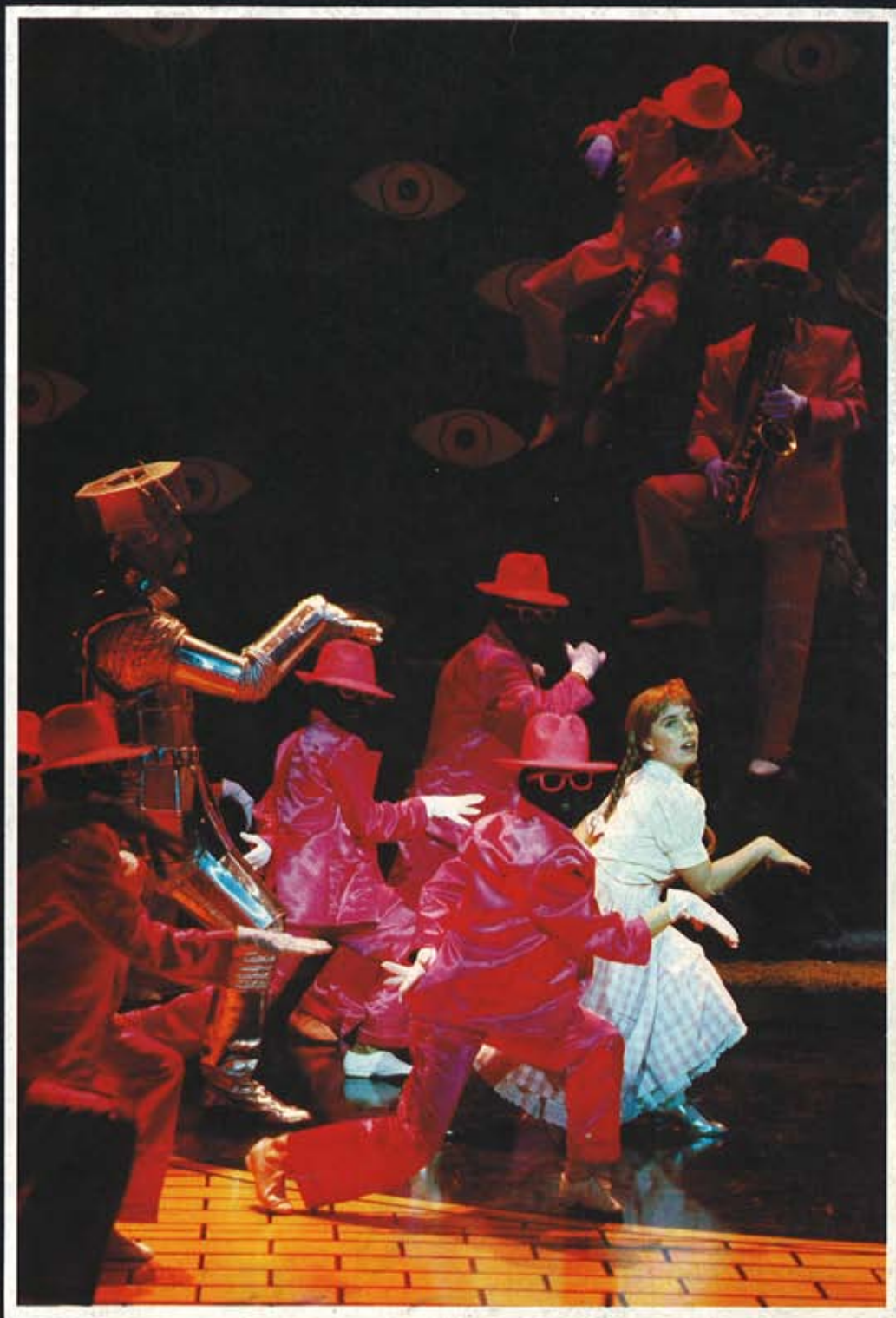


# LIGHTING+**SOUND** *International*



A scene from 'The Wizard Of Oz' at Birmingham Repertory Theatre - lighting design by Michael Northern. A profile of the designer is included in this issue.

**PLASA**

Published by the Professional Lighting and Sound Association

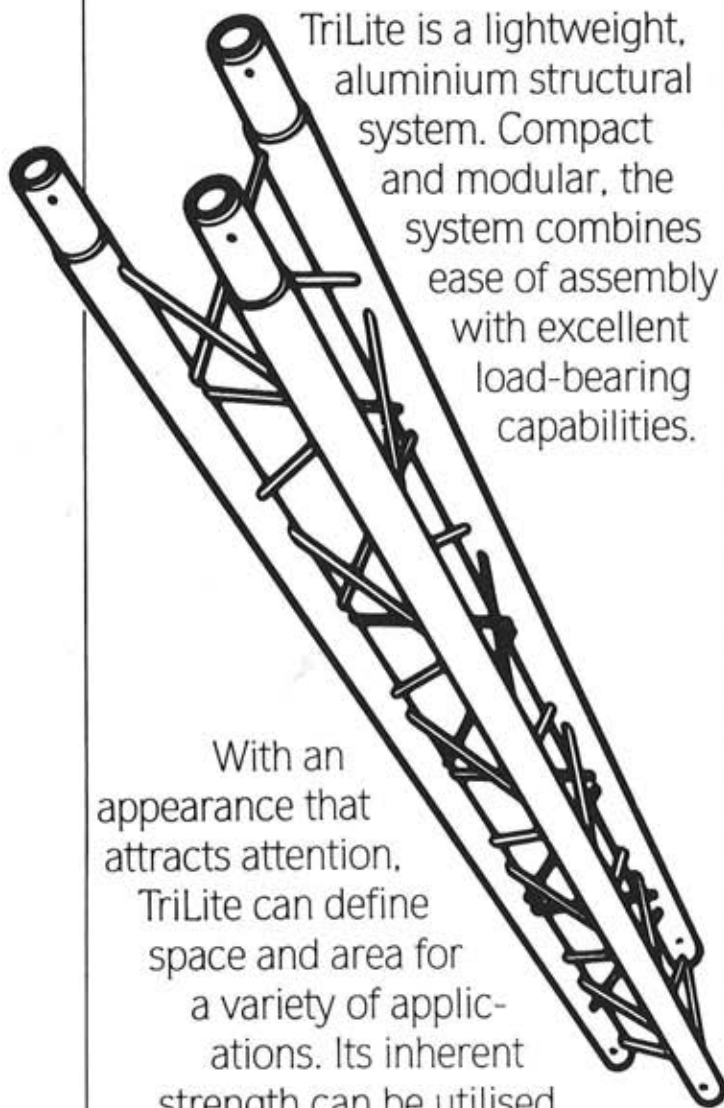
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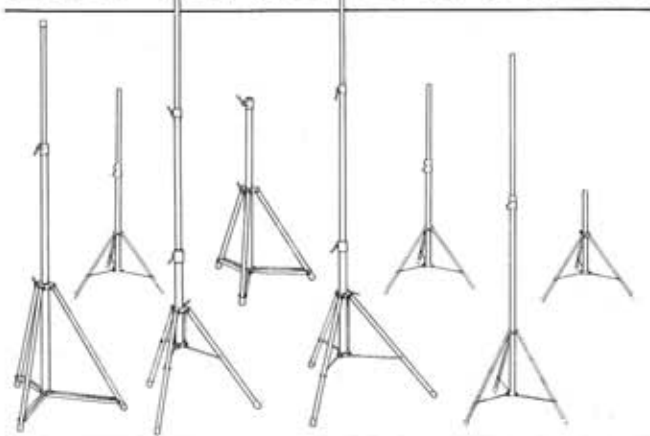
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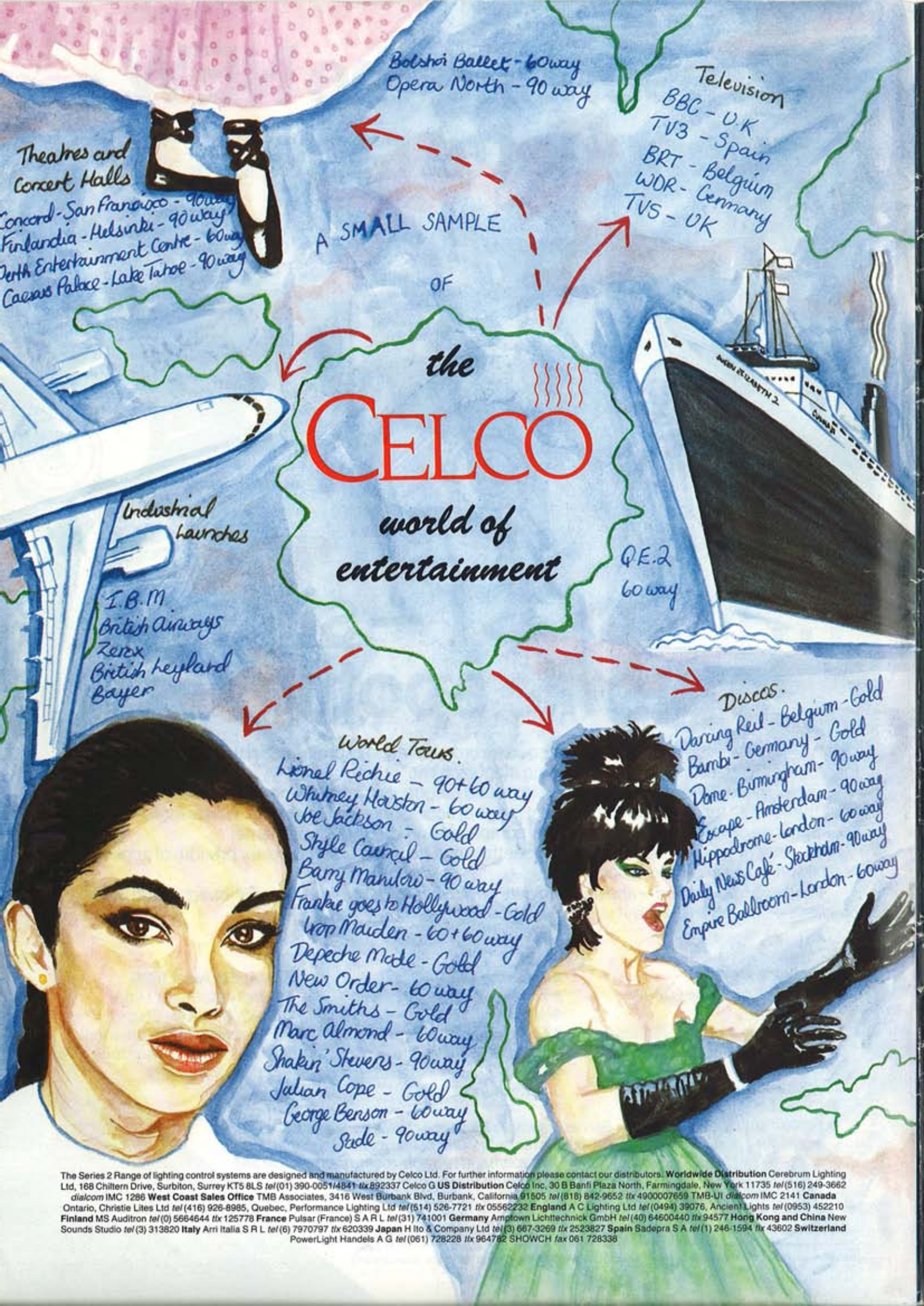
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# LIGHTING+SOUND International

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"Blimey! . . . I'd heard some of your stage machinery was Victorian, but . . .!"  
(see feature on Tyne Theatre stage machinery, pages 26-29)

## LIGHTING+SOUND International

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Loudspeaker enclosure manufacturers **Scott Sound Systems** has appointed Animation Lumineuse to represent its full range of enclosures in the French market place.

Chief executive of the Sound & Communications Industries Federation, **Ken Walker**, received the OBE in the New Year's Honours List in recognition of outstanding endeavour made in the promotion of the British Professional Audio Industry, particularly overseas.

**Francis Reid** is directing the British Council course on Theatre Lighting to be held in London in October. (For details see advertisement on page 6).

**Amek** have announced that HHB have been appointed as sole UK outlet for their range of mixing consoles for the recording studio market.

**Harman UK** have announced that the ART range of signal effects and processing equipment is now fully available throughout the UK, and price reductions have been made on many systems. Another growth area for Harman is with Bruel & Kjaer microphones where they are now the major UK supplier, highlight being Series 4000 mics. Soon to be released is the 4011 Cardioid version.

**Laser Creations** installed a temporary twin argon laser system at Camden Palace for the fund raising sessions in aid of the King's Cross fire disaster.

The Nova 500w range of lanterns has been granted ILEA approval report **R & G Services**. It was developed by R&G and Narva of Berlin to provide a multifunctional lantern - fresnel, PC or follow spot - by changing the nose assembly.



Chris Hill (left) and Ian Beeston.

## Sound Board

Rapidly expanding sound specialists Wigwam Acoustics of Heywood in Lancashire have announced the appointment of two new board members.

Operations manager Jim Beeston becomes operations director after joining the company in its formative days some eight years ago, and Christopher Hill joins the board after six years with Wigwam. His responsibilities will continue to embrace tours, equipment hire and installations.

## And now for the Good News . . .

L+SI took a sample of comments from around the industry in an attempt to sound out prospects for the year ahead - and it was good news all the way. (Even allowing for the fact that companies only want to tell you about the nice bits, after a very prosperous 1987, the outlook for 1988 looks better than bright . . .)

Sandra Cockell of **Formula Sound** told us 1987 had been a very good year for them. "The PM80 just keeps selling," she said. "But what has been an interesting bonus are the sales of the QUE-4 head-phone foldback system. Having been sold to shows such as 'Chess', 'Starlight Express', and 'Les Miserables', sales are now following from all around the world as international productions of the shows have commenced."

Formula will have a new mixer ready for the next PLASA Show - larger than the PM80 and with extra facilities - but exactly what we aren't allowed to tell. Other "highly interesting" items are under development, but no details will be released until they are ready for production. "Our reputation is such that as soon as something is announced we

are besieged with enquiries," explained Sandra.

Tim Burnham of **Arri GB** reported a "fantastic year - absolutely terrific. We've now built up a complete product range including dimmers in just over a year. In 1987 we sold a total of 60 memory lighting controls - half in the UK and half overseas - and they've been very well received. It's all gone so well at Arri, and it has been very satisfying on a personal level, also. The next stage is bigger and better control systems, dimmers for permanent installations, and some sneaky new toys for ABTT 1988!"

John Bradbrook of **Mode Electronics** said that 1987 had been another good year, and 1988 would see them attempting to set their highly acclaimed Unit 16 System at the top end of the market and established as an industry standard. "Various new products are in the pipeline, and we will certainly have new launches at the PLASA Show in September," he told L+SI.

**Eurolight** seemed to have found a regular home for their products and services in Scandinavia. Having just completed the massive Sola Center at Stavanger, several new projects have seen Nick Mobsby putting on his snow boots and returning to Norway to deal with the follow-ups. Back in the UK Eurolight are currently consulting on two experimental theatres for the West End of London,

and February sees the completion of the installation at the new Towngate Theatre as Basildon, due for an April opening.

**Canford Audio**, who took over Technical Projects at the end of the 1986 summer, told L+SI that they have now completed all outstanding orders for TechPro master stations and belt packs. LS and PS units are now in production, and all outstanding orders for these will be completed by February. Following that, there will be a major sales push on all TechPro lines during the Spring.

"The existing dealer network has been retained," said Canford's Hugh Morgan Williams, "and we have added some new dealers and export agents." He explained that the delay in getting TechPro products back on to the market was due to the necessity of having to re-design many of the components involved.

"As in 1987, it looks as if in 1988 we will again be continuously embarrassed about keeping up with demand," said Freddy Lloyd of **Zero 88 Lighting**. "We even increased our production staff by 25% over the last four months in an effort to cope, in addition to further investment in production line equipment. It's all part of a very buoyant situation right across the industry internationally," he said.

Watch out for something very new for the theatre business from Zero 88. It is due for launch at the Frankfurt Music Fair in March. You might

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just win the secret from Freddy Lloyd by giving him a call to suggest a name for it. Something in the field of heavenly bodies might do the trick.

**Playlight's** Mike McMullan reported a "superb year" with a 33% increase in turnover in 1987, due to a general growth across the whole spectrum of the company's activities. 1988 will see Playlight extending its hire range of the Sennheiser Diversity System, and it will be introducing its own 5k dimmers early in the year.

Bob Hall of **Anytronics** told us 1987 had been a first class year. "I can't believe what we've achieved in the two years since we started trading in September 1985," he said. "I've never seen orders like this. We now have an excellent customer base, and are exporting up to 60% of sales."

Anytronics are currently negotiating the purchase of the freehold of the factory next door, which will give the company over 4000 square feet of space - double their present area. A new expandable lighting control system is scheduled for a Rimini launch. "It is very exciting," said Bob Hall. "It's like Lego, and we will scoop the market with it." Other new products will include additions to their range of power packs.

"We were quite delighted with 1987," said **Roscolab's** Michael Hall, "and we still as hungry as ever! We've had a great year, and all the signs are that the industry is still growing."

