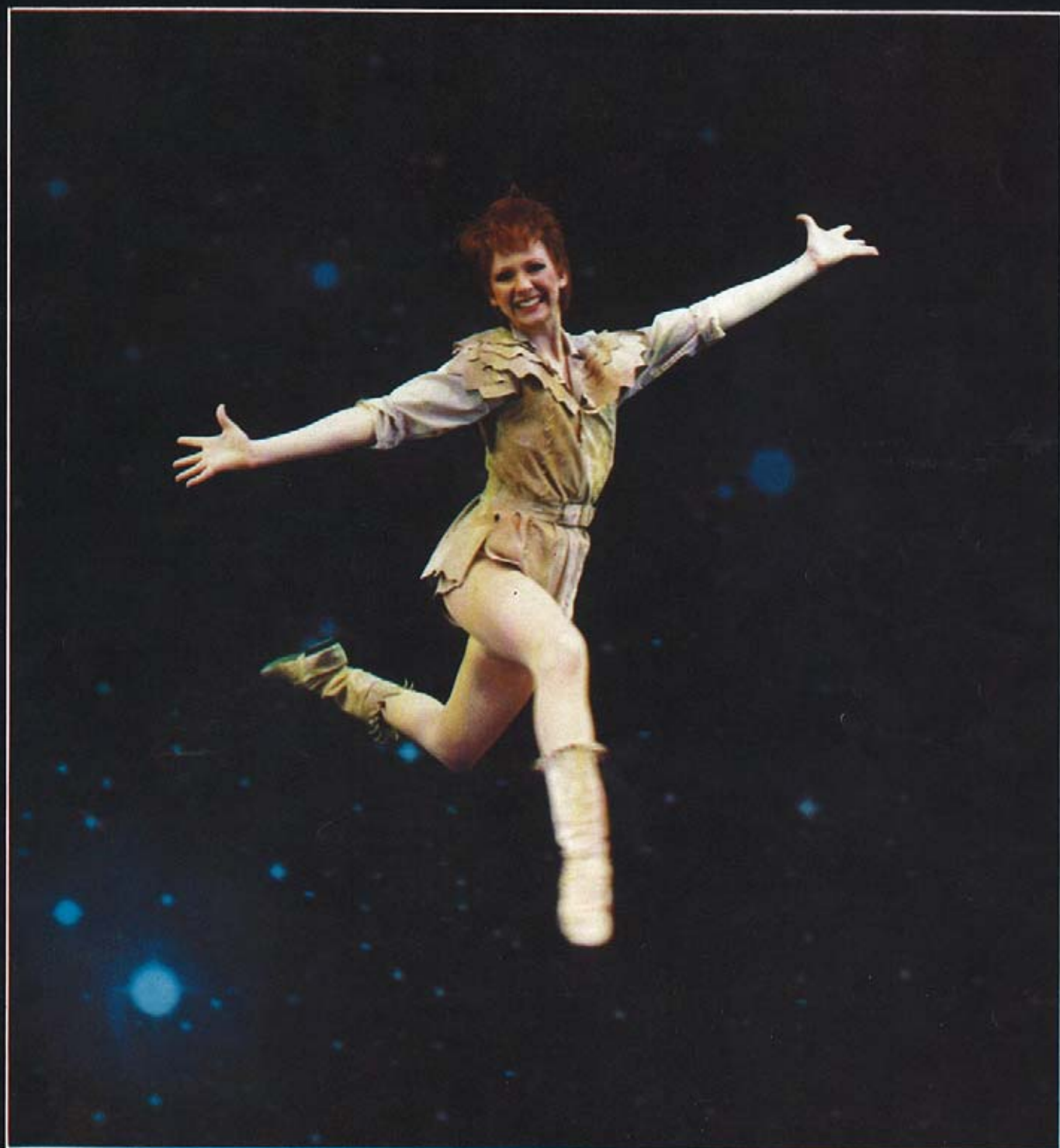


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Bonnie Langford as Peter Pan—see 'Peter Pan and the Fibre Optic Stars'.

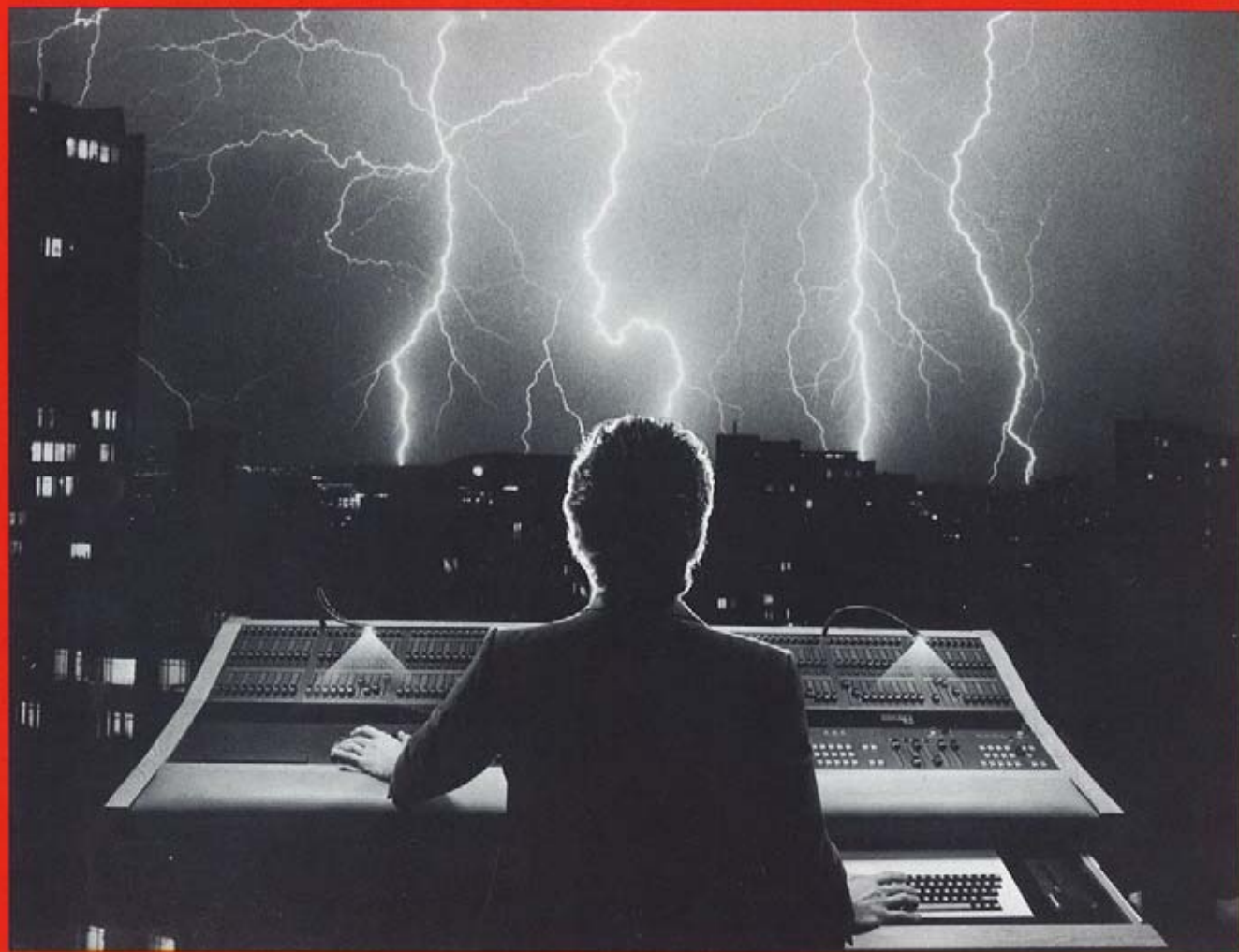
**PLASA**

published in association with the Professional Lighting and Sound Association

**February 1986**  
Volume 1 No.4

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# LIGHTING+SOUND *International*

## FEBRUARY 1986

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### Frankfurt International Music Fair

A view of Messe Frankfurt from the west with Hall 9 in the foreground. Behind it is the Galleria which links with Hall 8. The tall building to the right is the Gate House, the new service and administration building of the Messe Frankfurt. (see pages 15 and 16 for a listing of PLASA Group exhibitors at Frankfurt February 15 -19.)

## LIGHTING+SOUND *International*

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## No longer just the Light and Sound Show

The **Professional Lighting and Sound Association** is very much an up-and-coming body. It's got money in the bank, and latent ambition. It's just beginning to feel the flings of power, but slightly nervous about how it should be used.

The January committee meeting, although perhaps not considered so at the time, will be looked back on as a watershed in the development of the Association. Firstly, the Light + Sound Show in September this year. Already organiser David Street has sales worth £83,000 up his sleeve, and is quietly confident that all space will be sold out well before the event. And the committee had the confidence to go one stage further, giving him the go ahead to book for 1987 as well.

For many people, PLASA's name has only been associated with the 'Show', and it was worth joining the Association to get your hands on the discount on stand prices, or a first bite of the apple on prime sites in the halls.

But now other things are happening. General secretary Roger Saunders has actively promoted the first exploratory trade mission linked with the BOTB, and the PLASA Group at this year's Frankfurt International Music Fair is the biggest and brightest yet. More will happen in this area. The next mission is to Latin America in May, and others will follow.

The annual general meeting of the Association will be held at Novotel on April 24th (subject to confirmation), and this year it is planned to organise a luncheon where guests of members can be invited—an indication that PLASA is looking to its own image, and also for better links across the industry.

Which links naturally to possibly the most important decision of the evening's meeting—the agreement to form a press and PR sub-committee under the chairmanship of John Lethbridge, the Association's vice-chairman. Obviously this power group will have an important part to play in the future development of **Lighting + Sound International**, and in many other areas of PLASA's development and direction.

New members who have just joined the Association's ranks include NJD Electronics, Lynx Lighting Limited, Audilec, Mystical Lighting, and Satel UK. Others are in the pipeline. New committee members are David Neale of Disco & Club Trade International, and Walter Mirauer of Bose UK Limited, with Citronic's Tony Akers re-elected.

The new direct telephone line at the PLASA general office is (08956) 30718, and this is the one to ring with **your** ideas on how the Association should best serve its members, and the industry. This is no idle request—the next meeting of the committee (March 10th) will set out to deliberate on what the Association should set out to do for the future.

Your comment will be welcomed, whether you are a PLASA member or just a 'voice from the industry'.

**John Offord**  
Editor and Publisher

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# AVITEC SPEAKER MENU



DX15 – shown without front cover.

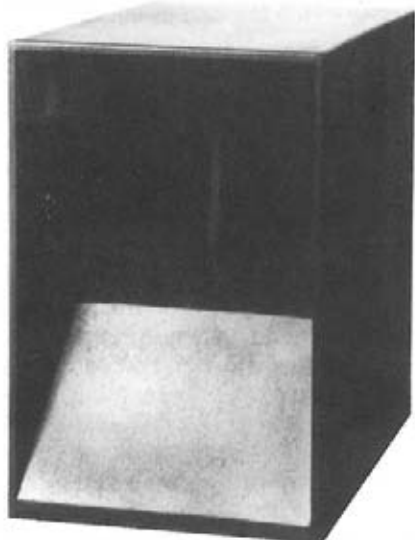
A small selection from the increasing range of loudspeaker cabinets offered by Avitec.

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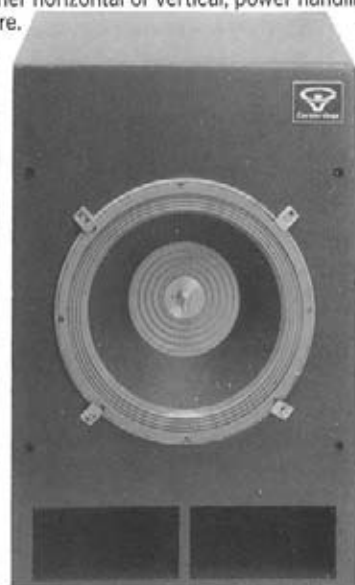
Quality need not mean expense and an example of value for money is the new loudspeaker manufactured especially for us, the DX15 full range system. This cabinet uses Son Audax components and achieves a remarkable output and quality. Where a particular environment cannot accept floor mounted bass cabinets, the 'floorn' DX15 in a small to medium size application gives the best all round sound we have heard from a compact full range cabinet. Mounting is either horizontal or vertical, power handling 250 watts, maximum output 124dB at 1 metre.



L36 JE "Junior Earthquake".

The legendary Cerwin Vega bass is exemplified by the L36 JE 400 watt folded horn bass cabinet, which, in coupled pairs, or a quad array for the larger venue, gives a 'trouser tugging' bass output which has to be heard to be believed. We have as yet found no equal to the Cerwin Vega bass effect – listen as well to the Cerwin Vega SW18 sub bass cabinet.

However, Dynacord have achieved a close second with their CL808 400 watt power bass cabinet. The 808 bass is not quite as powerful or low as from the CV cabinets – but tighter, drier – and actually more suitable for some venues and tastes.



SW18 Sub Bass Cabinet

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## Sound in Entertainment

The Association of British Theatre Technicians is launching a weekend course on Sound In Entertainment to take place at the Barbican Centre, City of London on Saturday and Sunday March 1st and 2nd 1986.

The course will take the form of small groups each looking at four areas in turn—microphones; mixers; the use (and abuse) of signal processors; loudspeakers and acoustics. This will allow the maximum time for individuals to get 'hands-on' experience on the equipment and discuss particular problems they have encountered with the tutors. The Course will have the use of the facilities at the Barbican, including the main concert hall.

Participants are expected to be in-service technicians, with some experience of working concerts or musicals. Course fees are £95 for non-members of the ABTT and £75 for members.

Further details from the ABTT at 4 Great Pulteney Street, London W1R 3DF. Telephone 01-434 3901.

## Big Business in Gloucester

A massive amount of work has been carried out by the Gloucester-based organisation B.D.C. Music and Lights over recent months. From their list of installations completed and equipment supplied it would seem much of Gloucester and neighbouring Cheltenham has a very bright night life!

B.D.C.'s major project, which is still continuing, is at the King of Clubs Night Club in the city of Gloucester itself. B.D.C. are supplying all the equipment for the two floors of this 1000 capacity venue, and equipment provided to date for the first floor includes a Citronic mixer and graphic, Mode Unit 8, Unit 40 light consoles and zoners, Mode dimmer, Technics turntables, Stanton/Ortofon cartridges, tape player, Citronic Mosfet amplification, Avitec helicopters, Light Engineering pinspots, mirror balls, ultra violet lighting, lanterns etc. On the ground floor a Cloud DM600 mixer, graphic, Citronic Mosfet amplifiers, Mode Unit 8, and Unit 4 lighting controls, Light Processor 436 matrix system for tivoli lighting, complete with power packs, approximately 60m of tivoli lighting on matrix around the DJ's console and wall pillars, Light Engineering pinspots and lanterns, Avitec 20-head helicopter and Nisel interceptor, mini strobes, Optikinetics strobes, amplifiers and speakers for background music system has already been installed. Total budget to date is around £14,000.

At the Images Night Club in Gloucester supply and installation of £7000 of equipment has just taken place. Other major installations include the Queens Club in Gloucester and Lorraines Night Club in Cheltenham.

## DDA Goes National

DDA of Isleworth have just announced that they have received an order from the National Theatre for a 16/8/2 D Series Matrix console. Supplied with the recently released Theatre Inputs, the console is destined originally for installation in the Cottesloe Theatre, the smaller of the South Bank's trio of NT venues.

## A Present from Sting

Rock star Gordon Sumner, better known to the world as Sting, has bought the Buddle Arts Centre in Wallsend a new P.A. system valued at over £10,000.

Born in Wallsend Sting has had a long term relationship with the Buddle. A further connection is that he and Tim Archer, the director, went to college together and are old chums. "I was a stranger to the North East", Tim told L+SI, "and Sting introduced me to a rather unglamorous old church hall in a terraced street where to my amazement people like Norma Winstone and Back Door were playing. We ended up putting on some shows there ourselves."

"After college Sting went on with his band Last Exit, and I got an Arts Council grant to set up a touring theatre and community arts company. Over the years we've kept in touch, and now that I run the Buddle the circle seems to be complete. We're in a different building nowadays—this one's a great big old school converted to our purposes (in fact Sting's mum came to school here), but the

spirit and the policy is much the same."

In conversations Sting and Tim talked about the problems young musicians face nowadays; particularly unemployed ones. They can't afford to buy a decent sound system and it can cost £75-£100 a night just to hire one. The consequence is that bands can't afford to play, and there are fewer venues; this all in a region that has produced a whole stream of good bands over the years.

So Sting decided to short circuit the system and buy the Buddle it's own rock P.A. "There's a lot of good things coming out of the Buddle," said Sting. "Now I hope there'll be even more. I've spent a fair part of my life unemployed and it's no joke. Anybody who says that it's easy is kidding themselves. But they'd better look after it or I'll be in there with my screwdriver!"

