

# LIGHTING+SOUND

*International*



- Cover Story: L+SI's Exclusive Feature on Imagination
- Jim Douglas goes Tracking in the Far East
- Stephen Joseph Theatre: Building on Success
- Italian Collection Continued: Coemar
- O Degrees: Laser Time at Greenwich
- Company Features on NJD and Futurist

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## PLASA'S First Independent Trade Mission



PLASA's Anna Pillow with Mikhail Chemberdgi, chief of the Art Committee of Kiev City State Administration, and Vitaly Malakhov of Podol Art Project (left). The exhibition in full swing at Kiev's Palace of Culture (right).



A speedily planned, cost-effective and highly successful trade mission saw a small but influential group of PLASA members set up stall in the Palace of Culture in Kiev, capital of Ukraine, in late May.

The event was hosted by Illusion, a Ukraine-based joint venture company with a British partner. Organisation was by PLASA's Anna Pillow and John Offord in conjunction with Ian Hill of Illusion International of Cardiff. Exhibitors included Strand Lighting, Arri GB, Pulsar, Light Processor, Lighting Technology Group, Glantre Engineering and Avolites. The stands of PLASA/L+SI and Illusion completed the

mini-show, covering a broad equipment range.

The directors and personnel of the host company were applauded for their efforts; they had succeeded in persuading many leading figures in the Ukrainian technical and cultural establishment to attend the exhibition. Visits were also made to various venues in the City.

"It is hoped that many PLASA companies will benefit over the years ahead from the links we forged on the trip," John Offord stated. "Progress will possibly be slow as the country emerges from its old straitjacket, but the early signs are very positive." (Full picture coverage will be included in our July issue.)

## Starlite Rescued

The assets, intellectual property rights and patents of Starlite Technology, the automated luminaire manufacturer which was put into receivership last month by its backers the 3i Group, has been sold by Levy and Gee, the insolvency specialists, to a consortium of its previous managers, ex-employees and a supplier.

"We have absolute faith in the viability of the product," Ray French, Starlite's managing director designate, told L+SI. "The problems to date had been entirely caused by an unfortunate set of business circumstances."

The new team also includes Robert Bunce who was financial controller in the previous company, and Dave Snipp, who wrote the original system operating software. Snipp, who has maintained a link throughout, though he left the company to join Microsoft some years ago, will be a director and shareholder with his present employers approval. "As the Microsoft NT project development manager, he is going to be a major

asset to the team," says French.

Additional funding for the buy-out was provided by Laser Grafex Sales and Hire. "Our prime interest was to recover secure ownership of Starlaser which we developed on the back of the Starlite system, and which there was a danger of losing in the circumstances, so we had to protect our copyrights," LG's Mark Brown told L+SI. The new Starlite company will continue to support existing franchise holders in Europe and Japan. Premises are under negotiation in the Erith area, and in the meantime Starlite can be contacted through Laser Grafex in Royston.

Starlite Technology traded from the same premises in Woolwich, and had been closely associated with, Tasco Communications who later also announced that they had succumbed and appointed Grant Thornton as receivers and managers. No decision had yet been taken about the method of liquidation of the hire stock.

Following the death of Terry Price, VP of Tasco LA in a car accident last year, TasWest was sold to US-based AI Audio a few months ago.

## Patent Action

Following rumours in the industry that Vari-Lite Inc of Dallas had taken legal action against various manufacturers for infringement of various patents they hold, which will enable them to dominate in the market in respect of the established DMX512 protocol, L+SI asked the company for comment.

Loren Haas, general manager of rental operations for Vari-Lite, told us in a statement: "Vari-Lite Inc has patents on various lighting architectures. The use of DMX512 alone would not infringe on any Vari-Lite patents. However, if DMX512 is used with other elements of Vari-Lite patented architectures, then the resulting product may infringe Vari-Lite patents."

He also informed L+SI that if any equipment manufacturer had questions regarding Vari-Lite patents they were welcome to direct their enquiries to their patent attorney Tom Dowling of Morgan and Finnegan on (212) 758 4800 (USA).

## Cadac Firsts

Pictured below is Terry Brown, record producer and engineer (left) with Autograph's Andrew Bruce at The Princess of Wales Theatre in Toronto, where Andrew was rehearsing for the new Canadian production of 'Miss Saigon'.

Both were involved in a Cadac 'first'. Terry Brown placed the very first order for a Cadac recording desk back in 1968, when he was studio manager at Morgan Studios, London. Andrew Bruce and Autograph were the first to place an order for a Cadac theatre desk, this time in 1983. The Canadian production of 'Miss Saigon' opened in late May and features an 86-input Cadac J-type console with a 12x12 matrix.



## Action News



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## Moves at Cottesloe

For four weeks between mid-April and mid-May, the National Theatre's Cottesloe auditorium hit a repertory season which was busy even by its own standards. The Springboards season brought five shows from the National's studio into the main building to acquaint the public with the theatre's more experimental work, normally only performed to invited audiences.

Designer Alison Chitty provided a common environment for the shows - a light floor with a fake breeze-block back wall intended to reproduce the spirit of the studio itself. But with the show's varied styles, and with each having to be teched, dressed and opened in one day, and then sometimes having to run with two others in a single day, a great deal of emphasis was always going to be placed on the lighting set-up.

This was the challenge presented to lighting designer Chris Toulmin, who was brought in by Baby Doll director Julia Bardsley after their earlier work together on shows at Leicester Haymarket and elsewhere. Toulmin quickly came to the conclusion that some kind of moving light system was required to make the schedules manageable.

For this debut of moving lights in the Cottesloe, Chris Toulmin chose to use five Posispot units and these were fitted in due course by Cottesloe electrician Tim Bray and his team with Strand ColourCall scrollers borrowed from the Lyttelton Theatre. For control, the National's touring Strand Gemini 2+ console was swapped with the Cottesloe's own Gemini, since the former's DMX512 control signal meant that it could run the moving lights and colour changers as well as the dimmers.

The plotting for the shows was handled by Hugh Llewellyn, who used the Gemini's submasters to set up pan and tilt controls for each Posispot. These were supported by the Cottesloe's standard rig, which as a result of upgrading over the past few years, now consists almost entirely of Strand Cantata and Prelude lanterns.

## Gabriel Scans Globe

Peter Gabriel's long awaited artistic collaboration with multi-media performance artist Robert Lepage finally became a reality this month with the European leg of Gabriel's new world tour reaching London's Earl's Court.

In keeping with past performances, and as expected from such an alliance, the show is a mixture of drama, visual effects and eclectic music. However, the stresses of such a co-operation were apparent and the one month rehearsal period was fraught with controversy, as witness the eleventh hour appointment of Vince Foster as LD in place of Alain Laute. The unusual stage set, implemented by Brilliant Stages, is in two sections, one square and the other circular connected by a 40 feet long walkway, has many moving elements.

As you would expect with such a huge area to be covered, this called for some unusual lighting solutions. The lighting system, provided by Neg Earth, required over 400 feet of truss to support the rig which physically spans 120 feet. Washes were provided by a combination of 5kW fresnels and Par 64s, fitted with Rainbow scrollers and Pan Command Color Faders respectively. But what was perhaps most unusual about the system was the use of 24 Clay Paky Superscans, subcontracted from Pete Miles' Spot Co, not only for effect, but also occasionally to spot the principals. Another interesting effect was achieved with these articulate luminaires, in combination with six detached Golden Scan heads, used as secondary deflection devices to create searchlight effects.

Danny Nolan, who is running the Wholehog desk controlling the Scans, told L+SI: "I am impressed by the accuracy with which these lamps retain their positional cues, in over 20 shows they've never failed to meet their targets. This accuracy is especially important when you consider some of the more dramatic looks Peter likes to achieve, for example, in 'San Jacinto' where his right hand is picked out by six pencil beams in almost total blackout." An Avolites QM

Diamond was the desk used for the conventionals.

Naturally, with the Lepage link, video played an impressive role in the performance, with projection onto a large moving screen provided by two Barco 5000 LCD projectors from Melville Presentation Services. Sound system was Britannia Row Productions' Turbosound Flashlight rig. The entourage leaves for the US leg of the tour in mid June.

L+SI are planning to cover this major production in some depth, together with drawings of the stages, equipment lists, photographs and comment from the participants, in our next edition.

## Wybron Opens in UK



Wybron Inc, manufacturers of the well-known 'Scroller' and 'Coloram' colour gel changers, have introduced a new service to the UK lighting industry - ColorExpress. The operation, based in Acton, London can provide custom gel strings for all types of colour changers. A full range of colours from leading gel manufacturers is kept in stock enabling the company to supply gel strings in any colour sequence and any length. As an added bonus, if the order is received before noon, delivery is guaranteed for the next working day. Pictured above with Adrian Offord (right), ColorExpress UK's manager are Brandon James and Jason Volmer from Wybron Inc. For details of the new service call Wybron UK on 081-838 2254.

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## Effects Lighting Closed

PLASA members Effects Lighting (Leicester) Ltd, for many years designated suppliers and installers to First Leisure Corporation of lighting equipment for their discotheques and nightclubs, have been forced to close down. Receivers Pannel Kerr Forster have been appointed. It was only a few months ago that Light Angles, a company also contracted by FLC, suffered a similar fate.

Reacting to the news, Shaun Doyle, FLC's director of technical services, told L+SI: "It's a sad day and a great loss to the industry and to us at First Leisure, where Malcolm Robertson has been a close associate for a long time. We are very concerned about the dearth of specialist installation companies these days, and we are actively trawling the industry looking for alternatives. Meanwhile, Malcolm is a good man and I am sure it won't be long before he is back amongst us."

Amid speculation that the recent dramatic reduction in the numbers of specialist installers, culminating in the demise of Effects, might create a vacuum which could even put the established distribution system under stress, L+SI spoke to some of the key players for a reaction. The result of this mini, and entirely random, survey indicated that with very little business going on, inevitably prices have been under pressure for some time. "It could lead to a situation where the installer's margin came under threat, as the manufacturers manoeuvre into position to gain the most advantage in a numbers game," Ivor Green, joint managing director of Creative Technical Services (née Carlsbro), and one of the few surviving specialist installers, told us. "People may think that as a competitor we are delighted about the demise of ELL. Actually, nothing could be further from the truth; it's a tragedy. This could be one of the events that lights the blue touchpaper. We are concerned and watching the situation very closely in our own interests. The crux of the matter is that if we want to maintain the level of our service, especially with regard to support, which has always been seen as crucial by the major leisure groups, there is a limit to the pressure our margins can take."

Avitec, who combine through separate operating companies both distribution and installation, take a similar view. Tony Kingsley, Avitec's MD and PLASA chairman told us: "I realise that market forces may be at play here, but I would support Ivor in pointing out that the installer provides considerable added value in terms of technical expertise and product knowledge when it comes to the mix of equipment which goes to make a complete installation, and the maintenance thereafter. I would urge manufacturers and distributors alike, to maintain support for what I believe is a vital link in the chain, that of the supplying installer. Any short term commercial gain that may be achieved in by-passing that link is, in my view, unlikely to be in the long term interests of anyone and that, I would emphasize, includes the final purchaser."

In fact, all the manufacturers and national distributors L+SI talked to, without exception, maintained their unstinting support for their re-sellers and, thus by implication for the established price structures. "The danger is that they will say one thing and do another, especially taking into account the buying power of the corporates," said Green.

One of the most hotly contested contracts in recent weeks has apparently been the competition to supply Rank Leisure with intelligent lights for Le Palais in Hammersmith. In fact, it was announced, as L+SI went to press, that Rank had instructed CTS to install 24 Golden Scan 3s in their flagship London venue.

## Elliot Bros

UK broadcast and installation company Elliot Brothers went into liquidation in early May, with the loss of 15 jobs. The company's MD Bruce Elliot lay the problem at the feet of contract delays and subsequent pressure from creditors which became too much for the company to deal with. A creditors meeting was held at the end of May.

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## The Facts of Live!

The Live! Show, a trade exhibition entirely devoted to the concert and rock 'n' roll touring market, opened its doors for the first time at the beginning of May. Sponsored by Live! magazine, the show was located in one of the two horticultural halls in London's Westminster district.

"The format of the Show was very much on the American booth system, which is a great ego leveller," Jerry Gilbert, Live's managing editor, told L+SI. "But on the whole exhibitors and visitors appreciated the market atmosphere this engendered and have been very supportive in their post-Show comments. The major criticism has been the date, which will definitely have to move to January or February next year. And there will be a next year!"

Other than the booths, the format of the show included a handful of seminars, a live band on stage in the hall with accompanying product promos and an awards dinner. Of the three events, the dinner held at The Park Inn International near Earls Court and hosted by comedian Jim Davidson, turned out to be particularly successful, no doubt due to the appeal of awards presentations. Over 300 industry people attended. Some 26 tributes, too numerous to mention, were handed out to amongst others Midas for XL3; Turbosound for Flashlight; BSS for Varicurve; Celco for Navigator; Flying Pig for Wholehog; Vari-Lite for VL5; Roy Bennett for stage, set, and lighting design for The Cure; SSE for Simply Red

and also to LSD, Brit Row, Brilliant Stages, Outback and Eat to the Beat. "We were especially pleased that Harvey Goldsmith turned up to collect his award for Concert Promotion," said Gilbert.

That the product performance stage was a disappointment is accepted by the organisers. "It didn't help when Outback called in the receivers just two days prior to the show, though we are grateful to Mushroom Lighting for stepping into the breach," Jerry Gilbert told us, "and we had a number of last minute cancellations. Frankly though, I am not sure how this formula can be made to work; there is probably just too much competitive pressure. We will certainly have to take a fresh look at it for next year."

By all accounts the last of three seminars (the first two covered Digital Sound and the Pop Code), set the fur flying between Brian Croft of Vari\*Lite Europe and Simon Austin of LSD, whose new Icon automated luminaire recently hit the streets, with additional judicious interjections from the Spot Co's Pete Miles, purveyor of articulate mirror units. The discussion called 'Intelligence and Imagination, is it curtains for the Par Can?', apparently swiftly moved to Icon versus Vari\*Lite and a clash about the political end of data transmission theory. Not much protocol here apparently, at least not of the diplomatic variety.

Following our news piece on SFA (February 93) we can now report that the company can be contacted at 270 Lafayette Street, Suite 809, New York NY 10012, USA. Telephone: (212) 343 9670.



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## Micron Days

Micron Days, or 'Micron Dagen' to the initiated, was a two day event held in early May at the headquarters of the the Dutch Compulite distributor, BEO (Brackman en Okx), a few kilometres outside Amsterdam. Micron is the Dutch name for the Compulite 'Applause' control desk, and the event was organised not only to promote the latest Compulite developments in Holland, but to create an open discussion about modern technology and stage arts and to provide the opportunity for technicians to gain hands-on experience of the latest equipment.

The response to this idea was staggering; over 350 people attended over the two days. They ranged from theatre and TV technicians to lighting designers and television directors and represented some 130 different venues. Visitors were greeted by the presentation of a 'Micron Dagen' pen (now much sought after!) and a foam cushion inscribed with the running order for the day.

The day commenced with a short presentation in the Steve Kemp Theatre, BEO's equivalent to Patrick Woodroffe's 4 to 1, and named as a fitting tribute to the LD Steve Kemp who died last year. The entire theatre is remarkable, not least because all the work was carried out by BEO's own staff in their spare time. The theatre features a fully working stage complete with more than 90 operational fly lines. The lighting rig currently consists of around 130 assorted miniature lanterns (we understand there are a further 300 in the building still to be modified) all of which incorporate a small electronic transformer whose output is controlled directly from the boosted output of the DMX demultiplexer. This provides an extremely neat method of controlling all the lights. Incorporated in the rig are a couple of fully operational 4 to 1 moving lights and three front of house bars which can be remotely traversed up and down the auditorium.

There is an astonishing attention to detail throughout the theatre, not just on the technical side, but also with the decor and furnishings (including period lanterns as house lights) which serve to create a quite unique atmosphere.

On leaving the Steve Kemp Theatre the visitors moved into the conference area, specially built for the occasion. There followed open and often heated discussion on various topics, and as these may be of interest to everyone in the industry, we include a brief synopsis of each discussion point.

### 1. Q - What good is the Steve Kemp 4 to 1 theatre and who needs it?

A - There was an enormously positive reaction to this question (thankfully, when you consider the amount of effort that must have gone into it!). Both lighting and scenic designers as well as production staff were very positive and five productions were booked into the theatre as a result of the Micron Days.

### 2. Q - What can MIDI and SMPTE do for us and how can we use MIDI showcontrol?

A - Touring companies seemed in favour of operating the lighting control from a MIDI signal, but the theatre technicians were reluctant to give away their territory and the discussions on this topic were heated.

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The Steve Kemp 4 to 1 Theatre.



4 to 1 lighting in action.



On stage at the Steve Kemp 4 to 1 Theatre.

**3. Q - Is the position of 'Board Operator' an acknowledged job requiring training and experience?**

*A - Again there was very strong discussion on this subject. Clearly there is a problem that in order to have a very powerful lighting control system the system will, from necessity, be complicated to operate. There appeared to be a demand for more education both in board operation and in how to link the lighting designer and the technician.*

**4. Q - Now that HMI and fluorescent light sources are becoming widely used is there a trend towards using white light?**

*A - No! was the resounding answer. These light sources have their uses, especially for supplementing the sun on outside productions and there is always a desire to experiment with alternative sources.*

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**5. Q - At what stage is the current development of tungsten, HMI and fluorescent dimming?**

*A - Here several examples were shown of varying types of dimming which included the latest Compulite digital dimmers with full read back to the control system, the new Compulite HMI dimming shutter and a number of different types of fluorescent dimming. It was felt that the functions offered by some of the new digital dimmers were very important.*

**6. Q - What are the differences in the application of moving lights to theatre, TV and rock 'n' roll? What type of luminaire suits what purpose and how can different types be combined?**

*A - Nine different types of both moving light and moving mirror fixtures were demonstrated as an answer to this question. All of these (with the exception of Vari\*Lite VL2B and VL4) were controlled from the Compulite Animator triggered from a MIDI source to provide a light show perfectly controlled and synced to the music.*

**7. Q - Blackout? What happens when there is a panic? Where are the weak spots in modern technology and how can the operator best cope with the panic?**

*A - The general consensus was that it was the role of the stage manager for the production to control the situation and to make the ultimate decisions. There are in excess of 150 Compulite systems in regular use in Holland and it was felt that the average failure rate was acceptable.*

The day ended with a sketch on 'stress' from British comedian, Tim Jones based on the hypothetical situation where intelligent lights get to the stage where they no longer listen to the control system, but talk to each other and make their own decisions (some say they already do!), a worrying, but amusing, end to the day.

## LETTERS

Dear Editor,

Re: Elkie Brooks: L+SI May 1993

As an electrician employed in a professional theatre and a regular reader of L+SI, I should like to question the content of Steve Moles' article on the Elkie Brooks Tour. The majority of the article was a basic appraisal of the tour's sound design and in particular the abilities of Trevor Jordan. It then progressed to review the show's lighting and the show in general. As a technician who has worked on this show and on previous tours I am in a position to comment on the accuracy of Mr Moles' evaluation. However I won't.

The section I take exception to is the closing paragraph. The reviewer suddenly switches track and launches a personal attack on a stage manager in a completely different theatre to the one discussed in the article. I also fail to see the bearing held on the stage manager's competence by the fact that he or she "hails from across the Atlantic".

As everyone in the profession knows the stage manager has a unique knowledge of their own theatre and holds a tremendous responsibility for safety. I question Mr Moles' ability to comment on a situation, unless he was present at the time, which to my knowledge he was not. Regardless of this, a trade magazine is not the place to air personal grievances not related to the content of the show discussed.

In conclusion, I may suggest the stage manager in question may well have had another reason for his actions; a reason which I and a great many other technicians who have shared the Elkie Brooks 'experience' can well understand.