A number of new products in Rosco's expansive range of consumables will be introduced during 1988, including 'Thermoguard' which will be fully detailed in our February Equipment News section. Meantime, Rosco's Supergel competition for a free trip to USITT in Los Angeles is attracting a goodly number of entries, with judging taking place later this month.

**Starlight Design** switched tack mid-way through 1987 and started their own manufacturing of lighting products. Graham Smith told L+SI that the change had definitely been the right thing to do, and figures for the first four months trading as a manufacturing operation had proved the point.

Some new products are due in February, and after a period of consolidation whilst production and development are finely tuned, Starlight are planning to present a broad range of products by the time PLASA 88 comes around.

"We should have made the changes a year ago!" said Graham Smith.

Dave Winfield of **Jivelight** reported "a very good year - particularly for our British manufactured products for export, and lead by our smoke machines." New lens-ended effects are due in to Jivelight from Spain in the new year, and the company is actively looking for new dealerships. They are at an advanced stage of negotiation to take over the UK dealership for one of the leading European manufacturers of disco lighting.

**Donmar's** James Bishop informs us that the new 'Reference Manual' will be available later this month, and has been increased in size to 80 pages. We will tell you all about it in our February issue, but page proofs I glimpsed just after Christmas certainly looked interesting, with many new products described.

Latest installation from Donmar is an Arri Imagine system for the Duke of York's in London's West End.

**CCT Theatre Lighting** will be having a New Year product party at Donmar's showroom in early January to test new ideas on industry practitioners - with new products for the ABTT Trade Show the likely outcome.

Phil Rose told L+SI that 1987 had been an exceptionally good year for them, culminating in the launch of the new Silhouette 1200 at ABTT North. "The various attachments have generated a lot of interest, with the up-date accessories allowing users to take advantage of all the latest developments without scrapping existing equipment," he said.

**Pulsar Light of Cambridge** have had a "marvellous year", according to Ken Sewell. 1987 saw them 20% up on the previous year, with a healthy 60% plus going for export. "The manufacturing link with Clay Paky of Italy, where we produce the electronics, has worked very well," he said.

A new 'Intelligent Spotlight' - "a complex project" - looks set for a Rimini launch in March,

and Pulsar report that the first production batch of 10 Oska controls are well on the way to completion. A 'flagship' model goes into First Leisure's Empire Leicester Square venue which is due to open in mid-February. "It's exactly the sort of venue and project where Oska can work to its full potential," explained Ken Sewell.

Having got the hassle of their move off their backs, **Icelectrics** are looking to a "high productivity" 1988 according to Rob Peck. Available from Ice in the new year will be their big amplifier, the DPA 600, and the Caravelle console, which received an excellent reception at the PLASA Show. "There are also some new bits and pieces on the drawing board due for Frankfurt and Rimini launches," said Rob Peck.

**Pancan** have reported the despatch to Saudi Arabia of no less than 25 System 3 heads and 2 Pancan Touchstone controllers as part of a consignment to a hotel group project, and ordered through **Furse Theatre Lighting**. Nothing special about that, you may say, but when I inform you that they were all painted pink to match in with the decor, you'll agree it was well worth a mention.

London Festival Ballet took delivery of a new **Avolites** dimming system for their Christmas season at the Royal Festival Hall. It consists of two 72 x 20 amp racks, with a third due to be added in the Spring, a patching computer and a sophisticated mains distribution unit. London Festival Ballet now join Sadlers Wells Royal Ballet and Opera North as major touring companies using Avolites' control equipment, and built to their own particular requirements.

**Strand Lighting's** managing director Michael Jukes told L+SI that 1988 will see the company with more exciting new products, and with improved facilities. "There is plenty of scope for product innovation and we fully intend to provide still greater value and service to the entertainment lighting industry," he said.

"The market has remained buoyant in UK and on the continent, and Strand have won an increasing level of orders each month."

The new 'Lightmix 430' controller from **Multiform** is now available and in full production following its PLASA Show launch (see this month's Equipment News). "1987 was a year of consolidation, and 1988, hopefully, will be a year of growth," said Iain Price-Smith. "We're launching a technically sophisticated product at Frankfurt for the rock and roll side of the stage lighting sector," he said. "But I'm not telling you what it is!"

Neil Rice was well pleased with **Optikinetics'** performance in 1987. "It was the year of Trilite," he said. "It was our best year yet, and even beat the boom year of 1979. What is more important, the bottom line was much better."

The Strobe Flower introduced at Rimini and PLASA in 1987 is now in full production, and after steady research on the lighting side, 1988 will see new products launched in 1988 we understand.

**Citronic** have grown by 70% over the last 3 years, and 1987 saw record growth. "We achieved a lot in 1987 with new products at the PLASA Show and more will be launched in January," said Mike Gerrish. "A particular strength are discotheque consoles, but major growth has been with amplifiers. Introduced just four years ago they now account for 35% of our turnover."

"If anything, Citronic have slipped back a little in the mixer field, but we are now switching emphasis back to this area to make up for lost ground. It is in this field that we will see the major new products launched this month."

Mike Fisher of **Cerebrum Lighting** told us that Celco products went through the roof in 1987. "It was in response to several years of hard background work," he felt. Hand in hand was a big increase in sales of Thomas lanterns and trussing. "Sales in the rock and roll and concert field have come to fruition well. There's still a lot of business out there, but the competition is getting tougher all the time," he said.

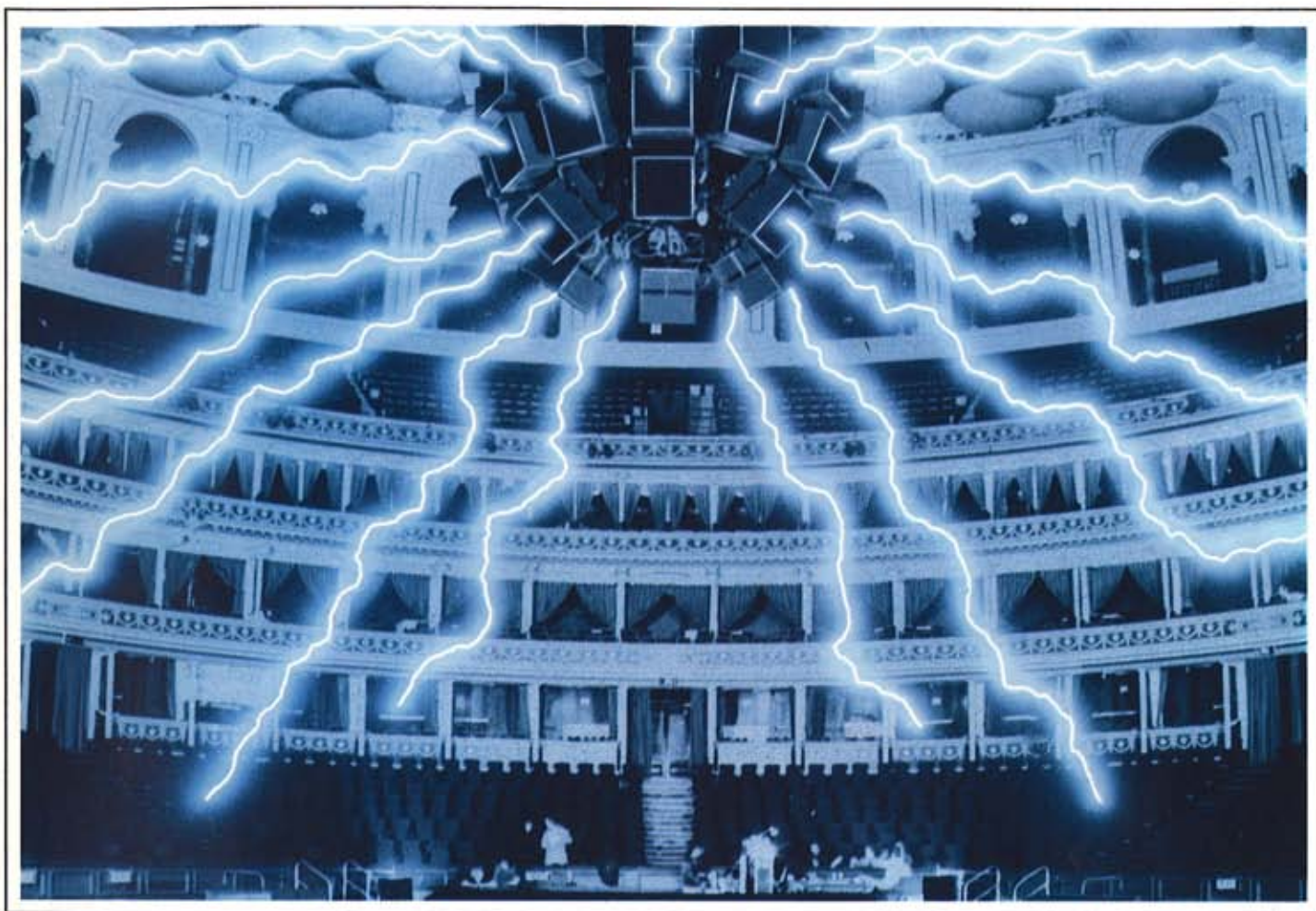
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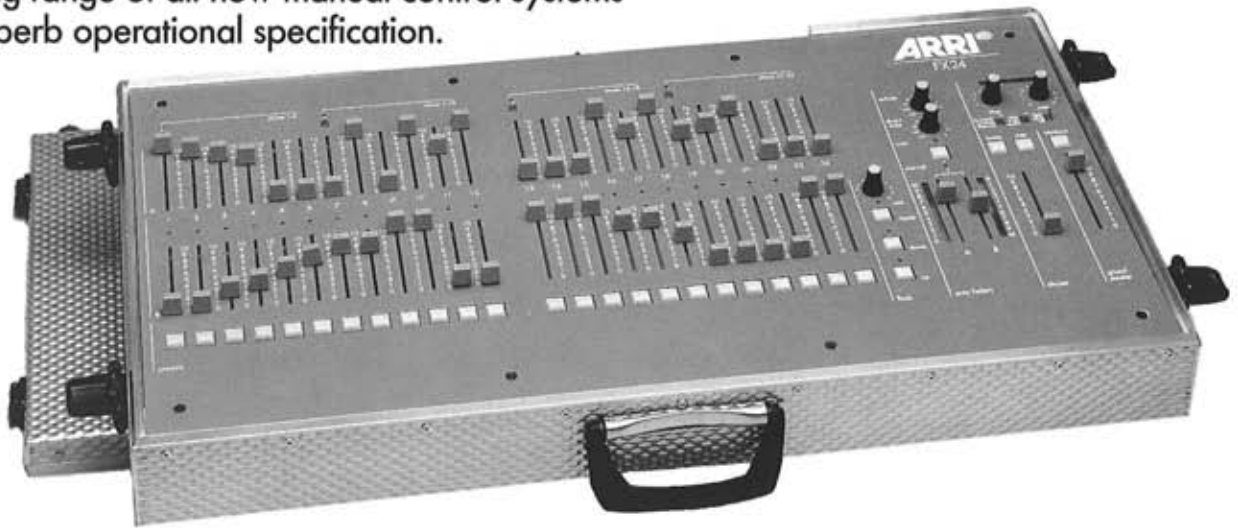


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# British Airways on the Road

**Imagination take British Airways on-the-road to launch two new services. L+SI takes a look behind the scenes.**

With feet firmly on the ground, British Airways currently have a 10-date UK and Europe show on the road to launch two new services - 'Club World' and 'Club Europe' - and London-based Imagination were responsible for design and production.

The show is intended to give delegates a taste of the new services, and takes place in an environment comparable to an executive lounge. Seating is around tables, and when guests arrive there is no obvious lectern and AV screen. The presentation itself consists of five combined AV and video modules linked by a professional presenter, and the final module incorporates a reveal of the new Club World seats and an exhibition of a number of products associated with the new service.

The set uses Trilite for its basic structure, which is designed as an architectural feature, providing a touring 'room-within-a-room' measuring 24m x 14m x 4m. The ceiling is stretched fabric in BA blue, with walls consisting of a Technal grid of Foamex panels and venetian blinds. The flooring is all BA carpet or Foamex floor panels with metal rostra for the raised areas.

The gridded screen has 32 squares of Technal framework and four squares each contain 4 x 20" Profeel monitors. The remaining 28 squares contain Perlux front projection material with a lightbox behind. There are two revolve pods - one containing the lectern, and the other new Club World seats.

The exhibition areas are enclosed behind 16 motorised venetian blinds supported by Technal framework. For the UK venues on the tour, a reception area, again built from Trilite, is similar to the main reception room and has its own special features.

Equipment for the presentation includes 32 Sony 20" Profeel monitors, with 16 in screen (four blocks of four) and 16 hung from the Trilite above the audience. They are fed from a three-source U-matic system, controlled by Imagination's own 'black box'. As all operating positions are 'blind', being outside the presentation room, a closed circuit show relay system is provided.

For the audio visual effects, 12 boosted Carousels are used front projection with the projection box outside the presentation room behind venetian blinds which are closed while the houselights are up, concealing the projectors.

With a club environment there are no theatre-type lights visible. Lighting designer Simon Bruxner-Randall used almost entirely 12v, 50w M16 type lamps - compact and smart fittings - with remote transformers located above the truss. As when using any sealed beam lamp it is important to select the correct lamp for particular use, and for this project EXT narrow spots, EXZ narrow floods, and EXN wide floods were used.

Birdie (1 under par) 12v 50 watt miniature par cans, originally designed by Imagination and now manufactured by Light Projects Limited, were used for house lights,

presenter spots, set lighting and exhibit lighting, and also for internal lighting of the Trilite legs with narrow spot lamps. Stick Lights - exposed M16 lamps on 400mm pole, 12v 50w - were used to light graphic panels and display case exhibits.

MR16 'Howie' standard battens are concealed in the front riser behind a metal mesh to provide an even screen wash for the walk-in. Special shortened battens are fixed to the back of the Technal frames to back light the reveal motorised venetian blinds, and finished in matching BA blue.

The nearest Simon Bruxner-Randall uses to a theatre lamp is 16 x Par 36/DWE 110v which are used for punch light through blinds during the finale. These are finished in white to match the Birdies.

The revolve pods have various lightboxes, with the vertical ones on front edge of the fixed curve wall left and right each containing 1 circuit blue linolites and 5 circuits of white linolites used for 'thermometer' chase. There are 28 lightboxes in the screen, each containing a Coda 500 flood and used on seven circuits. These are used for walk in to break up the screen, with a blue wash from MR16 battens. There are 32 squares in the screen, four squares of monitors, and eight squares lightboxes (2 circuits). They are also used in finales, short chase, and then as a complete wall of lightboxes to 'wipe out' the AV. Fluorescents are located behind Darvic squares in all main entrance features.

Control is a Zero 88 48 way Eclipse driving two 24 way Green Ginger racks fitted with new mains patching systems (supplied by Theatre Projects). With 40 transformers in the system, Green Ginger dimmers were

specified due to their tolerance with transformed loads.

To complete the scheme, and enhance the feeling of being in an executive lounge, there are a number of 'Syntheto Terras' in the room (free-standing up-lighters, Porsche design) and Tizios on tables (Artimede desk lamps).

#### Lighting Equipment:

102 Birdie - 12v, 50w EXT, EXZ, EXN  
40 Stick Light - 12v, 50w EXZ, EXN  
16 Special MR16 Batten - EXT, EXZ  
6 Standard MR16 Batten - EXN  
16 Par 36/DWE - 110v, 650w  
28 Coda 500w  
6 Syntheto Terra  
4 Tizio  
120 Linolites  
80 Golf Ball lamps  
7 5m Tubelight assorted fluorescents  
40 250VA transformer 240v-12v  
1 48 way Eclipse desk  
2 24 way Green Ginger rack c/w patch panel

Lightboxes

#### Production Team for Imagination:

Designer: Martin Grant  
Producer: David Schaller  
Lighting Designer: Simon Bruxner-Randall  
Sound Designer: John De'Nero  
Production Managers: Mark Waters, Nick Fraser, Tim Spencer  
Tour Manager: Robin Myerscough-Walker  
Production Carpenter: Tony Holmes  
Production Electrician: Simon Prior

#### Contractors and Suppliers:

Scenic Main Contractor: Scena Productions  
Additional Scenery: Kimpton Walker  
Trilite: Optikinetics  
Video Equipment: Creative Technology  
AV Equipment: HAVE Facilities  
Sound Equipment: Paul Farrah Sound  
Lighting Hire: Theatre Projects Services  
Low Voltage Lighting: Light Projects



View of the 'auditorium', showing extensive use of Trilite.







A view of screen and revolve pod containing 'Club World' seats, showing use of lightbox features.



Exhibition area, showing use of stick lights.



The environment as viewed from the rear of the auditorium.



Lecturn revolve pod, also showing monitors in screen.