In fact Tasco, who are building the system, are planning it so that young people will be able to understand it without having to take a degree in physics first. Workshops and courses are already planned for local bands to get to know the equipment.



Sting pictured with Buddle Arts Centre director Tim Archer on a recent visit to the Wallsend venue.

## ABTT Awards for 1986

The Association of British Theatre Technicians' coveted awards—plated hook clamps—will be presented at the next ABTT Trade Show, due to be held at the Riverside Studios from 20-22 March.

Nominations for Product of the Year and Technician of the Year will be welcomed by the Association at its London office. There will also be an award for the 'Stand of the Year' at this year's Show.

## Soundcraft in the USA

Soundcraft Electronics have appointed JBL Professional as its exclusive distributor in the United States and Mexico.

A new division of JBL Professional to be known as Soundcraft USA will continue to operate from the current Santa Monica, California, offices of Soundcraft, under the direction of Ron Means, President of JBL Professional. Continuing to head the sales and marketing team will be Wayne Freeman.

## Unique Soundcraft System installed in Netherlands

The Muziektheater, a brand new theatre for opera, music and ballet has just been built in Amsterdam, the cultural centre of the Netherlands. The theatre, seating 1,700, gigantic by Dutch standards, is a welcome addition to the capital city's cultural facilities, which are not only large and varied, but also of international stature. The Muziektheater will be the theatre of residence for the Netherlands Opera and the Dutch National Ballet, and as well as being suitable for developing productions, it will also provide an opportunity to show significant performances from abroad.

The fact that the Muziektheater has been combined with the Amsterdam Town Hall, in a modern and very large, yet well functional complex, in the heart of the old town, will contribute largely to a revival of cultural life in the city.

The nucleus of the sound system is a computer-controlled Soundcraft Series 2400 mixing desk, fitted with a new scene setting automation, a world premiere in theatre use. The automation user interface is based around a standard powerful microsystem to enable expansion and modification to customer's requirements. The console has 24 inputs and 16 outputs and will eventually be controllable from the auditorium using a remote console. The computer is needed to ensure simple use of the complete range of complex loudspeaker arrays. It also makes it possible to store scene changes for several productions at the same time.

The concept and the sale of the system was the work of Soundcraft's local dealer in Holland, Selectronic B.V., based in Amstelveen, on the outskirts of Amsterdam.

## Theatre Royal Re-opens

Winchester's Theatre Royal re-opened in December after the first part of a major renovation scheme had been completed. The auditorium has been remodelled, with a new floor level introduced to the stalls and a new rake to the circle seating in order to provide better sight lines.

Behind the new house tabs and fire curtain, the changes are equally apparent. Gone is the poky old stage—the original rear wall has been knocked out, and a new grid has been constructed in an extended fly tower. A new Rank Strand Tempus 24 has been installed, controlling 84 channels. Front of house lights are now clamped to a new steel grid by Erco (who gave generous financial assistance). Although this clearly provides for extremely flexible lighting positions, L+S's correspondent felt that it was visually intrusive to the auditorium.

A new sound system has been installed by Whiteman's Music.

## Free Taxis to stop the Drink Drivers

A new scheme introduced by Bugatti's nightclub in Brentwood, Essex means that members who take a taxi to the club can get in completely free of charge. Evidently it has been widely applauded by police and road safety chiefs in the area who welcomed the move as a sensible and practical response to demands for greater responsibility towards drinking and driving.

"I gave the problem a lot of thought over Christmas and decided that the best way to tackle the problem would be to offer members free entrance to the club as an incentive to leave their cars at home," said managing director Kevin Jacobs.



## First Time Live for Series 2 Gold

When Barry Manilow played his recent dates at the Wembley Arena, his lighting designer Billy Heaslip had the opportunity of being the first person to use Celco's Series 2 Gold 90-channel console in a live situation.

Billy has used a standard 90-channel and 30-channel "Series 2" linked together throughout Barry's world tour, supplied by Morpheus Lights Inc. An identical set-up was specified for the British tour dates, and supplied by Light and Sound Design Limited of Birmingham.

The picture above shows Keith Dale (left), marketing director of Celco Limited explaining the new features of the Series 2 Gold to Billy Heaslip and Dave Chance, chief crew for Morpheus Lights.

The picture below shows Billy Heaslip in action. (Heaslip is also featured in this month's "On Tour", in discussion with Catriona Forcer).



## Soundcraft 800B for Barbican Hall

As part of the continuing development of their sound system, the Barbican Centre in the City of London has recently installed a Soundcraft Series 800B 32 channel PA desk in the Barbican Hall, the concert and conference hall of this multi-auditorium venue. According to Soundcraft, this is an expansion and an improvement on the existing system.

Three of Soundcraft's new Series 200B mixing consoles are already employed by the Royal Shakespeare Company, whose London home is the Barbican Theatre. A 24-channel version is being used as their main national touring desk and is

currently being used in 'The Taming of the Shrew' on a ten month tour of the UK. The other two consoles are 16 channel versions and are permanently in The Pit at the Barbican, and at The Other Place in Stratford upon Avon -both 200-seater venues.

## Audix in Oman

Audix Limited are to supply and install equipment for a new radio studio centre in Muscat, Oman. The order, from the Oman Ministry of Information, is valued at £2 million. It will be the largest single radio station to be completed by the company to date.

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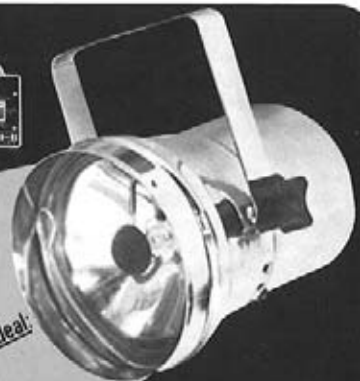
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## January Birthday for JHS

John Hornby Skewes & Co. Ltd., the Garforth, Leeds based importers and distributors of musical merchandise and amplification equipment celebrate their 21st Birthday in January 1986.

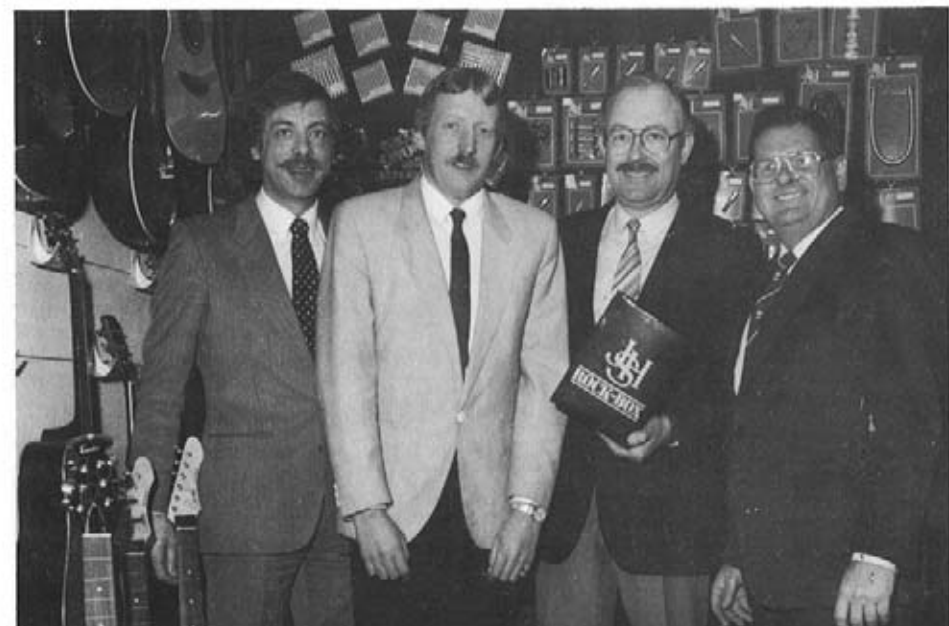
The Company represents in the U.K. a number of major manufacturers of musical instruments, and the brands handled, most on an exclusive basis, include Hondo (guitars and other stringed instruments), Audio-Technica (microphones and home recording equipment), Encore (guitars and other stringed instruments), Reghin (violin family instruments), Seiko (quartz, metronomes and tuners), Grover (guitar parts), Kahler (guitar parts), Sharkfin (guitar accessories), Rhythm Tech (tambourines and percussion instruments), Smoothie (instrument strings), Black Diamond (instrument strings), AVF (microphone stands), JHS (amplifiers and effects), JHS (instrument parts and accessories), Digitec (effects units), Thunder (drums and percussion items), Headliner (cymbals), and Istanbul (cymbals).

The Company has its own 'in house' packaging department where many small instruments and accessories are skin-wrapped under the JHS brand name for easy selling through shop wall or counter display, or with the use of the company's own specially designed revolving display stands. JHS sell to over 1,500 retail outlets in the U.K. and overseas and are major exhibitors at many trade fairs.

The Company is still family-owned, with the founder, John H. Skewes, active as chairman and managing director, together with Madge Skewes (John's wife) and Linda Sweeting (John's daughter) on the board of directors. In Scotland, the Company is represented by John Bills as Area Director and John has been with the firm since its first year, 1965. Other long serving employees include Neil Mooring (purchasing manager), Declan McLoughlin (marketing manager) and Robert Challinor (sales office manager).

The firm also has its own photographic, printing and publicity department, and has always believed in executing support work of this nature 'in house'.

At the Frankfurt Musik Messe in February 1986 the Company will be announcing the acquisition of a new, exclusive U.K. agency they say "is sure to be an exciting and profitable venture for both the Company and its customers alike".



Long-serving John Hornby Skewes & Co. Ltd. internal staff photographed in the Company's Showroom. Left to right: Robert Challinor (sales office manager), Neil Mooring (purchasing manager), Declan McLoughlin (marketing manager) and John H. Skewes (chairman/managing director).

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## Wind and Fire defeats New Tyne Theatre

Newcastle upon Tyne's famous New Tyne Theatre, faithfully brought back to life over the last two years by a voluntary co-operative headed by Jack Dixon, was hit by a major fire on Christmas Day. Half of the building was destroyed, and the blaze is the subject of a police investigation.

The Theatre was built in 1867, and is one of Britain's most historic and beautiful, being listed Grade One. David Wilmore, spokesman for the theatre said after the fire that he hoped the machinery had survived because it was the only set of its period still in working order.

Luckily the building had been insured for £4.5 million, but worse news was to come. Recent 90 mph winds caused the back wall of the stage to

collapse. The extent of the damage had still to be assessed as we went to press, and what damage has also been done to the machinery and remaining walls is not yet known.

## Change for Sound Engineer

From the December issue 'Sound Engineer' has become 'Sound Engineer + Producer'—in effect, say the publishers, a "new" magazine. The publication was recently purchased by Media Week Ltd., a subsidiary of Patey Doyle Publishing Limited. The new publisher's ambition, as stated in the December editorial, is "to produce the best", most responsive, comprehensive and authoritative magazine covering pro-audio".



Editor is Joe Hosken, and full details are available from Media Week Limited, 20-22 Wellington Street, London WC2E 7DD telephone 01-240 9851.

## TBA in Receivership

TBA Lighting, the company who last year won the ABTT 'Product of the Year' award for their Magic Lantern, has been put into the hands of the Receiver.

TBA, headed by Tim Burnham, developed the low-voltage, high power lamp which had been tipped to change the face of lighting. It was hailed as a 'revolution' throughout stage lighting circles.

A spokesperson for the company confirmed that they had been in receivership since January 29, and although she was not prepared to go into the reason for the collapse, there was room for hope that the operation would continue, even if in another form, L+SI was told.

## Full Report Next Issue

Theatre Projects' chairman Richard Pilbrow chairs the seminar 'Lighting for Entertainment' at the Bournemouth International Centre on February 6th as part of the 'Entertainment 86' convention. His four co-panellists are Tony Gottelier, Francis Reid, Richard Dale and Andrew Bridge—probably the best line-up ever on an 'across the spectrum' lighting theme.

The seminar will be fully reported in our March issue.

## Royal Opera House to buy German

According to a front page story in 'The Stage' as we went to press tempers are evidently somewhat frayed at Strand Lighting over the decision by Covent Garden's Royal Opera House to buy their new lighting control system from a German manufacturer, the Siemens Group.

Strand are allegedly upset because they were not even given the chance to tender for the job, and the company's managing director Mike Lowe is quoted as saying: "Of course we are bitterly disappointed as the installation of competitors equipment at the Royal Opera House seriously damages our international reputation."

Royal Opera House general director Sir John Tooley is reported in 'The Stage' as denying that the decision to buy from Siemens is 'anti-British'.

**COPY DEADLINE  
for the next issue of  
LIGHTING + SOUND  
INTERNATIONAL  
FEBRUARY 25th**

## Shure to Shuttlesound

Chris Gilbert has, after 21 years, left Shure/H.W. International and moved to Shuttlesound. Chris joined Shure Electronics Ltd in 1965, went with them from Blackfriars to Maidstone and was made Sales Manager, Professional Products in 1978. In November 1982, H.W. International took over and the company moved back to London where Chris and the company have been ever since.

Shuttlesound specialises in high quality design and engineering of professional audio systems, and the sole U.K. importer and distributor of Electro-Voice products, amongst others. During the course of several conversations with Tony Oates, Managing Director of Shuttlesound, it became apparent that Chris and Tony's perceptions and professional thinking ran very much along the same lines.

It was a major decision for Chris to leave Shure/H.W. International after so long, but Tony Oates' determination for Shuttlesound to be at the leading edge of technology and his commitment to research and development in order to achieve long-term goals, evidently convinced Chris that Shuttlesound represented an exciting and fulfilling challenge.



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# PLASA Group at Frankfurt

## Biggest and Best to Date

The PLASA Group of exhibitors at this year's Frankfurt International Music Fair (February 15-19) number a total of 16 stands, and in a year when representation in some areas is reported to be static, this shows precisely how active the British lighting and sound industry is in the international field, with a big increase in the number of stands over any previous Fair.

Although there are other British companies elsewhere in the exhibition halls, **Lighting + Sound International** has included below a listing of those attending as part of the PLASA Group, with a brief description of what will be featured on their stands. We hope this will serve as a useful guide to those attending the Show and visiting member's stands, particularly as far as international visitors are concerned.

Stand D42 will be the joint PLASA Stand with **Lighting + Sound International**, and Roger Saunders of the Association, and John Offord, Ann Holland, and Sue Grinstead of **L+SI** look forward to welcoming you there. All stands listed are in Hall 9/1.



Halls 8 and 9 (right) at Frankfurt with the Galleria in between. The International Music Fair uses both halls from February 15-19, with PLASA Group stands in Hall 9. This photograph was taken with a fish-eye lens from the airy heights of the Gate House of the Messe Frankfurt.

### D42

#### Professional Lighting & Sound Association Lighting & Sound International

PLASA general secretary Roger Saunders will be host on Stand D42, and he will be delighted to answer and assist visitors in connection with all PLASA group members at the Frankfurt International Music Fair.

Also on stand will be John Offord, Ann Holland and Susan Grinstead of **Lighting + Sound International**, the new monthly magazine for the industry launched in November 1985 in association with PLASA.

PLASA  
1 West Ruislip Station,  
Ruislip, Middlesex HA4 7DW.  
Tel: (08956) 30718.

Lighting + Sound International  
John Offord Publications,  
12 The Avenue, Eastbourne,  
East Sussex BN21 3YA.  
Tel: (0323) 645871.

### E41

#### Zero 88 Lighting Ltd

Zero 88 will be launching the link that completes the Mercury chain—Touch Light 12. More than just a touch panel, Touch Light 12 is a touch sensor with an in-built random chase which will sell at a very competitive price. In addition, both the touring and the standard version of the Eclipse will be displayed.

Peter Brooks, David Catterall, Freddy St John-Lloyd.  
Hart Road, St Albans, Hertfordshire AL1 1NA.  
Tel: (0727) 33271.

### E37

#### Hiwatt Ltd.

A legendary name in the rock scene for many years and with a display of over 80 square metres at Frankfurt, Hiwatt will be launching the 'Legend' series all-valve amp heads, combos and speaker cabinets and many of the models will be available to test in sound-proof booths.

Eric Dixon, Marketing Manager.  
Hiwatt Ltd., Crow Wood Lodge,  
Scofton, Worksop,  
Notts. S81 0UF.  
Tel: (0909) 483690.

### E39

#### Tannoy Ltd.

Tannoy will show their uniquely flexible range of Wildcats PA loudspeakers which feature their Dual Concentric Drive systems with studio-standard sound quality. In addition to the Leopard, two completely new base systems will be exhibited for the first time. The Cheeta, which will combine with the Lynx or Puma to provide a very compact system, and the Lion which boasts extremely high sensitivity, will combine with the Panther to produce a full range system with a sensitivity across its full bandwidth of 103dB/W/M Anechoic.

David West  
David Bissett-Powell  
The Bilton Centre,  
Coronation Road,  
Cresswell Industrial Estate,  
High Wycombe, Bucks HP12 3SB.  
Tel: (0494) 450606.