D Pendleton, New Pavilion Theatre, Rhyll



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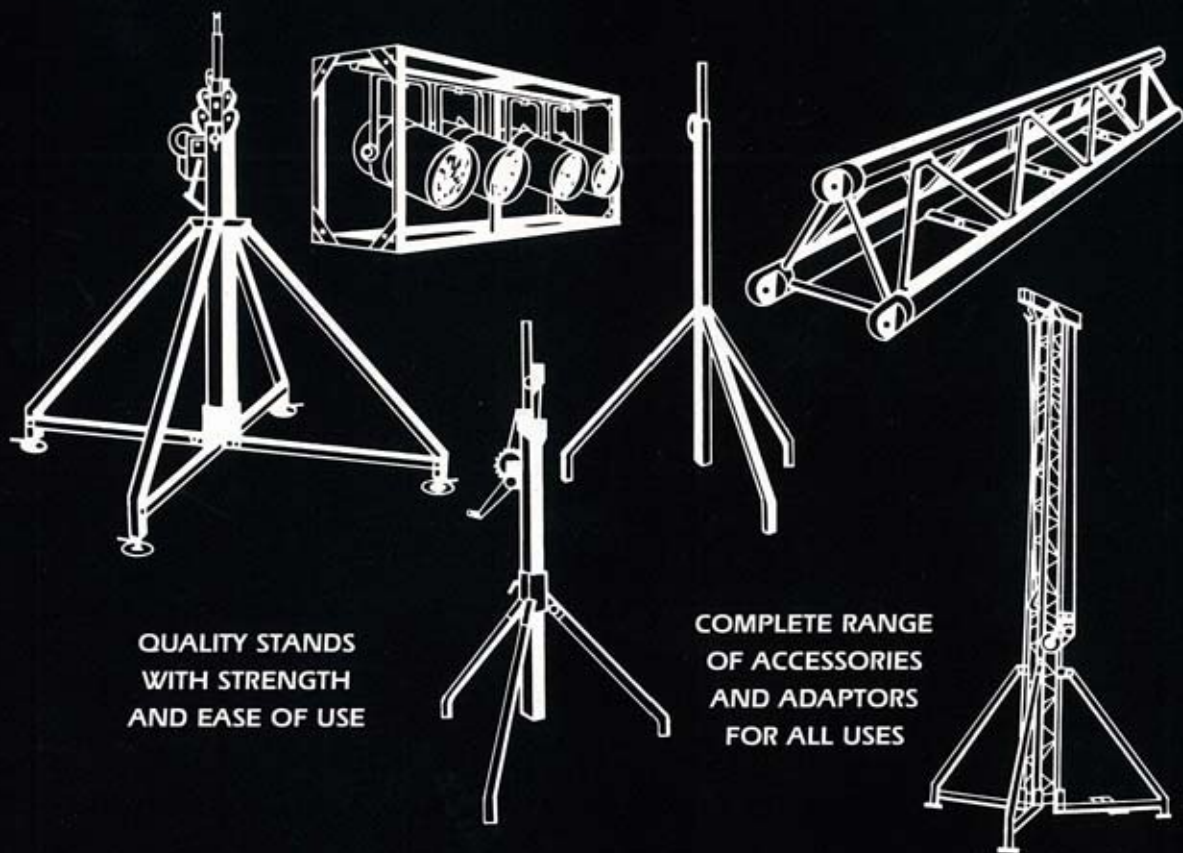
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## NEWS SHORTS

A TAC monitor desk, the SR65000, is currently on tour with World Party. The band and the 40-channel console commenced the tour, equipped by SSE Hire in early May. Sound engineer with the tour is Paul Dee. Willpower PA Systems Ltd are also currently using the TAC SR65000 monitor console on a tour with Crystal Gayle. Foldback engineer is Larry Schutz.

**Sennheiser UK** has joined with Deutsche Grammophon to provide in-store listening posts as part of the 'yellow label's' two month long promotion campaign for its Karajan Gold series of remastered recording. The CD listening posts are equipped with several pairs of Sennheiser's HD 560 II Ovation classical headphones. Pictured below is Paul Whiting of Sennheiser (left) with Chris Evans of Deutsche Grammophon and Ray Duffy of HMV.



The World Jive and Jazz Festival, held in Lausanne in April 1993, is the latest European live event to feature a Meyer Sound system. The equipment involved a combination of MSL-3 reinforcement loudspeakers, UM-1 monitors and 650-R2 concert speakers, all of which was installed by local hire company, Hyperson.

**Clive Green & Co**, manufacturers of the Cadac mixing consoles, has just supplied a new J-Type console for the US national tour of the award-winning musical 'Crazy for You'. A 68-input Cadac J-Type has also been supplied for the London production, currently running at the recently refurbished Prince Edward Theatre. The 'Crazy For You' tour, which opened in Dallas on 11th May, 1993, is scheduled to last for a minimum of nine months and takes in a total of seven cities. Autograph Sound Recording are handling the London production, under the aegis of sound designer Terry Jardine.

Avesco plc's giant video screen rental company, **Screenco Limited**, is to exclusively operate and

market Arsenal Football Club's two new Sony Jumbotron video displays. The Highbury installation will consist of two screens each measuring 37 square metres.

After their completion of a 500 capacity Night Club in Hamamet in Tunisia, **Leisure Resources International** have set up local representation with a Tunisian Leisure company and will be exporting a whole range of technical leisure products. This agreement covers a number of projects, which will be due for completion later in the year. LRI have also just completed Quasar Slough, which is the first in a chain for one of their UK clients. The telephone number for LRI which we weren't able to give you in the May issue is (0932) 570117.

What was once the South London site of an old Vickers tank factory is now the home of the Void nightclub. The sound system for this new multi-purpose venue was engineered, supplied and installed by **Marquee Audio**. The Void's 500-capacity main room with its purpose-built sprung dance floor, performers stage and DJ booth, is fitted with four Martin VRS800 speakers, a Soundcraft 200 Delta console, BSS FDS360 crossovers, and EMO GEQ60 and Yamaha graphic equalisers and powered by four Citronic amps. The club also features a dramatic lighting scheme by Moonlight Design.

Predominant among the Blackpool private club scene is the Bizness, a Tetleys-backed 'Pubarama' on which £1.5m has already been spent. Although the dancefloor system is a sizeable JBL rig, Blackpool sound specialist **Richmond Electrotech** was recently called in to boost the sound in the peripheral areas. The choice was Canon, and now one can find a number of V-100s clustered in pairs and groups of three around the industrial-style metal rigging that forms the heart of the club. Richmond Electrotech has also recently completed the installation of a Canon V-100 background music system in the Cheadle Cafe-bar which features eight V-100s.

**Compulite** sales in the UK continue to be extremely good in '93. The Animator moving light control desk is now used extensively in the TV and theatre markets and May has seen the delivery of two Animator 24 systems to Theatre Projects Hire and one Animator 48 to White Light. All systems are currently in use on West End productions, one system controlling VL5s and conventional dimmers, the second system controlling TP's own PALS luminaires which have been converted to DMX and the third system controlling a mixture of VL5s and Superscans.

**Concert Systems** of Altrincham, Cheshire is supporting Galliano's UK concert dates with a 40-box 850 Series loudspeaker system from Eastern Acoustic Works. EAW's MX800i closely coupled electronic processor drives the Amcron MA Series power amps for the system. Freelancer Colin Callum mans the Midas XL3 FOH console, while monitors are mixed by Concert Systems' Paul Allen on a Soundcraft 500 board. Monitor wedges are Concert Systems single 15" and ASS 2 x 15". BSS 201 compressors and 402 gates are used, with Yamaha SPX1000s, SPX900s and REV 7s providing the effects.

At the China Sound, Light, Music at Beijing Show **OHM** will be supporting both their local distributor for China and Hong Kong, Odyssey Engineering, and also providing the sound for Martin Professional of Denmark. Odyssey Engineering will have a substantial presence at the show with a stand of 160m<sup>2</sup>. A number of new sound installations using OHM equipment have been carried out by Odyssey and their dealers in China this year including The White Swan Hotel Ballroom, Guangzhou, The Paris Club, Shenzhen and The Shangri-La Ballroom, Jiangmen.

Light is being used to create some strange illusions at a number of galleries and museums throughout Europe. The American artist James Turrell has commissioned **Light Works'** 1200W daylight projectors for galleries in Berlin, Madrid, Tilburg and Dusseldorf and now London. The projectors combine high intensity light output with fine resolution optics to project razor sharp images to give the effect of light jumping off the wall or creating a hole in it. The work is currently at the Hayward Gallery until 27th June, 1993 and at the Anthony d'Offay Gallery until 16th June, 1993.

## Out Board Storms Euro Disney

Theatre and live sound automation specialists, Out Board Electronics have recently supplied an 8-channel moving fader and 8x8 matrix system to the 'Hurricanes' nightclub in the Euro Disney Hotel complex.

In conjunction with a Richmond Show Controller, the Out Board systems is used to harness, via MIDI, the comprehensive sound and lighting effects as Hurricane 'Zoli' rages through the club in a one minute sequence repeated at intervals during the evenings.

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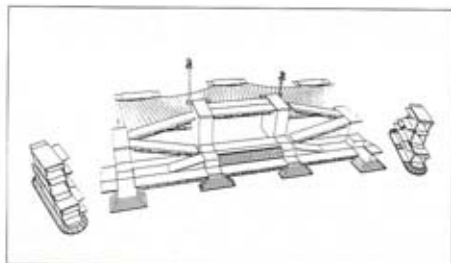
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Above and left: four scenes from Les Nuit Fantastiques. The drawing (top left) shows the assembled stage structure.

## Les Nuits Fantastiques

Les Nuits Fantastiques du Loto is currently working its way through a 25-city summer tour of France. The event has brought together the talents of Tony Winter and Globe Show Center who are responsible for the design and technical production and Ghent-based Arf & Yes whose Ignace D'Haese has designed the lighting.

By far the most interesting element of these shows is the set, which operates on the same principle as a Chinese puzzle. Four hydraulic lifts supporting three sets of platforms, each the size of a trailer surface, form the basic stage structure. Each hydraulic lift can rise, either in unison or individually, to a height of 12 metres, allowing the opportunity for practically endless configurations of the set.

As a result of this hydraulic/mechanical liaison, the build-up time for the whole is less than four hours. The second element of the set is the custom-made containers in which all the technical equipment is permanently mounted.

The containers positioned as 'side wings' house the HMI 2.5k followspots and the range of control desks including two Artisan desks for the Vari\*Lite, a Celco 60 and two Celco Navigators, whilst those positioned behind the stage set contain the 35mm projector units, four Coloray lasers and the scenery.

As no rig exists, most of the lighting is permanently mounted on the structure, hanging beneath the various stage elements. This includes a range of Vari\*Lite VL2Bs, VL4s and 63 of the recently-launched VL5s. Working alongside these are 17 Arena Vision 1.8ks with scrollers, Molefay 8-Lites, 16 Digital Light Curtains and four Clay Paky Superscans. A battery of Par 64s and ACLs form the front line. As a consequence, once the set is assembled, all that remains to get the lights working is the connection of the cables. All the light cues are programmed and stored, along with the laser and pyrotechnic elements, on time-code.

The actual performance itself features only choreography (no live speech or songs) and is based on a 60 minute continual soundtrack, the responsibility of Steve Willaert.

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## Automated Luminaires on Song

The recent 38th Eurovision Song Contest televised by RTE from Millstreet in County Cork, Eire, involved a number of firsts. It was the first time that the show had been sent out from anywhere other than a major European city, it was the first TV outing for LSD's Icon, and the backdrop for the 60' x 40' set produced at Rosco's scene painting dock in Sydenham in London was the largest ever produced there, measuring 187' long by 26' high and was wrapped around the stage to form a complete cyclorama.

Apparently, Millstreet groaned under the strain of the massive logistical exercise which in total involved 102 kms of cable, 5000 connectors and 1.6mW of power. LSD got the prize of rigging a chunk of that cable, plus 500 metres of trussing and 864kW of tungsten lighting placed over the massive set, designed by Alan Farquason of RTE. It also contained 8,000 architectural. This part of the project was handled by LSD's special projects department, set up to capitalise on the experience gained from such giant operations at last year's Barcelona Olympics.

The lighting design by RTE's Liam Ward also included 30 of LSD's Icons, their automated luminaire which isn't officially launched until later this year. It's also currently on tour with Depeche Mode, hoping for its road-worthiness certificate from Patrick Woodroffe. The Icons were used as effects lights during the show under the hands of Gary Westcott. In addition, and in the spirit of co-operation which exists between the two TV companies, 30 Intellabeams were drafted in from BBC Northern Ireland in Belfast. These were used by RTE's Louis Poveda to light the audience, to provide key lighting and to wash the cyc. Rock 'n' roll LD Tom Kenny was drafted into help with the moving lights concept. The show was watched live by 300 million viewers across Europe.

## Batmink Showroom Launch

Lighting and sound distributors Batmink report that after six months of refurbishment and building, their new demonstration facilities are now complete. To mark the occasion they are holding a Launch Trade Day on Wednesday 30th June 1993 from 10am until 6pm. The company will be supported by representatives from several major industry organisations, including: Anytronics, NJD, Adda, Citronic, Cerebrum Lighting, Altai, Lampo, Genius, JBL, Denon, Jem, Le Maitre, Martin Professional, Pulsar, Mode, Lamba/Kam Electronics and Optikinetics.

Further information from Batmink Ltd on (0458) 833186. Plasa is also supporting the event as one of its official 'Open Days' - see advertisement on page 41 in this issue.

## Cold Comfort

South London nightspot, The Fridge in Brixton, has recently commissioned the London Laser Company to supply and install their latest effect. Following a hire period of some six weeks, The Fridge installed two Spectra Physics 5W argon lasers, with twin scan, two colour heads, mounted one either side of the stage.

The two systems are controlled by one four channel PM19 controller sited opposite in the gods, above the DJ and lighting levels. This controller operates four sets of scanners, two beam shutters and two dichroic splitter actuators. Diffraction wheels and effects are also controlled from the same unit along with text and a vast selection of beams and patterns over all four independent channels. Over 100 flat and diffracted mirrors, eight mirrorballs and four cone scanners are scattered amongst The Fridge's numerous catwalks and dance platforms, all adding to the overall effect.

## Lasers in the Tower

In the month when Madame Tussaud's unveiled its dark ride, it is appropriate that Blackpool Tower, the UK's second most popular tourist destination after the famous waxworks, opened its own version of Laserium, called Laser Fantasy. Already the North East landmark, owned by First Leisure, incorporates an 'Experience' called Tower World, which includes an aquarium and a ride-through-time. Sandy MacPherson's ballroom is still intact and in use, as is the 1500 capacity Hippodrome and it was here, with an audience already craning necks to watch the high wire acts, for the circus animals have long since gone, that FLC saw the opportunity to interleave a laser based AV spectacular (pictured right). However, they wanted the pre-programmed shows operable at the touch of a button by non-technical staff, and for the content to be educational as well as entertaining.

A brief was handed down to Laser Graftix' Mark Brown just 14 weeks prior to the start of the season, with the first public display in the Tower Circus pre-ordained for April 9th. To plan the shape of the performance, Brown called in industrial show specialists Talk Talk who came up with the concept based around four Grafix 4.5W Purelight II lasers, four Barcovision 1600 HDVY video projectors from MAM and four Harkness Perlux motorized 11x4m screens. To this was added four LG Nexus 'intelligent' heads, based on High End System's Intellabeam articulate mirror projector, with fibre optically-fed laser light source. The theme would be the history of lasers and the application of laser technology in the modern world.

Talk Talk produced a computer graphic sampler, to convince all concerned that the concept was a goer, subsequently generating the storyboards, with frame-by-frame timing, scripts, voice-overs, digital show graphics, video edit and music. The sync programme for all components was created on site, when the production

*continued on next page*

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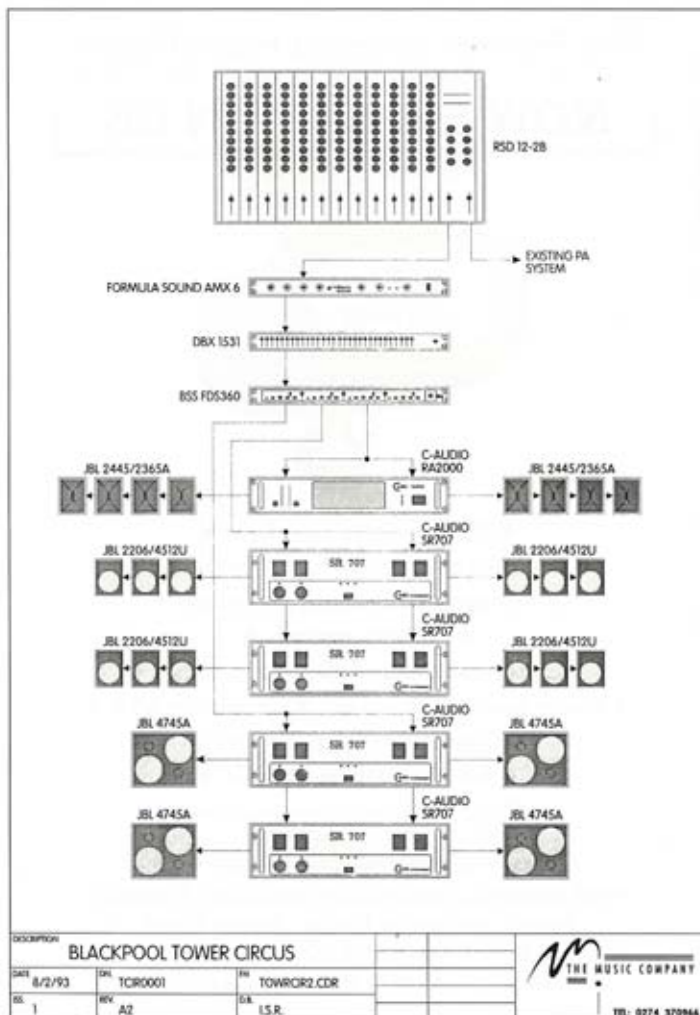




components came to hand, and the whole 20 minute show recorded on optical disc for instant repeatability. Otherwise, show control was provided by a Dataton Smartpak which was mated via a custom interface to two Laser Grafix Prisma controllers and a Pulsar Masterpiece.

A flown central cluster of JBL speakers was designed and implemented by The Music Company and the array powered by C-Audio amplifiers (see system diagram below). Meanwhile, nearly 500 feet up, and in 50mph winds, MAM's engineers installed two Panasonic colour cameras with 10:1 remote control lenses and pan/tilt mechanisms, to capture the panoramic views from the top of the Eiffel lookalike. These pictures are fed into video monitors in the viewing gallery, and to a 3 x 3 Laserpoint Barco videowall in the base of the tower, to keep the queuing public amused.

The Tower Circus itself had been created on the grand scale with sumptuous baroque plaster work and the resultant listed decor made installation very difficult for Laser Grafix project manager Rob Beardwell and the other installers. Fortunately, the location of the circus arena, in the base of the Tower, provided its own solution for the mounting of the heavier equipment, since the four main beams supporting the ceiling turned out to be the structural legs of the tower itself, consequently enabling the whole system to be sympathetically installed. The resultant 20 minute show-in-the-round in this unusual circus atmosphere, is reported to be proving very popular with Blackpool's tourist population.



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## PLASA Show '93

The PLASA Light & Sound Show will once again transform London's Earls Court 2 into a lighting and sound bonanza between 12th and 15th September. PLASA is internationally recognised as one of the industry's top showcases for all that's new in leisure and entertainment technology. You can expect to see major product launches as well as coming into contact with the industry's leading names.

Traditionally more than 50% of exhibitors take advantage of PLASA as the international launch pad for new products. Advance information from exhibiting companies indicates that this year will follow that trend with launches on the cards from Audio Projects, Arri, ADB, Avolites, Beyerdynamic, Batmink, Bose, DeSisti Lighting, Doughty Engineering, Electroacustica General Iberica, Griven, JEM, Laser Grafix, NJD Electronics, Shuttlesound, Vestax, Vinten Electro Optics. . . to name just a few. Details will appear in our bumper pre-show issue in early September.

With 113 exhibitors to date showing products and services from more than 300 companies the show organisers confidently predict a healthy visitor turn-out. Everything you need to know about all the latest sound and lighting products, and issues from every sector of the industry, will be there for the taking.

One of the new features at this year's show is The Pavilion. Almost 90 square metres of stand space has been dedicated to new and growing companies representing all sectors of the lighting and sound industry. Designed and constructed by Lite Structures, winners of last year's PLASA best stand award, The Pavilion promises to be well worth a visit.

Show sponsors, PLASA, will once again be running its highly successful programme of seminars at the event. Which will address the latest issues and trends that dominate the industry. The full schedule will be published in our July issue.

For further information on visiting the PLASA Light & Sound Show contact Nicola Rowland, PLASA Light & Sound Show, Philbeach Events Limited. Telephone +44 (0)71-370 8179. Fax: +44 (0)71-370 8143. Don't forget pre-registration will save you half the admittance price and side-step the lengthy queues on the door. So call the credit card booking service on 071-370 8210.

## Kemp Comeback for Taiwan Museum

An impressive team of British companies have been at work on the multi-media Environment Theatre which is to be installed this month at the National Museum of Natural Sciences in Taiwan.