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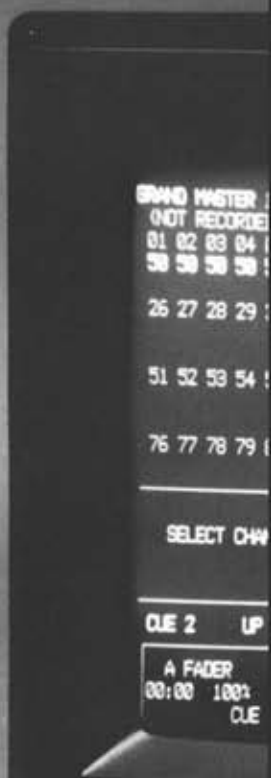
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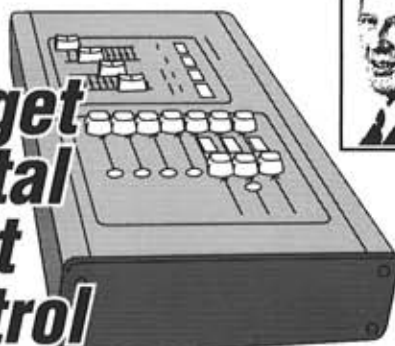
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# 'Starlight' in Rotterdam

John Offord discussed the Netherlands' entry for the Golden Rose of Montreaux - the 'Lee Towers Gala of the Year 1987' - with lighting designer Steve Kemp.

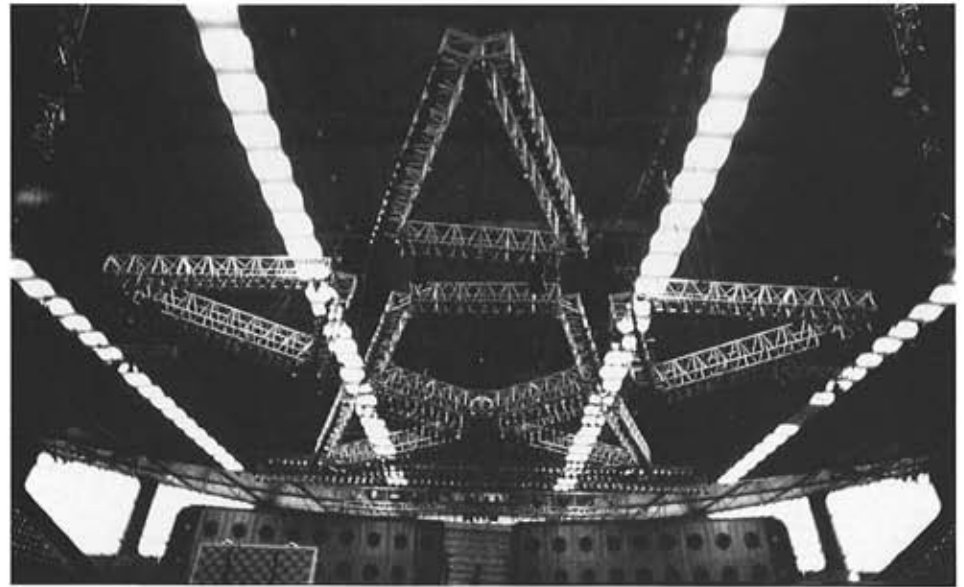
The Netherlands' entry for television's 1988 Golden Rose of Montreaux will be a spectacular and 'larger than life' concert from the Ahoy Sport Palace in Rotterdam, recorded in early December last year. Subject of the concert was Lee Towers, until 10 years ago a crane driver in Rotterdam, but now the country's biggest middle-of-the-road star, who carries an ample repertoire of numbers in the Sinatra/Andy Williams mould.

Unknown outside Holland and Dutch-speaking northern Belgium, Towers filled his home city's 500-seat Ahoy stadium eight times over for the concert series, and the staging and production of the show had to match the man's image. The project was on the grand scale, and the lighting had to follow suit.

"We were given the set design by Hub Berkers of Dutch Television, and had to come up with something very spectacular," said Steve Kemp. "We played around with lots of silly ideas, and eventually came up with a star - a very large one! - 24 metres across. That seemed to fit the bill."

The performance area provided was huge, and Steve Kemp's 'star' was no ordinary heavenly body. With six basic parts it could be manipulated in almost any number of ways.

"It consisted of six separate trusses," he explained, "with a pentangle in the middle and five triangles forming the points. Each of the pods were hung separately so that we could move into any configuration we wanted to



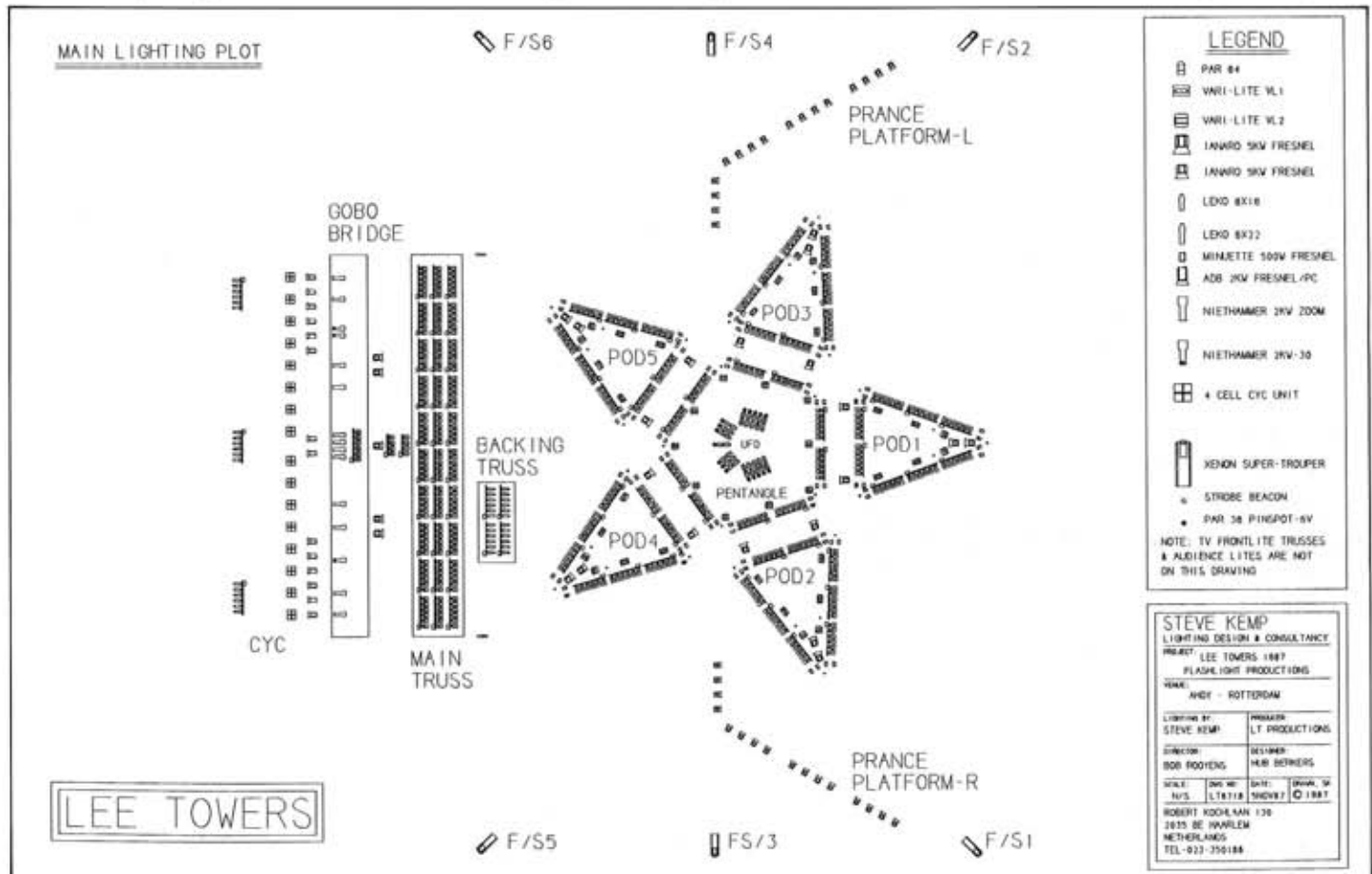
The 24 metre 'star' rig during set-up at Rotterdam's Ahoy stadium.

up to the limits of the building and the structural limits of the truss.

"For instance, at the opening of the show we started with the pentangle fairly low and flat and with the star pods slightly lower, with the points almost touching the ground. It looked something like a 'mother ship', and during the overture, which was rather long, the structure rose and started forming. As this happened we 'dropped' Lee Towers

through the middle on a spacecraft. He didn't worry about heights - he went for it! From there we formed the whole star during the overture, and it was very spectacular.

"For its general 'working trim' the star was flat overall, but lowered slightly upstage. For faster numbers we moved all the triangles down and the pentangle up and crossed them over. In another situation we closed all the pods down and dropped the points,





The huge stage area was surrounded in orange tungsten tubes.

photos: Ronald Tebra



The rig with triangular pods raised from the outside points.

moving them in and out.

"During parts of the show we used it as a 'backcloth' where the rear was at a very low point and the front raised at an angle of 60°, and at the end of the show we formed a crown by dropping the pentangle and lifting the triangle points right up and lowered it on the artiste in a 'crowning' manoeuvre."

All the movements of the rig were computer controlled and pre-programmed. "The system was put together by Vanguard Rigging, and it was very effective and we had no problems at all," explained Steve Kemp.

The other major highlight of the design was a Gobo Bridge. No less than 12 Niethammer 2kW zoom profile spots, complete with a selection of 127 gobos, kept crew chief Lex van der Haak's hands warm throughout each performance. "It provided for good visual variations during the 3-hour long show," said Steve, "but Lex suffered from burnt fingers!"

One of the concerts was recorded in full by no less than eight television cameras, giving the editing personnel of Dutch Television no less than 106 hours of videotape to work on in preparation for Montreaux!



Lee Towers in concert.

#### LEE TOWERS

'Gala of the Year 1987'

Ahoy Sportpaleis, Rotterdam

Client: Lee Towers Productions bv.

Lighting designed by Steve Kemp

Lighting production services and crew: Flashlight

Productions

Lighting Equipment: Flashlight Utrecht bv.

TV Lighting Equipment and Crew: Nederlands Omroep

Stichting

Rigging by Vanguard Rigging Service

Lighting co-ordinator: Vance Bryan

Lighting Crew: Dennis van de Haagen, Jack Smale,

Peter Dreuning, Erik Rietvelt, Willie Porter,

Patrick Jordan, Marcus Janzee, Bert Bunte, Frank Brok,

Nick Ball, Marina Prak, Jacques Koenen, Erik Kroon,

### Steve Kemp

trained at the London Academy of Music and Dramatic Art (LAMDA) on a graduate stage management and technical theatre course before joining Theatre Projects Lighting Limited in London as a lighting design assistant in 1970.

He then worked at various theatres in both London and the provinces before joining Theatre Sound and Lighting (Services) Limited in London in 1974 as a lighting designer and assistant to the legendary Joe Davis. He returned to Theatre Projects as a lighting designer in 1976 and continued with them until 1979 when he decided to go-freelance.

When Theatre Projects opened a Dutch office in 1983 he joined them as head of lighting design. He stayed in the Netherlands and went back to a freelance situation when TP shut up the operation as part of their major re-organisation and sell-off in 1986.

Steve Kemp has a major list of show credits to his name spanning theatre, opera and ballet through to concerts and industrial theatre and conference presentation work. He has now been a resident in the Netherlands for nearly four years, and in addition to lighting design projects he also acts as a consultant, both in his adopted country and internationally.





With the 'rear' point lowered, the rig became a backdrop for the stage area.

Kees le Clerk, Ruid Lucas Luyckx  
 Crew Chief: Lex van der Haak  
 Vari-Lites: John Sinden, Andy Gibb  
 Flashlight Utrecht: Gerard Jongerius  
 Lighting Structure and Rigging: Rinus Bakker (Vanguard)  
 Laser: Michel Povee, Jim Falk (Rasel-Laser o.l.v.)

**Lighting Equipment:**

|   |            |
|---|------------|
| Strong Xenon Super Trouper follow spots                           | 6          |
| Var-Lite VL1  | 40         |
| Par 64  | 614        |
| Par 36  | 17         |
| Leko 6 x 16   | 18         |
| Leko 6 x 22   | 2          |
| Minuette 500w fresnel/PC  | 160        |
| Ianaro 5kW fresnel  | 25         |
| Ianaro 2kW fresnel  | 40         |
| Niethammer 2kW zoom profile                                       | 12         |
| DHA Strobe Beacon   | 30         |
| Cyc units - 4 cell  | 16         |
| 1kW outdoor floodlights   | 12         |
| Philips MSNF/201 400W uv fittings                                 | 70         |
| 100W ES reflector lamps (step lights)                             | 920        |
| 75w tungsten strip lights (decor lights)                          | 210 metres |
| Flashlight pre-rigged truss sections<br>(2.35 metres per section) | 50         |

|  |            |
|--|------------|
| Standard Flashlight truss                                    | 120 metres |
| Verlinde one ton chain hoist                                 | 39         |
| Verlinde one ton chain hoist<br>(suspending decor, etc.)     | 12         |
| CM Loadstar one ton chain hoist<br>(suspending sound system) | 12         |
| DHA gobos - stock and custom made                            | 127        |
| DHA gobos - custom made for Vari-Lites                       | 84         |
| Clear-Comm communications to all operational positions       |            |

**Control:**

1 x Celco Series 2 Gold 90 channel desk linked to a Celco Series 2 30 channel desk to give master control over 120 channels.  
 1 x Celco Series 2 30 channel desk to control auxiliary channels.  
 1 x Vari-Lite Series 100 control desk.  
 1 x Vanguard Rigging Service computer interface connected to an Avab 202 giving memory control over all Verlinde chain hoists.

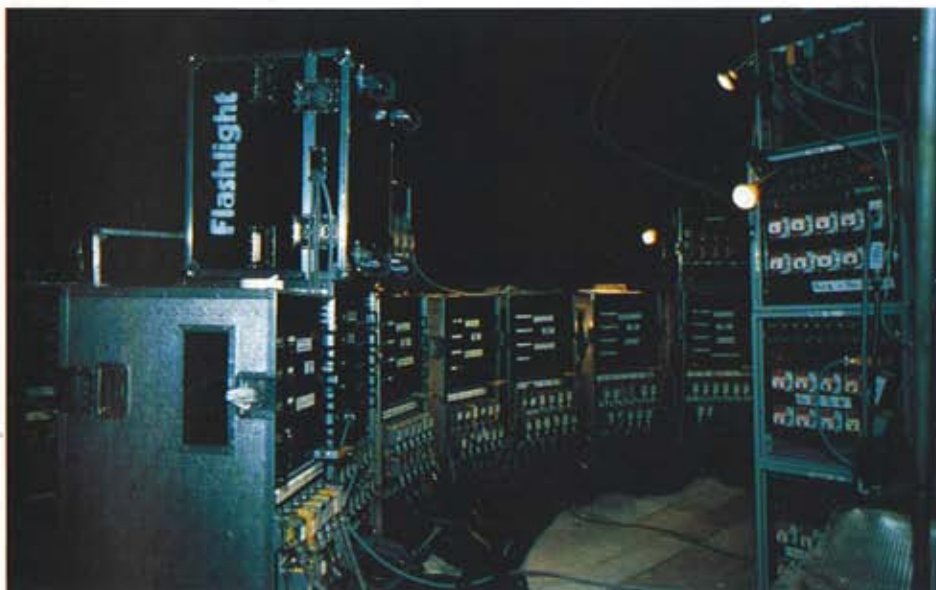
1 x Microlite 240 channel desk controlling all TV equipment, decor fittings and stairlights (144 channels used).

**Dimmers:**

14 x Flashlight ALC 5kW 24 way dimmer packs (336 5kW dimmers).  
 144 x ADB 5kW dimmers controlling all TV equipment.



An ex-crane driver, Lee Towers has no fear of heights!



Dimmer banks were located up in the roof on a specially built platform.

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# Cannon at the Hippodrome

Liverpool Hippodrome first to install the Bose Cannon in UK.

Two historical landmarks have been achieved by the Liverpool Hippodrome. In 1920 it was the first venue in the UK to show a 'talkie' movie, and in December 1987 it was the first venue in the UK to install a Bose Acoustic Cannon System.

Originally built in 1916 it started life as a theatre, later became a cinema, and eventually closed down before re-opening as a club - which is how it exists today. Owned by Kimberley Inns North West Limited, it has proved to be a popular and successful venue with a capacity of 800. Facilities include a main dance floor on the ground level, overlooked by a balcony where people can sit and watch the dancing. To the rear is a restaurant and cocktail bar.

Sound installers Sound Advice Installation (S.A.I.), and consultant Roy Carson, opted for Bose as a sound system when the venue was refurbished, and the latest development has seen the installation of the Acoustic Cannon.

Roy Carson described how the sound system has evolved: "I opted for Bose because I think the speakers are simply the best in the business. The quality of the sound is so good. It's clear but creates real atmosphere - not just a 'din'. The speakers are also very reliable - as well as being fireproof and waterproof - and the five year guarantee on all products is an extra bonus.

"In consultation with the designers, Grace Associates, we specified an initial system consisting of four Bose 802s and two Bose 302s. But we also knew that Bose were going to bring out the Cannon, so we built an option into the budget that we would try out the new product, and if we liked it, could include it in the system.

"Without the Cannon, the original system worked perfectly, although we did find that it was underpowered when the club was full.