### E43

#### D. Jordan

'Bandor', a small cottage industry in Bourne End has developed a new miniature moving coil loudspeaker, which covers a wide frequency range of 100Hz - 22KHz. It has 50 watts peak power and only needs 1.5 litres (96 cu inches) for cabinet volume per unit.

Mrs D Jordan  
1 Sydney Cottage,  
Coursend Road, Bourne End, Bucks.  
Tel: (06285) 29441.

### F22

#### ILP Electronics Ltd.

This is ILP's 'first' at Frankfurt and on show will be their base 12" speaker, their range of slave amplifiers, and Guitar Combo. They will also be launching their new Base Combo and 12 Kw stereo amplifier along with their other products.

Jake Jackson  
Graham Bell House,  
Roper Close, Canterbury, Kent CT2 7EP.  
Tel: (0227) 454778/67534.

### F24

#### Martin Sound & Light

Following a successful year, Martin Sound and Light will be exhibiting at the Frankfurt Music Fair and are keen to promote their

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- 6. Exceptional transient response with very low distortion level.
- 7. Peak power 50w. (continuous power 25w per speaker).
- 8. Choice of two systems complete, or for self-assembly.
- 9. Flexible: as much or as little power as you need.
- 10. Built for reliability, with twenty years of production experience.

BANDOR (Miniature Loudspeaker) MFG.,  
1 Sydney Cottages, Cores End Road,  
Bourne End, Bucks. SL8 5HY.  
Telephone: (06285) 29441.

specialist services. Equipment exhibited will include their sister company's Martek range of speakers—the CB18 base cabinet the CM20 and CM10. Also on show will be a selection of equipment from Light Processor and products from the enormous range available at their London showroom.

**Martin Prescott, Nikki Land,**  
70a Blackstock Road,  
London N4 2DR.  
Tel: 01-354 2254.

## F26 Sellmark Electronic Services Ltd.

Sellmark are showing their new range of potentiometers as well as their existing range. Their new 100 mm fader is suitable for both audio and lighting use. The Ampion range of hybrid circuits and resistor networks will also be shown.

**John Williams,**  
Rockwood House, Barn Hill,  
Stanley, Co. Durham DH9 8AN.  
Tel: (0207) 282880.

## F28 Pulsar Light of Cambridge

Pulsar will be represented at Frankfurt by Ken Sewell, Derrick Saunders and Jurgen Kutzker, manager of Pulsar Germany. They will be presenting their new computerised stage lighting control system using the BBC micro, as well as the full range of Pulsar controllers and spotlights. They will also be exhibiting their new Portapak II, a flight-cased 36 Channel dimmer pack for touring use, based on the new fan-cooled 2U high 10 amp packs.

Henley Road,  
Cambridge CB1.  
Tel: (0223) 66798.

## F30 Avolites Production Co Ltd

In their tenth year at the forefront of stage lighting control, Avolites will be exhibiting their 180 Channel QM500 Memory Console with disc drive, the 60 Channel Rolacue Memory Console with disc drive, 72 Channel Dimming System (48 x 10 Amps + 24 x 20 Amps) and the 18 Channel Dimming System (18 x 40 Amps).

**Keven Eyres, Derek Halliday,**  
184 Park Avenue,  
London NW10 7XL.  
Tel: 01-965 8522.

## F32 Multiform Lighting

Pride of place at Frankfurt this year will go to recently released Light-J lighting controller which can be programmed by the operator to provide up to 4½ hours of automatic lighting control.

Personnel on the Stand will include I. Price-Smith, as well as M. Schneider and U. Selmer from Lightronics Licht + Lampen of Hamburg, who are Multiform's exclusive German distributors.

Bell Lane, Uckfield,  
East Sussex.  
Tel: (0825) 3348.

## F34 MJL Systems Ltd

MJL will be exhibiting all its current range of lighting controllers including several versions of power packs, the range of mini desks for theatre, and the ever popular Rock desks. A number of these units will also be in operation with PAR56 lamps for demonstration purposes.

**Mike Lallier,**  
45 Wortley Road, West Croydon,  
Surrey CR0 3EB.  
Tel: 01-689 4138.

## F36 Celco Ltd

Celco will be displaying many new additions to the Series 2 range of lighting control boards and for the first time, the Series 2 Range of dimmers.

The 90 Channel 'Series 2 Gold' Control Board features many functions including 24 sequence patterns combined with multi-chase



A view inside the Galleria which links Halls 8 and 9, Frankfurt.

capability as well as Cue Lock, Page Freeze and other Rock 'n' Roll developed software.

**Keith Dale,** Celco's Marketing Director and **Matt Deakin,** Technical Director will be on hand to discuss customer's requirements, and to advise on any technical queries.

3 Bellingham Road,  
London SE6 2PN.  
Tel: 01-698 1027.

## F38 & 40 Cerebrum Lighting

The focus of Cerebrum's stand will be the new 90-channel lighting control board from Celco called 'Series 2 Gold'. This new flagship of the range includes a host of innovative features. The long awaited Celco Series 2 Dimmers will also be on display as well as a new message display system, the Spacewriter which has been featured in an episode of BBC's Tomorrow's World. Several items of Thomas Trussing will also be on display.

**Mike Fisher, Colin Whitaker and Colin Tonks,**  
Cerebrum Lighting (Sales and Hire) Ltd.,  
168 Chiltern Drive, Surbiton,  
Surrey KT5 8LS.  
Tel: 01-390 0051.

## F42 Le Maitre

Le Maitre will be showing their full range of pyrotechnics including a new computer-controlled timing/firing system, which will be launched at the Show. Also on display, amongst their full range of products will be the new smoke processor launched in December.

**Rodney Clarke and Andrea Nisbet,**  
316 Purley Way, Croydon, Surrey CR0 4XJ.  
Tel: 01-686 9258/9.

## F44 Citronic Ltd

On show on the Citronic stand will be their range of PPX Amplifiers, Turntables and Mixers.

Citronics tough amplifiers are designed to be capable of peak performance under adverse conditions, and for this reason, they have become one of the most popular power amplifiers on the market. The Citronic range of turntables is manufactured specifically for discotheques and the latest models will be displayed. The latest mixers complete the range on display.

**Andrew Briggs,**  
Bowerhill, Melksham, Wiltshire SN12 6UB.  
Tel: (0225) 705600.



# Peter Pan and the Fibre Optic Stars

Paul Chapple

Two men look out through the same bars;  
One sees mud, and one sees the stars.

Frederich Langbridge.

As soon as 'Peter Pan' was mooted as a possible future Plymouth Theatre Royal production, Terry Parsons, then Head of Design, said that to overcome the problem of seeing the flying wires he wanted to set all the scenes in a surround of stars and galaxies. The idea particularly appealed to me, knowing that to create a stage full of stars would be a challenge and make the production one of the largest, if not the largest fibre optic rig in the UK.

At this early stage Terry needed reassurance that fibre optics could achieve the full effect before he designed the show, so we decided to involve Eurotec Optical

Fibres, a supplier we had used several times in the past when we had built one-off star cloths, prior to commencing the design. Meeting in London with Barry Gregson, Eurotec's Sales Manager, we tried various samples of their range and experimented with looking at the fibres through the various materials.

Discovering that a gauze held approximately 30 mm away from the fibre optic ends created beautiful auroras around the pin point of light, we decided that a cloth and gauze rig was the one that would achieve the most spectacular results. Eurotec also had four sizes of fibre optic and although we had used size 1 in the past, which gave us up to 500 tails per projector, we decided to intermix size 4, (larger fibres so that there are only approximately 100

tails per projector), inserted in all the cloths and portals to give the occasional brighter constellation.

Normally, Eurotec supply the fibre optic harnesses ready made, which for one-cloth one-projector situations is ideal, but having up to six projectors on any one cloth meant the loops of fibre would be excessive and difficult to handle. So we decided to cut all fibres to length on site which meant purchasing a crimping tool and correct dies for us to finish the fibres actually on stage at the Theatre Royal.

A month or so after the meeting we were given the go ahead for 'Peter Pan'—approximately 10 weeks prior to the opening. This meant that we would only have about 5 weeks to build. Terry designed the cloths and portals straight away so that the fibre



The 'Nursery Scene' from Peter Pan photographed at the Albery Theatre.

optics, cloths and gauzes could be ordered. Pushing the suppliers to the minimum delivery period, it seemed we would receive the bulk of the supplies three weeks before opening. Although this could be coped with, it meant one of our options for creating auroras around the stars had to go. The aurora effect is only really effective if there is a translucency in the material (gauze). This meant that on white gauze we would paint back to the stars, in black or deep blue, but because of the limited timescale we had to order black gauze and paint the stars.

The materials arrived for the 4 cloths, 4 gauzes and 3 portals, 14 miles of fibre optics, 26 harnesses and 26 projectors. Scenic artists and the crew rigging the fibre optics were given exact reference copies of the original design drawings, so that the painting would tie up with the fibre optic installation.

The installing of the fibre optics in the cloths is a relatively simple arrangement of pushing the fibre optic cable through the cloth with tightly gripped washers either side of the cloth to hold it in place. The portals presented a couple of problems in that they were built of Class One plywood on a steel frame covered in dark blue bolton. The protruding fibre optics would create problems when the portals were rigged on the fit-ups and the overall thickness ruled out the use of washers. To overcome this difficulty we drilled holes in the portals, just big enough to feed the fibre optics through, and then glued them into position on the back of the flats.

So three weeks and 800 man-hours later (for fibre optic installation only), we completed the build and started the fit-up. Our next concern started to worry us, had we overdone it . . . would the stars be distracting? But when lighting designer Brian Harris started his work we know we had no need to worry. The star surround worked a treat.



Plymouth Theatre Royal's technical director Paul Chapple gets wound up with fibre optic cable on stage during preparations for the production of 'Peter Pan'.

## Planning and Installation notes for Fibre Optic effects

### 1. Sizes of fibres.

There are four sizes of optic cables to choose from, but for most star cloths the smallest, size 1, is suitable. There are also special-purpose medical fibre optic cables and lenses which are of interest and could be used in special circumstances.

### 2. Types of fibre.

There are two types of fibre, standard and white. The white fibre gives an approximate 20% increase in light output over the standard fibre.

### 3. Projector.

The standard projector is suitable for most applications with a 3000 hour lamp life, although there is a high output lamp, but the life is shortened to 150 hours.

### 4. Choose projector colour wheel.

For star effects use blue with white slash. There is a complete range of colour wheels available, for instance we recently built an effect for 'Aladdin' in the cave sequence. To start the transformation we used two fibre optic harnesses, free-hanging above the stage with a rainbow colour wheel, which was most effective.

### 5. Estimate lengths for harnesses.

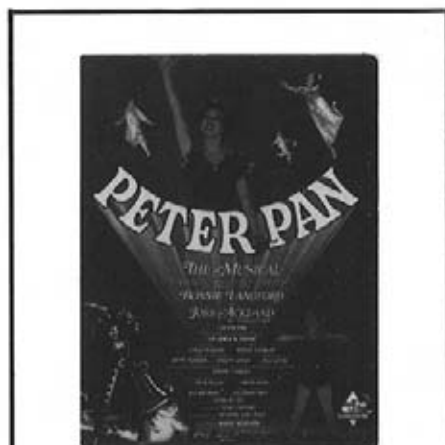
Draw the star pattern required. Select lengths most suitable to complete the pattern. The more different lengths selected, the cheaper the fibre optics will cost, although it would be difficult sorting a 500 cable harness out if every cable was an individual length. To keep costs down, the projector should be placed centre of the cloth, although for ease of rigging in a touring situation, projectors should be placed on the bar at the top of the cloth. This does mean an increase in the cost because the overall lengths increase.

### 6. Method of fixing.

After rigging projector and feeding cables into position, clipping them to the cloth, the cables may need to be held to the cloth. This can be achieved by either stitching or using a tag gun (similar to that used in shops for attaching labels to clothes), to support the harness where it crosses seams.

If you need advice or a star cloth built, then contact me at the Theatre Royal on Plymouth (0752) 668282 or for advice and costing of fibre optic harnesses and projectors, contact Barry Gregson at Eurotec on Doncaster (0302) 61574.

Remember, the full effect of auroras around the stars has not been achieved. It is up to you to take the next step in creation, although as Sam Goldwyn said, "God makes stars".



Running at the Aldwych Theatre, London for a limited season, 'Peter Pan—The Musical' is a Plymouth Theatre Royal Production of the American hit show that ran on Broadway from 1979 to 1981. Bonnie Langford plays the title role, with Joss Ackland as Captain Hook and Mr. Darling. The show is presented by Mark Furness for Mark Furness Limited and John Newman for Barry O'Brien (1968) Limited and Dina and Alexander E. Racolin, by arrangement with the Hospital for Sick Children, Great Ormond Street.



Fibre optic ceiling recently installed by Northern Lights at the Regency Club in Morecambe.

## Fibre Optics with Northern Lights

Northern Lights of Lancaster have quickly recognised the versatility and effectiveness of the fibre optic system, and through 'Lightwork' have the technical and design ability to apply themselves to practically any project.

Their range at the present time can be divided into three categories: custom signs and scene panels can be designed to specification for wall decoration, bar display and DJ consoles; optical effects ceiling can be programmed for colour changing star effects for dance-floors, intimate corners, dining and reception areas; and Litespot

Effects Modules use the pinspot idea of a single powerful light source.

Their Fibrespot System 150 consists of 50 narrow pinbeam lenses using a single 150 watt lamp, dispensing the need to change individual bulbs. Each lens produces a narrow beam, the colour of which is changed by a carefully programmed sequencer, producing effects which co-ordinate the fifty individual beams. These can be used in a variety of ways. For example, window displays and picture highlighting, and also for plants and flowers as the Fibrespots generate no heat. As a dance-floor effect the system may be used to send colour-changing bullet beams down onto the floor or walls.

The use of moving water is another area which lends itself to the use of fibre optics. Current assignments being undertaken by Northern Lights include the use of custom-built fountains and waterfalls which have the fibre optics system integrated into the effect. The combination of light reflection and refraction within the moving water creates a fascinating display.

All products are based on quality fibre optics used in conjunction with long-life light sources and individually-designed colour changers. A recent addition to the range gives the facility for fibre optic carpets.

The man to contact at Litework is designer Richard Hirstwood on (0524) 62634.

For details of forthcoming features in

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## The Eurotec Story

In recent years fibre optics have added regular sparkle to the lighting in West End shows such as 'Cats', 'Singing in the Rain', 'Starlight Express', 'The Fawn'—and this all emanates from a company based in Doncaster—Eurotec Optical Fibres Limited who are one of the world's leaders in the field of fibre optic development.

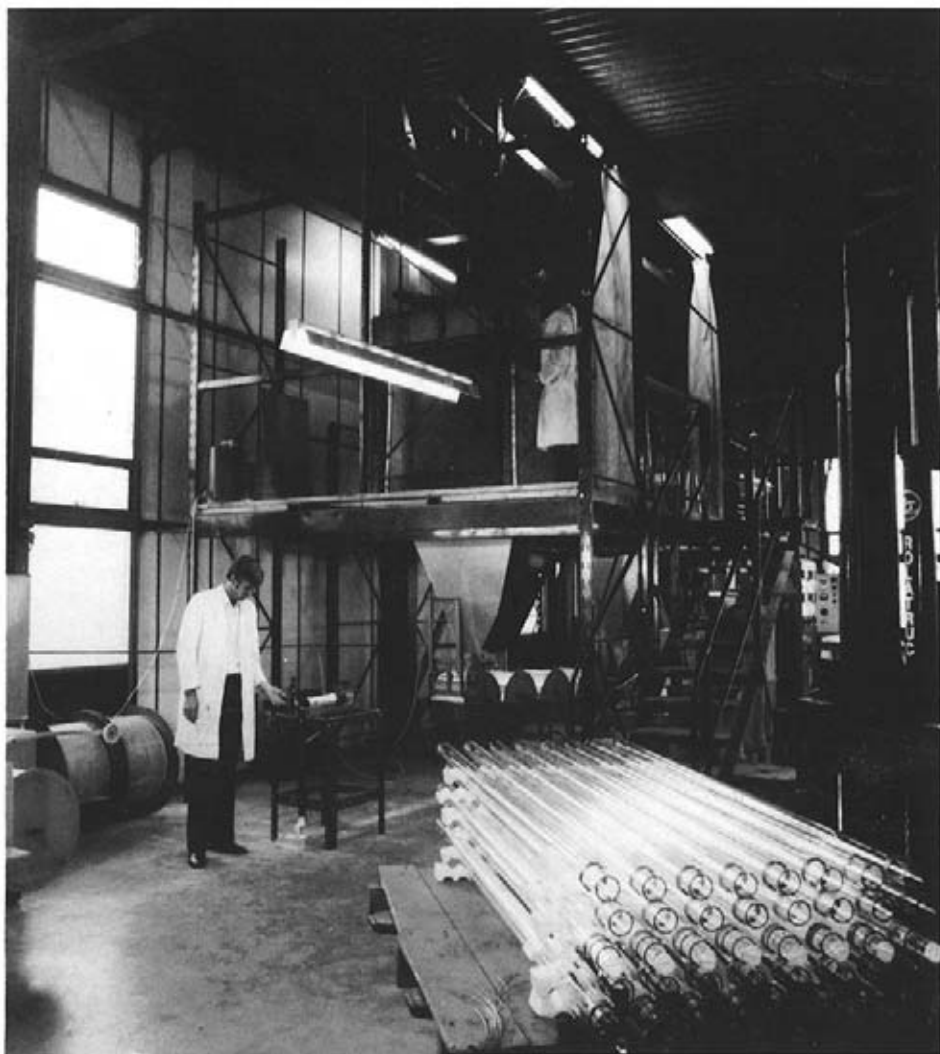
Back in 1977 they developed equipment to produce vast volumes of low-cost fibre, and they were soon developing and supplying components into many diversified industries from avionics, automotive, medical and security through to traffic signing.