Implementation of the concept, originated by Met Studio in London, saw mechanical design by Peter Kemp, firmly recovered from the collapse of his stage engineering business last year and subsequent heart surgery. The theatre will house a 22 metre diameter cyclorama, with two reveals, both linear tracking, vertical retracting and fold-down screens plus a turntable for an audience of up to 150 people at a time. Construction and rigging is by Arrow Structures.

Production of the visual effects was by Lightworks Entertainment and show control of the 86 Elmo slide projectors, 10 GE LCD video projectors, two video walls and synchronizing the mechanicals to the visuals and programming of the lighting and effects are in the hands of Electrosonic. Lighting design by DHA, sound production by The Sound Experience while Definitive provided the impressive lasers.

The whole structure was so big and complex that it was decided to pre-erect it for programming and tests prior to shipping, in an enormous warehouse space at Three Mills Lane, in Bromley-by-Bow during which it was presented to the press and invited guests. When it is eventually completed and installed in Taiwan L+SI plan to give full coverage in a future issue.

## Light Sound Image

Light Sound Image has commenced business in Europe having been appointed as exclusive distributor for Australian company Dyalite and their range of dimmers and controls. The Kent-based company is headed up by David Kerr, former sales and marketing director of Electrosonic Ltd, and now MD of Light Sound Image Systems. Light Sound Image hope to announce details shortly of their extensive distribution and dealer networks.



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## Waxworks Goes Dark

Seeing the need to provide visitors with a more adventurous experience relevant to London and its history, the UK's most popular tourist attraction, Madame Tussaud's and the associated Planetarium, have opened a dark ride. Situated in the basement of the famous premises next to Baker Street tube station, the £10 million 1,500 square metre attraction called 'The Spirit of London' takes travellers in a 'black cab time-capsule' on a journey through the City's turbulent past. It was designed by an in-house team.

A series of 12 themed areas make up the five minute ride, each depicting a significant event from the past. For example, the Shakespeare connection is evoked on a replica of the stage of the Globe Theatre, the Great Fire is seen from the Bakery in Pudding Lane, and the inauguration of Trafalgar Square from a pigeon's vantage point atop Nelson's column. Other scenes are The Plague, the rebuilding of St. Paul's Cathedral under Sir Christopher Wren, the Industrial Revolution, the Victorian Workhouse, the Blitz, the swinging Sixties and London today.

Each tableaux is achieved by use of appropriate AV effects, sound, smells, SFX and animatronics. The Spirit of London will be the subject of a future in-depth article in Lighting+Sound International.

## Freelance Directory

The first issue of the BFPP Freelance Directory is now available. The Broadcast Freelance Professional Publication provides access to freelance professionals throughout the country. A quarterly directory, it offers a source of recruitment for both production houses and broadcasting companies and is the first to also serve the radio sector. Issued free of charge, distribution has been specifically targeted to key employment areas.

The BFPP Freelance Directory is produced and published by Freelance Professional Publications Ltd. For further details please contact Miles Hudson on (0635) 34869.

## ATS 'The Preview'



Arena Technical Services recently held a trade show in Sydney, Australia, in conjunction with Greater Union Village Technology and High End Systems (USA) to demonstrate their range of equipment. A two day workshop offered visitors 'hands on' experience on a range of products. The event culminated with a show held in the Sydney Entertainment Centre with 400 invited guests. The rig, designed by Garry Brokenshire, consisted of 50 Intellabeams, 50 Dataflash units, 12 Trackspots, six Emulators and 300 Par 64s.

## Martin Memorial Cup

The 1993 Pasty Committee have announced that the industry sailing trophy won by Klark Teknik Plc in 1990 is to be contested in the Solent on September 3rd, 4th and 5th, 1993. Contestants confirmed so far are Klark Teknik, Shuttlesound, Soundtracs, Crest and Fostex. The Sigma 38's to be used in the race will be provided with a fully experienced skipper and space for a crew of seven. For information contact Tim Chapman on (0273) 325840.

The original Pasty trophy was won in 1989 by 'British Bulldog' which was the late Dave Martin's team from Martin Audio Ltd. Given the tragic circumstances of his death, the committee intend to re-name the trophy 'The Martin Memorial Cup' in memory of Dave.

## Golden Scan '3' has arrived



The sensational Clay Paky Golden Scan '3' is now available from stock. Contact: Cerebrum Lighting Ltd Units 4/5, Shannon Commercial Centre, Beverley Way, New Malden, Surrey KT3 4PT, England. Tel: 081-949 3171 Fax: 081-949 3649

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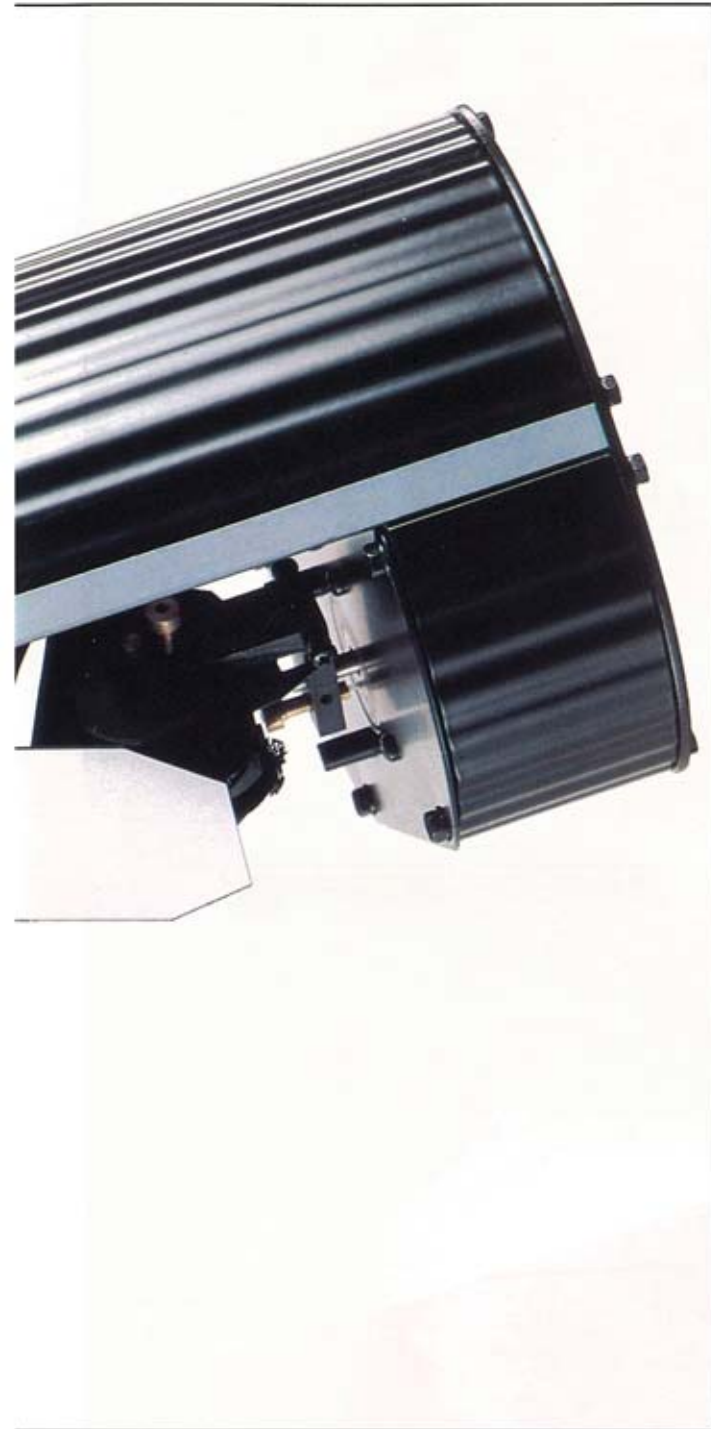


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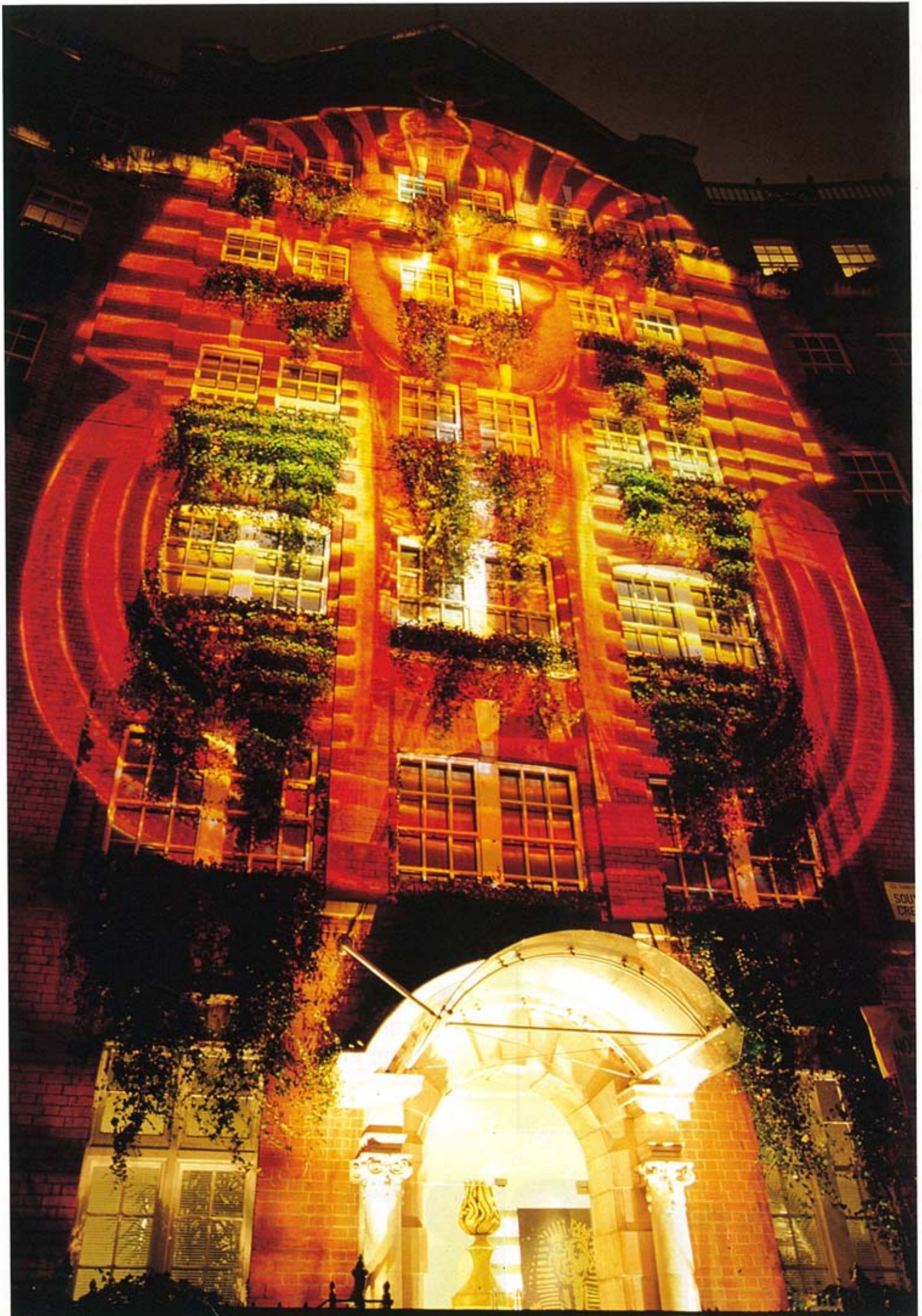


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# Scan PRO218





The mask of Tutankhamun was projected onto the front of Imagination's building to celebrate the 70th anniversary of the discovery of his tomb.



# CREATIVE FORCES

## John Offord in conversation with Gary Withers of Imagination

Imagination has a simple creed: 'Nothing is Impossible'. "There **has** to be a fresh way of launching a new car, a new airline service, of making a film, a video or a multi-media presentation or of creating a brochure, an exhibition or a new musical."

The company's London headquarters, a marvellous re-vamp of a fairly ordinary red-brick Victorian pile off Tottenham Court Road, won the UK Building of the Year Award and has a Phaidon 'Architecture in Detail' book devoted to it. It is self-billed as both a place and a state of mind, where 200 designers, writers, technicians and administrators can dedicate their efforts to finding new ways in which people and companies around the world can use design to communicate more effectively with each other.

On the recent launch of their new entertainments division, Franco Zeffirelli said: "Imagination is a most creative and extraordinary company. I believe that the formation of Imagination Entertainments will open up new and exciting areas of public entertainment in the 90's and beyond. It will make new things possible."

Inspiring a 200-strong and dedicated team to ever more diverse and greater creative feats demands a highly singular supply of start-up energy, and whilst Gary Withers will constantly refer across to the skills of his companions at Store Street, he has to take the brunt of the blame for causing 25 years' worth of inspired headaches to all the designers and technicians both in his own operation and to the larger presentation industry outside who've brought a huge stream of dreams and visions to reality. Be warned. That same energy source is about to be launched into the broad church of the entertainment and leisure industry.

Gary Withers' first major client in the presentation field was John Player. They'd already worked on exhibitions for Players and looked in on some of their launches. "We thought the launches lacked impact," said Withers. "This was back in the mid-late seventies and it was like the dark ages. I thought we could do much better and began to ask them if we could get involved. Players were very good clients and very receptive to ideas and duly invited us to put some proposals forward.

"We came up with presentations from the



Gary Withers, Imagination's creative and managing director.

design aspect, rather than 'here's a lectern and here's a screen'. We wanted to use our ability to create environments to make the event something more than just an audience sitting and looking at something. And that's the basic parameter we've always tried to adhere to. It's why you see so many unusual environments; we always try to break down the barrier between the audience, the presenter and the story. Later on I'll explain how we're now doing that in the entertainment field."

---

***"I hope it will be a challenge for the industry. I'm sure some of the things we will want to do will re-energise the industry again."***

---

Imagination moved on with John Player into product launches and sponsorship work coupled with their tennis events and the John Player Special motor racing team. "It was a very wide spread of activity and after a couple of years other clients started to come to us, such as Citroen, British Aluminium, Uni-Royal,

Dupont and Courtauld," continued Gary Withers.

"Along the way I kept coming up against another threat where there wasn't any equipment to do what I wanted to do and people were saying 'it's not done like that' or 'it doesn't happen like that'. The result was that we either made things ourselves or asked manufacturers to make something for us, and this was the start of building up a whole relationship with many people who have serviced us for years and years. In parallel we built a wide range of internal resource, with people who are all experts in their own right. The strength of this place stems from the fact that we have everything from graphic designers to architects, from AV technicians to electrical engineers, and from computer programmers to designers and so on. They can all come together as necessary to solve problems.

"In those early days it was very much a case of pushing barriers out. We'd ring up Bob Simpson of Electrosonic, for instance, and say: "We know you can do this, but we want to do **this!** Or we'd say to Howard Eaton when he was at Theatre Projects: "Howard, we need a widget that does this and does that and will do this and do that. It's always been our policy to decide what we want to achieve and then go out and find a way of doing it. On that basis our clients always get something different, and our people here always get something exciting to work on, even if they sometimes get close to pulling their hair out!

"By the early eighties we thought we could take the presentation market by storm. Conferences were becoming very fashionable and the clutch of companies who were looking after the market all had a certain 'way' of doing things. But we were treated as rank outsiders."

It was Withers' sheer persistence and the good grace and forward thinking of Ford that heralded Imagination's move into the big-time presentation league. "We'd asked ourselves which sectors made the most money, such as computers and automotive. Then we asked ourselves who was the leader in the motor industry - answer, Ford - and so we decided we wanted to work for Ford. It took me three years to get them. We rang them and pushed them every week, going down there, coming back



The Lloyds of London building illuminated by Imagination - the first major use of the MBI-Blue light source in the UK.



Eurotunnel 'Le Shuttle' modular exhibition system - part of an ongoing programme of events.





The animatronic Dinosaur Gallery at the Natural History Museum.

disappointed, getting into briefs and then not getting through, and so on. Eventually they put us onto the list for the Cargo truck launch programme for Europe, and it was us against all the regular people who had worked for Ford in the past.

"I remember the brief document coming through. It stated that the brief could not be challenged - the delegates have to do this, and then go to that, and so on. It looked so boring that we decided to challenge it completely."

Ford had planned to bus people to the Montreux convention site from five different locations but there were budget problems with this approach. The centre was difficult to work, with the entrance at a lower level on the lake-side. Imagination's scheme turned the whole concept round and suggested creating an entrance at the higher level. "It was an architectural solution to the problem of space," explained Withers. "We started from there. We re-designed the centre completely to reorientate the use of its spaces which made the sequence of things Ford wanted to do work. It



Above and right, Holiday Inn Worldwide - 40th anniversary gala celebration at the Royal Albert Hall.

enabled the other venues to be eliminated from the plans and we picked up all the savings and put it all into the one site. We argued it as a business case and they decided to appoint us. So, from literally never having worked with them before, Ford gave us a 14 language, 14 country launch. It caused a huge stir in the industry. Ford of Europe management had approved it, and they had had enough guts to say 'yes'. The show then came into the UK for Ford of Britain and that was the beginning of our relationship here. I'm proud to say that we have continued with them over the past 14



years and they've been extremely loyal. We've worked with them through the highs and lows, and now, when the industry is under huge pressure, I'm pleased to say that they are continuing to use us extensively having reduced their own internal resources."

Imagination demonstrated through some of their work for Ford, where the spend was obviously higher than with other projects, what they meant by using the environment and creating the space and then putting place and performance together to create an event. Major projects such as the British Telecom code change, Gatwick staff event and the Lloyds 300th anniversary followed.

The company now has a massive list of credits to its name, and readers of L+SI will remember a few of the more performance and entertainment orientated of those, having seen them featured them on these pages from time to time. I asked Gary Withers to pick out a few of his personal highlights.

"They all give you a buzz, but in different ways. We were working on a project for Ford in Strasbourg which was hugely complicated.

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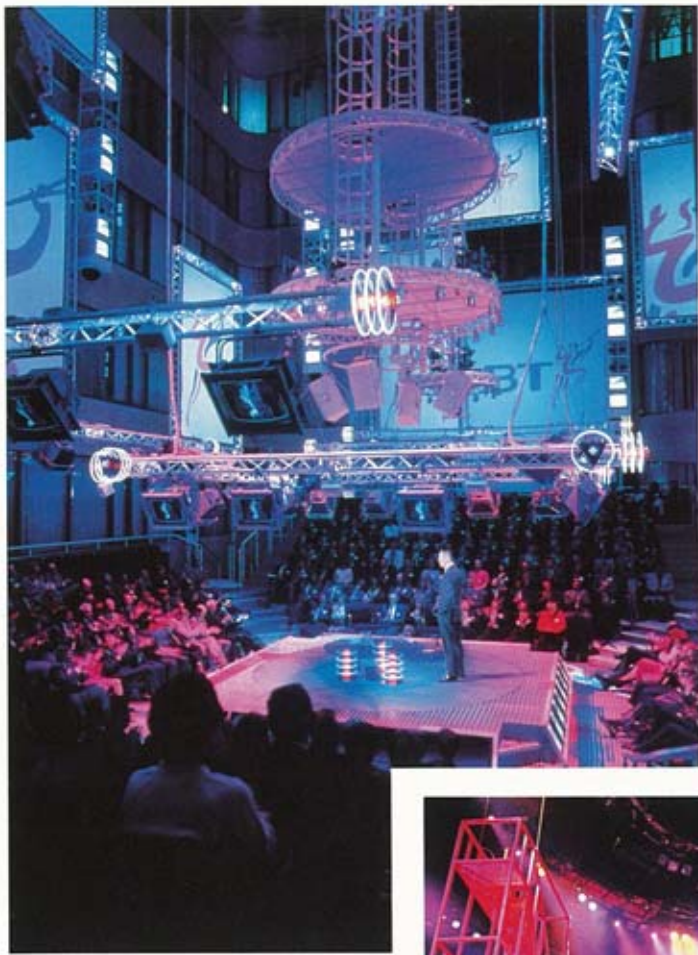
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Due to a problem of venue availability as a result of changed dates we found ourselves doing a truck launch in a concert hall. It was a nightmare job. We had to put steelwork in the roof, take out the seats, and so on. It all went very well during the rehearsals, despite all the incredibly complicated mechanicals which involved moving geometrically shaped screens. However, on the morning of the show day we had one of those inevitable glitches with the control technology, which we'd pushed to the limit.

"Everything had been programmed to arrive at the various formats, and we were at a loss as to know what to do. Paul McKay, who was then with our production management group, said 'well, we'll have to call it manually'. I told him he'd never do it in a million years, but he insisted there was no option. And that's exactly what we did. Everybody went on to headsets and they called the whole thing cue by cue - thousands of them - and at the end Paul literally fell down from exhaustion.