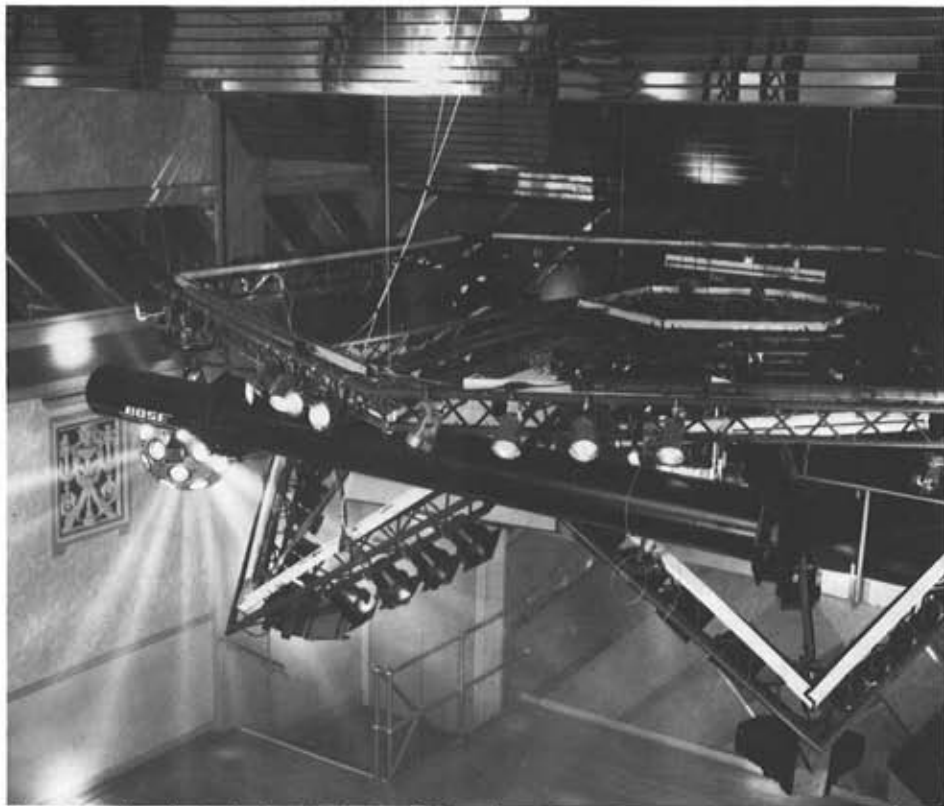
"We had planned originally to bolt the Cannon on the left hand side of the dance floor, but after experimenting with the product in different areas, we found that it produced the best sound when suspended from the lighting rig, in a dead central position over the dance floor.

"When we'd installed the Cannon, the change in sound was dramatic - it was much fuller and clearer, with no noise distortion whatsoever. At full volume the power on the 302s dropped by half, and the 802s ran much more efficiently. The system also achieved incredible audio separation.

"We actually had four 301s providing



The 12-foot long Cannon tube is attached to the existing Hippodrome lighting rig.



First Cannon installation in the UK - Liverpool Hippodrome.

background music in the restaurant and cocktail bar area, but the sound from the Cannon was so rich and atmospheric that we didn't need to use them. We just let the music from the dance floor filter through.

"We also found that the completed system had a much better 'feel' with a greater 'impression' of mid range/top and uncanny stereo separation. I'd say that it's one of the best sound systems I've heard for the big club market."

Footnote: The Bose Cannon can also be heard in action at this year's Miss Great Britain Contest at the NEC Birmingham on Sunday January 10.

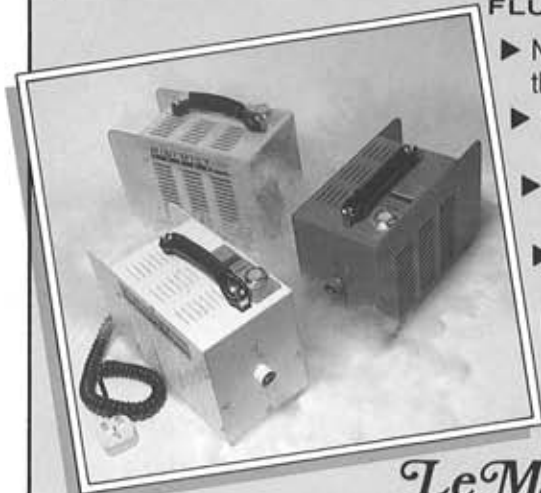
#### Sound Equipment at the Hippodrome:

- 1 Cannon
- 3 Bose 1800 amps
- 2 Studio 500 Watt amps
- 4 Bose 802s flown over dance floor
- 2 Bose 302s on dance floor level
- 2 Bose 201s in foyer

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# London's Friendly Hangman

Graham Waile talks to Alan Jacobi of the Unusual Rigging Company.

It is my view that the best designers of lighting or sound are those who think in creative and abstract terms before they consider the necessary hardware. Pictures should come first, and hardware should come second. Rigging usually comes third, and is often taken for granted. The Unusual Rigging Company might change all that.

The Company is one of that interesting and select band which was born out of the changes that affected Theatre Projects some years back and has just celebrated its third year on its own. And it will soon be moving to new premises.

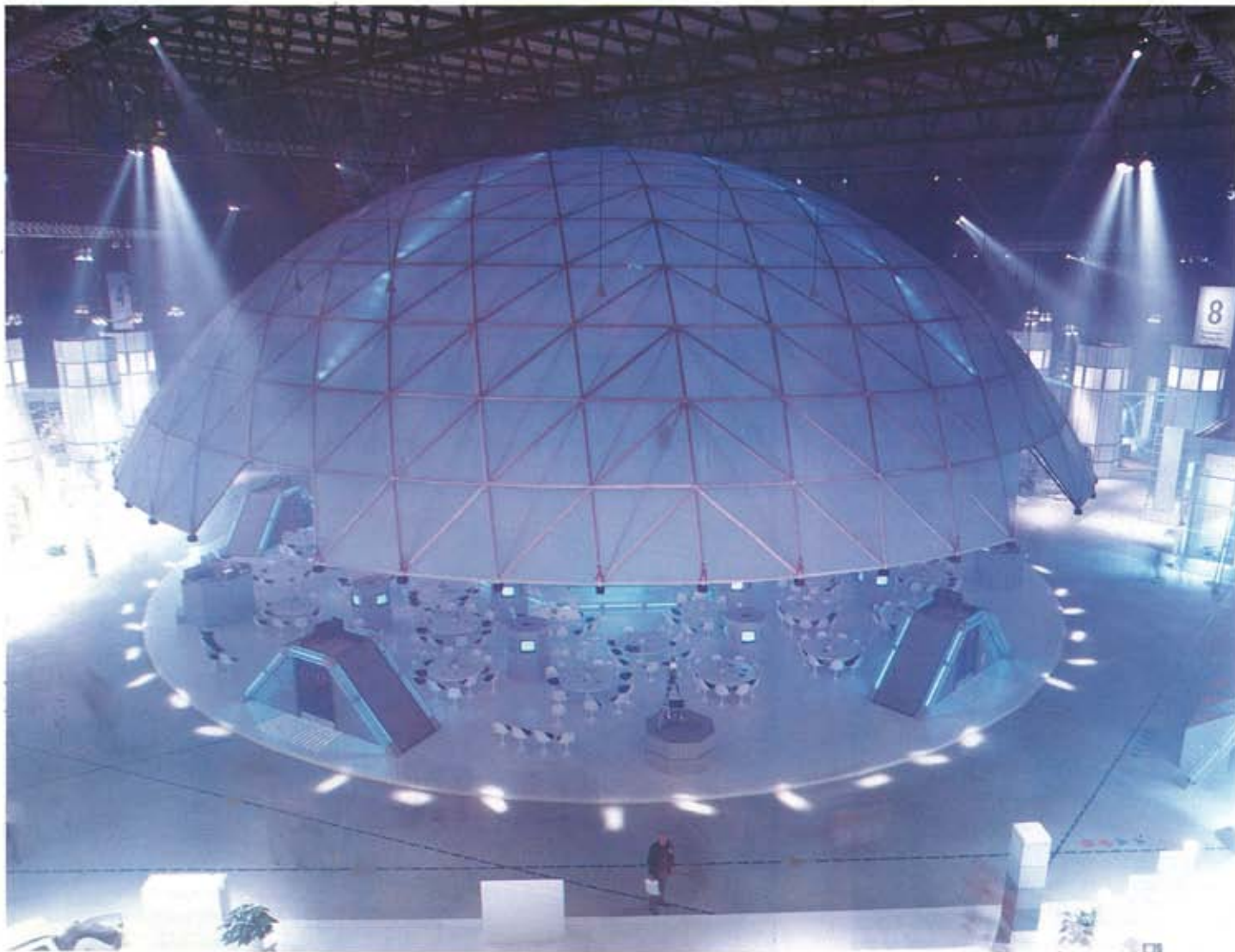
I asked Alan how the name came about. "We wanted to call ourselves 'The Rigging Company', but a business with that name already exists - they work on oil rigs in Scotland," he explained. "People refer to us as 'unusual' and the name has stuck. And it's true we do specialise in unusual things!

"There are now three specialised rigging companies: the other two concentrate on tours and video, and we cater for the trade show and conference market although we are also working in the more traditional theatre area. Theatre work is more intricate, but generally without the budget!

"Basically we do anything if it involves



First man in Unusual Rigging - Alan Jacobi.



Unusual Rigging's 'pièce-de-résistance' to date - 25 tons of British Telecom's dome flies out.



hanging something up, supporting it, pushing it, or pulling it. In fact any kind of mechanical handling, and it doesn't matter what 'it' is . . . lighting, sound, scenery or computers. We have also found that it makes sense if we specialise in providing full site services because we are the first people to arrive and the last to leave. So we can also arrange loos, catering, transport, lighting and generators, for example."

Unusual work all over the world and in many different kinds of buildings. I asked Alan how they cope with varying local safety requirements. "Well they do tend to change from place to place, and it isn't easy to conform - but we have our own safety procedures and we adhere to all the current regulations including those that involve craneage or lifts, for example. We work on many structural calculations ourselves and liaise with the house engineers to get on-site clearance. Everything we own follows the letter of the law and is tested annually. When we move it will be much easier because we will be setting up our own service bay."

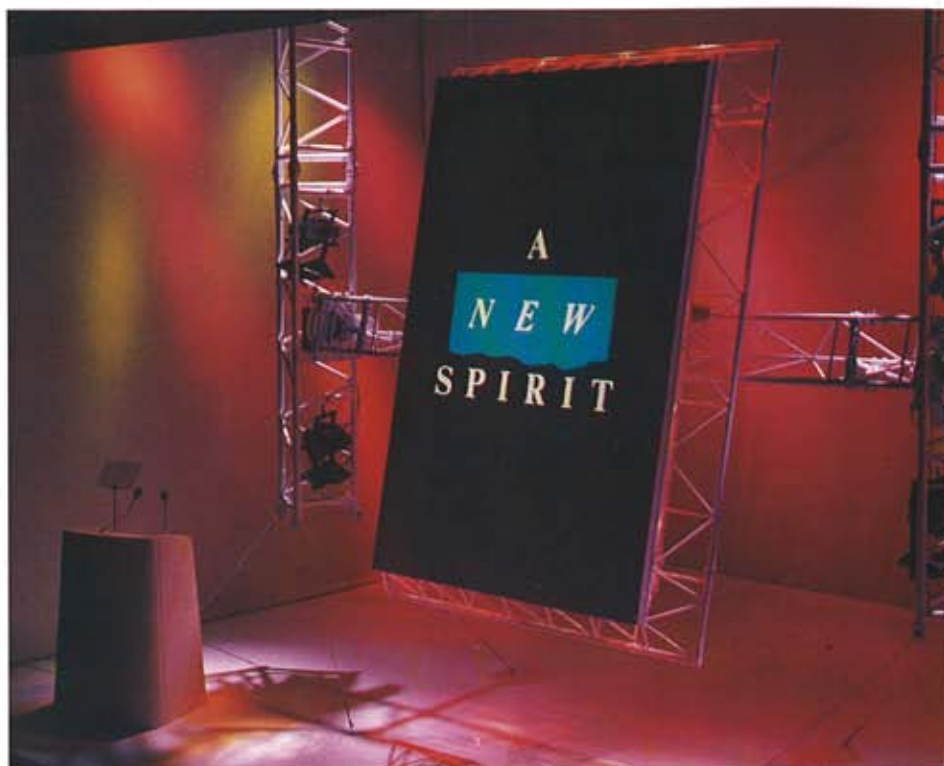
I spent a good hour looking at photographs of typical 'Unusual' projects - some from the early days like the 'Starlight Express' and 'Electric Ice' rigs - to schemes in the NEC and the P&O project which was featured in L&SI back in September.

We selected four typical projects . . .

"This really is a favourite . . . Imagination produced the launch of the Ford Orion at Castle Ashby and built an enormous room on to the back of the building, mocking it up to look like a banquet hall. We suspended the 80' long end wall on a truss, and for the reveal the whole wall flew out including the windows, curtains and plants. It was literally fantastic!



"The longest truss in the world" - for the 1987 Royal Tournament at Earls Court. The event is an annual four-in-hand between producer Major Michael Parker, lighting designer Robert Orno, Theatre Projects and The Unusual Rigging Company Limited.



A goal post truss with mounted revolve motors for the Daily Telegraph launch at the Mayfair Theatre.



Ford Orion launch: the back wall flown out from an improvised banquet hall - a stunning effect when seen from the inside!



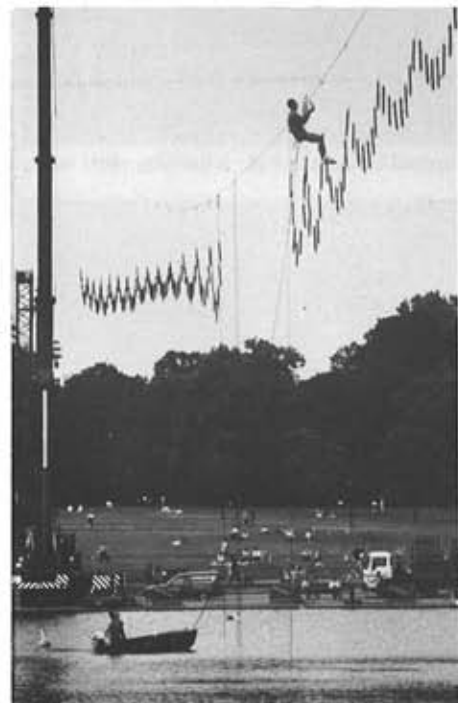
The spaceship flies in at the Royal Tournament.

"Another good one is the Royal Tournament which we undertake for the producer, Major Michael Parker. We provide what we think is the largest truss in the world, 300' long. This year was the RAF's year, and as a space theme we built a circular truss for lighting designer Robert Ornbo, which flew in during a blackout and then started pulsating to the music before flying out like a spaceship. The key thing about this was its flying speed, nearly one metre per second, phenomenal for a weight of 2 tons. And it worked every time. I also achieved an ambition because we were asked to suspend some old aircraft, and I'd always wanted to fly a Spitfire!

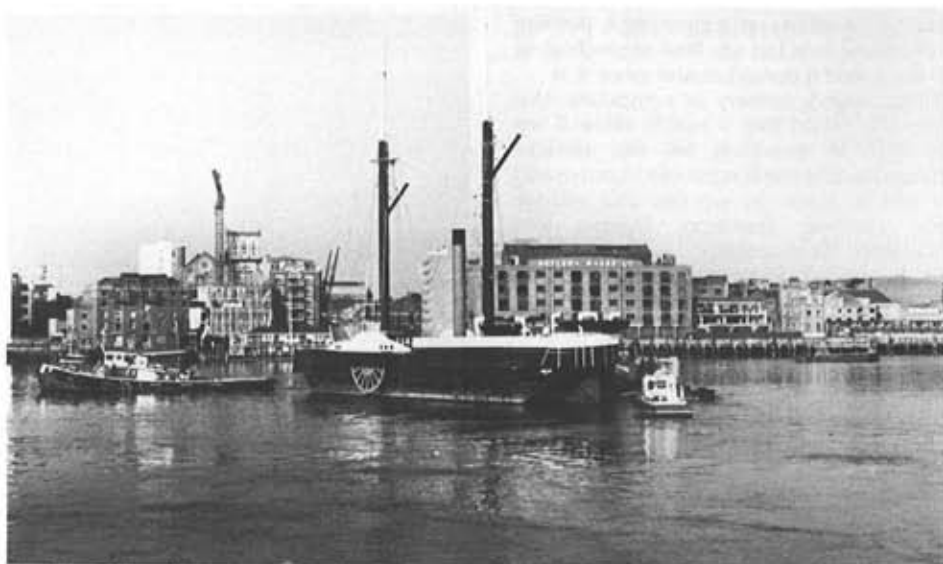
"On a smaller scale we did a launch for ICM on the new format of the Telegraph newspaper in London at the Mayfair Theatre, which is quite compact. We suspended a 'goal post' truss from the theatre grid and mounted a bridge piece which had a motor built into it and an actuator which turned the screen around. A lot of our projects are done in hotel ballrooms and the like, so we don't always work on vast scales. Of course, a lot of work is outdoors - like the P&O project you've mentioned and also the launch of the British Airways shares, which was similar to P&O in the sense that it took place on a barge moored in the Thames.