Four years ago they looked at the many applications for their high technology product, and decided there was enormous potential for using the purely visual effect in theatre and display lighting. Entering into a completely new world they banged on the doors of theatrical designers to sell the message of fibre optics. With the foresight that is common to creative people, the possibilities were quickly seen and taken up within the entertainment industry, and fibres were soon being used in starlight cloths, firework effects, and many other ingenious applications.

With their team of highly qualified specialists in the fibre optic industry, including a woman as joint managing director in Madeline Hall-Jackson who won a 'Woman in Business' award recently, they have an innovative approach to the theatre business, constantly developing new techniques whilst bearing in mind the "financial restraints of low cost production".

One of their recent successes was an enormous lighting display for the Sultan of Oman to celebrate his birthday, and 'Peter Pan' is an excellent example of the atmosphere and colour fibre optics can bring to the world of theatre and entertainment in general.

Even so, they feel this only the beginning as fibre optics could yet be used to greater effect—perhaps with water, three dimensionally, or even into other mediums.



Fibre optics in production at Eurotec's Doncaster factory.

## Par Opti—the Fibre Optics and Plastic People

Par's new patent Fibrelights are miniature fibre optic-powered lights—the PS1 (65mm long) casts very narrow beams over long distances, and the FLX is only 25mm long with focus. They are used in both decorative and display applications, and hundreds may be powered from just one light source, enabling an economical display—the complete fittings costing less than most lamps individually.

When used in multiples, and powered by a light source with colour wheel and size 4 (or larger)

fibre, visible and colour-changing beams are produced in a mesmerising display.

Par's managing director Paul Raymond told L+S that "we are totally committed to optic fibre techniques, and are regularly consulted throughout industry by architects and designers as a prime source of fibre optic products and technology. Our in-house manufactured components are available only from true specialists in the field."

The company's plastics plant incorporates the latest technology such as programmable eroder and C&C milling, so where a component doesn't already exist they can design and make to order on their MPU controlled machines.

Further developments from Par include curtain washers and various lenses used by David Hersey of DHA for theatre shows such as 'Cats' and 'Starlight Express'. Other users have included TBL for the Paul Daniels Show, Absolute Action in TV set displays, and Entec in their productions and for their Gargantuan Ford presentation at the NEC. Disco ceilings, exhibition and museum displays, and a cathedral feature among the recent clients who have used Par products.

Latest product from the company is a new fibrelight sign where 3-D images glow in acrylic panels whilst gently changing colour. It's all magic where fibre optics are concerned. Contact 01-995 5179 for more information.



Some Par Optic fibre lighting components.



A Par PS1 Fibrelight.

# From Porno to Paparazzi

## John Offord goes to Glasgow with Tony Gottelier

A disused skin flick picture house on Glasgow's notorious Sauchiehall Street may at first glance seem an unlikely location to have found an international lighting designer toiling away over the past few months. But then as Tony Gottelier, creator of the electric Camden Palace rig, says "The entire project presented a whole series of unique difficulties and I found it impossible to resist the challenge. Besides, nobody could fail to be impressed by the way Glasgow as a city has cleaned up its act in recent years and I found this new attitude very stimulating."

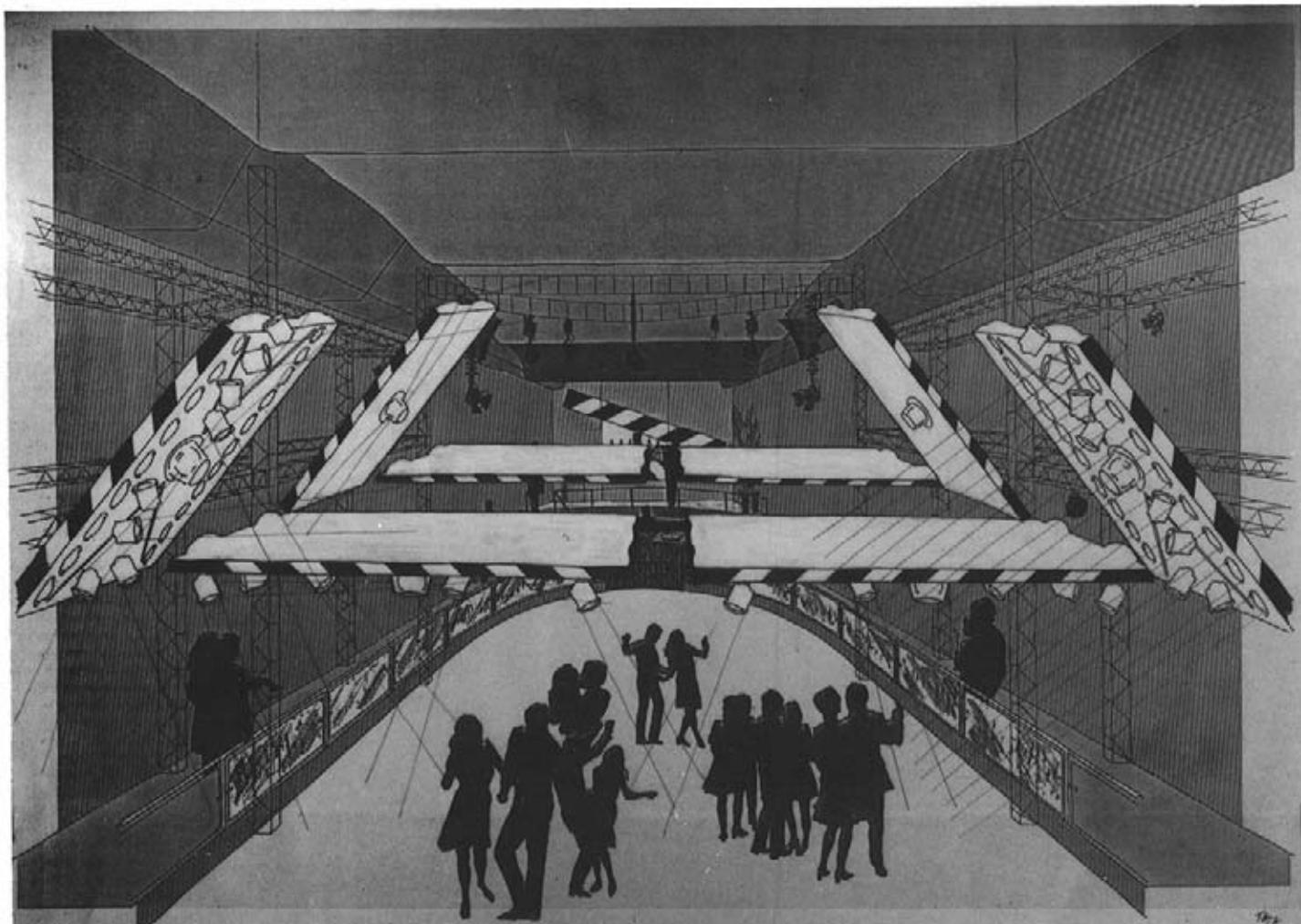
Meanwhile the old Curzon Cinema threw away its dirty raincoat and acquired white tie and tails in the guise of Glasgow's latest nighterie, renamed Joe Paparazzi. Local ar-

chitects Holmes and Partners were responsible for the conversion.

The first major hurdle Gottelier had to face was an injunction from the structural engineer forbidding the fixing or suspension of anything from the fabric of the existing building as they were unable to warrant its load-bearing capabilities. Then there is the building itself; being a typical small cinema, it is extremely long and narrow, no wider than 7.4 metres at any point. Yet the client understandably wanted to retain a link with the movies using big screen video, and a "Hollywood" theme and "I wanted to site a laser in such a way as to conjure up the imagery of the original projector," said Tony. "Both things necessitated unobstructed sight

lines through the auditorium, so where could we put the lights bearing in mind that an underlit floor is never a very satisfactory solution?"

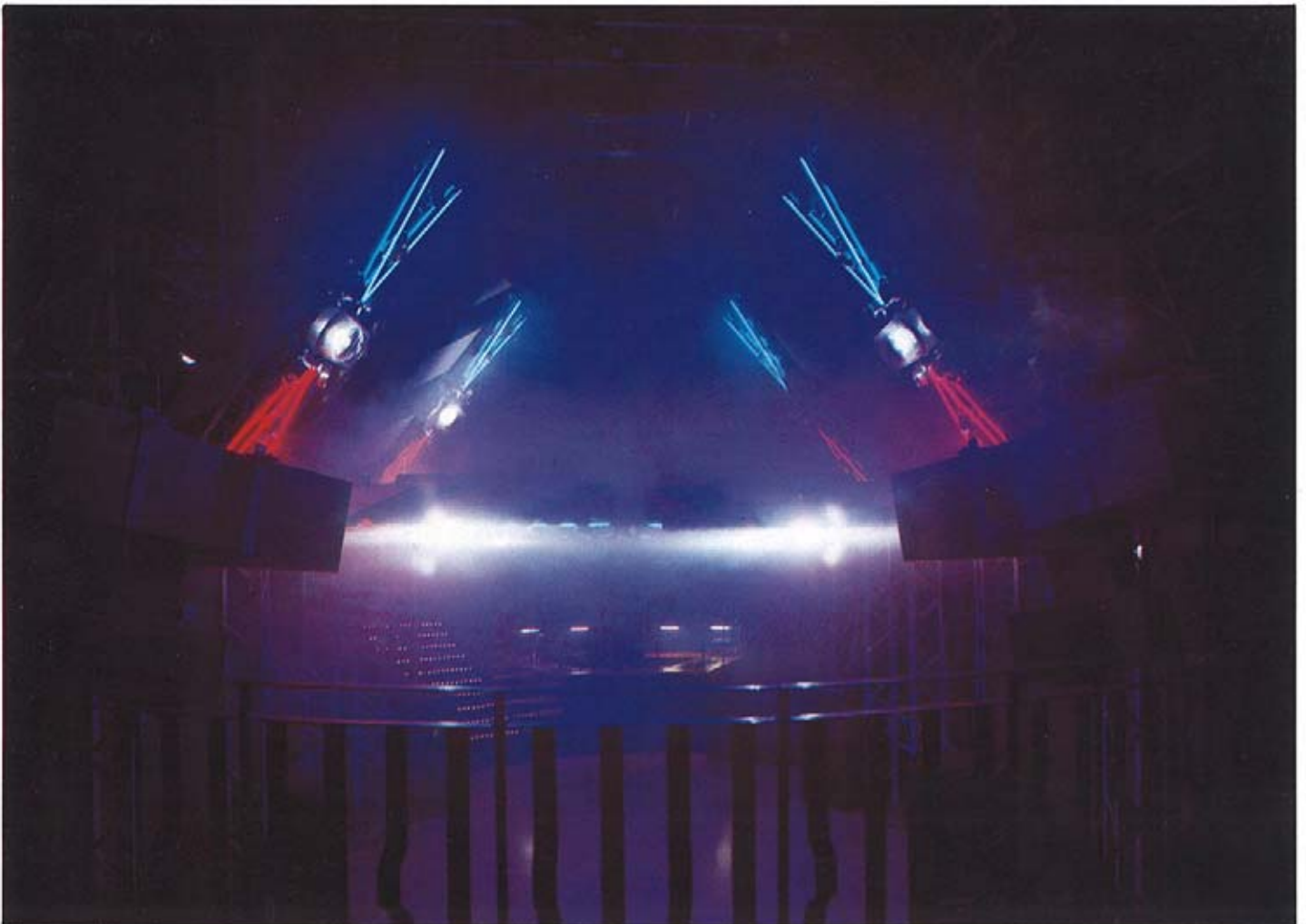
The ceiling void did not offer itself as a possibility because of the structural problems already mentioned, both because it coved down towards the gallery and because it is 7 metres high over the dance floor. Thus such a fixed structure would provide no intimate proximity to the dancers and no coherent beam angles. Furthermore it would be less than attractive to the audience in the gallery, which had been designated as a cocktail lounge. "Anyway, I no longer believe in physically hiding away the lighting equipment as this is too restric-



Visual perspective of Paparazzi's at the planning stage, showing basic structure of lighting panels.



A view across the dance floor of Joe Paparazzi's in Glasgow, showing the lighting panels in their store position with video screen in use.



The versatility of the panels are illustrated here in the different effect created when they are tilted at 45 degrees.



Here the panels are in conventional mode like a ceiling.

tive and limits the operator's armoury," Gottlelier told me. "Far better to disguise it by clever positioning. After all anything is secret until lit or repositioned." Nevertheless he is keen to point out that, although he was a pioneer of moving rigs, he does not advocate their use on every conceivable occasion and, indeed, is very concerned that this has become an industry trend. "Very few buildings either demand or require such systems," he emphasised.

By now it was clear to Tony that a self-supporting structure would need to be devised to hold all the paraphernalia of special effects lighting and sound. Also, in order to achieve maximum benefit for watchers and participants alike, the light sources would need to be capable of radical re-positioning during performance.

Then it occurred to Tony, after apparently agonising for several days, that most people's image of a film set is possibly more akin to the actual appearance of a T.V. studio and that, possibly, here was a way of solving the problem and using the inherent restraints to his advantage.

"It seems to me that within the context of a studio as seen in the public's imagination, such as *Top of the Pops* or *The Tube*, it would be quite acceptable to create a self-supporting structure from triangular trussing, and to rely on its silhouette at night as a decor feature emphasised by a liberal

sprinkling of old lanterns. "I practically bought out the whole of Theatre Projects' outdated hirestock," recalls Gottlelier, "including two really magnificent old 10KS which are used purely as bric-a-brac."

At this point Tony called in Cheshire Lifts to advise on the structure and provide both the trussing and lifting gear which he knew would be necessary to meet his requirements. Foundations were laid below the dance floor to support the legs of the studio structure which would then be entirely self-supporting, and remain mechanically unconnected to the building in any way.

Through his design of integrated cross lateral trusses and ladder beams not only is the right image conveyed but an ideal supporting rig emerges with ample space in the overhead ladders for fixed lighting, used largely as in-fill and background flood, and in the wings to fix such essential SFX as smoke machines. In fact the latter could be sited precisely to suit the beam path of the laser. However the major benefit of Gottlelier's design is in the four bays which are established on either side of the dance area between the vertical legs of the rig—for these provide the height and depth to store upright the eight lighting panels which form the main emphasis of the scheme. From this position each panel can be pivotted to either traverse or span the dance floor at low level.