"I stood there thinking, my God, this time we pushed everybody and everything to the limit. I had spent the whole show in the car park outside, walking up and down, saying to myself 'this is the Ford account out of the door'. Then they ran out and said 'we did it! we did it!' - and I remember standing at the back of the auditorium hugging Paul to death. In the afternoon we had time to sort out the glitch and the interface that had failed. We all said 'never again', but the following week we were back in London thinking about the next project!

"A totally different emotion was involved with the 'wall' at Castle Ashby. This got to me in a different way. We'd actually created a very simple idea which was to construct a period banqueting hall, and build it onto the back of a castle, leading everyone to believe it was real. We'd sit them in it, wine and dine them. They

**Above left, BT's new company launch in 1991, above right, the 1992 Ford Motorshow at the NEC in Birmingham, and centre, a scene from the Holiday Inn musical extravaganza at The Royal Albert Hall.**

knew they were going to get a car reveal, but they also knew they weren't going to get it in that room. At the end of the dinner the managing director stood up and said 'thanks for coming' and asked guests to sit back and enjoy the classic surroundings and then to go into the courtyard to see the new car. They all thought, 'well, that's nice', and then, wham! The wall lifted up and the London Symphony Orchestra struck up! The audience were completely in our hands and totally mesmerised - blown away! We'd completely fooled them, and it was a great feeling knowing you'd got them in the palm of your hands.

"On a completely different scale - we always try to apply the same level of creativity to whatever the scale of event - we worked with Kodak a couple of years ago when they re-launched one of their batteries. There wasn't much money available, but they didn't want just another press reception.

"We came up with the idea of using the Jacob Street Studios and boated everyone down river to Westminster. They then entered the studios

where there was no environment at all. Guests walked into total blackness with just key lights on the floor to indicate the routing. There was a circle on the floor with white chairs within it and they just sat there in the dark. The whole presentation was a soundscape where we spent practically the entire budget on sound. There were big screens hanging in the blackness, and as the different voices came at you from different sources, you suddenly had this black and white image appear. It was an extremely dramatic presentation. Every audience stood up and cheered at the end, saying it was the best presentation they'd ever been to. Yet it was all so simple - emotion and sound - enhanced by the fact that you were caught in this totally black space."

Gary Withers was in full flow now, caught up within the sheer energy of his and Imagination's creative forces.

"In all of this presentation work, what we've always tried to do is push ourselves ahead and leave the industry to worry about what we're going to do next. At the moment they're all saying: 'how the hell is Imagination carrying on in the recession with 200 staff? How the hell is it we're putting in the biggest Christmas tree in London?' And so on. The simple reason is that we don't spend too much time thinking about it - we just get on and do it. The way we're looking at the situation at the moment is that we're very frustrated ourselves with the fact that we put together all these big shows but very few people see them, in relative terms.

"So we've decided there are two ways we can correct this situation. We are looking at moving into more permanent entertainment projects with museums and projects at theme parks, where there's a permanency of place. We are also looking at live performance in terms of breaking down the barriers between audience and stage. We're looking at concert





Simon Bruxner-Randall, head of lighting design.



The Imagination lighting team at work. From left to right, Steve Latham, Jonathan Howard and Peter Fordham.

tours and new ways of doing environmental theatre. There are already quite a few projects that we are considering under the guise of the new Imagination Entertainments division.

"We're also looking at television production. We will be using all the skills we've brought to bear in other areas, bringing them into the public arena. At the same time, we're still designing for hotels, restaurants and similar projects. If you take the idea of 'the place', 'the environment' and 'the performance' - which is what we've done on all our big industrial shows - and you apply that to public entertainment, then it crosses all the other disciplines. Nothing's too difficult for us. We've been there, done that. We've done most things, and we want to keep moving forward."

Imagination have also pushed technology forward with their demands, and it has been the performance sector of the industry that has provided most of the wherewithal, particularly

with the control element and the numerous bits and pieces of both and equipment and skills, largely derived from both concert touring and musical theatre. The AV and conference presentation industry has surprisingly, in my view, not followed through with any strength on its lead role in the late seventies and early eighties.

"I think the difference with us is that we never think of the mediums first," continued Gary Withers. "We think of a way of doing something and then apply whatever medium is applicable. We've always steered well clear of 'normal' AV situations. We are continually evolving and blending things and adding new techniques. I think that in the early years when lighting designer Andy Bridge was here for a time we pioneered a lot of combined lighting and projection ideas and now he's got all his disciples at Imagination: Hugh Vanstone, Simon Bruxner-Randall, Steve Latham and

Jonathan Howard and others all came from the Andy Bridge school.

"Whatever we've wanted to achieve, we've achieved, and the biggest job doesn't strike us as being at all complicated. There's a kind of 'shorthand' that works for us very well because no-one in the building has to go through a learning curve.

"We had a brief in 1991 on the change of the BT logo, and we had to pitch. They informed us of the agency-recommended venue. I told my people that British Telecom's Ian Vallance would be reluctant to take his senior team to Birmingham, Brighton or an aerodrome at Crawley. 'They won't go,' I said. 'I know what they're like! We've got to find a way of doing it in the middle of Newgate Street.' All the BT people told us it was an impossible building to work, saying they couldn't even put a graphics panel in the atrium because of the District Surveyor.

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## IMAGINATION'S HEADQUARTERS

"I'd heard all that, but told them to let us have a go. We went down to Newgate Street and took a look and there certainly didn't appear to be anywhere at first glance. However, within two days we'd worked out how, with massive steel-work, we could put a 500-seat auditorium high up in the atrium. At the end of the day it looked fabulous, but there wasn't a moment in here when anyone said 'it can't be done'."

I questioned as to how well Imagination had been served by the companies in our industry.

"It services us very well - simply because most people in the industry like working on our jobs! When they've been given the challenge they respond to it. A lot of the industry has developed because we've pushed them. If you take people like Alan Jacobi at Unusual Rigging, for instance, we've constantly pushed him for new things. I'm forever saying to Alan 'I want this, and like it to be able to that, that and that. Please go away and think about it.' Then he'll come back and tell me he's just developed something that'll do 'this, this and this'. So, yes, I think the industry works very well, but we mustn't forget that we also have our people here. Our own R and D team are fantastic at creating amazing things out of nothing."

With a proposed growth of Imagination within the US market, I asked Gary Withers to compare the UK-US situation.

"We already work for quite a few US corporations and increasingly so; hence the reason we have set up an office in Atlanta - a big boom town for the future. It seemed like a good enough place - it's in the middle of the country and very easy to get to.

"What we're finding in America is that the presentation industry is almost in the dark ages! One thinks of them leading the line, but they aren't. They're still doing AV shows and song and dance routines, and from the experience we've had over the last two or three years clients are looking at what we are doing and saying 'wow! - this is completely different and we'd like something like this.'"

Interestingly, Imagination has witnessed a general change of direction from its leading clients in the UK.

"We are finding that many major clients are asking us what can be done that isn't advertising. 'Our advertising spend is going up, but the return is not measurable. Can you provide something that's different?' I think that some of the work we are currently doing for these corporations is a cross between the sort of presentation work we used to do, live entertainment, and event staging. Pepsi did it when they did their rock shows, using the show itself as a commercial.

"But there are other companies looking at that sort of environmental use of space. Nike have come up with a concept called Nike Town which they are building all over America. They've taken over old department stores and converted them into an adventure space where you can experience the brand. This sort of experience in the grand area fascinates us enormously. It draws on all the skills, and we're ideally placed to do it. We've got the presentation experience, the live show experience and the marketing experience and we understand about creating the place and it involves all our disciplines. So now we are doing more brand-type exercises than we are doing sales conferences, which are largely a thing of the past.

"We piloted business TV programmes with Ford two years ago, and we've now got a network up and running where we produce two or three live programmes a week. So we are servicing Ford in a completely different way. We're now doing it for other clients too, and it

From Store Street the Imagination building is a cleaned-up six storey Edwardian red brick edifice. The work of architects Herron Associates, it takes up the middle of the curve of South Crescent. The only hint about what lies behind this otherwise innocuous facade is the curved glass canopy hung on a delicate aluminium structure emerging from the main entrance door-head.

Inside, beyond the white-tiled reception area, is the building's extraordinary internal space. It is the slot between the Edwardian building facing the crescent and a second parallel structure behind. Seven metres wide, the space rises six storeys between white painted brick walls and white metal panels criss-crossed by white steel and aluminium bridges all the way up to the network of suspension rods, push-ups and umbrellas which support the fabric roof above.

Half the ground level of the atrium's 30 metre length is open, the other half is the company board room guarded by a simple gridded glazed steel screen whose detailing reappears in the doorways terminating each of the bridges and in a glazed screen along the full width of one side of the atrium. On top of the board room is an open library mezzanine level approached from ground level by an open staircase, detailed and constructed in exactly the same way as the bridges: aluminium treads, white powder-coated triangulated steel truss supporting structure, and handrails with tensioned horizontal cables in stainless steel.

The basement floor houses the company's model shop, gymnasium, photographic studios, offices and extensive 24-track sound recording suite. Across the front, the ground floor has a long reception area. Then there is the atrium and board room and in the rear block the staff restaurant, kitchen and offices. The five floors above this south block have open-plan offices. The sixth floor of the south block, originally its roof, is now a long gallery space with glazed screens on either side - a highly popular venue for special events.

The curved north block has offices behind its street facade opening on to a lateral corridor. There are roof gardens to either side of the double-height office of Gary Withers, whose triangular glass roof follows the profile of the building's central pediment. At the back of this office is a viewing platform overlooking the atrium.



means we are thinking more and more of the means of communication where large corporations can talk to their customers in a completely different way. In the next few months there will be quite a lot to talk to you about and quite a few things happening in this area. Obviously advertising agencies are very worried about the situation, but it's not in their nature to change. It doesn't bother us. All we are looking at is what the problem is and then setting out to solve it."

Gary Withers took an interesting line on the organisation of the company's research and development department.

"They basically get projects all the time," he explained, "and what we've done is set it up on a commercial basis so that they are encouraged to price things properly and charge them out at the correct commercial rate. The profit they make on projects is then ploughed back into their area for more development. Effectively, instead of taking the R and D profit out, we use it as a development fund. The team will respond to anything we want whilst at the same time work on the development of other ideas. Every so often they'll ask me down to show me something - or I'll see something and ask them to develop the idea. This was particularly the case with slide changers for Pani projectors. More recently they've done some fantastic work on videowalls where we use sound desk technology to switch signals to any monitor in

any configuration. It's quite revolutionary, and it's made an incredible difference to what can be achieved."

It becomes obvious, almost as soon as you begin a study of some of Imagination's work, that even a dynamo of Withers' energy couldn't cope with playing leader on all the creative goodies that come out of Store Street.

"I'm the driving force on the projects I'm involved with, but there are dozens that I don't work on, and our teams do fantastic jobs. However, I have one day a week when I try and go out on site, and nobody knows where I'm going! I just turn up. I went to Eastbourne the other day and walked into a rehearsal. Two electricians were in discussion, and one said: 'it's no good like that, he won't have it!' The other one said, 'what do you mean he won't have it - he's not here!' 'He'll find out', was the response. I then butted in and confirmed that no, I wouldn't have it! They drive themselves to make sure they keep the standard up, but I do get round, and I do drive them mad."

I was wondering whether Gary Withers was hoping I'd include his last comments as a coded warning, and would be circulating this piece to his staff, when he closed the sequence in softer tone. "Really, it is much easier now. I can steer a project very quickly by just making occasional suggestions."

Although Withers sits at the top, literally, in Store Street, and there is a strand of creative



pressure from 'above', he feels many of the dominant forces are from within the more lateral and mixed structure of the organisation.

"There's no hierarchy here. I can't bear levels of management where 'it's not my job and I won't do this, etcetera'. Everyone here will do anything, and if it's a question of mucking in they all do. People tend to say they have a lot of responsibility when they work for Imagination, and they certainly get thrown in at the deep end. They are here to do a job, so they should just do it. I give them the opportunity to do it, and I never spend any time thinking, 'well, perhaps they can't'. I always assume they can. I think most people find this stimulating.

"Also, everyone is important. They all know what they've got to do and they know the standard they've got to deliver to. There are no prima donnas, which makes life a lot easier because people aren't having to prove anything or having to protect their corner. There is never any conflict between one team and another. If someone's having to work late on the design floor you'll find several other draftsmen or another designer or perhaps people from logistics will come down and offer assistance. All of this seems to work. Clients keep coming back to us, and we keep pushing out the barriers."

As discussed earlier, there is now a new division at Imagination: Imagination Entertainments. And anything it does is bound to cause a stir; par for the course with anything that Gary Withers gets involved with.

"We are re-looking at all the entertainment mediums: arena shows, West End musicals, theatre, cinema and outside concert performances and applying to them much of what we've learnt across the past 15 years. I think audiences are becoming increasingly



**Imagination's Videowall at Expo 92 which featured 98 TV monitors, six video sources and a frame accurate matrix switcher.**

sophisticated; they want more, and a different mix. The audience that goes to a West End musical is not a young audience any more. Eighteen to twenty-four-year-olds have lots of money still, despite the recession, and are often living at home. Basically they've got nothing to do. They want entertainment. What we're looking at is providing new entertainment mediums into the nineties and beyond.

"We've talked about it for a long time now and never really had enough time to focus on it. Last year I got sick of just talking about it. Six months ago we set up a new team and we have been travelling around the world putting different creative talents together, looking at new properties, picking up options and talking to record companies and big brand names. During the next few months or so you'll see things that are completely different and we will have arrived at this because of what you've seen us do over the years.

"I hope it will be a challenge for the industry. I'm sure some of the things we will want to do will re-energise the industry again. In the same way as Andrew Lloyd Webber, Cameron

Mackintosh and John Napier set things alight in the early eighties, coupled with the introduction of Vari\*Lite's, work on sound systems and radio mics and so on - I'm hoping that we will come up with another set of challenging parameters that will push things on yet again.

"It will all be geared around the place and the performance, the environment and the experience. Nowadays people want more immersion and they want to feel more a part of the event. Life's very boring, and they are looking for adventure."

I should really have known better than ask a naive question about financing such grand ideas and who would be paying for the grand schemes ahead.

"We have partners already," Withers explained. "We've been amazed at the response from large players within the entertainment industry and from individuals who've said 'great, something different!' Within the record industry there is a lot of property - in terms of product - just sitting there, which they've exploited as much as they can. If someone comes along and tells them there are other ways of exploiting these assets they start to take you very seriously.

"So we're not finding it difficult to get interest and raise the money. But what I don't want to do is to end up being the producer in terms of the finance, because I don't think there will ever be enough money within our own resource to do it. We need to look to other people to help us move things forward - and the interest we've had on projects we've already developed is huge!" As I left, Gary Withers gave me a parting warning. "You'll be hearing from us inside a month or two."

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PROFESSIONAL SHOW LIGHTING



# MADE IN ENGLAND

John Offord explores NJD's explosion onto the lighting effects scene

NJD Electronics of Nottingham went for a big smart stand at last September's PLASA Light & Sound Show in London, launched themselves into the manufacture of lighting effects equipment, and as a result ended up, to all intents and purposes, re-launching the company, so great was the impact.

The story behind the decision to push out the boundaries of the company's activities is one of a remarkable turn-around of fortunes. In a time of recession, NJD realised they had to make a determined effort to stay in the leading pack of British equipment manufacturers, and to do that they needed to pull out all the stops. I spoke to the company's managing director, Kevin Hopcroft, who hasn't stopped smiling since the opening day of the last PLASA Show.

"Since the 1992 PLASA Show a completely new market has opened up for us - with open arms! However, the first discussions on taking our company into the lighting field took place as far back as 1989 when we were trading on the crest of a wave.

"With over 70 products in our catalogue at that time, covering the whole spectrum of audio and lighting control and all of them selling well, we were becoming aware of the shift in interest from intelligent lighting controllers to lighting effects containing their own intelligence. This was somewhat worrying as 60 per cent of our sales was in lighting control. The most important newcomer was Martin with their first Roboscan. We looked at this product very carefully and decided that this area of development offered the greatest threat to lighting systems as we knew them. In order to maintain our market presence we decided to commence work on our own intelligent can, the IQ250.

The original concept was very similar, with stepper motors, separate colour and gobo selection, compound lens system, and so on, and with a price around the £700-£800 mark. By early 1990 we had a prototype working in our R and D department, but in the meantime

fate had taken a hand too.

"The recession had bitten and we were having to make cut-backs, R and D was one of them. Coupled with this we had a big increase in demand for NJD printed circuit boards to control other companies' lighting effects units! The reality of the situation was that it was far safer for us to develop and make circuit boards for other businesses who placed large orders which guaranteed our income than to continue pumping money into research on our own lighting projects which may or may not sell."

NJD had looked over their shoulders at other British manufacturers who had made similar decisions and in the spring of 1990 their IQ250 project was mothballed. It enabled them to concentrate on other peoples' electronics and release new switching systems which they felt would be more in demand for the new lighting effects.

Usefully, the knowledge gained over the following 18 months not only increased NJD's

expertise in lighting control, but it also highlighted where some companies were making errors. "By the beginning of 1992 we had recovered from the recession and we were financially much healthier than we had ever been in 25 years of trading," continued Kevin Hopcroft. "We had also identified a new market that was perfect for NJD but hard for other lighting companies to compete in.

"If I can give you a comparison, Ford found it none to difficult to manufacture a luxury car in the Granada (also these days the Jaguar), but could Rolls Royce or Mercedes make a Fiesta at the same price? I think not! And what would it do to their image if they did? What we had to produce was lighting equipment that was just as reliable as the competition and with 90 per cent of the facilities of existing product and 30 per cent cheaper. It was no problem for us because that's what we've been doing for years!"

Work continued in deepest secrecy with the idea of releasing at least three totally new products at the 1992 PLASA Show. The main thrust would be with a revised and re-designed IQ250. "It was by now a completely new product and bore little resemblance to the original design," said Kevin. "The target market covered three distinct user areas: the small, low capacity or low budget club installation; hire companies, who were finding current available product too bulky and expensive for the 'carry away' customer; the long-forgotten mobile DJ, who was desperate to liven up his light show if only he could afford it."

NJD's target price for the IQ250 was now £350, and its list of features had to be highly desirable. Dichroic colours, x/y mirror control, high brightness, gobos, and most important of all, DMX control were all included.

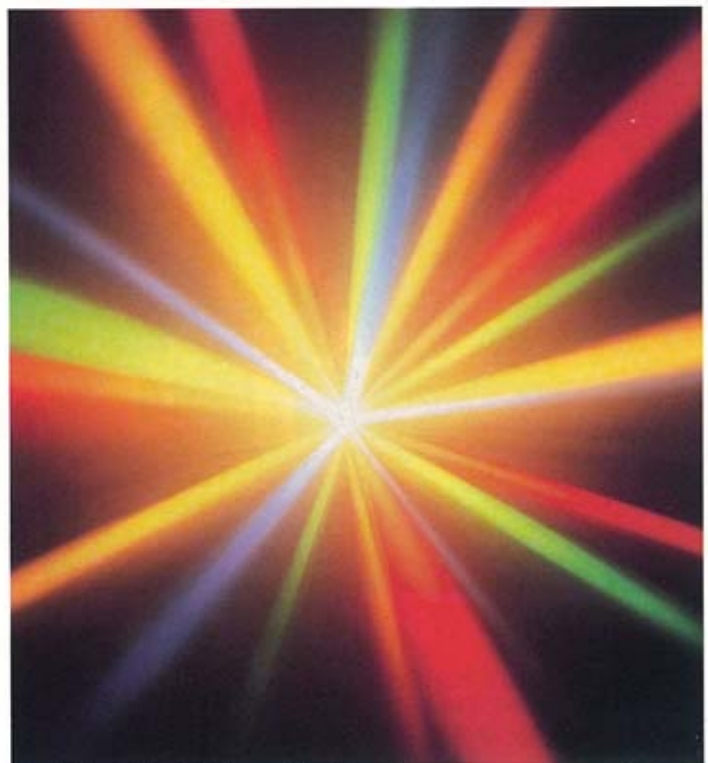
"Fortunately, having been manufacturers for many years, the skills needed to produce such a product were already in place within the company," continued Kevin Hopcroft. "Serial data technology was already being used within



Kevin Hopcroft.



NJD's best-selling IQ250.