"Another outdoor project was for the Handel Tercentenary in Hyde Park for Fisher Park Limited. Our job was to suspend a firework curtain 300' across the Serpentine. To do this we placed cranes at either side of the Serpentine and stretched a catenary cable across with a rope above it. By using a cherry picker we threaded a lighter gauge cable across which carried the droppers on which the fireworks were suspended. Steve Colley 'absailed' across to join the two halves together and then into the boat below before the whole thing was tensioned. When it went off the reflections in the water were fantastic.

"Our pièce-de-résistance to date was another Imagination production for British Telecom. Impact Structures supplied a huge dome, 30 metres across and weighing 25 tons. Visitors came into the dome down a tunnel, and after a presentation the whole thing flew out revealing a vast exhibition.



Steve Colley absails across the Serpentine to prepare for the 300 foot firework curtain.



A replica of the William Fawcett, P&O's first steam packet, was built at Wapping by Unusual Rigging using a barge as a base. It was then towed down the Thames to Greenwich for the company's 150th anniversary celebrations last summer.

After they had walked round, it then flew in again and they went back in through the doors for lunch. I think it's the best thing we've done . . . so far!"

As a theatre man listening to Alan (another theatre man), I couldn't help thinking of the word 'magic' as he described the various 'reveals' and transformations. I asked him

what he thought about the way theatre used rigging.

"I don't think the traditional ways of doing things have been surpassed. Quick changes can't be done any better by hydraulics, for example. We can lift heavier things, but the theatre has more to teach us than we have to teach it," he said.

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# Team Effects

**John Offord puts the spotlight on Effects Lighting, leading entertainment industry electrical and environmental lighting contractors, who are now marketing total concept design packages for the leisure business.**

Malcolm Robertson's Leicester-based Effects Lighting has been established as one of the leaders in electrical contracting and environmental lighting for the entertainment industry for a long time, but in recent years it has been making itself felt more and more in the design field. This natural growth has now culminated in a co-ordinated marketing push encompassing the idea of total design packages.

Starting out as a standard commercial electrical contractor, theatre and club work was regularly undertaken for various clients, and this side of the business has grown to a point where it now provides 70% of the company's turnover. In the process, Effects Lighting has built up an enviable reputation for specialist knowledge and experience coupled with no small degree of 'imagineering'.

Apart from numerous smaller contracts in the pub, club and general leisure field, it is with major new discotheques that the company's name is now more often associated. Its earlier lighting schemes in this area have included venues such as Seventh Heaven at Doncaster, Romeo and Juliets at Hull, Peppermint Place at Blackburn, Pink Coconut at Brighton, Silks at Sheffield and The Avenue at Gillingham.

A highlight in October 1985 was the dramatic scheme for 'The Dome' in Birmingham which put both the company and the venue firmly on the map, and just two months later 'Paradise Lost' opened in Watford. Along with Peppermint Place in Blackburn, Paradise Lost remains one of



Malcolm Robertson, Mike Teear and Steve Wilcox at Coco Savanna in Cardiff.

Malcolm Robertson's personal favourites amongst the many venues the company has worked on over the years.

And when you talk in numbers, no less than around 500 different projects, large and small, are now handled annually by the company, with 30 staff at the Thurmaston base, 20 of whom cope directly with technical work.

"We put a lot of emphasis on getting things right in the early stages to secure a good project," said Malcolm Robertson. "In some

cases we are not competitive for smaller projects, because we are geared up heavily towards major clients such as First Leisure, and everything has to be just right."

Sales and marketing manager is Ian Wasden, recently appointed to widen the scope of the company's operations. Backing up with strength is Steve Wilcox who looks after contracts, and Mike Teear who takes care of the engineering side under the Lighting Developments banner - a sister company. Dave Andrews looks after the fine



Effects Lighting's latest - central effects for Coco Savanna, Cardiff, a First Leisure venue. Interior design is by Group Northern.



detail of job costing and right through to the ordering of components.

Effects Lighting's latest scheme has seen yet another project with interior designers Group Northern come to fruition, again for First Leisure, and this time at Cardiff. The former Institute of South Wales Mining Engineers' building in the City centre is now a two-part complex incorporating the Coco Savanna discotheque which opened in December, and Dylans cafe restaurant due for an early 1988 opening.

The company was responsible for the central effects in the discotheque. Within a very restricted working area due to structural limitations of the venue, they have come up with a highly imaginative scheme at a very realistic cost in a situation where ever larger parts of the overall budget had to be moved over to structural work.

Using the building's central pillar as a focus of the design over the dance floor, the symmetric scheme has 12 segments radiating out, with four lines of Arc Line and eight of blue neon. Inside each shaped shining metallised segment are eight H3 70 watt halogen lamps. Around the outer edge are 12 Par 36 30 watt scanners, a double line of tivoli, and four banks of four Clay Paky Gemini units. At the back, on the opposite side from the control area, is an SLE Moon Flower 2.

At the centre the etched mirror column has two zones of pink neon and tivoli lighting. Above are 12 Par 36 360° scanners. Control is all Mode Electronics equipment, with a Unit 5 controller, a U5Z zone matrix, a U8TP unit eight touch programme, an AL100 Arc Line control and an SD16R 16 channel remote for the ambient lighting.

Next major projects for Effects Lighting are the huge Empire Leicester Square complex, with Tony Gottelier, and Buddys at South



Part of Effects Lighting's workshops. Many schemes are built here on a modular basis before installation on site.

Shields - both scheduled for early 1988 openings. And you can be sure there will be many more to follow in the year ahead.

Further into the future, Malcolm Robertson strongly believes that imaginative design rather than high tech will be the order of the day, with fibre optics set to play an important creative role. He sees moving rigs on the way to redundancy, unless they are part of a design itself as an architectural feature, and has far greater faith in controlled lighting of the 'Robot' type.

And anyone who saw the stand Effects Lighting designed for WB Lighting at the 1987 PLASA Show will know full well how something imaginative and different can be achieved by such methods.

#### Sound at Coco Savanna

Installed by Paul Smith of the Music Company, Bradford.

Speakers for dance floor:

- 4 Turbosound TSE-111 recessed into ceiling
- 6 Turbosound TSI-118 bass cabinets built-in dance floor surround

Peripheral:

- 20 JBL TLX3's

Equipment:

- Technics turntables with Stanton 680 cartridges
- TEAC W210 cassette deck
- Rane MP24 mixer
- Rane 6 into 2 splitter mixer for peripheral sound
- Studiomaster 6-2-1 for live performance
- BSS FDS360 crossover

Amplifiers:

- 3 C-Audio SR606
- 6 Metamp Q250
- 3 Metamp Q500



Full colour at Coco Savanna, Cardiff.



## Effects Lighting at . . .



Paradise Lost, Watford.



Silks, Sheffield.



The Avenue, Gillingham.



Seventh Heaven, Doncaster.



The Dome, Birmingham.



# Tyne Theatre Restored . . .

**Newcastle's Tyne Theatre gets a backstage re-build into full Victorian working order. David Wilmore describes how the theatre's machinery and stage facilities were fully restored after the disastrous fire two years ago.**

In 1867, The Tyne Theatre and Opera House opened its doors to the Newcastle Public with a performance of Dion Boucicault's 'Arrah-Na-Pogue', produced by the theatre's very own 'stock' or repertory company.

The theatre was designed by William B. Parnell, an architect of which very little is known. It relied heavily upon the use of timber, and being lit by gas, was potentially a tinder box. Yet amazingly whilst any theatre worth its salt in the nineteenth century had at least one great fire, this theatre survived intact until 1919 when it became a cinema without any major rebuild or 'modernisation'. A projection box was hurriedly inserted into the upper circle tier under the supervision of the Frank Matcham Office, a new box office was constructed in the foyer and a cinema screen erected on the stage - and there it stayed until 1974 when the projectors finally stopped after a double bill of 'World Without Shame' and 'Danish Bed and Board' - enough said!

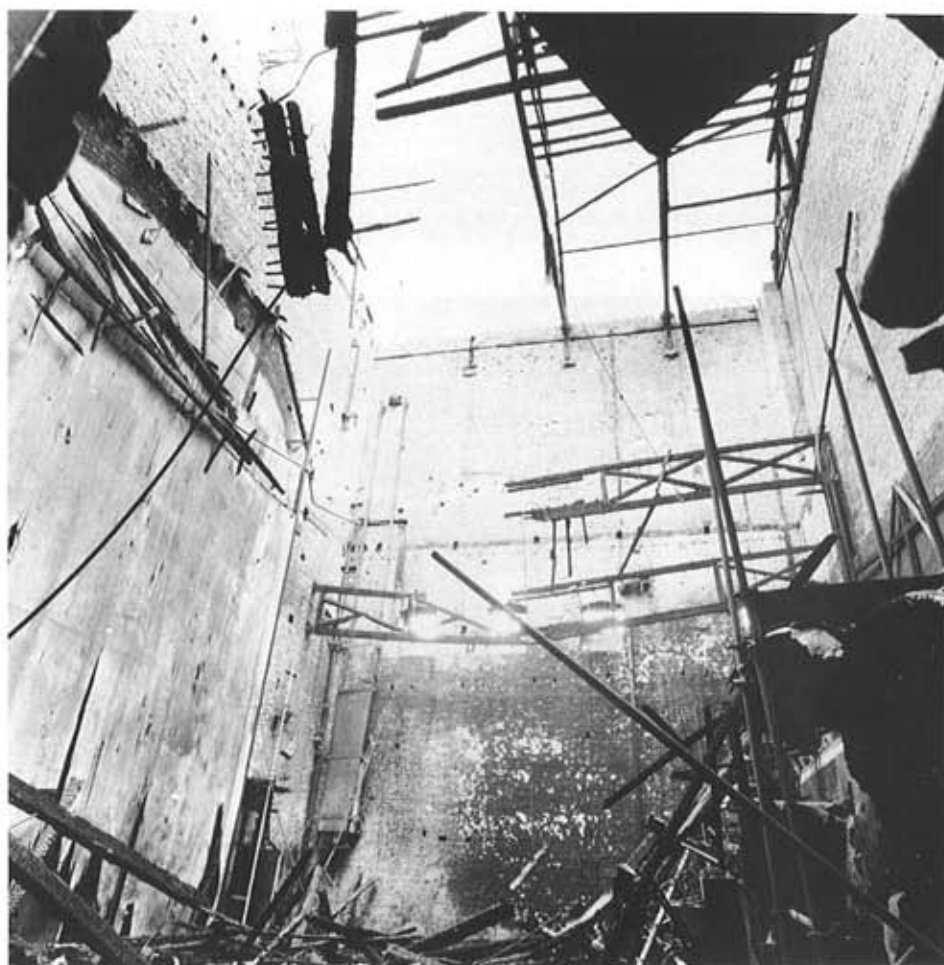
It was at this point that a local operatic society, led by businessman Jack Dixon, took on the task of restoring the theatre back to its former glory. This was no instant multi-million pound scheme but a slow, gradual, painstakingly caring process which took almost ten years, during which the theatre was completely redecorated and refurbished along with its unique Victorian stage machinery which was restored to full working order.

It was almost complete when disaster struck - in the early hours of Christmas morning 1985 a fire began backstage in the dressing room area, probably inside a gas meter cupboard. Within a few hours the fire spread, gaining entry into the stage tower via the fly gallery access door. Once inside, the result was inevitable. Perhaps on any other day of the year someone would have been in the building, but not on Christmas Day. Even outside, the City was deserted, and the fire raged on unabated.

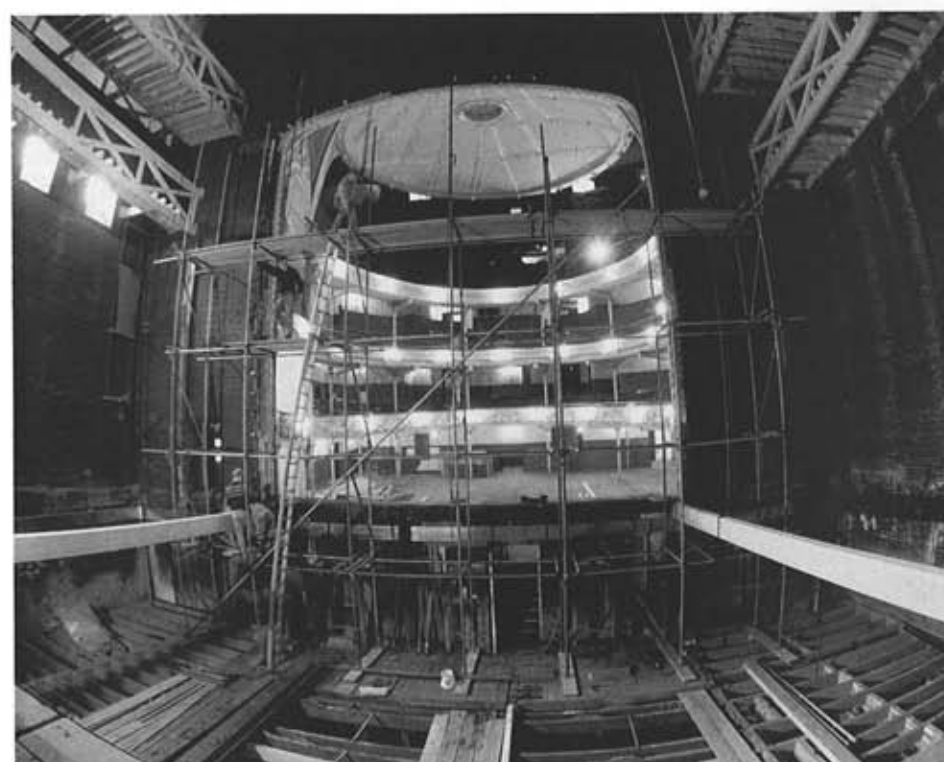
Thankfully, the safety curtain was in and the old 'iron' which had been installed around the turn of the century held back the fire and it was with some consternation that we later learned the iron was in fact only two layers of asbestos cloth covering an angle iron frame! - but my goodness it did the job.

The fly galleries and the grid were completely destroyed beyond repair, yet surprisingly, beneath the stage a large amount of machinery remained intact. Faced with the task of clearing the debris we were determined to rebuild the theatre as it was before the fire.

This decision meant that the clearing out process had to be carried out in the manner of an archaeological dig. However, after the burnt timbers of the old grid iron had been demolished, a high wind caught the back wall of the stage and before any additional supports could be added it collapsed on to the stage sustaining even more damage to the understage machinery. Not to be deterred, we pressed on, intent that the machinery would be restored. Unfortunately

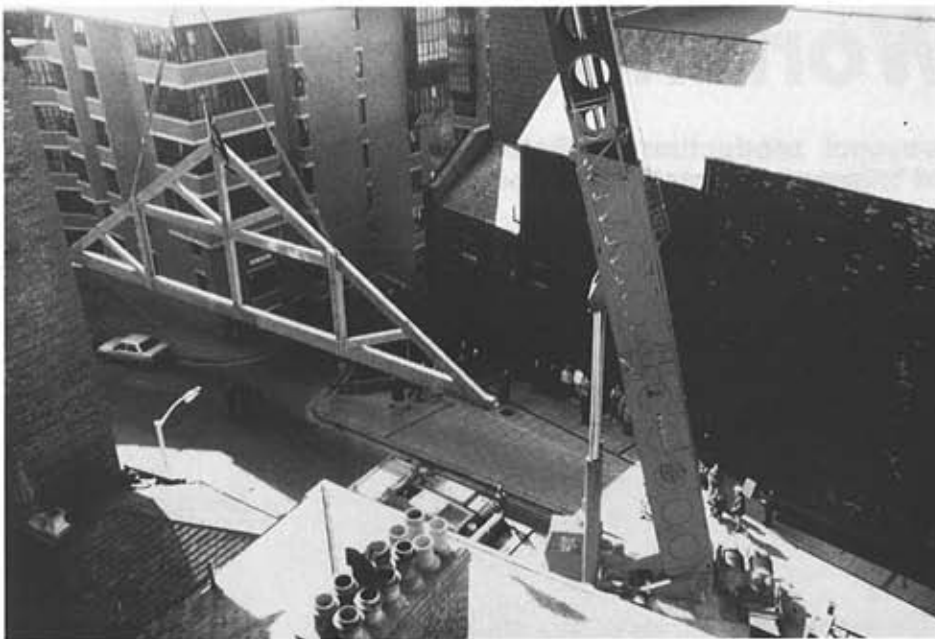


The burnt out fly tower of the Tyne Theatre after the fire in the early hours of Christmas morning, 1985.



A view from the back wall before the stage was re-built.





Raising the roof trusses.



The Tyne Theatre's new grid.

there were no measured drawings of the equipment, so burnt timbers had to be kept, as did every single piece of metalwork so that it could be used in the reconstruction.

It was decided very early on that any modern concessions to the theatre of the 1980's would have to be designed around the original construction details - for example, 20 single purchase counterweights were installed against the stage right wall, fitting in with the replacement timber galleries. While on the stage left side, the hemp gallery was reinstated without any modifications.