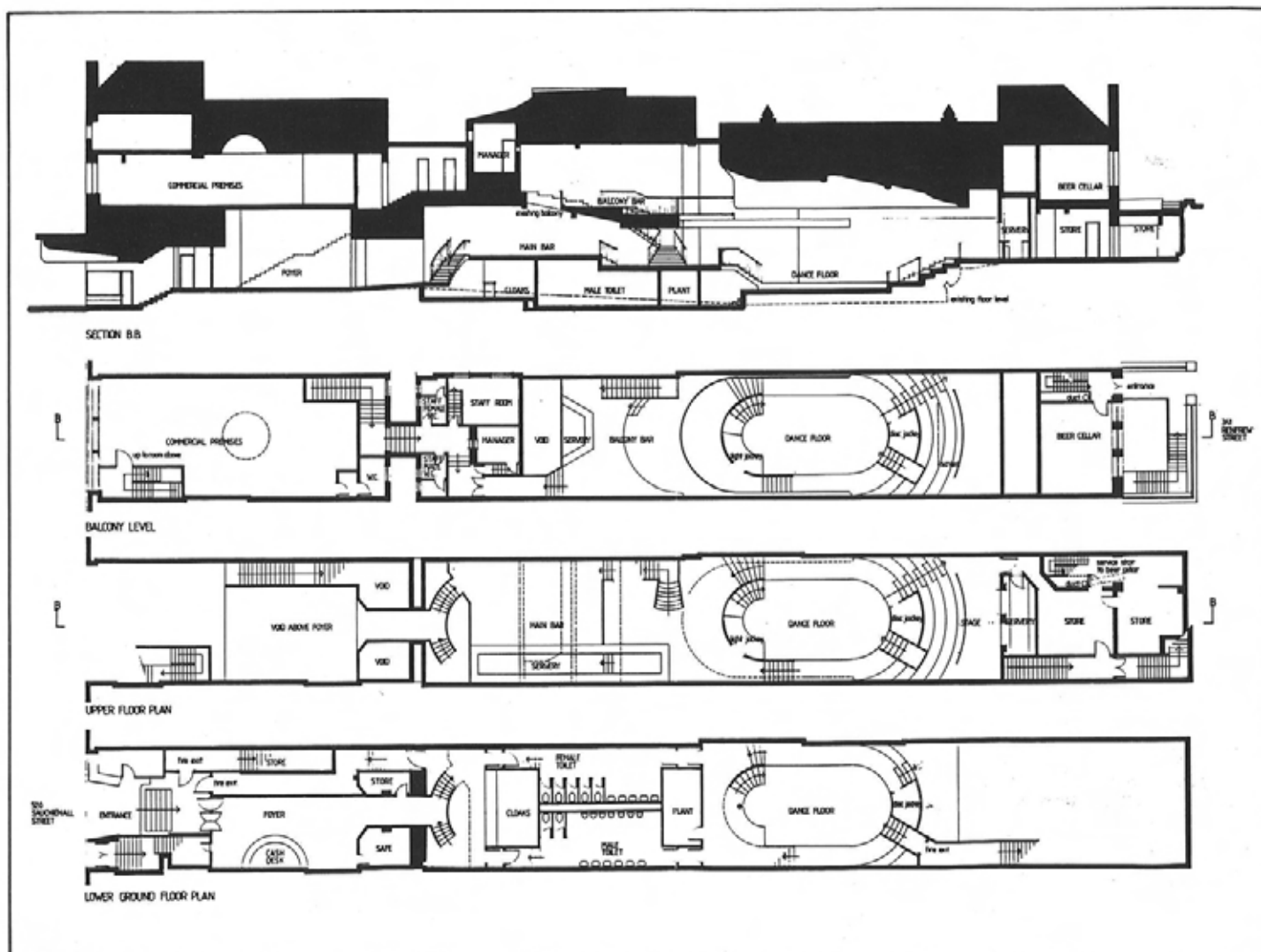
"The whole concept at this normal

operating level is based on a giant clapper-board," explained Tony, "so that the panels can scissor from vertical to 45 degrees and down to horizontal, varying the beam angles and direction with each new station. However a major bonus has also been the tremendous impact of the lighting in space even in the store position, particularly as this is only there out of the practical necessity to provide a clear laser beam envelope and unobstructed vision to the video screen."

It is in fact also possible, as we witnessed, to have two entirely separate light shows simultaneously with the lighting pods flat, virtually roofing the dance floor and the laser working in the void thus generated above, to entertain the viewers in the gallery and lounge balcony. Furthermore the panels can also be hoisted in matching pairs to four higher horizontal stations to provide a variety of different effects and positions.

Each lighting panel contains an array of built-in hardware including neon, pinspots and beacons, the latter being particularly effective in emphasising any change in position in horizontal sense with both oscillating and rotating light banks, nicknamed *Rockers* and *Rollers*, providing the counterpoint in the vertical plane. An advantage of these self-contained pods was that on-site wiring could be minimised, with each pod arriving or site pre-wired by electrical contractors HiTec and each simply needed connection to wall





Architects section showing Paparazzi's layout.

boxes already installed by the client's local electrical contractor.

With all this in place Gottelier was able to position the two-colour laser provided by Laser Systems within the front floor of the gallery, which provided the ideal level and location he had originally sought. Furthermore, the giant automatic video projection screen could be mounted from the truss on a lower central outrigger to provide back-projected images above the disc jockey's head from the Barco projector installed by Video Entertainments of Newcastle. It was even possible to accommodate a low light level colour video camera on a descending pantograph fitted with a remote pan and tilt so that it can follow people around.

"I was also very keen that the sound system should extend the same image while not conceding anything to quality," reflected Tony, "and after a great deal of arm twisting I succeeded in persuading Stephen Court to provide horns and tweeters in a flare shaped cabinet. "They were a sod to hang, but now they're up I think it was worth it." In fact the sound system at Joe Paparazzi is the first installation of S.J. Court Associates' new generation of professional signature series speakers, albeit that the flown enclosures are hardly a standard shape. Nevertheless if our ears did not deceive us, Stephen Court has managed to exceed his already immaculate record for providing state-of-the-art systems.

With a complex lighting system such as this, clearly the method of control requires a

great deal of consideration. The laser and the controls for the hoists and other lifting gear required a hands-on operation in order to satisfy safety requirements, but could the intricacies of the lighting system itself be made more manageable in order to give the lighting operator more opportunity to be creative while still maintaining efficient control? To Gottelier the answer was "Yes", as he went on to explain. "It seems a nonsense to me to face a lighting jockey with a baffling array of sliders, dimmers and pre-sets, especially as they do not really suit a discotheque environment. But equally the old idea of four channel zones and countless zoners, controllers and touch panels is even more cumbersome and limited in versatility."

The answer was found in a fully multiplexed system, developed for Gottelier by Axon Digital, which enables any channel anywhere in the system to be "patched" with any others in any order or sequence within the microprocessor memory. At first sight the small 3u x 19" rack mounting controller looked innocent enough—just 16 touch keys—but all is not what it seems. This single keyboard disguises the fact that a further five keyboards can be accessed at the touch of a button, providing control for up to 96 channels of lighting. However, the plot thickens, because in performance each of these keys represents a memorised scene or sequence of indeterminate length which the lighting designer or the operator has recorded on a previous occasion for instantaneous recall.

It sounds complicated, but I was assured that in practice it is simplicity itself as the local lighting operator explained. "There are a certain number of sequences or combinations of lights which I really like, and in a 96 channel system they could often be very difficult to access. With this system I can work everything out in advance when I have the time to think and reproduce them exactly as before whenever I want. It leaves me more time to get the best out of the moving equipment, the laser and the video. Besides, it is so flexible with none of the usual limitations imposed by 4 and 8 channel systems. At the moment I am using 32 different programme sequences, all of a varying number of steps, plus the Autopilot, which enables me to string several programmes back to back in an automatic sequence to the music. No doubt I shall use more as time goes on."

Having noted the restoration of the original neon to the cinema canopy and other piquant neon decor detail we left Glasgow, with its burgeoning commercial district and massive new office building developments, with the impression of a city that has really got to grips with itself. A city with a future far from the twilight zone of inner city decay which we read so much about.

If that is more than just our impression, then it has certainly acquired a nightclub in Joe Paparazzi to match its aspirations for the future.

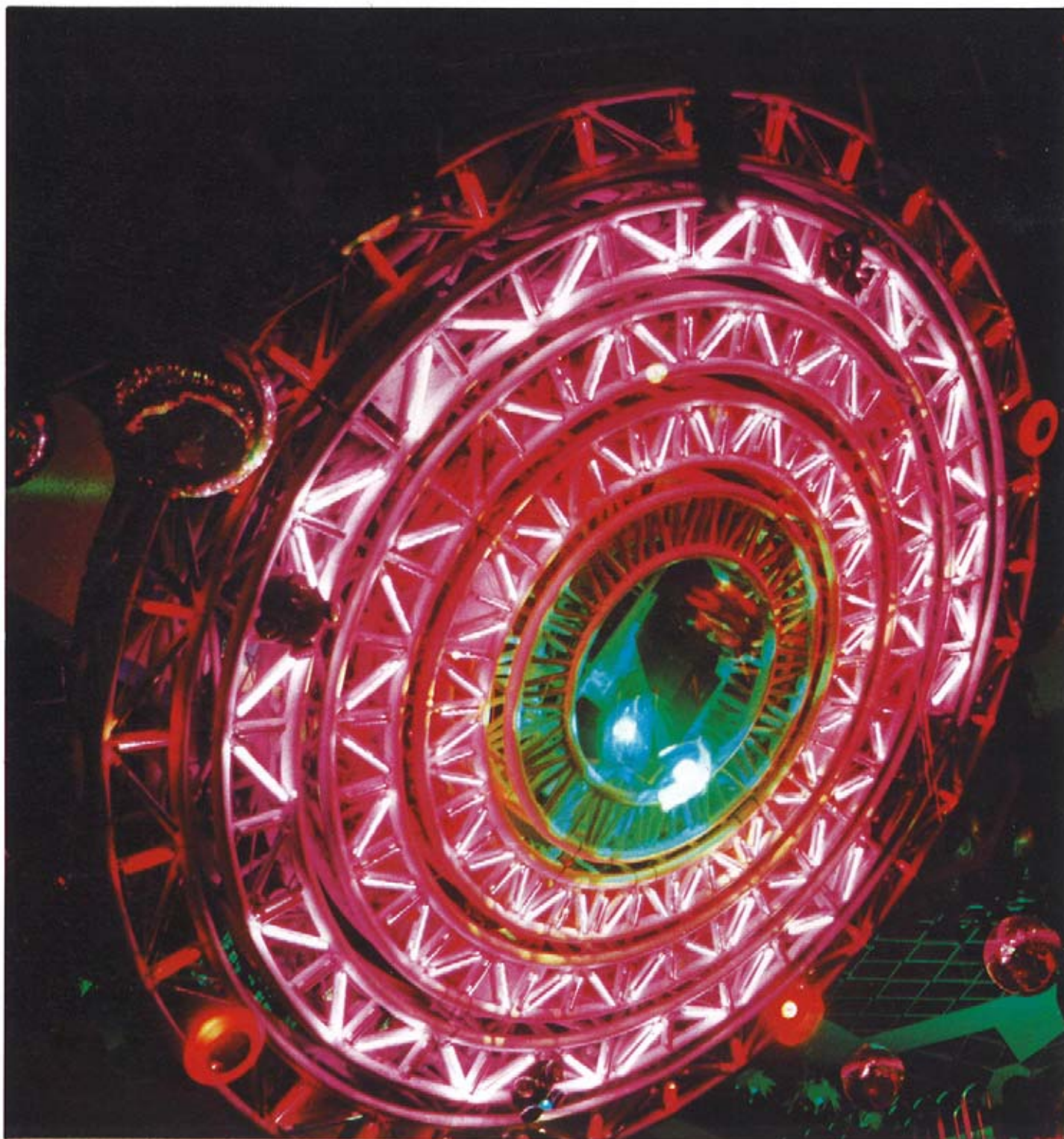
# Terry's Wheel

**"The most gyroscopic lighting rig in the world" — by Natasha Fielding**

Engineering experts took one look at Terry Mason's plans to build a moveable lighting rig and gave it the thumbs down. "It couldn't possibly work," they told him, "because the weight and size would put too much stress on the building." And so half-a-dozen companies rejected the idea.

But 33-year-old Mason, who admitted "I'm a qualified nothing", disagreed with the experts and his decision to go ahead with his "dream project", has resulted in a fairy-tale discotheque, featuring what is described as "probably the world's first-ever gyroscopic lighting rig".

More about Terry Mason's "wheel" later. Meanwhile, the £1 million recently-opened Cinder's nightspot at Willenhall in the West Midlands is the focus of attention. The venue took fifteen months to build. Initially Terry, whose family own a string of businesses in the area, sold his timber yard and set up



Terry Mason's 4-ton aluminium gyroscopic lighting rig.



The lighting rig makes its appearance over the dance floor.



Cinders, Willenhall—mirrors and holograms in abundance.

Phoenix Leisure Company. Then work began on building a night club around his lighting rig idea.

Everything has been planned, designed and installed by Phoenix. Terry explained: "When the experts rejected my plans for the lighting rig I was determined to prove them wrong. Really it was my love of night life that spurred me on.

"It was a very hectic time for everybody involved with the building of Cinders and six weeks prior to opening, we worked round the clock, bedding down in sleeping bags for a couple of hours each night, in order to catch the Christmas trade. We opened our doors on December 21st, and for me it was a dream come true."

The 875-capacity night club has four bars—The Pumpkin, Three Mice, Slipper and Cocktail—a fast food restaurant, function room and three matrix-lit dance floors. An evening at Cinder's discotheque takes you along a journey into a fairyland of twinkling mirrors, velvet-lined walls, and a breathtaking display of lights.

Visitors entering the midnight blue velveted reception area pass through a mirror-lined tunnel and arrive in the main lounge and dance area which has a 30-foot mirrored wall with strobe lighting behind. Suspended above the dancers is the £100,000, 360-degree, gyroscopic, matrix-operated lighting rig, that **Lighting and Sound International** has christened "Terry's Wheel".

It's made of aluminium, holds 400 zip strips, and has one Jedi and two Gemini central effects. There are around 1000 light fittings, and 3½ miles of electrical wiring is installed in the 4-ton rig, which has been designed to travel up and down the dance floor, rotating as it turns full circle.

"On the opening night it took a few dancers by surprise," said Terry. "When the rig started to move, they actually jumped off the dance floor. But they've settled down now that they've got used to it.

"As far as I'm aware, there's no other rig like it in the world. It was my conception, and I've taken steps to ensure it doesn't get copied," he added. This amazing construction was put together by one of the companies in the group.

Lighting control is a Zero 88 Mercury coupled to five computers—all programmed by another company in the Phoenix group. There are 4 specially-built 5kw Zero 88 Rackmasters to handle the 20k load, and the unit is driven through multiple slip rings. The computers are actually installed on the rig itself. A spokesman for Zero 88 called it "a really amazing piece of heavy engineering".

The stairways and ceilings are lit by array of small lights, and a dazzling array of mirrors surround the bars, walls and pillars, many having hologram designs. There are at least 3000 individual lights and 10,000 mirrors installed in the club, and it took four people 16 weeks to cut and fit them.

Even Cinderella's pumpkin has not been forgotten. It's situated on the balcony lounge overlooking the ground floor dance area, and forms the disc jockey's base and houses the main control centre.

Sound installation was by ACT of Guildford, and details were included in the General News section of last month's **L+S.I.**



A view from the balcony as the rig is set in motion.



The rig moves down—a picture taken from the control area on the balcony lounge.

The only variation to that list is that the Citronic turntables were stolen, and had to be replaced. Two LAD 828P's now do that work.

Leading off the balcony lounge is a function room which is a cocktail and wine bar with a small matrix-lit dance floor. The burgundy archways are lit by dozens of microscopic lights. Another Zero 88 Mercury controls the lighting in this area, and sound can either be taken from the main centre, or operated separately to suit.

Now that his "dream project" has come to fruition I asked Terry Mason whether he would fancy building another? "I've already got plans for an even more spectacular

idea—but that's in the future.

"At the moment I'm very much involved in the running of Cinders. I'm in complete control here. I'm manager, the licensee, the electrician; everything rolled into one. That way, if anything goes wrong, I've only got myself to blame.

"My aim is to attract a high-class clientele and everybody, staff and customers alike, have to comply to my standards," he said.

The only exception to Cinderella's fairy tale is the fact that Cinders can go to the ball four nights a week. And they don't have to leave before the stroke of midnight. Prince Charming, in the form of Terry Mason has extended the hour to 2 a.m.

# Mirrors—The New Technology for Discotheques?

**John Offord talks to Manhattan's Bill Allen.**

"Since the days of the ballrooms, when early forms of light projection were directed at a new and revolutionary idea called the Mirror Ball, mirrors have always had a role to play in club design. However, until very recently, mirrors were restricted for use only as decor items, or perhaps as mood lighting for slow records. Since the development in the middle 70's of moving lights as disco effects, a new breed of lighting design has taken place. It started with a single par 36 lamp turning, moved on to multiple lamps turning, reached its peak with over 80 lights turning, then moved on to two-directional movement, three-directional movement, and now as many movements as manufacturers can design into the units!"