The Blitzer dichroic flower effect in action.



our touch panels, microprocessor programming was already being done 'in-house' for the Night Star (released a year earlier) and our head of design had studied optics at university and couldn't wait to put his knowledge and talents into practice. Progress was faster than expected, largely due to the work that had previously been done on the original concept, and by the time PLASA opened, 16 IQ250s were performing."

The most regularly asked question on stand was: 'Who makes these?' It was followed by a stunned reaction when told they were totally NJD manufactured. "Shock turned to disbelief when we told them the price was £319," said Kevin. "Today, because we are making so many units, the price has been reduced to just £299 plus VAT. It turned out that we had no idea just what we had started, and by the time the show closed we had taken advance orders that would take up our entire manufacturing capacity through to Christmas, a period of nearly four months. Despite insisting that the 16 on stand were not for sale we had to bow to demand and allow some to go abroad so that our overseas distributors could demonstrate them."

NJD have now sold over 1000 IQ250s and demand shows no sign of abating. Also, with the addition of lighting products to their range, there has been an increase in demand for other products, with a massive 30 per cent increase in sales since Christmas, the lion's share of that being lighting, but all NJD products without exception have shown an increase.

"I suppose it seems incredible to the industry at large that no established British manufacturer has attempted to take on the Italian-Danish monopoly on intelligent lighting effects products before now," continued Kevin Hopcroft. "However, when you think about it, intelligent lighting requires a large collection of skills that are not usually found in one company: motorised engineering, optics and microprocessor-based electronics. The Italians solved this problem by buying in the electronics, usually from British companies. If you owned a British company with one of the above skills, say electronics, would you be prepared to take a chance to expand during a recession into two more fields of which you have no experience? On second thoughts it's not really surprising that no British company has tried before."

"We now realise how unique our combined skills are, and the reasons why we had entered the lighting sector so strongly. We are very confident now that within a few years we will become a major force in this part of the industry. The British have always been good at



NJD's new Blazer is probably the cheapest moonflower effect on the market. It produces eight dichroic flat beams which twist in time with the music, activated by its own built-in sound circuit and internal microphone. By pressing the red button on the top of the unit Blazer will flash the lamp with 'perfect' sound to light response. The secret is in the optics which allows the enhancement of the beam from a standard 100W household lamp, which unlike a projector lamp can be flashed very quickly.

The effect is stunning, say NJD. 'When used in multiples, it gives one of the best sound-to-light effects since the industry stopped flashing Par 38s and went over to in-air projection.' It is priced at £99 plus VAT.

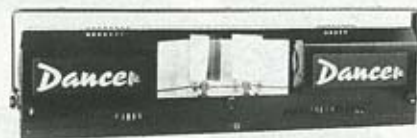
thinking up good and original ideas, but we've often been lousy at marketing them. I feel that the world market is large enough to support a British lighting industry as well as an Italian and Danish one.

"The world in general has a high opinion of British quality and reliability, and provided we take great care to maintain that opinion then the market is wide open for us. I think that the market Abstract created with a few simple lighting effects should also give a clue to the possibilities of what could be achieved should the right products hit the market at the right price and continue to work reliably."

NJD have plans for five more lighting products to be released this year - some of them bigger, more intelligent and with more facilities than the now famous IQ250. One, at the opposite end of the scale, is already released. The 'Blazer' is a simple moonflower effect with eight dichroic flat beams that twist in time with the music and flash with 'perfect' sound to light response - and Kevin Hopcroft reiterated here that by perfect he really means perfect. He explained the secret. "Our optics have enabled us to enhance the beam of a standard 100W household lamp, which, unlike a projector lamp, you can flash very quickly." Blazer is



NJD's IQ250 - the unit that launched the company into lighting effects. Below: Blitzer and Dancer were also launched at the 1992 PLASA Light & Sound Show.



priced at £99 plus VAT and includes the lamp. (Replacement lamp circa 60p!).

"All of the other products due to be released this year are more expensive," said Kevin, "but we just couldn't resist this one!"

Although it has taken NJD eight months to catch up with demand, all their new products, the IQ250, Dancer, Blitzer and Blazer are now in full production and available 'off the shelf'.

With no less than 12 new products to be launched at the 1993 PLASA Show in September, including five new lighting effects and two intelligent lighting controllers, Kevin Hopcroft had a final message, most particularly for the Italians: "Watch out! The British are coming!"

And he was still smiling when we'd finished our conversation. He was thinking about the stir his range of new products would create.

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# JAPAN: LAND OF THE UNUSUAL RISING VARI\*LITE

Yumi Matsutoya 'Tears & Reasons' tour of Japan, December 92 - May 93.  
Jim Douglas of Unusual Automation reviews some of the technology behind the special effects created for the latest tour of Japan's leading female rock star

On Sunday December 20th, 1992 Yumi Matsutoya stepped out on to the stage at the Makuhari Messe, Tokyo, in front of an invited audience of press and fans, marking the start of her 1992-93 'Tears & Reasons' tour. After a non-stop, action-packed, 15 minute opening section she took the audience on a guided tour of the staging. To quote Yumi: "The stage this year is more international than ever. Allow me to explain. The truss you see here is made in Belgium and these rails come from Germany. They carry all kinds of computer information. The tracking system (attached to the truss) is made in England. This unit riding on the track is called a pod. The pods go down beneath the stage as well as above and the lights on top of the pods are called Vari\*Lites and they are made in the USA. And then the roll down screen, the one that was down at the start of the show, is American made. And the lighting units - I'm not sure if they have been used already - they are called Telescans. The light reflects off the mirrors to produce the beautiful lighting effects; they are made in France.

"The TV monitors are from NEC (laughter from the audience). The base detail is made in Osaka. As I said, the staging is becoming more and more international and high-tech every year. If I can draw a comparison with Formula 1 racing, today is the last qualifying session. We have had all possible kinds of problems and troubles throughout the preliminary practice, and today is our final adjustment stage. God only knows what will happen; the equipment may even stop working during the performance! Nevertheless I hope you enjoy the show. Have a good time!"

Well, the fans clapped and cheered and shouted for more. The press must have been impressed as in the next day's newspapers they hailed her as their 'Queen', and she was praised for the show's content, performance and technical innovation. And what's more, all the technical equipment worked perfectly!

As Yumi was keen to point out, this show did come about as the result of a large international collaborative effort. However the presentation of the show owed a great deal to Yumi's commitment to artistic innovation, which in many cases implies supporting the technical innovation and development necessary to achieve the desired



Audience view of the stage with all the pods positioned overhead.

effects. Although her appeal is strictly to the home market, she is international in her outlook, and is always willing to incorporate ideas gathered from all corners of the globe that will enable her to offer the fans something unique each time they come to see her.

So far, the investment in the technology has paid off as it has been directed into areas where it can be re-used, rather than one-off special effects. A prime example of this is their home-grown 'Maddie Rocky Synchronsystem' a sophisticated SMPTE time code-based system. ('Maddie Rocky' comes from the Japanese word 'majirogi' used to describe something of great power.) For the last five years it has literally has been the driving force behind each show.



The 'Voyager' - high above the earth, atop the Vari\*Lites. (Apologies for the camera shake).

The musicians play to an electronic metronome derived from the time code which is relayed to them by radio. MIDI commands are available for keyboards and sound generators. A multi-track audio tape machine is used for fill-in instruments, additional vocal tracks and sound effects. This year video tape was used for back projection and on a video wall which rose up out of the stage. The time code was converted to MIDI commands for the benefit of the Vari\*Lite and Telescan desks controlling the moving lights. Only the static lighting was manually controlled. The motion control system responsible for moving the Vari\*Lite around took its cues directly from the time code, with operator intervention possible to block cues and/or trigger manually if necessary. For those areas where it was impractical to employ direct SMPTE control there was a system of cue lights driven from the time code.

The totally repeatable effects that can be achieved with such a precision tool are quite stunning. At the simplest level lighting effects such as colour changes, beam sweeps or intensity pulses can be made to happen exactly on, or even anticipate, the musical beat. However good a human operator is, his or her finger will usually descend onto the button with the beat. Add to that the reaction time (latency) of the lighting control system and the effect is invariably lost. At the other end of the scale the fact that music and pictures are precisely locked was used to great effect this year. A 4' high by 8' wide video wall was mounted, lying on its back, in the stage. During the second number it rose up to the vertical and three dancers appeared, at first on the screen, and then in the flesh looking as though they had jumped 'out of the box' onto the stage. The video wall then split into four separate 4 x 2 units each showing a life size image of the individual dancers and Yumi, all complementing and in perfect synchronism with the live action.

Of course the down side to this system is that the musical numbers have to be performed at the same tempo every night, which leaves little room for manoeuvre in the musical expression/interpretation department! Obviously this would cramp the style of some artistes, but Yumi's shows are packaged and presented as an entertainment



'Mysterious Experience' - the pod descends behind Yumi Matsutoya ready to pick her up.



'Wanderers' intro - pods climb the truss while the video wall sections pulse crazy patterns.



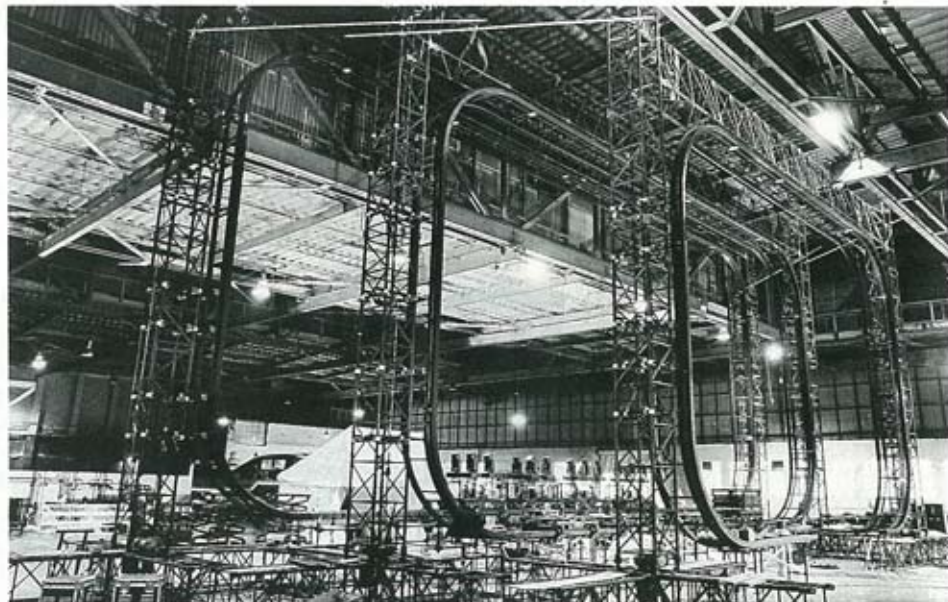
with a strong theatrical element, and as such she is not attempting any major interplay with her audience. It is all credit to the skill and professionalism of her creative team that they can pitch the tempi and arrangements of the numbers in advance, such that they work for different audiences, night after night.

This year's technological breakthrough came from Unusual Rigging in the UK. As his contribution towards Yumi's relentless quest to boldly go where no rock star has been before, lighting designer Mark Brickman put forward a lighting scheme which involved the tracking of Vari\*Lite's around continuous loops. Unusual Automation got together with Vari\*Lite UK and did some feasibility tests and demonstrated that the principles involved were sound, but it was not until October that the starting gun was fired. The time scales looked ridiculous for a project of this size and complexity as everything had to be up and running for rehearsals in Japan by the first week in December.

The scheme consisted of three vertical loops of track running around the inside of a truss frame. The tracks were nominally rectangular in shape but with curved corners. They decreased in size from down to up stage, thereby giving an appearance of exaggerated perspective focusing on the fourth, most upstage truss which supported and framed the video BP screen. The tracks carried five, four and three 'pods' respectively, each pod capable of transporting three VL4s and one VL2. The pods were self-contained and self-propelled and their motion was completely unrestricted as all power and data was fed through a system of conductor rails and sliding contacts. All movement was controlled from a central computer with facilities for editing and recording cues and playing them back in sync with the SMPTE time code.

At their lowest point the tracks came down close to (venue) floor level thereby allowing the pods to run underneath the stage. The stage floor above the tracks was made of transparent plastic so the Vari\*Lite's could act as up lighters. The downstage pods also carried a wire winch which allowed the four VLs to be lowered almost to stage level when positioned on the top horizontal section of track. The pods on the remaining two tracks had a scissor lift mechanism capable of approximately three metres of extension in any orientation.

Some of the design problems that had to be overcome were formidable. The support truss had to be ground supported and the floor loading requirement was ridiculously low at 200 Kg/m<sup>2</sup> (about the design level for a domestic toilet). There was only time to lash together a very crude prototype pod while the main equipment was being designed and fabricated. The main truss was sea freighted to Japan and a second one erected in a disused factory in Feltham in order to facilitate the fitting and testing of the track and pods. This process continued throughout the latter part of November during which time some of the Japanese production staff visited the test site. The



The three tracks erected at the test site prior to shipment.

scissor lifts were designed and fabricated in the USA and they were air freighted over and fitted to the pods. The rig was packed onto its touring stillage at the end of November and air freighted out to Japan followed soon after by a group of riggers and engineers.

The rest of the staging had a number of dynamic features. There was a traveller belt running the full width of the forestage used to transport people, props and instruments. The videowall mounted in the stage has already been mentioned. There were three large hinged flaps above the midstage track to allow the scissor lifts to rise up out of the floor. Upstage was a motorised elevator platform large enough to carry eight people.

The remainder of the lighting rig consisted of nine Telescans mounted overhead on the trusses. There were static lights inside the truss, illuminating it, and floods equipped with colour scrollers under the stage. In total, the rig consisted of only 57 moving lights but because of the added dimension of tracking they were capable of doing the job of three or four times that number. So much was possible that the crew and staff were still experimenting with different effects right up to the last day of the tour. The end result that went out on the road contained numerous effects that no-one had ever witnessed before, and through the medium of the printed word and a few non-moving pictures it is possible to convey only a small proportion of the excitement of actually being there.

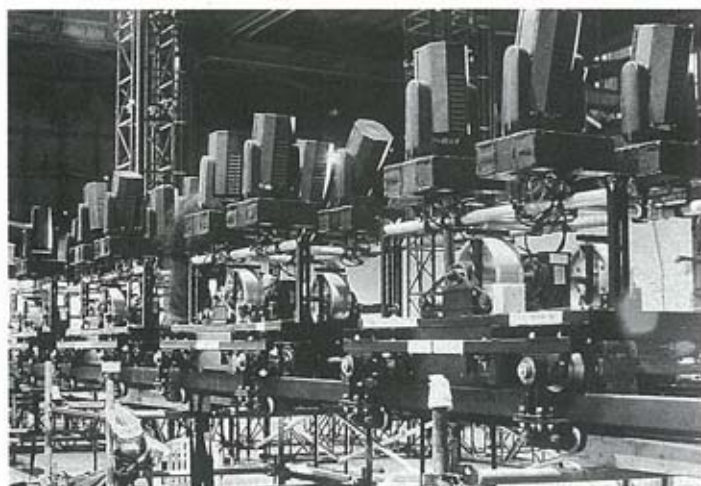
The show started with the first track from the album - 'Once in Limitless Time'. The stage was dark and Yumi appeared, at first on video on the BP screen, walking towards the audience. At an appropriate point in the music there was a flash of pyrotechnics and Yumi jumped up off the lowered

elevator platform and appeared centre stage in a blaze of light. The second number, 'Miracle', involved the previously described trickery with the videowall whereby the dancers/backing singers appeared from behind it and then danced with their screen images. Throughout these two numbers the principal source of illumination and effect was the nine overhead Telescans, working extremely hard for their living.

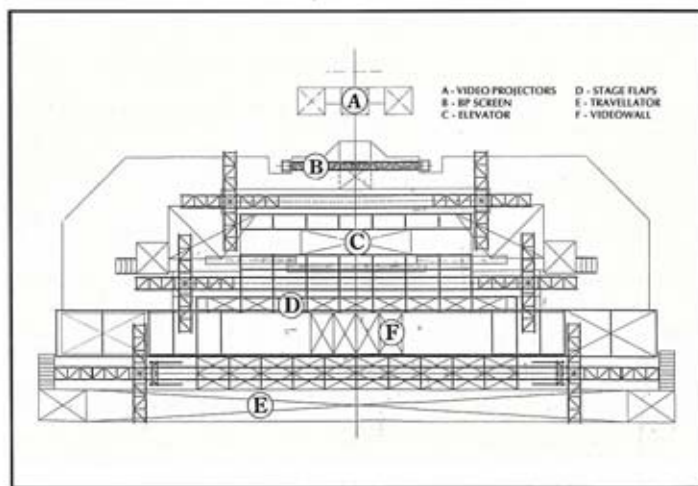
At the end of this second number - blackout - and then the heavy compulsive beat of the introduction to 'Wanderers'. Over the next 30 seconds the whole of the 48 Vari\*Lite's moved out from their under stage parking positions and climbed the trusses, facing the audience, flashing and colour changing in time with the music. Precisely on the downbeat of the vocal they reached their station above the performers and panned swiftly downwards forcing the attention back to the onstage action. The audience reaction to this move was more akin to their watching a fireworks display - pointing, open mouthed and lots of 'Oohs' and 'Ahs'! During the second half of the number, the pods with scissiors extended downwards moved to form a frame around the dancers. The fast tempo of the music coupled with the dynamic lighting made this an amazing climax to the opening section of the show.

After this the pace slackened a little. A couple of slower songs, one of which involved flying Yumi's double, Mary Poppins-style, complete with umbrella. This then led into a sixties style pastiche section, complete with gaudy costumes and outrageous wigs made from foam rubber.

The introduction to the next song 'Misty China Town' was a joy to watch. All the pods gathered quite leisurely above the stage. Just as they reached their final positions they extended about



The winch-type pods lined up for testing.



Stage plan showing the key moving elements.



half a metre downwards and the lights were turned upwards and inwards to illuminate the framework of their own partially open scissor lifts. With the strong magenta and red colouring used it was possible to believe that there really were 12 Chinese lanterns hanging above the stage.

Afterwards Yumi would talk to her audience for a good ten minutes telling them life stories. She would do one solo number accompanying herself at the keyboard and after more chat go into 'Saalam Mousson, Saalam Afrique' which made good use of the video back projection and a wind machine. The Vari\*Lites then quickly tracked down to a low level and six additional dancers came on as the stage erupted in a riot of colour and gyration for 'An Hour of Love Means a Thousand Hours of Loneliness' which, despite its downbeat title is an extremely upbeat Latin American/rock number.

The next section had a distinctly 'Sci Fi' feel to it. Two numbers - 'Mysterious Experience' and 'Voyager' lasted some 10 minutes during which the lighting rig was hardly ever stationary. Yumi entered stage right, stepped onto the traveller and was conveyed to centre stage, her passage being illuminated and tracked by a pod overhead. Some other pods then started to climb the truss very slowly with orange/red beams pointing downward to suggest the plume of a rocket. When they had reached the overhead position they were lowered in a line to meet others which rose up from the floor. All this time the air was filling with smoke (about the only time it was used in quantity) and numerous 'extras' wearing black cloaks were lining up on stage. Then the rig rose back up and cleared to the sides with the exception of one pod in the centre which continued down almost to floor level. At the same time some steps were brought on to centre by means of the traveller. During the transition from one song to the next Yumi climbed the steps, sat on a small platform above the Vari\*Lites and was hoisted up five metres into the air with a take-off manoeuvre that would do justice to NASA. During the course of this number she was illuminated by the Telescans as the pod tracked slowly stage right then to stage left and then, tracking and lowering together, landed Yumi back at the steps where she dismounted.

The final number was 'Carry On' - a slow ballad. At the start, the pods on the downstage truss were evenly spaced out in the section of track visible above the stage. The pod on stage right started to move very slowly towards stage left and as it

caught up with the next one it too started moving and so on. Yumi remained centre stage throughout and as the pods gradually collected and travelled in formation all the Vari\*Lites remained solidly trained on her. As if this wasn't enough, the pods on the upstage track circulated as well providing back light, again locked on to her. By the end of the song all the pods had 'gone to bed' under the stage - almost like watching the sun set. The visual effect of this last number was stunning, but it also represented a monumental three day effort on the part of the programmers to achieve it. The next leap in technology surely has to be a data link to enable the motion control system to tell the moving light controller where the lights are so that they can be angled and focused accordingly.

The experience of working in Japan was an eye-opener. The crew organisation (or apparent lack of it) on the load-in and load-out was hard for Western minds to comprehend. But like all good crews (after a few changes of venue), what had started as a two day load-in was down to one. A fascinating spectacle to witness was the blessing of the set by a Shinto priest at the end of the production period prior to its going out on the road. But above all was the kindness and helpfulness of the Japanese staff and crew who often went out of their way to assist in any way possible.