Luckily, because the theatre trust had wisely insured the building with Sun Alliance, work literally began on Boxing Day and by



David Wilmore - the project's mastermind.

March 1986 the new timber roof trusses incorporating many original pieces of metal strap work, were raised into place above the stage. From then on, we could begin to rebuild and refit the stage as it had been prior to the fire.

It was not until that point that we began to realise that no one had actually built an English wooden stage using these techniques for eighty or ninety years. The original stage timbers were pitch pine but on availability and cost we decided to use douglas fir, a Canadian timber of comparable quality. Every single piece was bought 'down the road' at South Shields, dispelling the myth 'they don't grow 'em like that any more!' - but my goodness there were some big timbers. The stage is supported by 2 12" x 6" beams 45 feet in length and it took 17 men to carry each one into the building. (Incidentally, none of that metric nonsense here, it was originally built in imperial so that's the way we restored it!)

Because of the very tight schedule for the reopening on 24th November - eleven months to the day - the restoration of the stage machinery, especially in the sub-stage areas, was left until the second phase of the restoration project which is currently nearing completion - more anon.

Within the past two years, the face of 'theatre on Tyneside' has changed dramatically. The Theatre Royal has closed for major refurbishment and many large scale productions which might not otherwise have visited 'The Tyne' have found its intimate auditorium and superb acoustics a joy to behold. Yet once again, change is in the air, for as the Theatre Royal nears completion, the repertory company, originally based at the Newcastle Playhouse (formerly The University Theatre) has moved to the Tyne to form the Tyne Theatre Company. What is more, the machinery was completed in readiness for the Christmas presentation of 'Peter Pan' and all will be revealed . . .

Architect: Karol Biskupek  
Structural Engineers: Ove Arup & Partners  
Theatre Consultant: Tony Easterbrook for John Wyckham Associates  
Electrical Contractors: Dixon Electricals  
Heating Engineers: J.P.O'Brien  
Main Building Contractors: Bowey

### Tyne Theatre - Technical Installed Wiring

- 12 Mic Circuits from stage to stalls control position switchable to control room.
- 24 Mic circuits from pit to stalls control position.
- 10 loudspeaker outlets for proscenium system from rack room all wired for either XLR-3-32 or E.P.S. for bi-amplified loudspeaker systems.
- 6 Rear of house effects loudspeaker circuits from rack room.
- 18 Under Balcony delay loudspeaker circuits from rack room.
- 8 On-stage loudspeaker circuits from rack room.
- Full independent mains distribution system switched from rack room.
- G.P.O. patchfield in rack room for 16 sends from control room or stalls control room position patching to delay lines, Martin controllers, and power amplifiers.
- 2 loudspeaker patching panels.

### Sound Equipment

- 10 Martin CX2 loudspeakers, 2 Martin BX2 loudspeakers, 2 Yamaha loudspeakers, 18 Proac super tablette loudspeakers, 2 Tannoy Jupiter loudspeakers.
- 8 HH V800 amplifiers, 2 Hill DX500 amplifiers, 1 Harrison 150 amplifier, 1 Crown DC300A amplifier.
- 3 Knowles delay lines.
- 1 Soundcraft 800 24/8/2 console, 1 Hill Multimix 12/4/2/1 console.
- 2 Revox PR99 Mk2 tape decks, 2 Itam 3 77 tape decks, 1 Revox B77 tape deck, 1 Shure CD player, 1 Luxman Z60 cassette deck, 1 dual turntable with Stanton cartridge, 1 Yamaha SPX-90 effects unit.
- 4 Crown PLC160 microphones, 2 Shure SM58 microphones, 3 Shure SM57 microphones, 4 AKG C535 microphones, 2 AKG C451/CK9 Rifle microphones, 1 AKG C451/CK1 microphone.
- 1 set BBC CD sound effects library.

### Lighting Equipment

- Profile spots: 4 x 2k Sil 15, 2 x 2k Sil 10, 2 x 1k Sil 30, 39 x Patt. 264, 6 x Patt. 774, 10 x Harmony 22, 20 x Harmony 12, 10 x Prelude 16/30, 8 x Cadenza 12/22.
- Fresnel: 19 x Patt 743/223, 10 x Patt 243, 25 x Harmony F, 16 x Harmony PC, 2 x 5k Mole.
- Beamlights: 10 x Par64 (Thomas) CP60.
- Floodlighting: 21 x 4 way Coda sections, 6 x Nocturne floods.
- Control: 160 way Gemini control, 120 Berkey Colortrack as optional back-up.
- Dimming: 114 x 2.5 Berkey dimmers, 12 x 5k Green Ginger.
- Patching Layout:  
F.O.H. - 1,3-7, 9-11, 13-17, 15-20, FOH Horseshoe, 21-28, Prompt side, 29-36, Opp. Prompt, 4 5k Hardwired 109, 110, 111, 112. All red.
- Upper Circle Boxes: Prompt: 37-40, Opp. Prompt: 41-44. All blue.
- Prompt Side Fly Floor: 45-59, 118-120, 123-128, 60-66, 129-134. All yellow.
- 71-77, 82-85 2 x 5k Hardwired 119, 120. All Blue.
- Prompt Fly Floor: 67-70 all yellow, 78-81, 90-93, 4 x 5k Hardwired 114, 115, 116, 117. All blue.
- Prompt Side Floor: 95-97, 1 x 5k Hardwired 113 at facilities panel; 98-101, at mid-stage position; 102-105, at up-stage position. All blue.
- Opp. Prompt Floor: 107-113, 1 x 5k Hardwired 118 at downstage position; 114, 117, at up-stage position. All blue.
- Independents: A-H FOH, J, K Prompt side Fly floor, yellow; L, M Prompt side Fly floor, blue; N, P Opp. Prompt Fly floor, blue.

# ... in Full Working Order

The Tyne Theatre Company's seasonal production of 'Peter Pan' uses the restored stage machinery to full advantage. David Wilmore completes the story ...

When the Tyne Theatre Company (originally based at the Newcastle Playhouse) decided earlier this year to move to the Tyne Theatre and Opera House it also undertook to complete the restoration of the sub-stage machinery in readiness for a Christmas production of J.M.Barrie's play 'Peter Pan'.

Alex McPherson was commissioned to design the production utilising the stage machinery to its full advantage within his own scenic design concept. Yet when this process began, the sub-stage was merely a structural timber framework awaiting the insertion of machinery.

Due to the lack of measured drawings, its reconstruction, restoration and conservation (three distinct and separate operations) had to be carried out from photographs, memory and charred archaeological remains! The basic layout of the machinery was typical of the nineteenth century 'English wooden stage'. Downstage there are three hinged trap doors, a carpet cut, two corner traps, two staircase traps, a grave trap and then a series of alternating 'cuts' and 'bridges'. Whilst there is not enough space here to discuss the details of this machinery it is interesting to look at the relationship between these two latter pieces of equipment, and how they are used in Peter Pan.

The lagoon scene begins with a mermaid discovered on a rock, centre stage. The stage crew on the mezzanine floor, some ten feet below the stage must first of all open the 'cuts'; in effect trap doors. Each one measures 28' in length, nine inches wide and is orientated parallel to the proscenium opening. The off-stage ends are supported by levers or 'paddles', which when pulled back allow the floor to drop down into a set of guides which run off under the permanent staging of the wings at either side of the stage. Within each cut are mounted two 'sloats' which are essentially vertical timber posts that slide up and down inside a timber box. The position of the post, to which the scenery is attached, is controlled by a rope connected to a windlass on the stage right side of the mezzanine floor. The sloat is a moveable piece of equipment which can be moved around as required, however it is

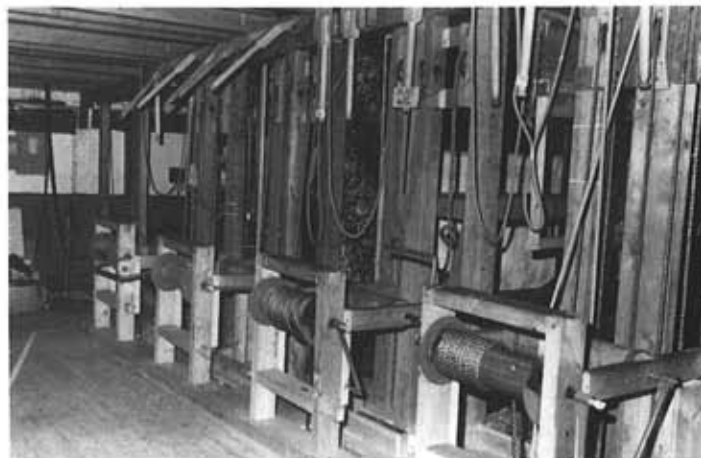


Raising the set for the underworld scene, stage left, mezzanine floor. (See colour picture, facing page).



Raising the groundrows for the lagoon scene, stage right, mezzanine floor.

Photos: Rik Walton



A close-up of some of the new 'Victorian' stage machinery at the Tyne Theatre. After the disastrous fire, all burnt timbers and every piece of metalwork had to be kept as there were no measured drawings of the equipment.



normally only necessary to have two positioned within a cut to raise a piece of scenery 28' long, both sloats being controlled from the same windlass to ensure a coordinated movement.

Once the cuts are all open and the cue is given to raise the ground rows (we allow ourselves the luxury of walkie-talkies for this!), the windlasses are turned to produce the effect of the water rising around the rock. At the same time, the upstage or number four bridge, which is in effect a lift 28' long and 2½' wide is raised from 14' beneath the stage to 5' above it revealing a series of three dimensional rocks. This mechanism works upon the same basic principle as the 'underworld' which is effected by coupling the two downstage bridges together, forming a lift 28' long and 8' deep. During the interval two tree trucks are secured on to the top of this lift which also serves as the stage for the majority of the production. As the scene opens a number of 'redskins' are seen encamped around the trees, but then, slowly and smoothly the whole unit begins to rise revealing the home of the lost boys. Normally the two bridges are operated as independent lifts but the English wooden stage is an incredibly flexible piece of equipment which can be modified to suit the requirements of a particular production.

The bridges are usually operated by independent windlasses positioned on the stage left side of the mezzanine floor and connected by steel cable to a large timber drum and shaft 25' below the stage in the cellar. The ratio between the circumference of the drum to the circumference of the shaft produces a mechanical advantage which assists the raising of the bridges. Further assistance is also given by variable counterweights which hang from either corner of the bridge. However, for Peter Pan we found it necessary to link the bridges,



The lagoon scene - windlasses are turned to produce the effect of water rising around the rock.

remove the independent drum and shafts and replace them with one drum and one long shaft, allowing both bridges to be operated as a large lift using one windlass.

Believe it or not the new shaft is in fact a redundant telegraph pole which was turned into the requisite diameter with the skills of our master carpenter Mike Wymark - no small task!

Finally, due to the fact that the underworld elevates not only scenery but also actors (who collectively weigh 120 stone) and descends minus the actors it is necessary during the course of the scene to remove some of the counterweights. Having said that, there are plenty of stage crew in the sub-stage at this point as the underworld and the number four bridge have just been raised by sheer muscle power. One thing is for certain - with almost 100 performances during

the run we should have one of the fittest stage crews around by the end of January!

#### Production Credits

Director: Ken Hill  
 Designer: Alex McPherson  
 Production Manager: Clive Odom  
 Company Stage Manager: Jane Pule  
 Deputy Stage Manager: Sian Gilroy  
 Stage Director: Dave Wilmore  
 Set Construction Manager: Chris Coles  
 Master Carpenter: Mike Wymark  
 Assistant Carpenter: Richie Mahoney  
 Sound Designer: Mic Pool  
 Lighting Designer: Andy Phillips  
 Chief Electrician: Kevin Fitz-Simons  
 Stage Machinery Operators: George Boxer, Jim Tearse, David Forrest (crocodile), Glyn Colwill, Graeme Challands, Mark Dunlop, Stewart Hogarth, Michael Ede, Robert Laverick, Jim Glover, Frank Mendez, Glenda McCall, Tony Dolan, Paul Harrison, Keith Cadwallader, Steve Bell, David Eker, William Murphy, Philip Terry, Kevin O'Keefe.



The underworld scene - a major crew operation for every performance of 'Peter Pan' at Newcastle's Tyne Theatre.

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## ***Dynacord***

Dynacord's new speaker range includes the **CL 820** folded bass horn and the **CL 812** compact cabinet, which can be used as a stand-alone full range cabinet or actively combined with CL 820 as a mid/high cabinet. The new range features a new textured white finish, and incorporates a slide rail mounting system for flying. A three year guarantee reflects the manufacturer's confidence in their product. We ourselves are impressed with the tight bass and smooth reproduction through the vocal range together with crisp highs, without fatigue even at high SPLs, of the 820/812 combination.

**CL 812:** 2 way (30 cm cone driver plus bi-exponential tweeter) fully overload protected. 150w RMS, 8 ohms nominal impedance, 98 dB/1w/1m, Max 123dB/1m. (W) 501 x (H) 396 x (D) 335 mm.

**CL 820:** "Half-W" folded bass horn (45 cm bass driver) fully overload protected. 200w RMS, 8 ohms nominal impedance, 104 dB/1w/1m, Max 129dB/1m. (W) 776 x (H) 505 x (D) 425.

## **RAMSA**

RAMSA's speaker range is now distributed by Avitec, with the **WS-A250** bass cabinet and the **WS-A200 E** compact cabinet bi-amped actively, being another high quality system recommended for the small to medium size club.

Again, the quality is excellent with a slightly lower bass extension (but perhaps less ultimate "punch") and a brighter top end, when compared with the Dynacord system.

The **WS-A 200 E** can be used horizontally or vertically, with both the horn and the grille being user changeable to either mode. Hank bushes are provided for flying, also in either mode. The **WS-A 250** is fitted with Flanges for safe stacking where required.

**WS-A 200 E:** 2 way (30 cm cone driver plus twin Bessel constant directivity 60° H x 40° V high frequency horn) — all components thermally overload protected. 150w RMS, 8 ohms nominal impedance, 98dB/1w/1m. (W) 395 x (H) 557 x (D) 273.

**WS-A 250:** Ported bass reflex (45 cm bass driver), 200w RMS, 8 ohms nominal impedance, 100 dB/1w/1m. (W) 560 x (H) 750 x (D) 450 mm.

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WS-A250 Bass Cabinet



# First in Lighting Design

Julian Williams interviewed MICHAEL NORTHERN at Plymouth Theatre Royal during rehearsals for 'Dick Whittington'.

In this present era of musical revivals the West End has seen many of the old favourites again, some 20 or more years after their origination. This month we have come full circle as one of the remaining best shows - the one that "socks it all" with famous musical hits one after another - comes into town. 'South Pacific' is now given the modern treatment - all effects, real waterfalls and the best in lighting. At the same time, one of the great masters of theatre lighting, Michael Northern, has made a comeback. After a seven year break at the age of 67, he has achieved design credits for a major series of current shows around the country which include 'Dick Whittington' at Plymouth Theatre Royal, 'The Wizard of Oz' in Birmingham, and both the new productions of 'Peter Pan' and 'South Pacific' in London.

Michael Northern, who lives in a peaceful retreat - on a 17-acre donkey stud in the Cotswolds - claims that during his "best years" back in the '50s, '60s and '70s, an era when there were relatively few lighting designers, it was possible to detect the presence of a lighting designer by a distinct visual style in the lighting for a particular show. He considers this the top period of theatre set design, where there were many more designers who were great artists in their own right, and when design was more pictorial. Artists that he was fortunate to work with during that time included Tanya Moiseiwitsch, Lesley Hurry and Salvador Dali - with whom he worked on 'Salome' at The Royal Opera House. He lit most of John Piper's work at the Opera House including 'Billy Budd', and more recently lit his 85th painting exhibition at The Tate, just two years ago.

He questions what is currently being said about the lack of good training for production technical personnel, as he finds there are many good young production personnel and electricians around the country who are very conscientious and obliging in meeting the heavy demands of the lighting designer. He finds it beneficial to the artistic work of the designer to have this back-up from competent, technically orientated technicians who are using the equipment to its fullest advantage and as an aid for the designer. "If there is an experienced, perhaps even older member of the team to motivate these crews then so much the better," he said.

Michael Northern is, as others are, concerned about the extent of technology now available. Whilst in some ways envying young designers and technicians having so much equipment to use, he feels that if he were starting out on a career today, he would fulfil a dream, but he is also concerned that the creative element of lighting could gradually disappear as a quality of a forgotten age. He is continually surprised at the amount of equipment being used in today's lighting rigs, apparently with such little forethought in the planning or positioning; particularly where the same lanterns could perform various tasks.

Very aware of being one of the 'old

school', and therefore old fashioned in his ways, he prefers the days of lighting rehearsals where there was time to concentrate properly on each lighting cue, instead of being left out of modern schedules where the lighting designer is expected to cope with cue changes over rehearsal time and with other distractions. He well remembers his early days back in the late '30s when theatre lighting was so excessively simple, and when Strand had just four lanterns. The lighting consisted of the floats or footlights, a couple of lamps front of house and a couple of simple follow spots.