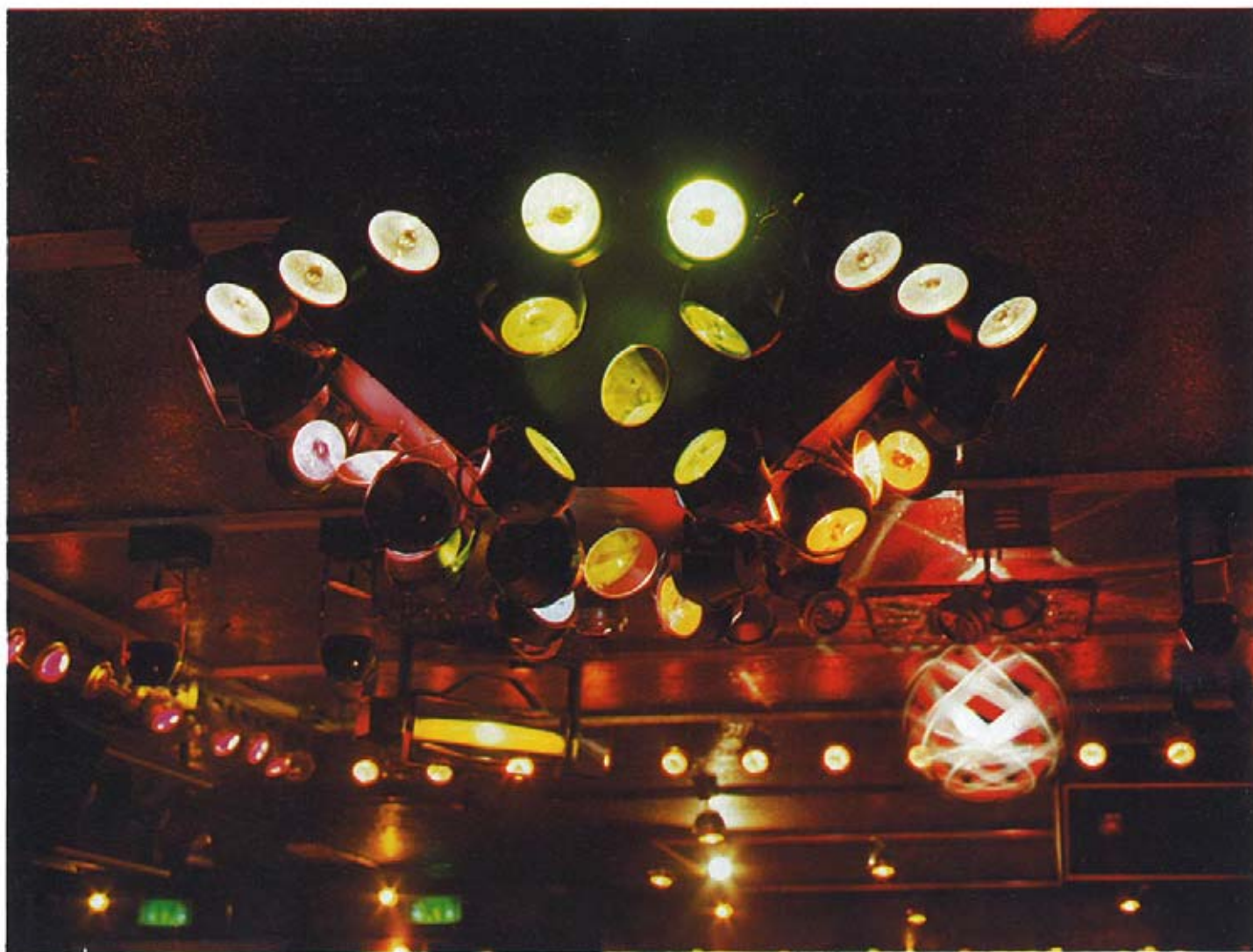
So says Bill Allen, partner in Manhattan Sound and Light, a company whose name is now closely associated with the introduction of mirror techniques used to overcome the problems created by the use of heavy moving parts and multitudinous power commutators. The problems were ones of reliability, and as he comments: "high tech started to become synonymous with service headaches".

"The first development came from America, with a unit called the Isohedron, which was a derivative of the mirror ball, using large triangular facets to rotate a larger beam around the room. In 1980 Manhattan launched the Multibeam, which featured a flying saucer shaped unit, with 10 angled mirrors around its circumference, which rotated the complete beam of any quantity of par 36 lamps directed at it. This was the first attempt to use mirror balls to replace the conventional movement effect of the Helicopter. The original aim of this launch was to increase reliability but as a by-product, by rotating only the beams, and having static lamps sources, multi-channel wiring could be added. This created the first unit on the market with the rotating beams changing colour to the music as the unit rotated. We also adopted this policy on scanners, and a smaller version of the Multibeam.

"As the 80's proceeded more and more large effects with multi-dimensional movement were introduced, and these were labelled as "high tech", and they rapidly took the place of mirrored units. However, history repeated itself, and customers started to find servicing problems, leading them to look more seriously at the original principles of using mirrors to rotate beams. Optikinetics launched a low voltage single



Supertrilus on a hydraulic ram at Benjy's Night Club in the Mile End Road, London.



The "expanded" Supertrilus at Calebs, Eastbourne.

head spinner which had the added feature of being able to move in time with the music. At the same time, a company whose name was derived from their new product, launched the Pan Can. This unit was originally launched as a remote follow spot, using a joy stick to control pan and tilt movements of the mirror, allowing the beam to be directed where required. This unit has been further expanded into multi-head units, with computer control and colour change facilities opening its entry into the club lighting world. A new servo system has since been added making a more budget priced system which runs off any conventional lighting desk."

1984 saw Manhattan launch a full production line of new mirrored effects, which included single-head, dual-head, and 4-headed units, culminating in a mirrored centre piece of 20 lights onto 5 different mirrors. "All the units feature mains motor throughout and all have the ability to move to the music," explained Bill Allen. This was a new innovation, as it allowed the units to be run off any conventional inductive load sound to light controller. The company produces two special single channel or 10 channel sound to light units, which have the added feature of being able to select whether the beams move to the music, rotate and stop to the music, or just spin like a conventional helicopter ef-

fect. From their original concept, of the Multibeam which replaced an existing effect, they have now introduced units whose beam patterns and movements can **only** be produced with the use of mirrors, ie the **Aerobic Scanner**, the **Trilus**, and the **Supertrilus**.

"Mirrored effects are now being specified in clubs, to fit in with conventional "high tech" fittings, providing that mirrors have now come to be regarded as not just replacements for conventional lighting, but also have a positive role to play in their own right. This has been amplified by the recent introduction of the **Piovra** by Coemar of Italy. The unit features 16 high powered beams created by a central discharge lamp, directed through lenses which also have the ability to change colour, aimed at 16 round mirrors that move to the music. With a price tag of £4,500 this unit could not be mistaken for anything but a new and innovative lighting effect which ranks with any conventional "High Tech" effect."

The benefits of mirrors can also be found in the freedom it gives designers to add extra motion. As most of the mirrored effects available can work at any angle, these units are the ideal tool for any form of moving rig, be it up and down, or tilting from side to side. Large conventional units are normally designed for use in a fixed position only, any

extra movement added tends to harm the motors as they were not designed for this application.

Examples of this come from Manhattan where their Supertrilus has been used on a hydraulic ram descending through a ceiling on cue, and another installation where a Supertrilus travels around the club on a monorail. The largest test of all is Calebs in Eastbourne in Sussex, where a standard Supertrilus had its sides expanded upwards and outwards to form a large octagon, with a ring of pinspots added at the top of the unit, making a twenty-lamp curtain. The whole unit rotates. In all cases to date there has been a 100% reliability, and the motors have survived the added motion, even with the added dimension of beams that dance to the music, according to Bill Allen.

Spain, France and America have also introduced units featuring mirrors, although in each case it is only to rotate a single beam. However, innovation into this new field is developing in leaps and bounds. Manhattan will be launching six new units in the near future, and it is expected that they won't be alone in further mirror developments.

"It is now up to the lighting designers to take the newly available units, and add the creativity of use which has become synonymous with the new lighting rigs going into clubs," was Bill Allen's final word.

# ON TOUR

Keith Dale

The lighting design for Barry Manilow's recent Copacabana Tour and in particular, lighting designer Billy Heaslip provided an interesting topic for Catriona Forcer to cover for this month's **On Tour** column. The design included a substantial amount of projection work combined with the dynamic effects of moving and colour changing instruments. The technical details of the equipment used is contained elsewhere in this article along with some interesting information provided by Theatre Projects including the use of a Connexions multiplexed control system over a distance of one kilometre.

## Catriona Forcer talks to Lighting Designer Billy Heaslip

An embarrassing experience was narrowly avoided when I first met Billy Heaslip because I thought, for a moment, that he was Barry Manilow. Luckily I realised my mistake before I made a blunder!

A gruelling sixteen month tour was coming to an end with three nights at Wembley and one at Birmingham. I asked Billy Heaslip about his work as a lighting designer—particularly with Barry Manilow.

My interest in lighting design began in 1971 when I got a job in a small night club in Denver, Colorado. A year later I graduated to a better club, working for people like Helen Reddy, Dizzy Gillespie and Mike Davies. Later on I moved to Los Angeles where I got involved with The Comedy Team who were rather like Cheech and Chong. I went on the road with them for two and a half years doing the lighting, sound and road management. After that I toured with another comedian called Spike Jones Jr.

Eventually I ended up working for the Roxie Club in LA until I got my first big world tour working for Frankie Valli and The Four Seasons. I really enjoyed it and, for the first time, I began to seriously consider making a career as a lighting designer. In between touring I would always go back to working in the clubs of LA like The Roxie and The Troubadour.

I then managed Cheech and Chong for two years but I decided that I wasn't a manager and I got back into lighting. I went to work for a lighting company in Baltimore called Maryland Sound and Lighting and for one year did all the setting up of lights as well as control the board for bands like The Jacksons and The Ian Hunter Band. I gained valuable experience there, but eventually I returned to LA to concentrate on designing. I've worked with bands like George Benson, Stevie Wonder and Donna Summer.



Billy Heaslip.

### What is Barry Manilow like to work for?

Well he's my biggest account, he gives me the largest budget and the most toys—but he is also the most demanding. He is very meticulous and he knows just what he wants.

Barry's show is very carefully staged and choreographed. It's rather like a Broadway show where every movement is thoroughly planned. It is very professional and none of the other acts I have worked for have shown as much interest in the lighting as Barry does. For rehearsals he hires a large sound stage in LA and has the entire set up for about one month. Barry will sit with me at the console, while the assistant choreographer does his

movements on the stage, and he'll want to see how all his movements are lit.

### Do you have a particular style or image?

I'm known for working with middle of the road acts rather than rock and roll production shows—what I call flash-bump-boogie shows! I like sets, sceneries, and subtle lighting like Vegas-type shows.

I know that my lights have a certain look, but I can't quite say what. The Pointer Sisters recently did a show in Paris and a lot of people thought that I had done the lights but I had not—so maybe you can read something into that!



Above and below: Barry Manilow at Wembley Arena, lighting Billy Heaslip.





## What, if anything, annoys you in lighting design?

Overkill makes me mad. People aren't supposed to notice good lighting as it should enhance a show—not take it over. When I went to see Genesis, two or three years ago in LA, they had 184 Vari-Lites and the effects were spectacular. But it was overkill every second—constant flash-bump-boogie!

## Have you seen any lighting design recently which has impressed you?

The new Lionel Richie video for 'Say You, Say Me' is fabulous but I wouldn't want to work in video. Barry brings me in to do the lights on all his television work. The other day we did the Terry Wogan Show and on Wednesday we're doing the Joan Rivers show 'Can We Talk?'

## Is there anybody that you would like to work for?

I would like to do Dire Straits but I don't know why. Some day I would love to light a big Broadway show like 'A Chorus Line'.

## What are your plans for the future?

This is my last tour, and when it finishes I will be going to work for a company called Imero Fiorentino Associates who are based in New York and Los Angeles. They've been in the business for twenty-five years and they are strictly a design company. They do things like television game shows, car conventions, commercials, videos, concerts—and even The Academy Awards.

I'm going to be working with a fellow called Joe Leyton who stages shows for the company. I'm going to be developing their concert division, but I won't be travelling anymore.

## Will you miss touring?

No not at all. The only reason I'm with Barry now is that he's like my 'puppy act'. It takes a long time for someone to get into trust with Barry so it was sort of necessary for me to be with him. My wife travels everywhere with me and on this tour she's looking after the wardrobe.

Last year I also designed the lights for several other acts, like Tammy Wynette, which I put into the computer board and turned over to someone else.

## What's your first project for Imero Fiorentino going to be?

I'm going to design the lights for Jeffery Osborne. I'll design the show, go to rehearsals, go on the road for about one week with them, and then someone else will travel with the show. So instead of designing a couple of shows a year I can design seven or eight.

# Equipment on Tour

## Barry Manilow

Copacabana Tour 1985-1986  
Morpheus Lighting Inc. (U.S.A.)  
Tel: (408) 295 4866.  
Lighting Design: Billy Heaslip for The Stig Edgren Group, Hollywood, California. Tel: (213) 856 9050.  
Additional equipment for the U.K. provided by: Lighting and Sound Design.  
Tel: 021 632 5663.

### Lamps/Trussing:

29 8' sections square span truss.  
c/w 250 Par 64's, 48 A.C. lamps and 61 assorted Leko's.

### Effects:

Morpheus equipment.  
9 Panaspots c/w Klieg Performer 2.  
4 R.D.S. Projectors c/w turret slides.  
1 16mm Elmo rear projector.  
1 20' x 30' rear projection screen.  
2 Rosco smoke machines.  
2 Wind Fans.  
2 36" Mirror Balls.  
40 Morpheus Systems 90 Color Rangers. Various lengths of Diamond (Tivoli) Lights.

### Light and Sound Design equipment:

16 L.S.D. Colour Mags.

### Desk (Control Board):

1 Celco Series 2 Gold.  
1 Celco Series 2 Thirty.

### Dimmers:

2 72 channel Avolites Dimming Systems (240 volts).  
1 48 channel Avolites Dimming System (110 volts).

### Spots:

6 Supertroupers (f.o.h.)  
2 Short throw Lycian Superarcs.

### Crew:

Morpheus:  
Crew Chief: David Chance.  
Electrician: Felicia Tyler.  
Electrician: Tom Roberts.  
Panaspot Operator: Mike Hall.

### Light and Sound Design:

Steve 'Dak' Harris.  
Kevin Bryce.  
Jon Holt.  
Earl Wood.

## 'The Pajama Game'

Theatre Projects.  
Tel: 01 622 4272.  
Lighting Design: Chris Ellis, Haymarket Theatre, Leicester.

### Lamps:

94 Par 64's.  
140 Leko's.  
22 C.C.T. Silhouettes.  
7 C.C.T. Minuettes.  
7 R&V Beamlights.  
3 AC1001's.  
2 Patt. 252's.  
4 Patt. 243's.  
2 Patt. 23's.

### Desk (Control Board):

1 96 way Klieg Performer 2.

### Dimmers:

1 60 channel Avolites Dimming System.  
2 24 channel Green Ginger Dimmer Racks.

## 'Oh Calcutta'

European Tour.  
Theatre Projects.  
Tel: 01 622 4272.  
Lighting Design: Mark Henderson/Sandie McRobbie.  
Norsk Concertdirection.

### Trussing:

188' Telestage.

### Lamps:

90 Silhouette 30's.  
20 Silhouette 30 Axials.  
20 Par 64's.  
16 Par 36 A.C.'s.  
6 Patt. 743's.  
6 Berkey 6" Fresnels.  
5 Patt. 243's.  
6 Patt. 23's.

### Desk (Control Board):

1 Celco Series 2 Sixty.  
1 Celco Series 2 Thirty.

### Dimmers:

1 60 way Avolites Dimming System.  
1 36 way Avolites Dimming System.

## Lewis's Fashion Show

Royal Albert Hall.  
Theatre Projects.  
Tel: 01-622 4272.  
Lighting Design: Sandie McRobbie.

### Trussing:

456' Telestage Truss.

### Lamps:

200 Par 64's.  
48 Par 64 A.C.'s.  
48 Leko's.  
24 Silhouette 30's.  
4 ADB 5kW.  
16 Berkey 6" Fresnels.  
15 Macspots.

### Effects:

2 Londoner Foggers.

### Desk (Control Board):

1 Celco Series 2 Sixty.  
1 Celco Series 2 Thirty.

### Dimmers:

2 Avolites 72 channel Dimming Systems.

### Spots:

4 Long Throw Color Arcs.

## Royal Oman Police Tattoo

Maidan Al Fateh Stadium,  
Muscat, Oman.  
Theatre Projects.  
Tel: 01-622 4272.  
Lighting Design: Benny Ball.

### Lamps:

944 Par 64's.  
45 Leko's.  
14 Verti Major's.  
12 ET 1500.  
12 Patt. 60's.  
2 Patt. 137's.  
48 Par 64 A.C.'s.

### Effects:

54 KK Wheels.  
24 Flame Flickers.

### Desk (Control Board):

2 200 channel Klieg's.  
2 160 channel matrix boards.  
1 200 channel matrix board.

### Dimmers:

4 72 channel Avolites Dimming Systems.  
2 60 channel Avolites Dimming Systems.  
1 10 x 5kW STM Rack.

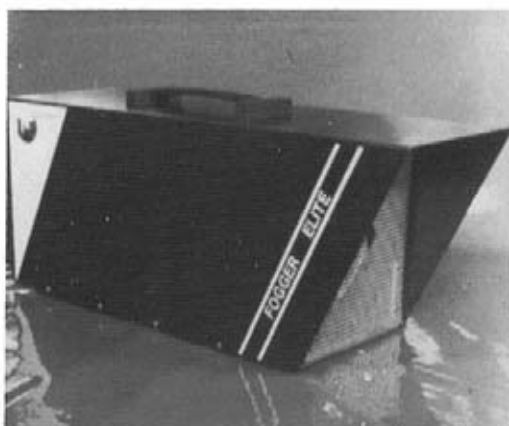
### Spots:

6 Long Throw Color Arcs.

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# Asolo Center

All-in-one venue for television and live performance

Actor Burt Reynolds has personally pledged \$1 million dollars towards the development of the Asolo Center/The Theatre Inc. \$10 million dollar theatre and education complex to be built in Sarasota, Florida.