This was a large and complex project, executed in a very short space of time and a vast number of people contributed to it. To mention one would be to mention them all. You all know who you are - many thanks to you, or as they say in Japan 'domo aligato'. Be proud that you contributed to a project that had such an impact on the entertainment business. As the show's director, Yumi's husband Masataka, said towards the end of the tour: "this show is alive, not just because of the content, but mainly because of the people involved with it."

**The principal contributing companies were:**

- Sound: Sound Craft Japan
- Video: Ray Corporation
- Lighting: Vari\*Lite Asia  
(with contributions from Dallas and the UK)
- Telescan: Hayashi Office
- Vari\*Lite Tracking System: Unusual Rigging/  
Unusual Automation
- Truss: Stage Co Belgium
- Base Detail: Japan Stage
- Maddie Rocky Synchronsystem: Office Blink

**YUMI MATSUOTOYA - A PROFILE**

Yumi Matsutoya is a super-star in Japan. To quote the Mainichi Daily News, Japan's English language newspaper, she is "a genuine idol, a true friend, a colossal success . . . pop singer, Sunday afternoon disc jockey, homespun philosopher, and the very woman to write to if you ever have that feeling - and who doesn't - that a certain something is missing from your life." Apparently her post-bag consists of a mixture of fan mail and agony aunt letters.

Yumi started in the music business at the age of 16 and had her first hit in 1972 at the age of 18. She has issued 24 albums since then, with the last few selling more than two million each. At the time of the first concert in December the album 'Tears and Reasons' was No 1 in the CD charts with sales of over 1.5 million and the tour was completely sold out.

Yumi's success is due in no small part to the creative partnership formed between herself and husband of 16 years, Masataka. Yumi writes the songs and Masataka arranges them. He is the show director and originator of many of the ideas for the artistic presentation and staging of the numbers. Masataka's hobby is cars and he appears on TV as a presenter of motoring programmes. On top of her recording and touring commitments, Yumi has two weekly radio shows, but curiously she never appears on television. Judging by the audiences at her concerts she appeals to a wide age range. The subject matter and content of her lyrics is emotionally quite deep and on her radio shows she is not afraid to face personal issues which, in general, Japanese women (and men), for cultural reasons, find it hard to deal with. When you meet Yumi she comes across as a charismatic, yet modest woman with a reassuring smile and a slightly mischievous look in her eyes. Despite her fame she is totally approachable and is never afraid to venture out in public. She takes each encounter with her fans completely in her stride by putting them at their ease almost immediately. On stage Yumi Matsutoya has the command of her audience equal to any top class performer - off-stage you could not wish to meet a nicer person.



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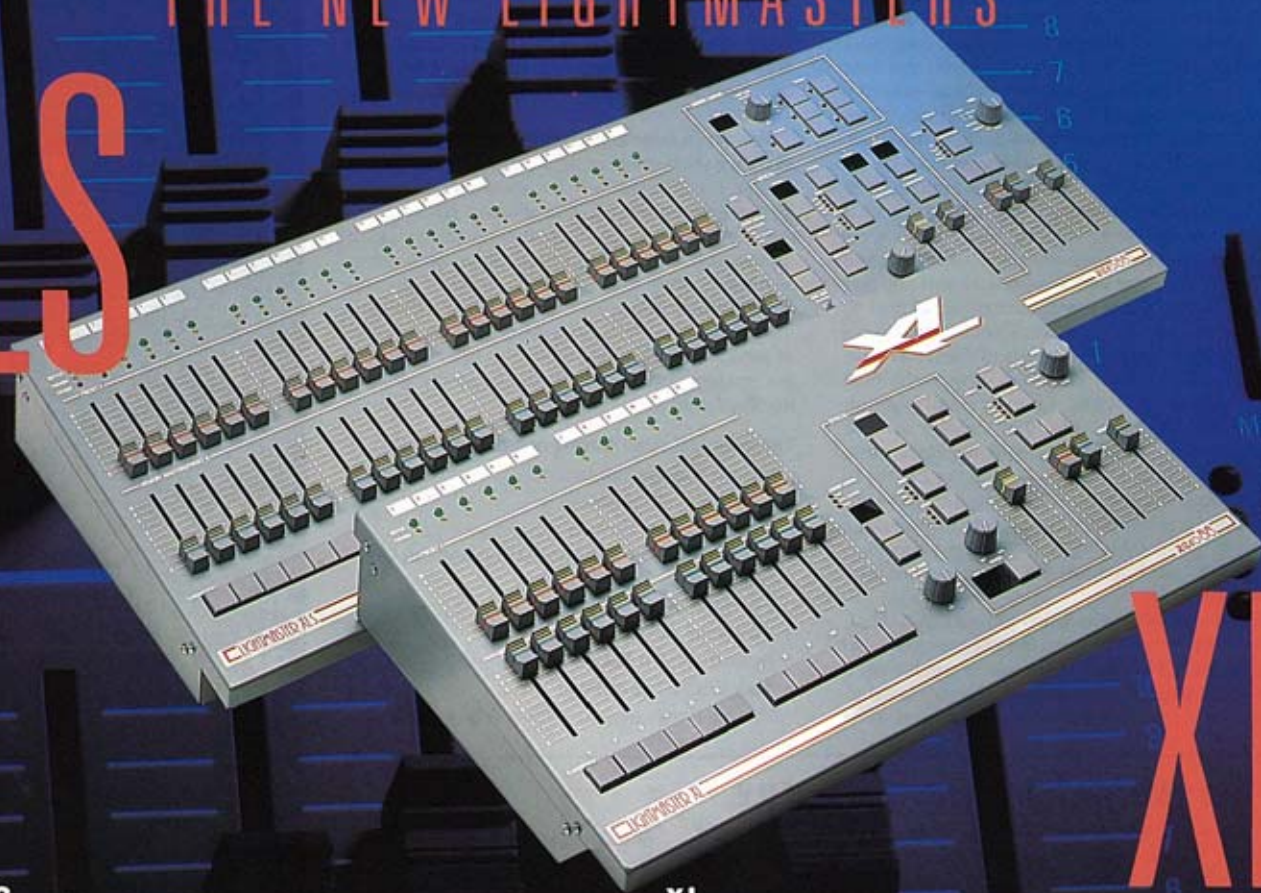
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# AYCKBOURN AND THE ODEON: "BUILDING AROUND TALENT"

## John Offord goes to the launch of the Scarborough Theatre Development Trust's new Theatre Fundraising Appeal

With a skill in speech-making and presentation equally as neat, funny and appealing as his writing, Alan Ayckbourn and his Trust chairman Charles McCarthy took the stage at both press conference and reception at Scarborough Town Hall on May 24th with a well-balanced double act that set in motion a fund-raising gallop that will ensure the old Odeon cinema opposite the town's station becomes a new home for the famous Stephen Joseph Theatre by early 1995.

The people who wield power in Scarborough and its surrounding district are now all convinced they have in their hands a writer/artistic director and a theatre company of the highest international level that will put their out-of-the-way watering hole back on the map. They're also convinced Ayckbourn's theatre audiences will help fill more of the empty beds in the town's hotels. I'm easily persuaded on the first point (Ayckbourn is to Scarborough what Shakespeare is to Stratford was the apt message), but not so easily assured on the second. Even if the new 'Odeon' centre can sell out, you are only talking about a maximum 3,000 or so visitors a week buying tickets to see the shows: compare that with the 5,000 or so holiday-makers who packed out the town's Futurist Theatre every night (2,500 per performance) for the Black and White Minstrel shows of 20 years ago. How many beds did they fill?

However, the Ayckbourn affair will run almost all year round, and it's bound to be good for the town in many ways. It's all a question of degree, and our maestro playwright deservedly has the situation nicely under control. They are selling the situation back to him now.



To a journalist's question on his continuing commitment to Scarborough, Ayckbourn stated that his loyalty "would always be to the North-East coast. I've no plans to move - I've just bought the house next door!" he emphasised.

The commitment to the 'new' building will be at least 99 years - the length of the lease on the Odeon purchased by the Trust. "We want to encapsulate in stone all the ideas and developments we've had across the years," said Ayckbourn. "We want to be a marker for many other small theatres. We are going to re-create and improve."

The listed Odeon came into Ayckbourn's sights four years ago: "at the same time as we needed to change the facilities." (Since 1976

the theatre has been housed on the ground floor of a redundant boys' grammar school). He asked Harry Osborne of architects Osborne Christmas to devise a scheme whereby all that they had now, and more, could be placed within the Odeon.

The plans were duly drawn up by Harry Osborne and approved by English Heritage, and in due course Shepherd Design and Build of York were chosen to carry out a design-and-build contract to convert the former Odeon Cinema into a new home for the Stephen Joseph Theatre in the Round.

Plans for the new theatre comprise a 420-seat auditorium with a full stage lift with three slip stages, a full lighting grid with overhead access, and a sophisticated sound system. The designs also include a 200-seat studio theatre, which will double as a small cinema, as well as full backstage and front-of-house facilities.

The cinema is one of the few remaining Odeons in the UK which has been unaltered from the original plans, and special attention will be given to carrying forward the existing art deco style of the building through into the designs for the new theatre. The outside of the building will also be refurbished, and new neon lighting installed, to transform it back into the style of the 1930's cinema. A special feature is the fully glazed atrium which penetrates the heart of the building, allowing natural light to filter through.

Jackie Staines, chief electrician and lighting designer at the Stephen Joseph Theatre, explained how the scheme evolved. "Harry Osborne came round to all of us and asked what we wanted. It took several weeks, and he wanted a clear idea of what we needed to fit



This Shepherd Design & Build artist's impression shows how the two performance spaces will sit within the reconstructed Odeon. Note lift under stage of the main auditorium (right).





Stephen Joseph Theatre's old grammar school base . . .



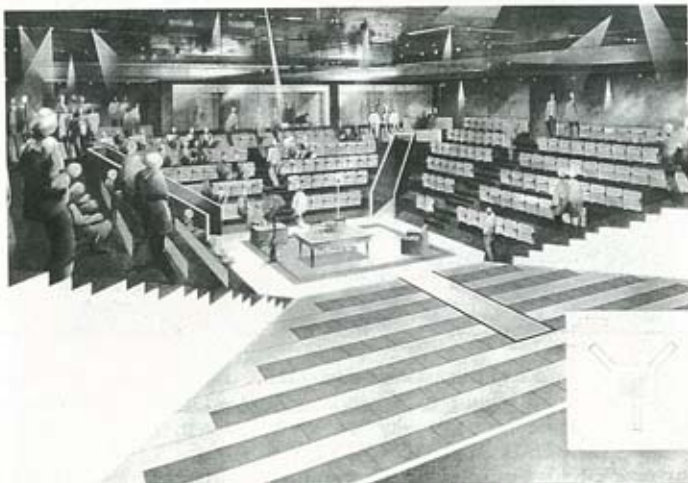
. . . and its proposed new home at the Odeon Cinema.

into the new building. The bulk of our conversations revolved around the grid and the layout of the control room. We developed the idea of a walk-around grid - thanks to a suggestion from Alan Russell of Theatre Projects Consultants - and if installed as planned it will be the first such construction in Europe."

Plans for this stressed steel grid, with a mesh of around 3" square and already proved in some Canadian installations, provide for it to cover a 20 feet square area at a height of around 16 feet. There will be a catwalk surround, above the auditorium seating, and 200 or so lanterns will be located above the grid, allowing for a 'spongy' walk across the steel mesh to focus the units. It will mean the theatre's stock of ladders can satisfactorily be made redundant.

There are simple requirements for the control situation: Jackie Staines wants maximum flexibility. Equipment must be movable, from auditorium to auditorium, and from control room to selected points within the main theatre. The present plan is that equipment currently in use in the 'old' theatre will transfer direct to the 'new' studio theatre, whilst the new main theatre will have the benefit of a completely new inventory of kit.

The equipment and mechanical specification list for the new Stephen Joseph Theatre in the Round is sacrosanct. "The feeling is that we'll be in the place for 99 years, so there is no point in compromising," said Jackie. "We are fully supported by Alan Ayckbourn in this. There will be no cut-backs. It has to be right. Jackie is also committed to Scarborough: "I've gone this far with it, I've got to see it through now!" In



The new Stephen Joseph Theatre will seat over 400.

fact, she's a touch impatient to see the project up and running. Also, very realistically, she regularly moves inland, when time permits, to the big world 'outside'. "I've just designed the lighting for three shows at Harrogate Theatre - just to prove I can still work in a proscenium theatre!" she told me.

Despite the confidence emanating from all those involved with the future of the Stephen Joseph Theatre, a great deal of money still has to be raised: £4.3m is the total required, with £1.9m sitting in the bank or pledged, £400,000 of it from Ayckbourn himself. There is a long way to go, and this is where the Ayckbourn-McCarthy partnership comes into play.

There are 'named gift' opportunities that range from naming the overall theatre at £800,000 down to a theatre library at £10,000. In between you could name the control room

or the scenic workshop, for instance, at £20,000; you could attach your name to all the lighting equipment for a mere £40,000 (sound equipment comes in at the same price). Ayckbourn's studiously chosen patrons, executive and appeals committee members will probably take care of that lot.

To make up the difference, and if you're a more normal punter like me, you can 'buy' a square foot of the new theatre at £25 a shot and get a signed certificate from Alan Ayckbourn as a 'thank-you'.

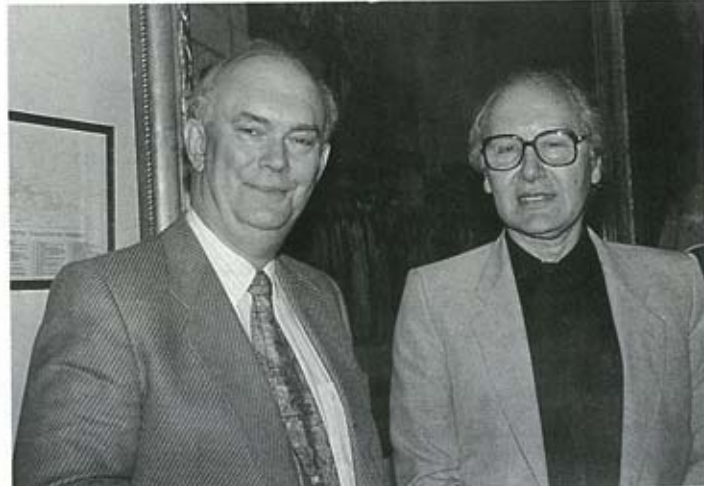
And Ayckbourn is nothing if not persuasive; he draws you into involvement. In the new building the audience will still be able to walk across the set, and he promised it wouldn't become an "experimental ghetto". It will be the same, but different. There will be 'silent' air conditioning (those who've sat near the ceiling in the present venue will know how important that is in high summer), and numerous improvements all round. Refreshingly, he considers "the times when we could take ourselves terribly, terribly seriously have gone." And more urgently: "There is work waiting to be done that we just can't do in the present building, and I want to exercise ideas within living memory!"

Charles McCarthy sees Scarborough being pulled back from mediocrity. Alan Ayckbourn wants to build a role model for smaller theatres for the next 100 years, and build around the talent they've built up.

The important thing is that they are both right and understand the realism of the situation. Scarborough and theatre will undoubtedly benefit as a result.



Alan Ayckbourn, Jackie Staines and Alex McCrickard of Shepherd Design pictured at the appeal launch.



Alan Ayckbourn with architect Harry Osborne.



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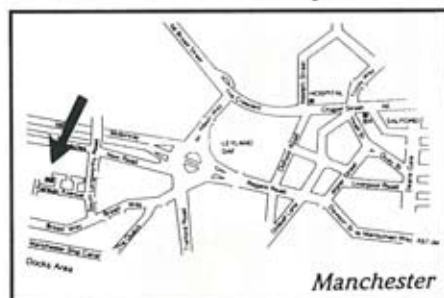
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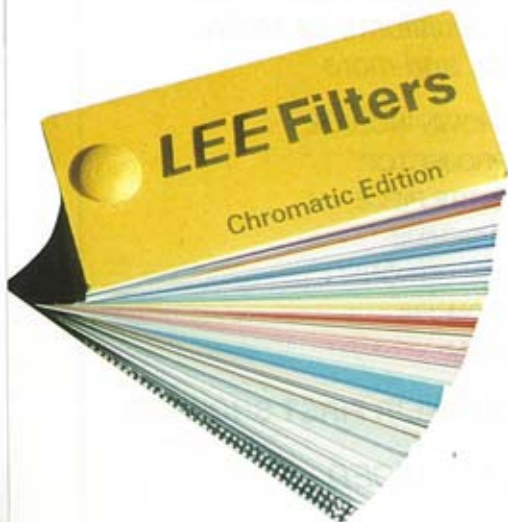
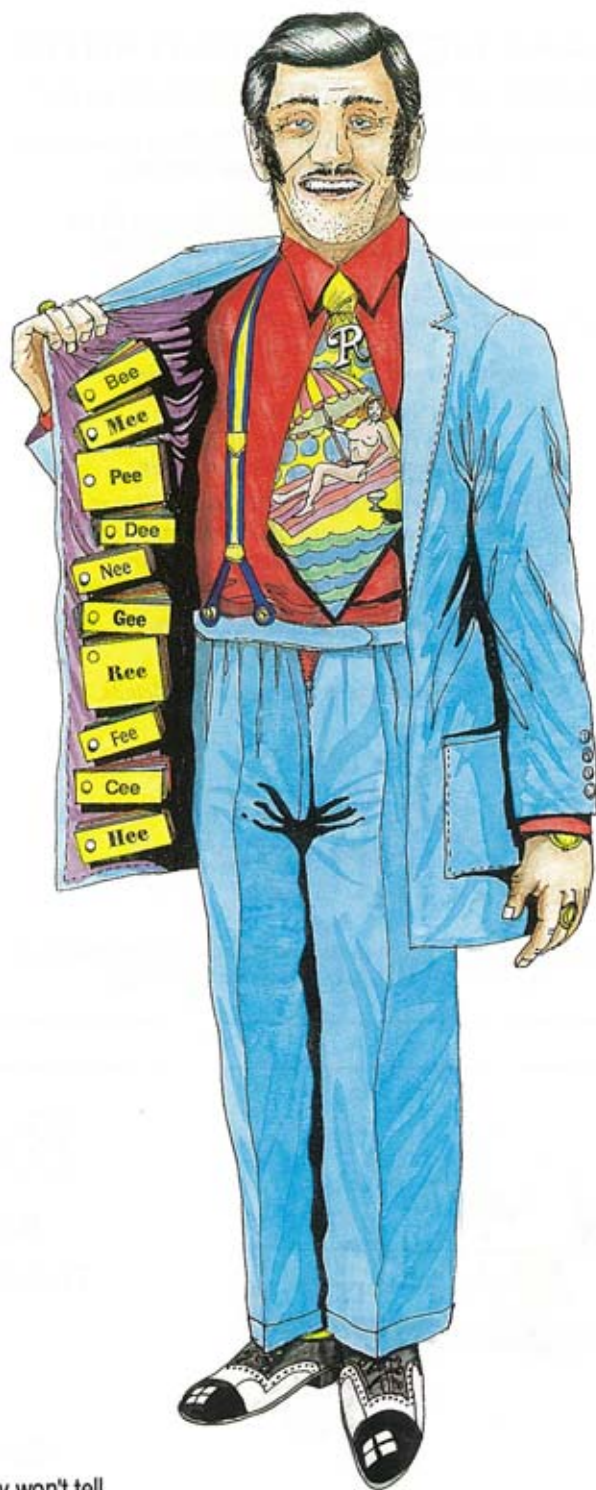
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# PAST, PRESENT AND FUTURIST

John Offord sources the background of Futurist and describes its plans for expansion

Futurist, based in Dewsbury in West Yorkshire, is as 'Yorkshire' as they come. Solidly built, it grew out of the success of the huge Futurist Theatre at Scarborough 20 years ago. And the success story of the Futurist itself and its then owner and impresario Robert Luff, was due in large part to the seat-filling attributes of the Black and White Minstrel Show.

Robert Luff owned the Minstrels: he is chairman of Futurist. The lighting, sound and scenic properties and expertise he had at his command eventually became the business we know today.

You can't have a more secure base in our industry than one that is founded upon successful theatrical and musical tradition. Along the way, and soaked in the very atmosphere of show business, the people who have provided equipment and services have had to employ the best in standard theatrical skills alongside no end of new technical and presentation wizardry that producers and directors have called upon to keep their productions up-to-date. It calls for a huge range of expertise based on long tradition, coupled with the latest in sophisticated technology and techniques.