Although feeling very modern using the par can - "in relatively small amounts on my favourite booms position, compared with the millions you see used on the screen" - he



## Michael Northern

began his theatrical career in 1939 as an ASM, and after war service in the RAF he returned to the theatre, working at Stratford and Covent Garden as well as in numerous London theatres.

The first lighting designer in the country to be billed as such, his initial major credit was Gielgud's 'King Lear' at Stratford in 1950, and he went on to light countless other productions at Stratford for the RSC and numerous plays, ballets and operas at the Old Vic, Glyndebourne, Aldeburgh, Covent Garden and overseas.

Among his more recent credits are 'Lend Me A Tenor' at the Globe, 'Cabaret' at the Strand, 'Seven Brides For Seven Brothers' at the Prince of Wales, 'Ross' at the Old Vic and 'Two Into One' at the Shaftesbury. In fact he has lit shows in every West End theatre - among earlier ones being Noel Coward's 'Sail Away', 'The Mousetrap', 'The Music Man', 'Wait Until Dark', 'The Canterbury Tales', 'Alfie', 'Charlie Girl', and 'Relatively Speaking'.

His regional work has also been extensive, and includes tours of Compass Theatre's 'King Lear' and 'The Tempest' with Anthony Quayle, and numerous productions at the Theatre Royal Plymouth and other major producing venues.

Michael Northern's latest work is discussed in this article.

finds that now he has learned to live with them they are almost as suitable as his favourite specially-designed pageants, which also in their day had to be carefully adjusted to achieve a good result.

He spends much time in keeping up with the technical advances of equipment, although he considers there must be a need for some good old fashioned lighting these days, such as light battens and footlights, as otherwise he wouldn't have been asked to light a show in the first place! In future, he plans to stagger his production schedule as he feels it's now important to recognise that lighting designers can easily be 'dried up' if they take on too much work at one time, which may result in producing lighting for the sake of lighting with little creative thought as to its purpose.

Michael Northern started out in the theatre at the age of 17 and trained as a stage manager. He went on to stage manage big revues with such artistes as Hermione Gingold and Hermione Baddeley and followed by Jupiter Laughs with James Mason. During the war years he toured the world working with the Gang Shows and doing everything - stage managing, lighting and some acting. After the war he set up a studio as a model-maker, with his own miniature theatre at his home in London, and assisted set designers with practical work and technical drawings. He also worked with Peter Brook at Stratford-on-Avon as a co-designer on sets.

He then joined Covent Garden as production assistant where he was able to work with the big designers of the time, and while stage managing there for the Royal Ballet, came what he considers to be his big break into lighting. John Gielgud invited him to light 'King Lear' at Stratford and even now he says his lighting was "absolutely fab" and that it was "a bloody difficult play to light".

At a time when Joe Davis was about the only credited lighting designer, Michael considers that it was a combination of John Gielgud and the designer Lesley Hurry who encouraged him to have a bash at the lighting. In 1953 he left the Royal Opera House and undertook a series of seasons lighting productions at Stratford, after which he went into opera and worked at Glyndebourne with designers such as Oliver Messel on 'Idomeneo' and John Piper on 'Don Giovanni'. A couple of seasons later he joined the English Opera Group as a director, and worked at Aldeburgh in the early '60s when he went to Venice with their production of Britten's 'The Turn of the Screw'. At this point he was persuaded to go into the commercial theatre and lit plays and West End musicals including all of Harold Fielding's productions of the time which included the elaborately designed Cinderella at the London Coliseum. He has had as many as eight West End shows running at one time, including specials such as the Debbie Reynolds' Show at the London Palladium.

When I asked Michael what had persuaded him four years ago to come back into the business after a seven year break he told me



that Anthony Quayle's launching of Compass Productions was utilising much of the earlier expertise of the profession, and he agreed to light 'Clandestine Marriage' on a friendly basis. The production eventually came into the Albery Theatre where his name suddenly appearing on the billboards in the middle of St. Martins Lane surprised many.

At the same time his contemporary and good friend, the eminent Joe Davis died. Together they had been the first lighting designers to receive billing and recognition for their profession, and he decided to support their cause once more and take on more lighting himself, particularly as the offers came thick and fast! The fact that the 'Joe Davis era' might know something about the theatre also stimulated him.

He was surprised that people bent over backwards to help him when he started lighting again, and he came out of the cobwebs into a wide new world of computerisation, pressing buttons and looking at video screens. He found that there was no resentment towards "an oldie". In fact he found that the efficiency of today's lighting technicians with this new equipment made it so much easier to work creatively again. As other designers have also said, he feels that "it is the biggest drawback to know anything about the workings of a computer board" - and he doesn't even like being presented with a machine in the stalls as he feels that this is the domain of the technician.

Michael Northern is concerned that the link between the younger and older generations is in danger of being lost by allowing the machine to take over completely and thus lose the individual style of the serious designer. There are many lighting technicians who have become lighting designers but are, at the core electricians, and more interested in that sort of thing and not so happy about the artistic side of theatre lighting, though very interested in interpreting it.



A scene from 'Dick Whittington', the current production at Plymouth Theatre Royal.

"They burst their buttons to get it right for you," commented Michael.

He feels that the integrity of the young technician today is very high and told me he has not been to a single theatre in the country where he has found the chief LX and board operator not well versed and keen to help you, and more interested in the practical side rather than becoming creative lighting designers. "It is important that the modern technician appreciates this link, and is prepared to go beyond the limits of the machine to interpret an artistic impression

with individual feeling," he said.

"With theatre lighting in a different style in this modern age, with nine million par cans all going upsy-downsy and twiddling round, and extraordinary space-age-looking moving machines, we could lose the original techniques of stage lighting if we are not careful," he believes.

It is reassuring to know that Michael Northern can still contribute so much to theatre lighting, and that his techniques can be interpreted in the modern idiom of today's high tech world.



The dramatic new production of 'South Pacific' - "all effects, real waterfalls, and the best in lighting."





The 1987 Compass Theatre production of 'King Lear'.



A scene from 'Peter Pan' at the Cambridge Theatre, London.



'The Wizard Of Oz' at Birmingham Repertory Theatre - see also cover picture.



'Curse Of The Baskervilles' - a Theatre Royal Plymouth production.

photo: Eric Thompson

# SHOW PAGE *with* **PLASA News**

## Membership set to Soar

With a steady growth in membership to the present 107 over the second half of 1987, general secretary Tony Andrew has no less than 14 new applications from companies wishing to join the Association.

Subject to approvals by the committee, it should see the 120 mark achieved in the near future - well on the way to Tony Andrew's initial target of 150 by mid-1988.

## Exhibition Diary

### Sound Eighty-Eight

February 23 & 24th.  
Heathrow Penta Hotel, London.  
Organised by the Federation Secretariat,  
Sound & Communications Industries Federation,  
4B High Street, Burnham, Slough SL1 7JH.  
Telephone: (06286) 67633.

### The 2nd Scottish Pub, Club, Hotel & Catering Show

February 23-25, 1988.  
The Edinburgh Exhibition and Trade Centre, Ingliston,  
Edinburgh.  
Enquiries: Ian Macfarlane Exhibitions Limited,  
676 Wilmslow Road, Didsbury, Manchester M20 0DN.  
Telephone: 061-434 5300.

### Frankfurt Music Fair

March 9-13, 1988.  
Frankfurt Fair Centre, Frankfurt, West Germany.  
UK Representatives: Collins and Endres,  
18 Golden Square, London W1R 3AG.  
Telephone: 01-734 0543.

### SIB Rimini

March 22-25, 1988.  
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.

### USITT Conference/Stage Expo '88

March 23-26, 1988.  
Disneyland Hotel, Anaheim, California.  
Show manager: Richard James, 486 Fullerton Court  
San Jose, CA 95111  
Telephone: (408) 225 6736.  
National office: 330 West 42 Street, Suite 1702,  
New York NY 10036.  
Telephone: (212) 563 5551.

### SIEL '88

April 10-13, 1988.  
Porte de Versailles, Paris, France.  
Organisation: Bernard Becker Promotion,  
161 Boulevard Lefebvre, 75025 Paris.  
Telephone: (14) 533 74 50.

### Pub, Club and Leisure Show

April 12-14, 1988.  
Olympia 2, London.  
Angex Ltd., Europa House, St. Matthew Street,  
London SW1P 2JT.  
Telephone: 01-222 9341.

### ABTT Trade Show

April 14-16, 1988.  
Riverside, Hammersmith, London.  
Enquiries: ABTT, 4 Great Pulteney Street, London  
W1R 3DF.  
Telephone: 01-434 3901.

### Expo Musica, Madrid

April 20-24, 1988.  
Madrid, Spain.  
Organised by IFEMA (Institution Ferial de Madrid),  
Avda de Portugal, s/n Casa de Campo,  
28011 Madrid 1101.  
Telephone: Madrid 470 10 14.

### Audio Visual 88

April 25-28, 1988.  
Wembley Conference Centre, London.  
Enquiries: EMAP/MaClaren Exhibitions Limited, P.O.Box  
138, Token House, 79-81 High Street, Croydon CR9 3SS.  
Telephone: 01-688 7788.

### Showtech 88

May 18-20, 1988.  
Trade Fair Centre, Berlin.  
Enquiries: German Chamber of Commerce,  
12-13 Suffolk Street, London SW1.  
Telephone: 01-930 7251.

### International Disco Technology Fair

June 7-9, 1988  
Bally's Grand Hotel, Las Vegas.  
Enquiries: Night Club & Bar Magazine,  
305 West Jackson Avenue, Oxford, MS 38677.  
Telephone: (601) 236 5510.

### PLASA Light & Sound Show '88

September 11-14, 1988.  
Olympia 2, London.  
Exhibition Organiser: David Street,  
Telephone: 01-994 6477.  
General Enquiries: PLASA general secretary,  
Tony Andrew, 7 Highlight House, St. Leonards Road,  
Eastbourne, East Sussex BN21 3UH.  
Telephone: (0323) 410335.

### Photokina

October 5-11, 1988.  
Cologne, West Germany.  
UK Representative: Tony Pittman,  
12/13 Suffolk Street, London SW1Y 4HG.  
Telephone: 01-930 7251.

### Disotec/Hogatec

November 7-11, 1988.  
Dusseldorf Messe, West Germany.  
Enquiries: Miss Renata Born or Mr Peter Brodie,  
Dusseldorf Trade Fair, Charles House,  
108-110 Finchley Road, London NW3.  
Telephone: 01-794 0166.



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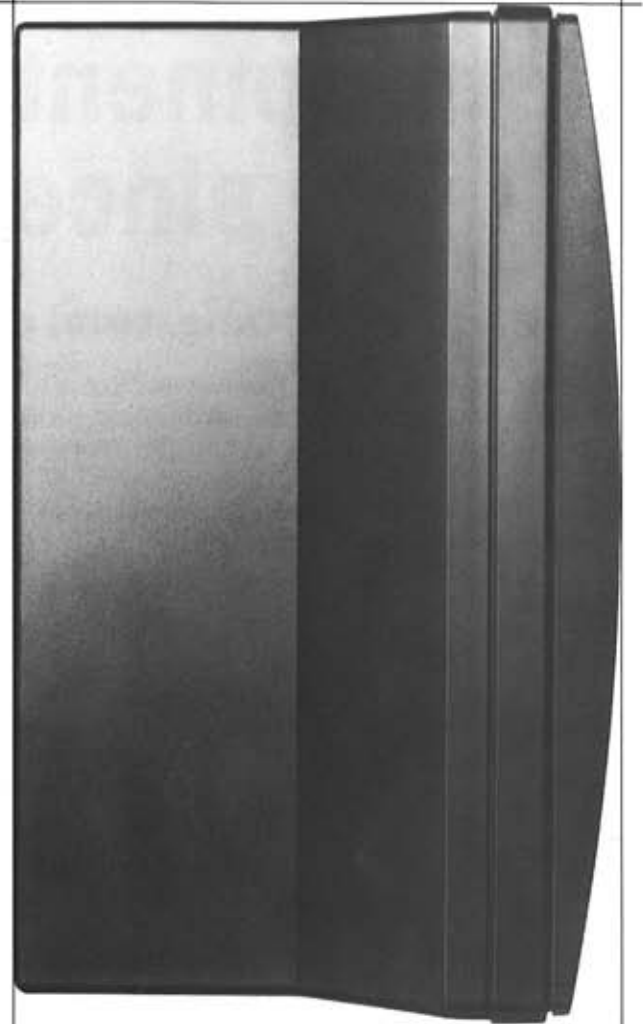
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**Pulsar GmbH,**  
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# ON TOUR

Keith Dale

## ITV & Channel 4 Presentations Dorchester Hotel

Catriona Forcer talks to lighting designer

### John Rinaldi

#### How did you become involved in lighting design?

I was an electronics boffin at school, and when I was 16 I built my own lighting desk which I used to light school plays and discos. When I left I got involved with bands and my career just grew from there. I've done freelance work for a few major companies ranging from conference work through to some of the big rock and roll productions where I worked as a crew member. Often I had my own special area, for instance when I worked on the 'Frankie Goes to Hollywood' tour for Meteorlites, and I operated the slide show.

#### What other bands have you worked for?

I used to do many independent, smaller bands which I enjoyed because the designs could be really different. One of my favourite bands was 'Everything but the Girl', who had very constructive ideas and we worked very well together. It was a very theatrical show with plenty of profile spots and fresnels.

My largest production as a designer in terms of number of lamps, would have been the UK Fresh '86 show which was a big hip hop festival at Wembley Arena. It was a very involved system with 504 lamps and two supertroupers. I subbed the gear from Meteorlites and I provided the desks.

I used to really push to get the rock 'n' roll tours but this year our major acts (I work with James

Louden who is a very popular LD) have all decided to spend a year in the studio. At first I was disappointed but then I realised I didn't mind because I could spend the year pushing into other areas of the business.

#### Tell me about tonight's Show.

ITV and Channel 4 are presenting their Christmas and Winter programme to big advertisers and this will be followed by a cabaret show. The main production company are Rapier Productions who contracted Otto Vokoun and Peter Robertson of Staging Post to supply the sound, video and lighting. Thames Television brought in Supermick to light the cabaret - which was fine as I get on well with Peter Clarke.

Supermick provided all the rigging equipment and I supplied the control which is all Celco Series 2 - a 60 way desk and 72 way dimmer. For the cabaret we have 60 par cans and for the conference 28 profiles, 18 fresnels and 6 ground rows.

Tonight we have had to support a 71' span of truss only from the ends because in a decorative environment like this you can't have super lifts visible. So we chose Slick trussing for its great strength over immense distances, but it was still too long so we used scaff-pipes along the top to strengthen it. It bows a little but not too much considering there are over 60 lights up there!

#### Do you prefer conference work to rock 'n' roll?

There are things about conferences which I prefer to rock 'n' roll. It can be a more pleasant environment to work in, but the artistic satisfaction from a show can often be much greater in rock 'n' roll. In rock 'n' roll I like to design everything you see, whereas in a conference you are often fulfilling a requirement rather than being particularly creative.

This year has been very much a year of moving away from rock 'n' roll and getting involved in a lot of commercial presentation - fashion shows, exhibitions and conferences.

#### What do you think of the state of the lighting industry today?

As I do a variety of lighting work I see quite a few aspects of the industry and, recently, there's been quite a change. Events like the big Samuelson changes, for instance, end up affecting everyone. The rock 'n' roll touring industry in '87 has been full of very big tours which have gone, out of necessity, to big companies, but I see '88 as being a year for the smaller bands.

There is a lot of rubbish about in lighting design - I can't stand the normal, boring two rows of par cans and the symmetrical fans with aircraft lights stuck in the middle and at the ends. Fortunately there is an increase in the number of people getting away from that, and getting involved in the more imaginative use of lights. I'm not referring particularly to moving lamps and colour changes, but I think that they are great when there's an application for them - especially if you can find something different to do with them i.e. moving the lamps themselves like Jonathan Smeeton did.