The Asolo Center will have the Asolo State Theatre, now in its 26th year of operation, The Theatre Inc.—an institute for professional theatre and film training, and the Charles MacArthur Centre for American Theatre with its library and theatre memorabilia. The facilities will include a 900-seat theatre designed specifically for television recording of performances, a 450-seat theatre to replace the existing Asolo Theatre, together with public spaces, library and other technical areas.

The idea was conceived by Burt Reynolds with Asolo State Theatre executive director Richard Fallon, and the theatre and equipment consultants will be Theatre Projects Consultants of London and New York. Richard Pilbrow will lead a team which includes the men who negotiated the contract. They will advise and collaborate with the architects R.F. McCann and Company of Seattle on stage and auditorium design, space planning, lighting and rigging equipment needs and numerous other special requirements for the complex.

"The incorporation of state of the art television technology into the 900-seat theatre presents a particular challenge," Richard Pilbrow told *L+SI*. "The aim is to produce a theatre which is not only ideal for live audiences but can allow unobtrusive video and television recording of performances. This is an extremely exciting project and Theatre Projects are delighted to have been invited to participate."

Architect Richard McCann also commented on the joint use of the venue: "With its television capability in combination with the live theatre, it has a real possibility for opening a new approach to the economics and subsidy of performing arts in America, and can take theatre into the next century."



David Staples, London member of the Asolo Center consultancy team.



The 18th century Italian Opera House at Sarasota will be retained within the new Asolo Center.

The Asolo Center will make possible the creation and production of new material for American theatre, and by the same token it provides an opportunity for playwrights and directors to become known and to try out their ideas."

Local associate architect will be Stuart H. Barger who will serve as the principal in charge, acting as the liaison between the design team and local government agencies. His company is already involved with other arts projects in Sarasota and it is his judgement that the arrival of the new Asolo Center will do big things for the area. "No other city of its size has the quantity and range of theatres that Sarasota has. This is a very supportive community, and theatre breeds theatre. What it will do for the theatre community in terms of industry is phenomenal," he said.

Currently Florida ranks third in the nation, behind California and New York, in the number of movies produced in the State. In

the past five years, according to the records, the film and video industry have produced films in Florida to the total value of \$366,272,000.

The Florida State University's graduate conservatory will continue in co-operation with the complex, and the new facility will provide high calibre training to aspiring actors, technicians and other trades allied with theatre, film and television production. The Asolo will continue its professional theatrical presentations in repertory, while the Theatre Inc. will feature celebrity performers in premier theatrical presentations.

The budget for design and construction of the facility is being met with a Florida Legislature grant of 5.5 million dollars and local citizens have launched a campaign to raise an additional 3.5 million dollars to make the total \$10 million after allowing for Burt Reynolds' \$1 million pledge. To date local fund raising efforts have produced \$920,000.

# Second Donmar Reference Manual

*Book  
Review*

In this age of rapid access to information at the press of a button or a flick through a directory, and with the ever increasing demand for knowledge from students, teachers, LX crews and other end users, it is inevitable that in this business of communication there should be a read-made reference booklet.

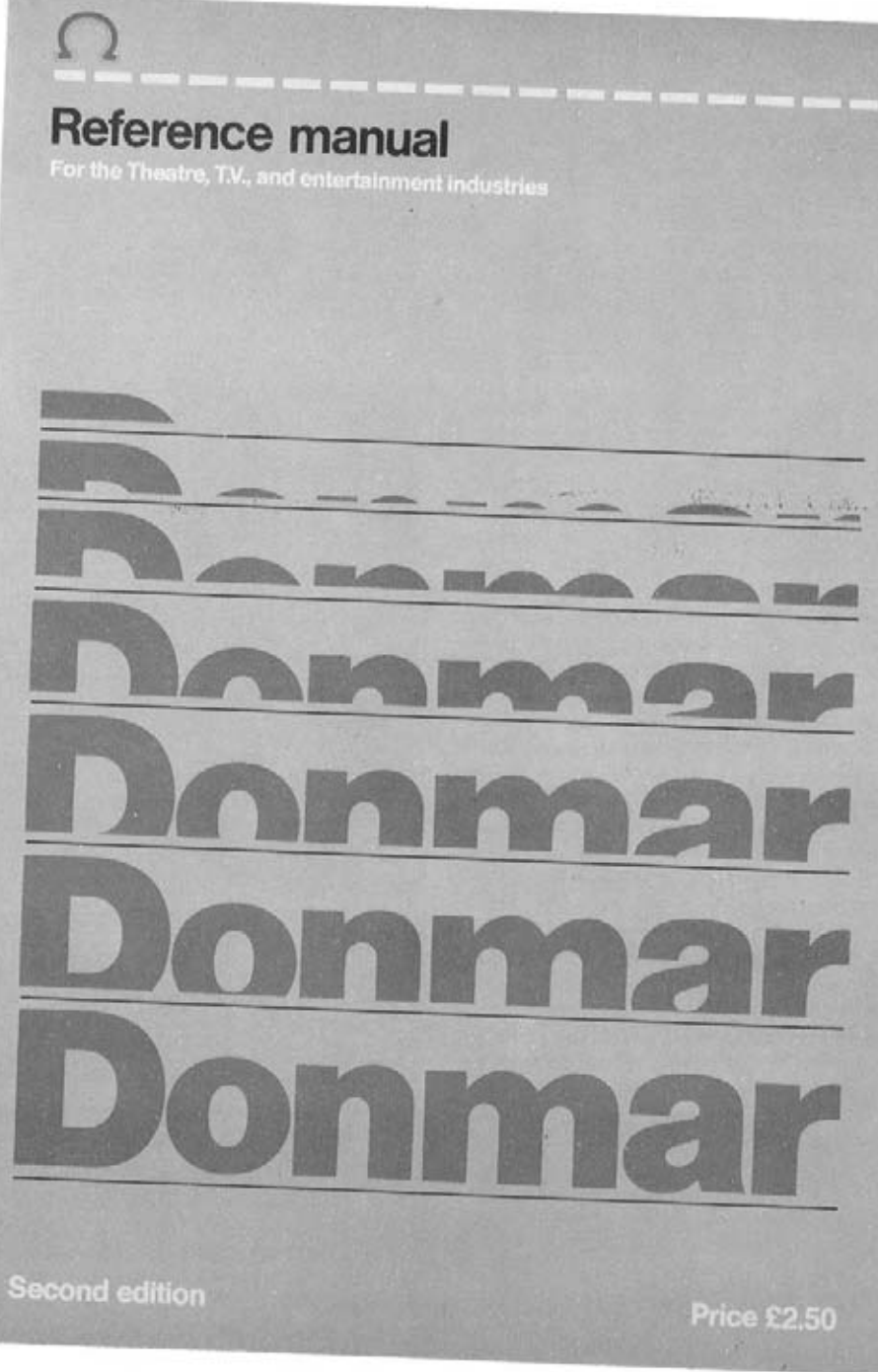
At a relatively quiet time for new things to happen in the world of stage lighting, Donmar is launching in February a second and enlarged 1986 edition of the ABTT 'Product of the Year' (1984) award-winning Reference Manual. The Donmar 'Reference Manual'—with A4 sized pages, comes in all its glory in a super blue coloured binder priced at £2.50, which includes a separate Price List booklet.

The Manual has a new information section containing a 4-page introduction to stage lighting—'How to Light a Stage'—expertly written by Francis Reid in his usual humorous style of clarity and simplicity, and a new section on drapes, curtains, and materials.

In addition to the sections in the first edition which included in the lighting category lamps, cables, fuses, connectors, filters, and gobos, there is an enlarged range of plugs and sockets and a comparable colour reference guide to the American colour filter range. The stage effects section includes pyrotechnics, smoke guns, and special FX. The stage machinery section has an additional area covering a compilation of DIY scenery kits and wooden rostra with an enlarged ironmongery section to add to the existing range which includes curtain tracks, winches, pulleys, scenery fixings, ropes and chains, tubes and fixings, and associated hardware. Other equipment includes A.V. stands, together with peripheral accessories commonly used in rigging, and tapes, paints, flame retardents, torches, and batteries, and is concluded by a round-up of publications currently available and written by our own eminent British craftsmen.

The Reference Manual is perhaps the only concise source of pictorial and dimensionally line drawn stage technical equipment. Each product is illustrated either by a photograph or pictorially, and is presented with a brief description of what an item is, and suggestions on what it should be used for—with the uninitiated in mind. Any item may be found by a fast multi-accessible reference look-up through either the Contents page, alphabetically by a 'product term' through the Index, or simply by flicking through the separately coloured titled pages to find their related sub-headings. In addition, every item can be identified by the unique 7 digit product identity code (P.I.C.).

General manager Hugh Leslie proudly claims an ever-increasing demand for the booklet, which now has an established mailing list of over 3000 growing by the day. It is



posted out to clients and prospective clients both in the UK and overseas, and is essential reading for students at several leading drama schools.

It was conceived as an idea to bring other stage crafts up to an acceptable profile, and to the same level as that attained by stage lighting. To be able to refer to ancillary technical details such as weights and sizes from one source, Donmar felt there was very little data readily available to the end user in these other areas of less glamorous theatrical equipment.

The Reference Guide also has an im-

mediate map location illustrating 'how to get there' details such as local Tube stations, main roads (and one way streets) to ensure you arrive in the right direction and at the correct entrance!

Hugh Leslie, who heads Donmar's Sales and Hire operation from the heart of London's theatre land in Covent Garden, welcomes readers of *L+S* to drop in and see them, and inspect the Reference Manual at first hand.

Donmar are situated at 22 Shorts Gardens, London WC2.

Julian Williams

## New Fog Machine from Rosco

Rosco have introduced a new fog machine to supplement their existing range. The PRO 1000 is a miniaturised version of the PRO 3000, Rosco's super high output generator introduced last year.

The reduced size has been achieved by eliminating the internal fluid reservoir and connecting an intake hose to an external fog fluid container. The external tank gives the added advantage that continuous fog can be generated indefinitely, and as with the other Rosco fog machines, the PRO 1000 comes complete with a remote control station.

The PRO 1000 is designed for use with the Academy Award winning Rosco fluid, which is now available in a scented range for club work.

A free leaflet on the complete range of Rosco fog machines is available from Roscolab Limited, 69-71 Upper Ground, London SE1 9PQ, telephone 01-633 9220.



The new PRO 1000 fog machine from Roscolab Limited.

## New Input Modules for Series 200B

Two new input modules have been developed for Soundcraft's Series 200B mixing console which will increase the flexibility of the console even further, broadening the scope of application for this tidy, compact mixer. The introduction of the Series 200B and the addition of these new module options has led to the withdrawal from production of the Series 400B mixing console. The 200B now offers comparable facilities, but at a considerably lower price, say Soundcraft.

For the operator who requires more control over his equalisation than that offered on the standard input module, a module with two sweepable mid-bands in the four band equaliser is now available.

The circuitry is derived from the equalisers available on Soundcraft's larger consoles. Still with a full 15dB of cut and boost, the lo-mid sweeps

from 150Hz - 2.4kHz, with the hi-mid sweep covering a range of 600Hz - 10kHz. There is also a Hi pass filter operating at 100Hz with a 12dB per octave slope. This module is fully compatible with the standard input and may directly substitute it.

Where stereo sources are required, a stereo line input module is also available. This makes the Series 200B particularly compatible with many areas of broadcast application and an ideal compact sub-mixer unit in larger systems.

The stereo module features an electronically balanced line level input, with an input impedance of 10k Ohm. High and low frequency equalisation may be switched in and out of the signal path by use of the "EQ" button, and a high pass filter with a slope of 12dB per octave at 120Hz is also incorporated.

Four mono auxiliary sends are provided, selectable either Pre or Post fade by push-on links on the PCB. The channel can be routed to any of the groups 1+2, 3+4 or mix L+R, but the pan is replaced by a balance control giving a +3dB range to the position of the stereo image.

The remainder of the controls are identical to the standard input module, but in addition an isolated external control is available from the ON switch for remote starts etc. The stereo module may be fitted in any position, however, a special rear connector panel is supplied if channel insertions are required.

Further details available from Soundcraft Electronics Ltd., Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, Herts. WD6 5PZ, telephone: 01-207 5050.



## Two additions to Jivelight Range

Jivelight have announced the addition of two new lighting effects. The G360 x 2 twin headed rotor twist (left) with a separate scan and pan head and the G90-2 Scan Pan (right) a single Par 36 scanner with a separate scan and pan head. Both units have two motors, and full details are available from Jivelight Limited at 16-18 Greyhound Road, London W6 8NX telephone 01-381 0868.

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## Additions to Supergel Range

Smooth, even lighting of a backcloth or cyclorama is often difficult to achieve with conventional stage lighting, especially when the units are placed too close to the eye, or too far apart, giving a 'scalped' effect. Rosco's new series of Supergel filters overcome this problem by combining Rosco Tough Silk with a colour into one filter.

Tough Silk has the effect of spreading the light either laterally or vertically to smooth out the light distribution, thus minimising the scallop effect, say Rosco. The four filters comprise three specially selected high transmission primaries, Red, Blue and Green, plus an Amber. All are part of the Supergel range, which are designed to operate on hot lights. With increasing international concern about the potential fire hazard of using polyester filters in places of entertainment, Supergel, a polycarbonate body-coloured filter, is probably the only filter in the world to comply with the latest and toughest flame test requirements of public authorities.

Further technical details are available from Roscolab Limited, 69-71 Upper Ground, London SE1 9PQ, telephone: 01-633 9220.

## Decor Loudspeaker Grille from Fane

Fane Acoustics, pioneers of the steel mesh protective grille now widely used throughout the world, have introduced some colourful and exciting variations to their grille range. A white grille has been added to the black and silver options already available and the edge trims are now available in black. Grille sizes range from 5" to 18" diameter and any combination of size, grille colour or edge trim colour is possible. The coloured edge trims are luminescent and emit a striking colourful glow under ultra-violet light. The new grilles are ideal for club and discotheque owners wishing to match equipment to interior decor and for mobiles seeking to add colour and interest to normally purely functional speaker cabinets. Equipment manufacturers can now select a grille trim to match their house or badge colour.

The new grilles are available as standard in black, white, or silver and with black edge trim fitted. The new coloured edge trims are available separately, in individual packs, and quickly and easily self-fitted. Grilles with coloured edge trims as an original fitment are available to original equipment manufacturers and large quantity trade buyers only.

Further details from Fane Acoustics Limited, 286 Bradford Road, Batley, West Yorkshire WF17 5PW telephone: (0924) 476431.

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## "Revolutionary" new Controller from Multiform

Multiform have just released the LIGHT-J, a "revolutionary" new type of lighting controller that can automate the control of all the electronic and motorised lighting effects that make up a complete lighting rig. Once programmed, it will automatically provide a continuous light show of up to 4½ hours duration. The Light-J is an 8 channel low voltage controller with four separate 2000 step memory banks that can be programmed by the operator.

This unit can store any sequences desired using the front panel keyboard or external inputs. It can also be used for manual lighting control, providing latch and flash facilities. Programme security is maintained by a key switch, and a rechargeable battery ensures data retention when the unit is not in use. The programme can be run in automatic or audio-triggered mode, and the unit includes facilities for record and playback of music and cue tones on tape for synchronised sound and light presentations.

For larger installations, an output port allows the connection of additional 8 channel expansion packs (LJC802/L). A powered version is also available with 8 zero voltage switched outputs rated at 5A per channel to drive lighting or motors directly. This unit can also be used for 4 x 4 matrix displays, and is provided with remote disable inputs.

Multiform Lighting have also announced full availability of their new high powered strobe, the Multiflash 1000. Provided with all the normal facilities of speed control, internal or external triggering, and a lantern style suspension bracket, it offers in addition a delayed trigger output. This exciting new feature allows several strobes to be fired in sequence to produce the dynamic Whip-through effect, without the need for a separate



Two views of the Multiflash 1000 high powered strobe from Multiform.



controller. The Strobe uses a plug-in flash tube for easy replacement, and colour filters can be fitted in place of the perspex front plate.

Full details of both product ranges from Multiform Lighting, Bell Lane, Uckfield, East Sussex TN22 1QL, telephone: (0825) 3348.



The Light-J programmable lighting control unit from Multiform.

## New Polarising Cinegel Filter

Until recently polarising filters have been used solely on the camera lens to reduce glare from smooth reflective surfaces. Now Roscolab Limited have announced the introduction of a Linear Polarising Filter to supplement their Academy Award winning Cinegel light control range.

The large sheet size makes it possible to use on-light, allowing 'cross-polarisation' techniques to be

used in conjunction with a polariser on the lens. The Rosco Polarising Filter also reduces glare in colour photography, giving richer colour saturation.

The filters, which are formed from a special 006" copolymer base, which gives a more durable surface than conventional Triacetate, are available in 19" x 20" sheets or 19" x 5" rolls.

Further technical information and prices are available from Roscolab Limited, 69-71 Upper Ground, London SE1 9PQ, telephone: 01-633 9220.