For many years Futurist Theatrical Hire, as it was then known, coasted along successfully on the desirable spread of its own in-house

business and a Strand distributorship; a broad range of equipment, sets, costumes and cloths to hire out coupled with sure sales.

Times change. The new Futurist has had to take stock. It's no longer the cosy company that had business almost automatically 'built-in' within its structure and the Futurist Theatre connection is no more. The Black and White Minstrels are almost a distant memory and the direct links with the seaside entertainment scene have ended.

With a careful eye to the future in 1975, just two years after start-up, Robert Luff sited Futurist's operations in Dewsbury, a location conveniently placed for access to the motorway network. Here, director Brian Simmonds supervises operations.

"Our policy has always been one of steady, but continual expansion," he told me. "Now in our twentieth year, we are planning our next expansion which will allow customers on a national level to access the Futurist range of services and products, together with a superior level of customer service and technical back-up. Futurist has always been a profitable company and this has enabled us to invest in new equipment for the hire department and to develop and install new computer systems for our own administration use to enable us to respond more efficiently to our customers."

"However, we want to be more than just a lighting and sound company. We want to offer people a reason for using Futurist, and to that end we are planning to have a design office and several other facilities where clients can work on their drawings and discuss them with our in-house production crew, or with their own people.

"Over the past year our 'event' business has taken off in a big way and we are gaining a reputation throughout the UK for the specialist work we carry out for both indoor and outdoor events and concerts. This is a massive market, and we are aiming to dramatically increase our market share by utilising our inventory of high specification equipment and our internal expertise in the design and rigging of events and corporate promotions."

In addition to Strand, other distributorships have now been added including Rosco, Lee, Bose, Allen & Heath and C-Audio. Futurist also has a special arrangement with Lite Structures to hire out their trussing system in the UK. They are also main distributor in the North of England for Steeldeck staging.

"It means we can now put whole packages together," said Michael Lister, manager of sales and marketing, and the man at the sharp end of Futurist's expansion programme. (Prior to joining the company 14 months ago, Michael



Star cloth preparation.



Astralloy assembly area.



Ted Ruddiman - technical sales specialist.



Office manager Dawn Wadsworth.



Brian Simmonds (seated) and Michael Lister.

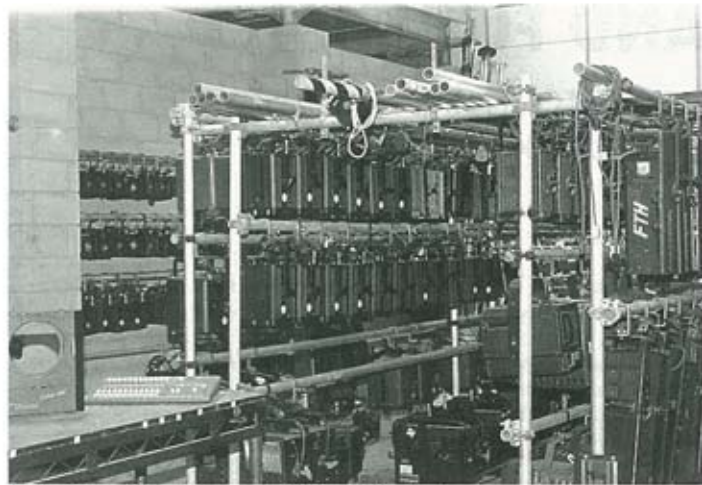


Available members of the Futurist team line up for an L+SI photocall.

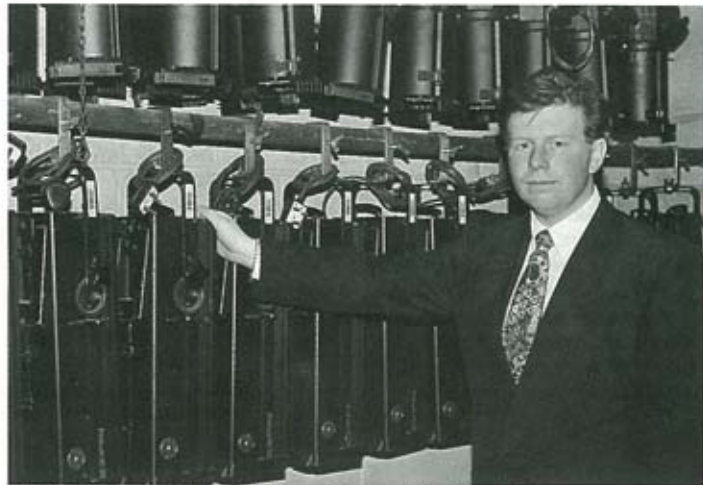


Service boss Keith Hartley with his new van.





Part of Futurist's hire stock of Strand luminaires.



All PAT tested - Michael Lister points out the bar code.

was with Strand Lighting for five years working on project management and technical sales).

Futurist's turnover is split equally between sales and hire, and in addition to widening their sales front with a much larger range of products, the hire and service areas are also undergoing major improvement programmes. In addition, they were recently appointed by Strand as a Registered Service Provider. "Over the summer we will be gearing up our service area and procedures," explained Michael Lister. "All our equipment is PAT tested and the testing procedure itself is offered as a service to theatres and educational establishments."

Michael has strong views on current selling procedures adopted by many companies in the industry. "There are far too many dealers around who simply work on turnover, with a very low margin. Until this is sorted out there won't be any money made. Exclusive

dealerships are also questionable as so many businesses are multi-faceted now. There has got to be some structure to the business, as we can't run things just on sales." He would like to see PLASA as the industry body attempting to do something about the situation.

Increasing the scope of Futurist's operations also includes project work, and one major scheme they are assisting on will see them going back to the town they originally sprang from, but to a different theatre. Alan Ayckbourn's new Stephen Joseph Theatre in the Round, featured elsewhere in this issue, will be equipped by Futurist and Michael Lister has been a regular traveller to the East Coast to discuss the project.

They are being employed by Shepherd Design and Build to advise and specify the lighting, sound, grid and lift system for the new Odeon venue, as well as working closely with

the theatre's own technical team.

"The project involves 240 production dimmers and 200 lanterns. Techplan Theatre Search International (Richard Brett and David Wilmore) have provided a technical specification for us for the stage lift which will be six metres square," Michael explained. "It will be the single most expensive part of the scheme."

The successful conclusion of the work and the opening of the new theatre in Scarborough next year, if fund-raising goes to plan, will endorse Futurist's potential in the major installation field. "We started in the town, and it's a very important job for us," said Lister.

To further aid their work on major sales and projects, most major manufacturer's equipment is listed onto a computer programme, complete with prices. "It enables us to provide correct costings and then make

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Steve Farnsworth Futurist's hire manager.

the proper business decisions on any project," said Michael. The system is based on a Strand concept and has been customised to Futurist's requirements.

The sales counter area at the company's Dewsbury base has plenty of room for more stock as the planned expansion adds variety to goods on offer. Strand, Lee and Rosco colour is available in all but the most esoteric of shades. Out in the warehouse there are separate areas for hire and preparation (and as with busy hire operation, there wasn't too much on view), test and maintenance, and a dedicated space for Astralite assembly and storage.

During my visit, final preparations were in hand for a special ABTT North event - 'The Ultimate 1kW Shoot Out' - on the following day. Also included during the event was a seminar (utilising a special Steeldeck-built seating and stage area) and a small exhibition of latest products distributed by the company.

An interesting and most profitable hangover



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from the 'old' days is Futurist's growing stock of starcloths, for which there seems to be a never-ending demand. In fact it's the singularly most profitable sector of the whole operation. No less than 70 are out in Hong Kong at the moment.

With the telephones getting ever busier, extra lines have recently been added. "We are now getting enquiries from all over the UK," explained Michael. "And all the staff are extremely enthusiastic about our plans for expansion. Their support will help us achieve our objectives.

"Our company assets are of a sort that are aspired to by many other companies. We have firm financial support from our chairman, and money is available for expansion. We have excellent premises, loyal and experienced staff, good business practices and directors who

really want to make it happen. It all makes my job so much easier because all these factors are good selling points!"

A final point to emphasise is that Futurist has a very young and energetic team. Their years of experience, however, add up to a much higher number than you'd ever guess, as most of them have been with the company since leaving school or college. Leading them, and and at the same time maintaining the tradition and the original links with Scarborough is Brian Simmonds, who was stage director at the Futurist theatre before joining the Dewsbury operation.

It's a unique recipe and, given its ingredients, one that should ensure the success of a company that is aptly named to notch up another 20 years in the industry without too much trouble.

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# LONDON'S LASER SPECTACULAR

Peter Fink counts down to 0 Degrees, the launch event for a permanent laser installation at Greenwich



The laser cuts through London's skyline and out across the Thames.

The creative cutting edge of large scale public art events such as the Canary Wharf Light Year and O Degrees rely on the act of transgressing the boundaries between mass entertainment and art. A large scale art event by its very nature is creatively often the outcome of a multi-discipline, collaborative approach, which highlights in its own urgent way the question of its intended audience. When successful, these sort of events have the power of overcoming public lack of interest through visually spectacular and innovative uses of everyday public spaces. The very nature of such a transformation of an everyday public space with often monumental effects gives these events their creative cutting edge.

When we started as artists to think about the possibility of a permanent laser installation after our experience with Light Year it soon became important to us to find a strong contextual reason for this as well as a good practical location. The ideal opportunity soon appeared through an invitation to submit a proposal for the River Crossing, an art events related to the Thames. Our initial proposal resulted in the O Degrees event for Greenwich based on an architectural use of sound and light over water exploring the poetic, social and historical connotations of the Greenwich meridian.

Having secured the co-operation of the Old Royal Observatory in principle I approached the laser industry both in the UK and USA with

a specific proposal suggesting they may wish to consider co-sponsoring the project. At the outset I was warned by many that this may prove to be an impossible quest, not only because of the general economic climate, but also because of the highly focused end-user trading patterns in the laser industry. As a part of our presentation we tried to locate our proposal in both the context of the current extensive maritime trials of lasers in the US and UK, as well as in the context of the possible use of lasers for architectural lighting, an application which we find of particular interest. This approach produced a number of concrete responses from the main laser producers, resulting in Spectra Physics and Horizon Laser Graphics becoming the principal sponsors of the installation.

The actual installation of the 2011 Argon Ion laser, apart from the statutory consultations and permissions, also involved a detailed consultation with English Heritage to ensure minimal disruption to the Observatory, which is a national monument building. Particular attention had to be given to all the pipe and cable runs to ensure that they were installed and routed with the minimum of visual disturbance to the building. Similarly all the structural details of the laser installation had to visually conform to the original detailing.

Initially concern was voiced by London City Airport, as the beam crosses the east bound flight path, about two miles west of the airport.

However, as the beam is projected below the flight path, at less than 200 feet above sea level, and angled up at only 2.5 degrees, it was considered unlikely to cause any problems to pilots. Also, as the beam is expanded, the power density is greatly reduced, thus making it eye safe within a few hundred metres of the observatory.

The detailed design of the system was carried out by Image Systems using optics by Spindler & Hoyer with a control system from Network Production Management. The laser installation, which is designed to switch on in a sequence triggered by a combination of a time switch and a light sensor, is based on a collimated beam expanded to 45mm diameter. The cooling of the laser is provided by a PTC Coolstream heat exchanger located on the ground next to the observatory. The beam passes through the central space of the Meridian building and out, over North London, through a beam port in the observatory topmost door. The permanent installation of a laser in the Greenwich Observatory effectively shows how the meridian crosses the Thames three times within a couple of miles, allowing the reflection to the beam to be used to great advantage. The beam can now be seen from many different places along the river in both Greenwich and on the Isle of Dogs, giving millions of Londoners the opportunity to see this little known and appreciated fact.

The first firing up of the laser projection was



O Degrees: Alien Products' large scale projection (above), and the paintings of Turner meet Apocalypse Now for a stunning finale (right).



also linked to a performance which took place in early May on the stretch of the river under the laser beam between the Victoria Deep Water Terminal and the Greenwich Foot Tunnel. Due to the nature of the proposed effects we had to collaborate closely with the Port of London Authority and the Maritime Division of the Department of Transport culminating in a river closure order for the duration of the event. The event itself further developed the notion of making visible the invisible with large scale projections on a monumental water screen produced by the powerful, variable water jets of the London Fire Brigade firefighting ship Phoenix, by surrounding buildings and by the sails of 30 yachts.

The event involved over 50 boats and barges in a choreographed performance with many large scale effects based on a mixture of high and low tech approaches.

The projections were carried out by Alien Products with a 7kW Xenon projector on a portable table allowing the images to be redirected onto the various target screen areas during the event. Alien Products were also involved in the operation of two Lightning strikes 70,000 watt lamps from Cirro Lite, which drenched the facade of the local power station with the pulses of light of more than four million lumens.

Apart from forming a dramatic backcloth for the performance the power station also became involved as a sponsor by providing the necessary two 100 amp power supply for the lights, which were placed on its jetty. Other kinds of effects on the opposite side of the spectrum involved the release of hundreds of 20 inch helium balloons with individual cyallum lights, from the hold of a slowly travelling barge, creating a ghostly new

constellation of stars in the sky over the river.

The pyrotechnic effects for the event were provided by Fox Fireworks from two barges and a land site. Pains Wessex Schemuly sponsored the creative team with 200 flares and smokes which were used in the final yacht section to create a scene resembling a mix of a Turner painting with Apocalypse Now, heightened by model helicopters carrying small flares and smokes flying through the laser beam.

At an early point of the event development we decided to go for unamplified sound and consequently worked with musical instruments capable of directional sound.

To this end we commissioned Alan Tomlinson to compose a piece for 50 trombonists, Ansuman Biwas a piece for 40 pipers of the Mukajeevan Hindu temple piper band and Paul Burwell a piece for 40 Bow Gamelan drummers, thus exploring through sound the notion of East and West. The staging of this event involved a number of risks stemming from the fact that nothing could be rehearsed as virtually all the boats were provided free under various sponsorship deals from both the commercial and leisure users of the river, with the special effects manned mostly by volunteer groups of art students. The staging of the event involved over 300 people in one or other capacity.

The fact that the Greenwich Meridian has so many potent references to time and astronomy, as well as to the meeting of the West and East hemispheres, allowed the event to draw on so many rich and evocative images, which an audience of 4,000 enjoyed on the night from the easily accessible, extensive walkways on both shores.

We are currently working on a number of other schemes exploring various light technologies and hope to realise another major

project for London celebrating its river in 1994 for which the O Degrees was a small trial. The principal aim of 'High lights' will be the creation of a unique platform for a monumental celebration of London as a leading international city, by Londoners, through an architectural use of sound and light.

The choice of the geographic areas covered by 'High lights' will be governed by the underlying desire to express, in a creative way, a sense of urban unity of the capital and consequentially making the river Thames its main axis, taking in the areas of Westminster, West End, South Bank, the City and that of Docklands.

The overall strategy is to conceive 'High lights' as an event with a strong and imaginative vision of London and develop it in a positive atmosphere, which would encourage a synergy of creativity and resources. This approach we believe will not only be successful in raising the considerable financial and organisational resources needed but equally important, should help to establish an exciting atmosphere of collaboration across art forms on both the professional and amateur levels, creating considerable potential for a world wide media coverage of both the project and of London as a vibrant cultural city.

The project will centre conceptually on a single sound to light performance on the river during which the buildings and open spaces of the capital will communicate with each other through large scale projected images, choreographed light and pyrotechnic effects to the accompaniment of a vast array of sound compositions from large scale choral voice performances to industrial music and synchronised radio links - creating a monumental sound and light performance in-the-round.

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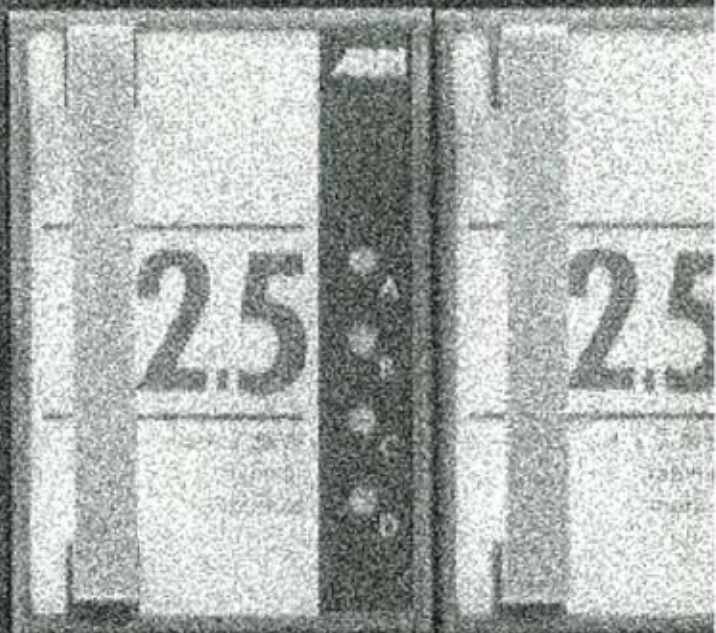


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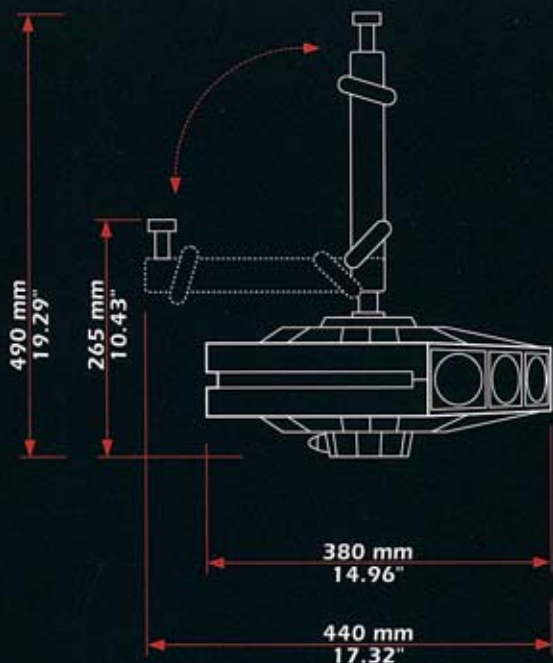
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# THE ITALIAN COLLECTION

A series of L+SI fact sheets giving information about leading Italian manufacturers of entertainment lighting and their products. Previous editions have covered FLY and FAL, successive issues will include Clay Paky, Griven, Lampo, La Novalite and TAS.

## Coemar

**Director:** Bruno Dedoro (ably assisted by Ivano Burato and Fausto Orsatti).

**Location:** Castel Goffredo, Italy

**Background:** 60 years old this year, Coemar has been a pioneer in new lighting products since its foundation in Milan in 1933 as a manufacturer of photographic, architectural and studio lanterns. The founder, an engineer by the name of Marcucci, lives on in the 'MAR' of the company's name, the rest standing for Costruzioni Ottiche Elettriche. Early on Coemar was providing architectural lighting for the Vatican and during the war years it made Aldis-type signalling lamps, searchlights (some with 3m diameter reflectors) and underwater lights for submarines.

With the war out of the way, Coemar was soon busy producing a full range of lighting equipment for theatre and opera houses throughout the country and establishing export markets elsewhere. Its first bi-lingual catalogues which appeared in the sixties, already included a range of low voltage framing and effects projectors. Because of the burning angle of the lamp, a front-of-lens mirror deflector attachment was offered to increase the beam excursion possibilities - a foretaste of what was to come, a long 20 years later!

Dedoro joined the company in 1968 to head up the development department and in 1972, the same year the company moved to Castel Goffredo, Coemar produced their first dedicated disco effect in the shape of a liquid wheel projector. Suddenly they discovered that there was a whole new world out there which would not only fuel new expansion, but which also challenged Dedoro to constantly innovate, which he clearly enjoys. In Italy, unlike the UK, it seems it's possible to maintain an image in the theatre and disco lighting markets simultaneously. By 1978, when Dedoro had acquired the company from the Marcucci estate,



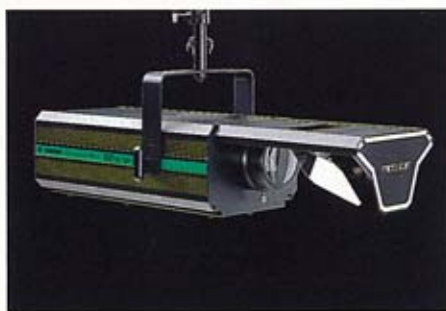
Bruno Dedoro joined Coemar in 1968.

Coemar were already able to present a prototype robotic luminaire at a show in Palma.