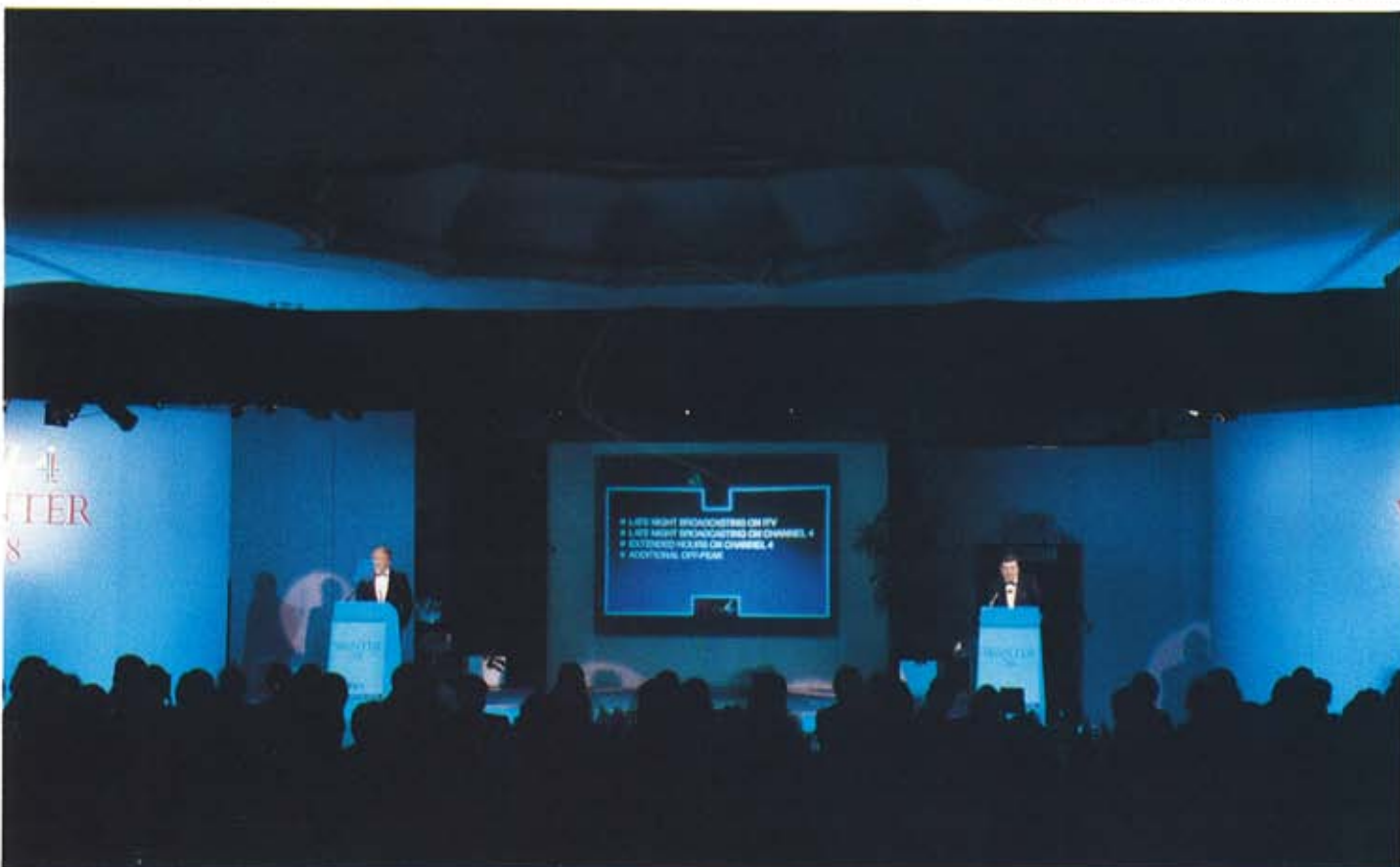
All too often the overall design of how a stage looks is not thought about, and things can look very cluttered and untidy. With 'Everything But The Girl' people often remarked at the clean lines of the stage, which pleased me. Keith Dale was involved in the designs, and we wanted the lighting effects to be seen not the lights and the metalwork.

#### Who do you admire in the lighting industry?

I worked with the support band on the Peter Gabriel '82-'83 tour and I thought that Jonathan Smeeton was excellent. I also like James Loudon because he has a good imagination and takes a lot of trouble over his designs. I think that Keith Dale has done well in getting away from par cans, which is something that I also like to do. Echo and the Bunnymen's designer is very good - as is U2's.

#### What are your future plans?

I like to think that I can turn my hand to most ap-



Part of the ITV and Channel 4 Presentation at the Dorchester - lighting designer John Rinaldi of Stagelight Design.

plications, and one day I would like to have a go at lighting an Ice Show, because lighting such a huge expanse of white would be very challenging.

I don't want to become a major stockist of vast quantities of equipment - another Supermick or Meteorites. I can't see myself doing anything other than lighting. I like to think that there will always be a so/so mixture of conference work and rock 'n' roll to keep me sane! I do see myself going back on tour soon as there are a couple of bands talking to me at this moment, and I'm looking forward to that.

## Roger Waters Wembley Arena

Keith Dale talks to lighting designer

## Abby Rosen

Some lighting designers have a free reign with lighting and set design; others have to feed off ideas formulated by their clients. Abby Rosen, on this production at least, falls into the latter category, as Roger Waters had definite ideas on what he did and didn't want this show to look like.

Early on in the planning stages Roger Waters brought in set designers Jonathan Parks and Mark Fisher. Between them the overall design was formulated and specific moods and looks were worked out. At this stage it was obvious that this was not to be an average rock 'n' roll show. Roger Waters had made the stipulation that there was not to be any front or back truss, and that the majority of lighting would be from the sides, hidden by the P.A. This gave lighting designer Abby Rosen, now called upon to work out colour and show running, a few problems with regards to instrument angles and positioning - but these were soon to be eliminated.

To add variety to the colour and focus positions of the instruments confined to the sides, it was decided that some form of colour changing and moving instruments would be needed instead of fixed single colour types. For this, Strand units were chosen, partly because of their reliability and partly because, in an attempt to avoid what everyone else was doing, it had been stipulated that Vari-Lites were not to be used.

Because of the limitations of focus available from the sides, a greater reliance was placed upon the follow-spots to 'cover' than may have otherwise been expected. Although this method worked admirably, Abby Rosen felt that perhaps too much emphasis was given when it was not required.

In all some 125 instruments were used, a surprisingly small amount for a show of this size, comprising:

- 64 Strand par Scrollers on side washes and rear screen,
- 54 Strand par Scanners on side washes and rear screen,
- 8 Lekos on side washes,
- a variety of Lekos and fresnels on the floor.

Control was by an Avolites QM and a Strand colour change control, and all lighting equipment was provided by See Factor, 74-75 County Street, London SE1 telephone: 01-403 1466.

## Equipment on Tour

Chameleon, 53 Northfield Road, London W13 9SY  
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Current tours out from Chameleon include the following:

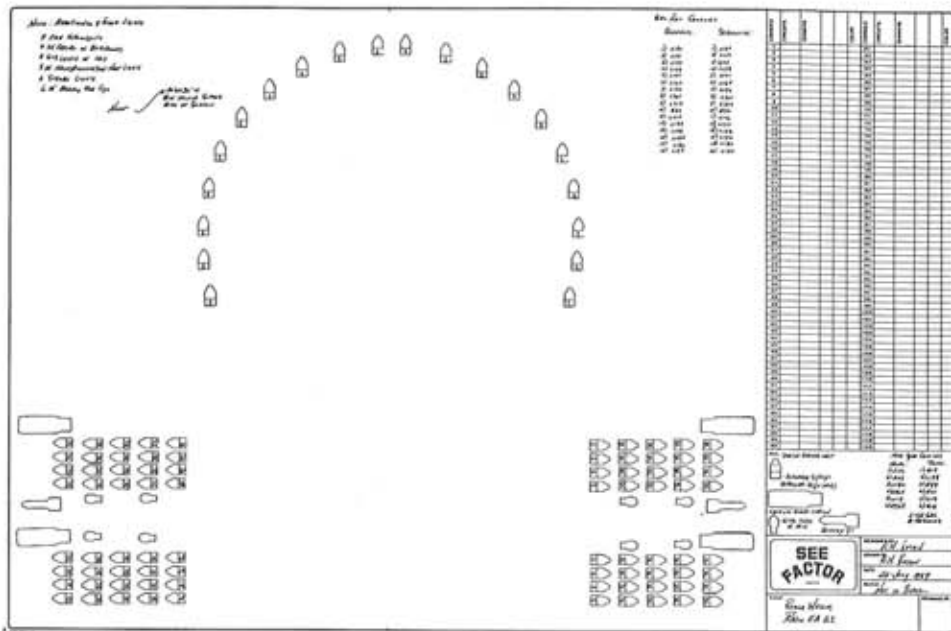
### Alison Moyet

- 184' A type and Slick trussing
- 188 various lamps
- 12 Colorwiz gel changers
- Avolites QM control board
- 6 Motor rigging
- 2 Pani Longthrow follow-spots

Lighting and set design: Lawrence Park  
Lighting Crew: Richard Armstrong and Simon James

### Echo and the Bunnymen

- 64' pre-rig truss, 32' A type truss
- 168 various lamps



Lighting plan for the Roger Waters concert at Wembley Stadium in November.

12 Colorwiz gel changers  
Celco Series 2 Sixty and Series 2 Thirty control boards  
2 Pani Longthrow follow-spots  
Lighting and set design: Bill Butt and Alan Espley  
Lighting Crew: John John Armstrong and Brian Richardson (Kiwi)

### Rory Gallagher

80' A type truss, 4 point rigging system  
132 lamps (mainly PARs)  
60ch. Avolites manual control board  
2 Pani Longthrow follow-spots  
Lighting Design: Finnbar Quinn  
Lighting Crew: Roy (the boy) Davidson and Nigel (Skip) Monk

### The Cult

400' of trussing, 20 Motor rigging system  
450 PARs etc  
Avolites QM 90ch. lighting control board  
Lighting Design: Ian (Chip) Calder and Peter Barnes  
Lighting Crew and most of the equipment courtesy of Supermick Lights

### Motorhead

A back truss and 2 Genie system with 143 lamps, 2 Motor rigging Chameleon 48ch. lighting control board  
1 case of earplugs  
Lighting Design: Paul Stewart and Colin Jones  
Lighting Crew: Nigel Holbrough

### Black

An unusual system comprising of:  
40' Trilite truss  
4 Genie hoists  
57 assorted theatre lamps  
Kodak Carousels and Pani BP1.2 projectors  
Rear projection screen  
Avolites Rollercurve 60ch. lighting control board  
Lighting Design: Louise Stickland assisted by Simon Taylor

### Big Country

A truss and 2 Genie system with 100 lamps  
Chameleon 72ch. lighting control board  
Lighting Design: Peter Barnes

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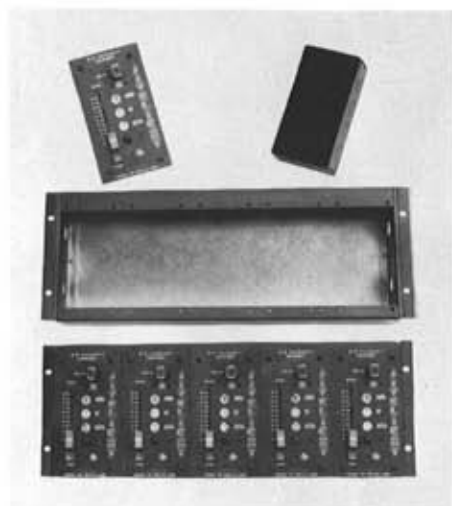
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# EQUIPMENT *News*

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For full details and prices contact Jivelight Limited at 16-18 Greyhound Road, London W6 8NX telephone 01-381 0868.

## Lightmix 430 Available

Multiform Lighting have announced full availability of their latest lighting controller, the Lightmix 430, which was formally introduced at the PLASA Show last September.

The Lightmix is a low voltage four channel controller which combines in one package all the facilities for the control of a fully dimmable club system with up to four zones, four switched effects and strobes. Background level controls and flash buttons allow for manual lighting control when required - a particularly useful feature if live acts are presented in a venue.

The effects section can produce three distinctly



Now fully available - Multiform's Lightmix 430.

different types of lighting effect, and the chaser section provides 16 different patterns which can be run individually or changed automatically about every 30 seconds. Auto-reverse and sound triggering can be selected as desired.

True four band sound to light incorporates a sophisticated AGC system to ensure consistent effects at all sound levels, and the variable speed crossfade has a cycle time that can be varied from five minutes to one-tenth of a second and sound activated to produce dramatic pulsating effects. Effects can be further enhanced by using the 'Attack' button for fast or slow response and sound modulation of the overall brightness level.

The Lightmix is designed to drive up to four 'Multipac' slave dimmer packs which can be enabled individually from four front panel buttons or from a separate 'Light Fingers' touch switch board. A second group of four buttons can be used to switch four separate effects via an external 'Switchpac'. If zoning is not required, the first set of buttons can be used to control four more switched effects via a second Switchpac. Finally, a Blackout button is provided which can also be used to enable a separate strobe control system.

The unit is normally powered from the DC outputs available on the Multipac slave dimmers. However, a mains PSU is available which can be fitted to the rear of the unit should it be required.

For further information contact Multiform Lighting, Bell Lane, Uckfield, Sussex TN22 1QL telephone (0825) 3348.

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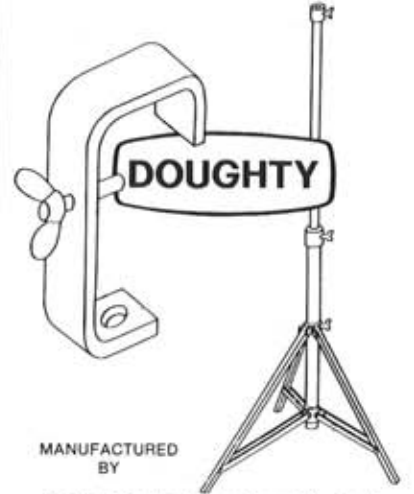
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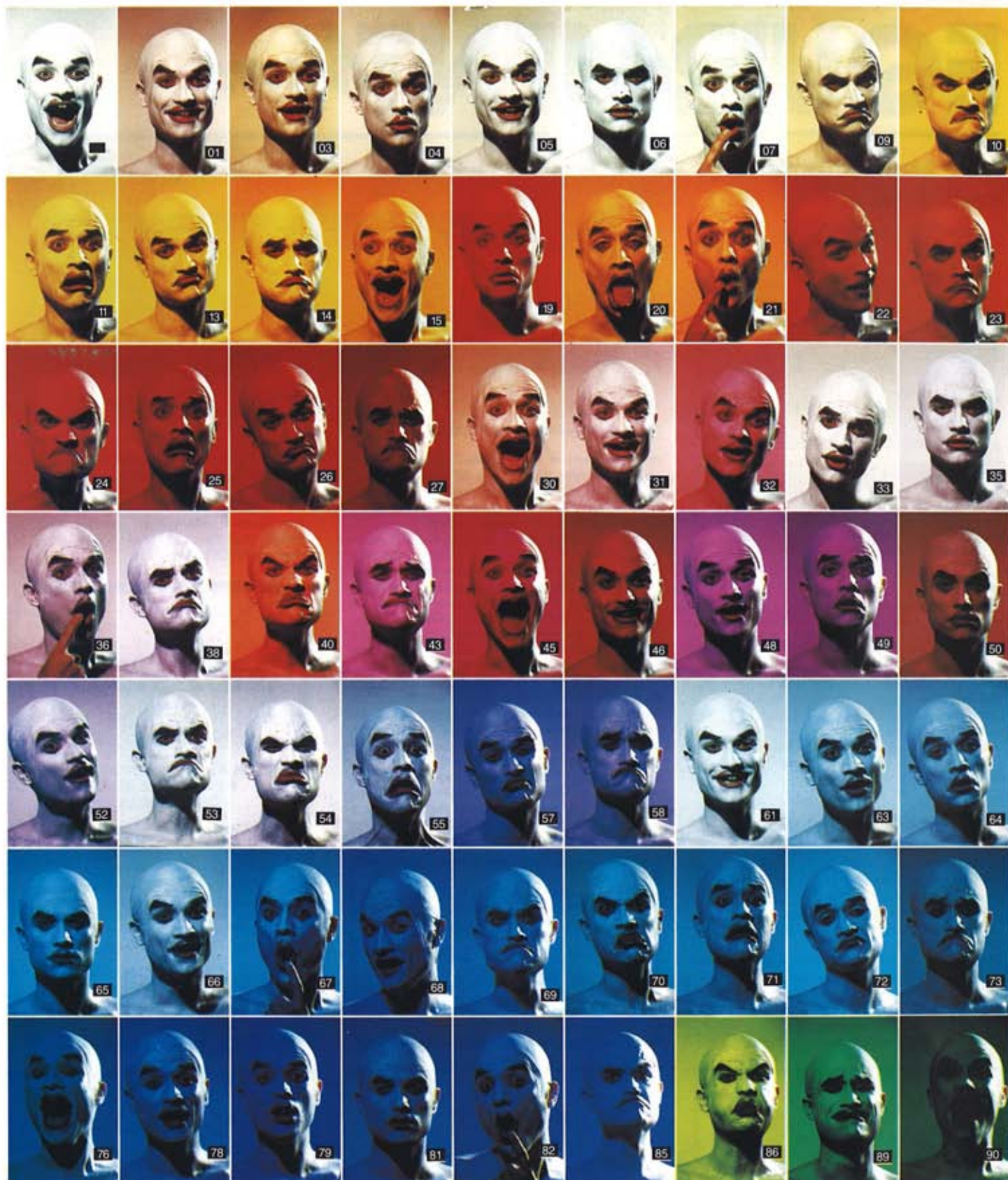
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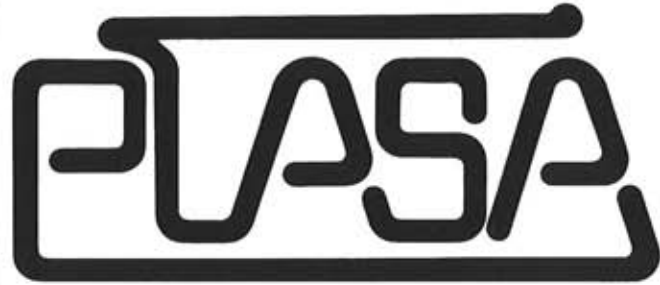
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