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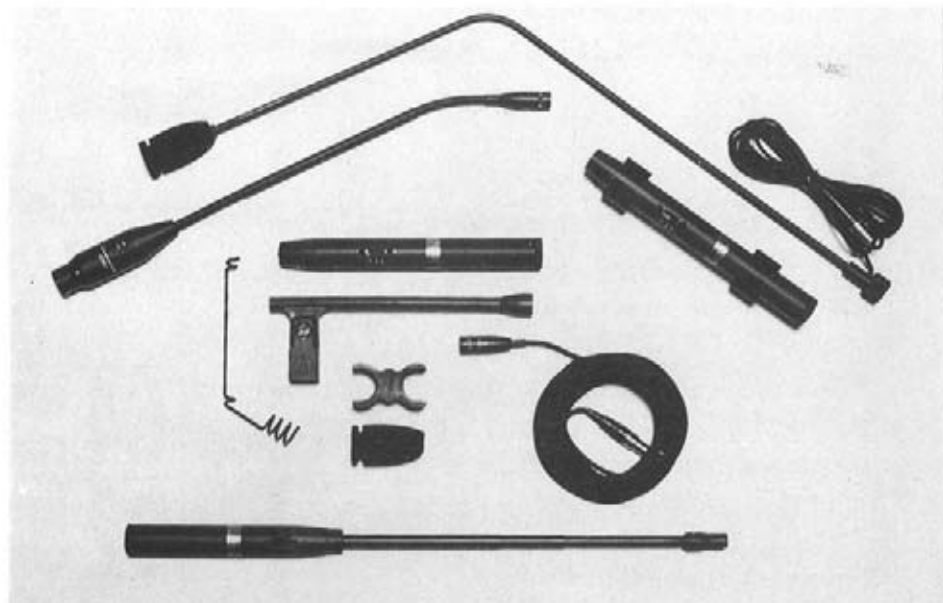
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176 Junction Road, London N19 5QQ.

LS1



The Audio Technica 800 series range.



The Audio Technica Unipoint range.

## Audilec to Distribute Audio Technica Mics

Audilec Distribution have announced that they have been appointed main UK distributors of Audio Technica sound reinforcement microphones, namely the established 800 series and the new Unipoint series.

They will be holding stocks of all the popular models, and technical advice is available on the suitability of various models for specific usage.

The Unipoint range includes five basic models. For the lectum, the AT837 is a double gooseneck which adjusts to any height or angle with just a touch. The AT857QH has similar dimensions but wider range, and plugs directly into any surface-mount XLR-type socket with no sag, slip or stand noise.

The AT855 fits onto a standard desk or floor stand. A single fixed bend puts the mic in the correct position. With its adjustable wire guide to set the angle, the AT853 is the overhead microphone for choir or orchestra use. It is extremely light in

weight and suspends from its own cable. Included in the AT853 kit is an adapter for a floor or desk stand.

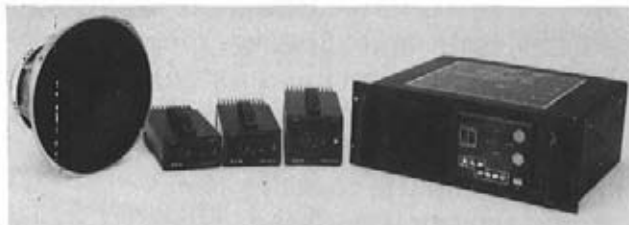
Finally the AT859 is a wand mic, cardioid in pattern and telescopic, making its use ideal for interview, talk shows, new conferences, etc.

Full details of both the Unipoint and 800 series are available from Audilec Distribution Limited, at Unit 16, Laurence Industrial Estate, Eastwoodbury Lane, Southend-on-Sea, Essex SS2 6RH telephone (0702) 511661.



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## Love of a Gold?

John Pope

Two years ago, when Celco launched the "Series 2" range of memory lighting desks, through innovative design and appreciation of user friendly technology, they established themselves firmly in the forefront of the market. Part of this success was due to market research into various areas of the entertainment industry.

By asking questions and listening to ideas and suggestions put forward from lighting designers and board operators Celco were able to produce a range of lighting desks which specifically responded to the demands of the industry.

Now, two years on, in response to further research into 'end user requirements', Celco are poised to reveal their flagship of the current range. The Series 2 Gold ninety-way lighting desk at the Frankfurt Music Fair.

At a recent preview, my attention was immediately drawn to the marked improvements in appearance that have been undertaken.

An impressively styled and quality finished wooden surround envelops the control area, which together with the new leather armrest and the re-design of the two pre-sets at an angle to the operator, in contrast to the flat level of its predecessor, lend the desk an overall feeling of sizeable quality.

Two wooden drawers, on smooth operating runners, are at each end, housing in one a built-in keyboard and in the other a Sony Pro Walkman for use, should you wish, for cassette back-up. Both can be individually switched to allow external units to be connected if so required. Although not fitted at the time of this review, there will be three clips in the cassette drawer to serve the desklights during travel, and both drawers will be able to be secured in the open-closed position. It would be a bonus if at the same time locks could be fitted to both drawers as, unlike the keyboard, the Sony Pro Walkman is not build-in and to install another desk light into the keyboard drawer, as when fully extended, it becomes difficult to use with just the desk lights.

A new, more light reflective matt black finish has been applied to the control areas, and in conjunction with new blue flash buttons fitted to the Memory Page and the sequence sections, combine to give an overall 'lighter' look to the desk. The option to revert to black, or change any other flash buttons to blue is available, along with many wood and leather finishes.

The remaining layout keeps faithfully to the original format of the Series 2 desks, of which there are only two minor features that I would wish to see changed. The first is that the Dead Blackout toggle switch is still black, when considering the various stages of panic that have been known to set in if it is in-



John Pope, lighting designer for the Tasco Group, examines the new Celco Series 2 Gold Board.

advertently knocked during a show, could at least be white like the flashbutton toggle switch, if not red! The second concerns the position of the markings by the sequence speed fader. If they could be moved to the operator's side, then it might do away with the sticky bits of tape that are necessary there if various speed sequences are required.

Technically, the facilities that the Gold presents the operator may not at first glance appear quite so radical as the cosmetic changes, but given time and familiarity they will come into their own. They include Dipless Crossfade, Page Freeze, Cue Lock, 16 more Sequences and C.L.E.A.R. — all of which are easily accessed through independent keys fitted to the keyboard. When

Dipless Crossfade is activated, all timed crossfades present in the desk will operate as dipless providing, of course, that there is at least one common channel present.

With 'Page Freeze' the operator no longer needs to load the X-Master to hold the output of the cue fader whilst changing from one page to another. Now, by leaving the same cue fader up he can change page and change all the other cue faders except for the cue fader that is still up, which will hold its output until it is brought back down to zero and change to the new page's memory.

The 'Cue Lock' feature, once keyed in, will allow groups of cue faders from 3 up to 29 to remain constant whilst changing through pages. This could be very useful when the operator wishes to continue particular memories throughout all the pages, as it is no longer necessary to programme these every time into each page.

The extra 16 sequences have been made available through dividing the 8 sequences into three sub-groups A, B, and C at the keyboard. They can now be programmed into any of the 30 cue faders, giving much better access to sequences during operation, but their speeds cannot be entered into each cue fader, and are still determined by the levels on the sequence speed fader which has been modified to increase its fastest output.

CONTROL C.L.E.A.R. when entered by depressing the control key and then entering the aforementioned letters will clear all the

memories and legends in the desk at that time. This does away with the time consuming operation of clearing the memories in the desk after its use on a previous job, but is perhaps, considering its possible 'doomsday' capabilities another strong reason for having those locks placed on the drawers.

All these extra facilities have been realised in part by extra memory capacity found in the new Central Processor Units that now run at 6 mhz, instead of the previous 4 mhz, a by-product of which is a much faster response time that can now be found in all the flash buttons.

When the angle of the two pre-sets was raised, the location of the control multicore connections were also moved, so that it is now possible to attach the multicores without having to lift the desk out of its flightcase, which now boasts the addition of six wheels to cope with the increase in size and weight. Three fans have been fitted for much cooler running and operating of the desk. The Master/Slave switch has been recessed, so it is no longer possible to knock it whilst lifting the flight case, and the Cassette Interface now features phono connections as well as D.I.N. I was disappointed though to note the absence of a mains XLR outlet, which when connected to a 4 way 13A plugboard would provide valuable mains outlets, one of which could be used to run a mains adaptor for the Sony Pro Walkman as it does not receive mains from the desk.

A bigger disappointment was the absence of a much needed faster memory transfer system, to replace the 18-minute cassette, but I'm informed that Celco are currently working on a new memory system which should allow information to be stored in fifteen seconds, and by having the benefit of no moving parts, should escape some of the problems that befall floppy disc systems under touring conditions. This should be available later this year, together with an Eagle Interface for specific use within the Audio Visual Industry, a Control Voltage Interface for use with dimming systems that run at different control voltages to the desk, and a Multi-channel interface for linking more than two boards together, or two ninety-way desks.

Since its launch two years ago, I have worked with Series 2 desks on almost every occasion, and have found them, by comparison, reliable and a real pleasure to work with particularly within the Audio Visual Industry where the Blind Programming, Preview and Output Limit facilities have proved invaluable. With the launch of the Series 2 Gold, Celco have moved forward into 1986 with a desk that combines new facilities and improvements with an imposing and expensive appearance that should re-open markets where up to now, 'The Biggest is Best' have long held reign, and in conjunction with the various interface systems available later in the year, can really strengthen their position.

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# SHOW PAGE



## ABTT Trade Show 86

Theatrical Trading Ltd., on behalf of the Association of British Theatre Technicians, will be presenting ABTT Trade Show 86, the eighth annual exhibition of equipment, services and supplies for the entertainment industry, at the Riverside Studios, Hammersmith, London W6, from 20-22 March 1986. Open Thursday 20 March 10.00-18.00, Friday 21 March 10.00-20.00, Saturday 22 March 10.00-15.00.

Over 50 manufacturers, suppliers and craftsmen will be showing their products, both new and well established, including lighting equipment and accessories of all kinds, sound and communication equipment, scenic paints and materials, scenery fittings and hardware, special effects, props and prop making, stage flooring, costume fabrics, make-up, drapes and tracks and much more.



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## Silver Jubilee Conference

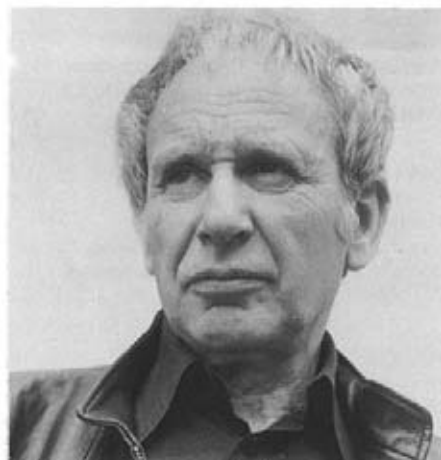
To mark the ABTT's twenty-fifth anniversary, Theatrical Trading Ltd. will also be presenting a Conference which will run concurrently with the first two days of the Trade Show. Under the title **Presentation 2010** this Conference will seek to examine likely technical developments for the entertainment industry over the next twenty-five years.

The past twenty-five years since the ABTT was founded have seen a revolution. The development of lighting and sound equipment, the availability of new materials, the application of mechanical engineering techniques, the building of new venues and the refurbishment of old have created change. The period has also seen the application of new techniques not only to traditional performance but to a host of other activities such as industrial theatre, sporting events, conferences, exhibitions and museum presentation. In an age where technological development appears to move at ever increasing speed, where will the techniques be by the year 2010? Ask the organisers.



Richard Pilbrow.

Conference sessions will be devoted to: Designing for Performance; Lighting the Show; Production Engineering; Industrial Presentation; Sound Developments; Safety and Constraints; Building for the Future; Chairman's Review. The event will be chaired by Richard Pilbrow and the speakers will include Ralph Koltai, David Hersey, Peter Kemp, Michael Wilson, Peter Mapp and Nicholas Thompson.



Ralph Koltai.



David Hersey.

The Conference will be held at Novotel, Hammersmith, London W6, from 13.00-17.30 on Thursday 20 March and from 9.45-17.30 on Friday 21 March. A display and demonstration of RITA (Real Time Ticketing and Administration) developed by British Telecom in association with the Royal Shakespeare Company will take place in an adjacent room.

Further details and application forms are available from: Mrs. Pam Lane, Barbican Centre, London EC2Y 8DS, tel: 01-434 3901.

Footnote: Theatrical Trading Ltd. is a wholly-owned subsidiary of the Association of British Theatre Technicians.

# Exhibition Diary

## Frankfurt Music Fair

February 15-19, 1986.  
Frankfurt Fair Centre **Frankfurt**, West Germany.  
UK Representatives: Collins and Endres,  
18 Golden Square, London W1R 3AG.  
Telephone: 01-734 0543.

## Sound 86

February 18-20, 1986.  
Novotel, **London**.  
Association of Sound & Communications  
Engineers, 4b High Street, Burnham, Slough  
SL7 7JH.  
Telephone: (06286) 67633.

## ABTT Trade Show

March 20-22, 1986.  
Riverside Studios, **London**.  
Association of British Theatre Technicians,  
4 Great Pulteney Street, London W1R 3DF.  
Telephone: 01-434 3901.

## USITT

March 19-21, 1986.  
The Hyatt, **Oakland**, California.  
David Hand, c/o The Stage Engineering  
International, Box 2699, Colorado Springs,  
CO 80901 USA.

## Pub, Club and Leisure Show

April 8-10, 1986.  
Olympia 2, **London**.  
Angex Ltd., Europa House, St. Matthew Street,  
London SW1P 2JT.  
Telephone: 01-222 9341.

## SIEL 86

April 12-16, 1986.  
Porte de Versailles, **Paris**.  
Bernard Becker Promotion,  
161 Boulevard Lefebvre, 75025, Paris.  
Telephone: (14) 533 74 50.

## NAB (National Association of Broadcasters)

April 13-16, 1986.  
**Dallas**.  
Director: L. Gayou.  
230 South Beniston, Suite 910/912, St. Louis,  
Missouri 63105.  
Telephone: (314) 721 7717.

## Audio Visual 86

April 14-17, 1986.  
Wembley Conference Centre, **London**.  
EMAP/MacLaren Exhibitions Ltd.  
PO Box 138, Token House, 79-81 High Street,  
Croydon CR9 3SS.  
Telephone: 01-688 7788.

## SIB Rimini

May 6-9, 1986.  
**Rimini**, Italy.  
Ente Autonomo Fiera Di Rimini,  
PO Box 300, 47037 Rimini, Italy.  
Telephone: 0541/773553.  
UK enquiries: Disco & Club Trade International.  
Telephone: 01-278 3591.

## Lighting World 4

May 11-13, 1986.  
**Los Angeles**, California.  
Robert Weissman, National Expositions Company  
Inc., 14 West 40 Street, New York NY10018 USA.

## Showtech 86

May 13-15, 1986.  
ICC - **Berlin**.  
UK enquiries: Spectrum Communications Ltd.,  
183-185 Askew Road, London W12 9AX.  
Telephone: 01-749 3061.

## Scottish Pub, Club and Leisure Show

June 3-5, 1986.  
The Scottish Conference and Exhibition Centre,  
**Glasgow**.  
Ian Macfarlane Exhibitions Ltd., 15 Elm Grove,  
Didsbury, Manchester M20 0RL.  
Telephone: 061-434 5300/0050.

## NAMM Exposition

June 14-17, 1986.  
McCormick Place, **Chicago**, USA.  
Larry R. Linkin, 500 N. Michigan Avenue,  
Chicago IL 60611, USA.

## 1986 Music and Sound Expo

June 14-17, 1986.  
**Chicago**.  
Director: John Vincent.  
National Association of Music Merchants,  
5140 Avenida Encinas, Carlsbad,  
California, 92008.  
Telephone: (619) 438/8001.

## PLASA Light and Sound Show

August 31 - September 3, 1986.  
Novotel, **London**.  
Enquiries: (exhibition bookings) David Street.  
Telephone: 01-994 6477.  
Enquiries: (general) PLASA secretariat, c/o Roger  
Saunders, 1 West Ruislip Station, Ruislip,  
Middlesex.  
Telephone: (08956) 34515.

## Sonimag 86

September 15-21, 1986.  
**Barcelona**, Spain.  
Feria De Barcelona, Avda. Reina M.<sup>a</sup> Cristina,  
08004 Barcelona.  
Telephone: (93) 223 31 01.

## Photokina

September 3-9, 1986.  
**Cologne**, West Germany.  
UK Representative: Tony Pittman.  
12/13 Suffolk Street, London SW1Y 4HG.  
Telephone: 01-930 7251.

## National Club, Pub, Hotel + Catering Show

October 7-9, 1986.  
C-Mex, **Manchester**.  
Ian Macfarlane Exhibitions Ltd., 15 Elm Grove,  
Didsbury, Manchester M20 0RL.  
Telephone: 061-434 5300/0050.

## Discotec/Hogatec

November 24-28, 1986.  
**Dusseldorf** Messe, West Germany.  
Dusseldorf Trade Fairs, 6 Albenmarle Street,  
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