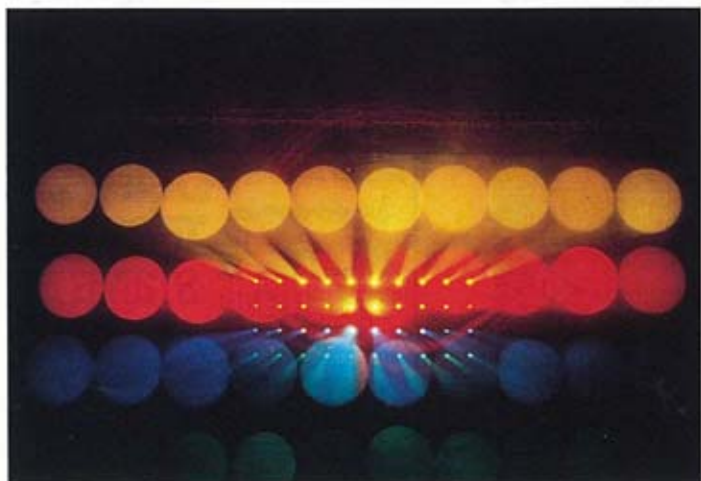
It was on the Coemar stand at SIB '83 in Rimini that a revolution was started with the debut appearance of the commercial version of Robot, arguably the first proprietary controllable mirror projector. Not only that but it brought together, for the first time for many people, the high colour temperature of the discharge lamp and a dichroic colour changer. Robot was swiftly followed by Jupiter and, more recently, by Samurai. At the same time Coemar introduced a whole range of other new lighting effects while regenerating their range of followspots also using discharge lamp technology. It was about this time that Teatro was formed with ex-Strand supremo Mike Lowe, to exploit the company's theatrical skills under another name. Though this company



The recently-launched ten colour Baby Color, and below the unit in action.



Microscan 2 1000, with below the Microscan 2 575MSR in action - ten colours, ten gobos.



now belongs entirely to Lowe, it continues to rely on Coemar for much of its product.\*

If Robot was the progenitor of a new breed of lights, then also indicative of Coemar's seminal influence, is the rash of other lighting companies which have grown up around their home base. Many of them included in this collection owe their existence, in one way or another, to Coemar.

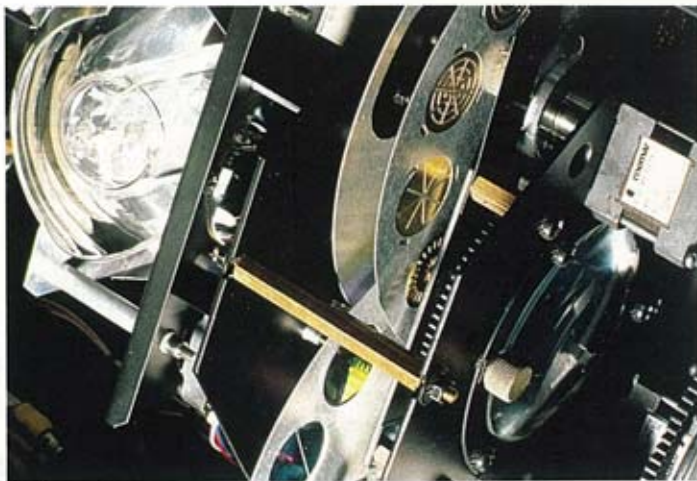
Dedoro believes that Coemar are on the threshold of a second revolution in the dark science of automated luminaires, but this time he is keeping his powder dry until 100% certain that he has a viable product. However, it is promised to storm the barricades at PLASA '93 and, in view of past history, nobody should think to gainsay Bruno Dedoro on that score.

**Company philosophy:** Expansion through innovation and customer loyalty.

**Selected product:** Samurai is the third generation of Coemar articulate projectors, though Jupiter is still in the catalogue as a top-end product. Samurai comes in two options, either 700MSR with on-board ballast, or 1200MSR (Samurai Light) with separate ballast, which provides an attractive package for touring with a smaller lighter head (23kg) for mounting on the truss. The remote ballasts come in single or 4-head configurations. The effects include 12 colours, rotation and splits, 12 gobos, strobing shutter, full mechanical dimmer and 170 x 110 degs pan/tilt, and microstepping. As with most devices of this sort these days, Samurai is power factor corrected and requires nine amps at 230v, the lamp can be remotely switched on and off. Control is via DMX512 or analog and a control system for up to 16 Samurais is available.

**Recent releases:** Baby Color Pro - provides 10 dichroic snap colours, plus colour rotation, splits and remote iris; Baby Color Eco adds a full mechanical dimmer to the above, both models based on ENH 120v 250W lamp, 170 hours. A dedicated controller is available for both these models; Microscan 2 is the upgraded version of Microscan which offers a choice of 1000W halogen CP63, or 575W MSR, ten colours, ten gobos, otherwise as the basic model (see Effects Projectors). A dedicated controller is available; Versatile - replaces both 'Spartan' and 'Multitunnel', generating seven beams of light from a single lamp source, the characteristics of which are determined by the choice of lamp, either 650W TH, or





The Samurai Light 1200 articulate projector (left) and what makes it tick (right).

1000W Roundlux.

**Other products:** *Lighting effects:* **Duo** is a twin beam effects generator with four colours based on a single 700MSR lamp; **Multi-Beam** comes in two lamp versions, either 200W MSR or 250W halogen, and yields a starburst of beams (sometimes called a moonflower effect); **Tunnel Light** uses the 750W Roundlux lamp to give a single cone of light; **Piovra** and **Cybernetic** are both rotunda-type centre pieces deflecting several focused beams from a single 1200 MSR source; **Bello** are multi-directional rotating dish-shaped units radiating coloured beams from around the circumference, available in 750W halogen, or 1200MSR; **Venus** - is a fixed version of the same device; **Rotomax** - are twin (2) or six-head (6) scanners based on the 40v 150W parabolic Discolux lamp; **Strobe light 700** is a linear strobe in a diecast flood fitting, single channel controllers for one or up to eight units are available, or **Delta 8** will programme up to eight strobes on each of eight channels; **Colour System** is a clever alternative to a scroller for attachment to the front gate of many lanterns from which up to 21 colour mixes are possible; a **Split Box** for up to 24 units via DMX or analog is available; **Ribalta Luce Wood** is a range of three blacklight fittings ranging from 20 up to 80W.

*Effects Projectors:* **Graffiti** - is an unusual version of the sixties liquid wheel projector, based on the 1k halogen TH type lamp with internal reflector; **Atomic**, **Mirage** and **Ritmo** are all multi-effects units based on the MSR 1200, which need to be seen rather than described; **Jupiter** which was Coemar's



Versatile: seven beams or cones and a choice of two lamps.

intermediate generation articulate luminaire, is available with 700 or 1200 MSR lamp and provides 12 colours and gobos plus pan and tilt. Unfortunately it requires a proprietary control protocol but a choice of three boards are available, each of which has a joystick to ease programming congestion and there is one which provides the option to add a mechanical dimmer; **Microscan** is the junior articulate projector of the family and comes in two models each offering a choice of lamps. The five colour, five gobo Microscan can be delivered with either 500W M40, or T25, or 650W halogens all of which are dimmable, or 400W MSR. Effects include strobe and blackout.

*Spotlights:* **Corto**, **Solar**, **Passo** and **Primo** is a range of theatre quality fresnels and PC spots all with halogen lamps ranging from 300W up to 2000W; **Accento** are two ellipsoidal profile spots available with 500 or 650W halogens with variable beam angles from 20 to 35 degs,

or 16 to 30 degs; a range of accessories is available for all these lanterns, iris, gobo holder, barn doors, etc as appropriate; **Sequenza** is a range of linear floods and **Ribalta**, a range of cycs in individual, or 3,4 and 6-way enclosures depending on the designation, with R7 halogen lamps from 500W up to 1250W **Testa** is a comprehensive range of followspots all with semaphore colour changers, 'Aldis' shutters and stands available. Models range from MSD 200, 1, 1.2 and 2k halogen, MSR 575 and 1200, up to 2.5k CID; **Luxor** are Par 56, or Par 64 spun aluminium cans available polished, or in matt black finish; **Polo** are two very narrow, concentrated beam profile spots (1400 lux, 2m dia. at 25m).

*Control desks and dimmers:* Coemar offer a wide range of manual and memory lighting desks from six up to 48 channels, dimmer and power packs, as well as integrated dimmer/lighting controllers in a number of configurations.

*Other items:* **Mirror balls** - 20, 30, 45 and 55mm dia.; Four circuit **Lighting bars** with psu for 12V MR16s; **Mini fog machine**; **Laser System** - 6W Argon effects system, with controller.

#### UK Representation:

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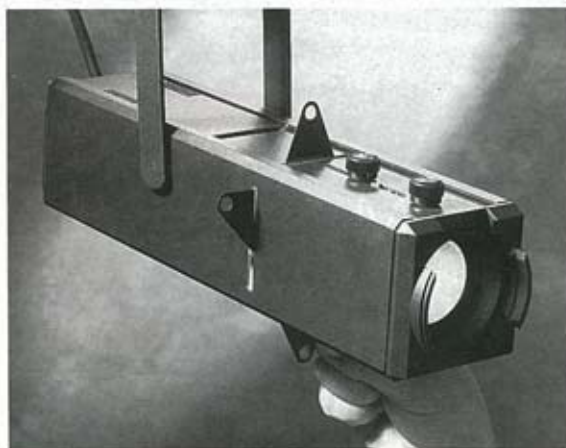
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# ON TOUR

## AND PRODUCTION NEWS

### Bruce Springsteen Sheffield Arena LD: Jeff Ravitz SD: John Kerns

Bruce Springsteen has a new band, a new PA company, lots of new songs and is being lit in some brash new colours. Jeff Ravitz has been lighting Bruce since 1985 and this is certainly a new look from him. Like an advert for some new car, the stage is washed in chrome pinks and metal magentas, swamped in blood reds surrounded by primary green. To see a rock/folk hero, an icon for those who were too young to catch Dylan, lit in such a way seemed initially disturbing. What at first appeared garish and incongruous quickly became appropriate when matched against the accelerated pace and power of Springsteen's delivery.

Never one to relax and take it easy on stage Bruce seems to be pumping even more energy into his show these days; maybe his old band held him back (in fairness, most men Bruce's age would be hard pressed to keep up with his performance) or perhaps he's fighting to deny his own advancing years. Nonetheless in this, the 25th anniversary of his first British tour, he's giving more than ever.

The change of PA suppliers was in the words of Albert Lescasse "no great coup, we just presented the best deal and George Travis knew we would come up with the goods". Albert, as well as being shareholder and founder member of Audio Analysts, is the head technician on the tour though that is perhaps to diminish his import, as he is also the co-designer of AA's own FOH console the CADD 40 (40 channels into eight, stereo), and their new CADD three way cross-over. Unlike Clair Bros, AA use Crown Macrotech amps to power their S4s. Incidentally, another Albert design was the wedge-shaped near down fills slung beneath the main PA and performing the obvious function their name implies. With 24 flown cabinets a side (soon increasing to 80 per side for the outdoor shows) in the Sheffield Arena, the sound was always loud and grew more so as the show progressed, the best sound being at the top of the bleachers just under the balcony where the slap-back from the roof was less pronounced. John Kerns, the sound engineer, although pushing the PA hard, never noticeably ran out of headroom, whether dealing with just Bruce and



Bruce Springsteen on stage at Sheffield.

guitar, or with six backing vocalists singing Gospel style or the whole band full-on. Allowing for the short-comings of the hall, he produced exactly what was expected of him.

Bruce has a very workman-like attitude to his presentation; sound is the single most important element of the whole - it's his songs people come for. In fact, so important is it that Jeff Ravitz always requests a copy of the rigging plan from the PA company so he can design the lighting system around it. That's not to say Bruce has no regard for the lights. Knowing that Jeff would not be running the show once out of rehearsals Bruce took the time to interview Gregg Maltby (Jeff's chosen board op) not only to 'feel him out' but also to offer Gregg his personal visualization of his songs. Bruce's huge repertoire and penchant for the impromptu addition of songs to an already nightly variable set list made this interview all the more important. Only three weeks out of rehearsals and already Gregg has built up a library of cues for 40 songs - something Jeff would not have been able to fully cater for during his limited involvement, but which he was able to comfortably leave to Gregg, safe in the knowledge that rapport was established between operator and performer. Gregg also added rather coyly: "I have no aspirations to be a designer, which is why I'm one of the most fully employed board ops in the US and why Jeff felt so comfortable letting go his baby."

The lighting rig comprised a fairly simple truss arrangement of Morpheus swing wing, an inverted 'W' figure above the stage with a straight span either side running up and down stage, with, likewise, a straight span across the rear. There was also a short centre spine that ran out 20 feet into

the auditorium to give access to a spot truss. Spots featured heavily, four on the back truss and six on the bridge, a mixture of Stark and HTIs from Lycian, with two 2kW Super Troupers supplied by Spot Co FOH. Over 100 Morpheus Fader Beams, but only half a dozen Panaspots constituted the meat of the rig. There was also a large number of Par 64s (Gregg couldn't remember quite how many) down the side spans as well as on the spot bridge, though these were, on the whole, focused for audience lighting. The stage was bereft of lights save four Omnis around the drum kit and two 1200W Cinepars hidden beneath. What was most surprising was the three Telescans MK1s positioned at stage height, just off stage, down each side.

The interplay between overhead rig and these six lamps was remarkable. What looked at first glance to be a designer's expensive indulgence worked extremely well - the power of the Telescans coping admirably with the profusion of light from above. Don Clifford, the TS operator claimed they could do even better, stating that the current optical system the lamps employ only transmits about 60% of light produced, and that this could definitely be improved upon. Gregg was also assisted out front by Matt Jones who ran the PanCommand desk mainly for positional cues as Gregg elected to run colour changes and fades from the Avo QM. With so many Pars facing out into the audience it was a shame to note the poor trim condition of the Leprecaun dimmers. I dare say this will be rectified by the time Jeff comes out to direct the live video when the show moves outdoors in May. As mentioned, the colours were somewhat shocking. I remarked on this to Gregg during the intermission and he urged me to bear with it and tell him again how I felt about them at the end. I must say I was largely won over, especially when taking into consideration how well they will work outdoors.

Never less than exhausting, all the new elements of this show added to the excitement, especially the new songs themselves. In particular 'Lucky Town', a real hard driving song, cranked the already enthusiastic audience that one extra notch. However, what gave me most pleasure was seeing that my old friend Kevin Buel still has all his front teeth despite Bruce's insistence on hurling a Telecaster at him each night, lobbing it high into the blinding beam of a Lycian up on the spot bridge. It was easier with the saxophones, eh Kevin?

Steve Moles

### INXS Selinas LD: Sean Hackett SD: Benji Lefevre

Over the last couple of years there has been a significant INXS backlash in Australia which probably started when they headlined the controversial 'Concert for Life' (some refer to it as the 'Concert for Strife') in March 1992. There have been accusations in the press that INXS's own indulgences had cut the profit margin for what was supposed to be a charity fund-raising performance. Listed over-indulgences included the lighting and sound, and when the band's management chose to ignore the criticisms, the knife was twisted deeper.

In 1991 INXS toured Australia with the 'X Factor' tour which received bad reviews in the popular press. Hire companies and local crew were dismayed by the lack of Australian personnel and equipment on the tour. There were complaints that the INXS organisation were arrogant and held little regard for their home territory. It seems that many people have forgotten that INXS have, by their world-wide popularity, forged a path for a lot of Australian acts. They have proved to the international music scene that Australian bands can make it outside their own country. Like the British press, it seems that the Australian media are all too keen to kick down a success.

So, when INXS announced that they were playing smaller 'pub' venues, many people were quick to say that it was because the band would have trouble selling out the larger venues. In a recent interview\*, Michael Hutchence had the

chance to tell his side of the story. "You see, to me INXS has always been a pub band. We had years of playing in that environment, of going out there and proving ourselves in a rough training ground. All we're doing now is reclaiming some of that excitement. It's fun for our fans, but it's also very important for us to prove to ourselves that we're not jaded and cynical yet. We've worked so hard over the past few years. Out of that, we've achieved a level of success that no other Australian band has achieved. I think the Australian backlash has been petty and ridiculous. Most of the time, they are like a pack of jealous lovers. You know 'you're never here, we never see you, you don't like us anymore'."

The lighting design for the last INXS tour, the 'X Factor', was the result of a collaboration between Roy Bennett and John Featherstone. For the last few months it's been rumoured that John Featherstone would be designing this tour and, for

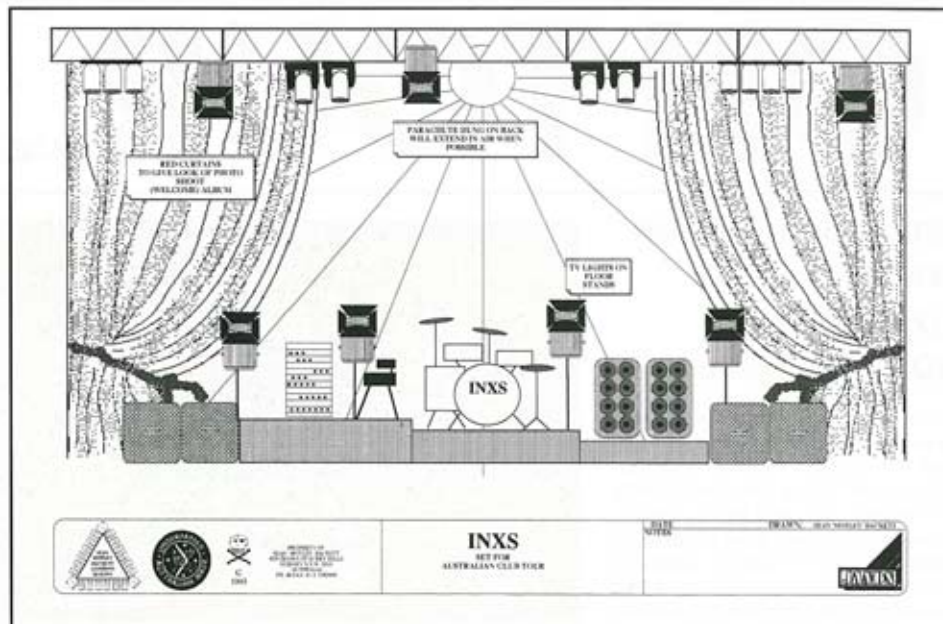


a while, his presence was expected here in Australia. Unfortunately, John was still tied up with Van Halen and so the lighting for the Australian leg of the world tour was left to local guy Sean 'Motley' Hackett.

Sean has worked for Jands for over seven years and has also worked for Vari\*Lite Europe. He's had vast experience both as a lighting designer for acts such as Diesel and Noiseworks and as a crew member on many international tours. "I've always wanted to be a lighting designer and I really want to work in this country for Australian bands," said Sean. "I want to tour the world, but with Australian acts and with Australian products. John Featherstone sent me an equipment list and said that he was after a rig that was really asymmetrical, as strange as possible and with as many shadows and weird angles as I could get. I sent him back a list of colours and a plot which he said was fine. It just evolved from there. I did all the programming myself based on John's explanation of what he would like the show to look like. John gave me a lot of freedom, the only thing he added to my colour list was 156. The only other direction I've had was three sentences from the management - 'change that', 'don't like that' and 'too pretty'. I like pretty lights. It's not a box of Smarties, like Bobby Brown.

"The concept for this leg of the tour is different to the overseas tour because the venues we're playing in are all so different. They'll play smaller venues overseas, but in England and the USA the smaller venues are theatres so they have more height. As a result we'll be hanging three layers of lighting, having lighting right up above the fly bars shooting down and through to give a sunlit effect. They'll all be hung at different heights so it'll look like a TV set. In America they're using a backdrop which consists of 18 inch strips about eight inches apart in three layers. The first layer is sharkstooth, the second layer the scrim and the third a heavy cyc material. So when it's lit at different angles there will be some weird, shimmering effects. In Australia the rooms are so small and dingy - here a pub is a pub. In Europe and America a pub or club is usually a theatre that's been converted into one. Over here it's a place with a 10ft trim! We haven't done a venue yet where we can fly points - everything has had to be group support. There have been a couple of venues where there are bars in the roof, but the highest trim we've had so far has been 16ft, and the lowest 8ft.

"Friday night at the Jet Club in Dee Why was insane - every single light went in. We just got so annoyed trying to figure out what to do there. We put a generator outside and when the band arrived I welcomed them to my convection oven because that's pretty much what it was. The lights didn't even have time to happen there - they came on, the beam came out 6ft and hit something. That was probably one of the hardest venues to work in." Fortunately, Sean's experience touring clubs



INXS' set for their Australian club tour.

with other acts came in useful. "We've been doing things on this tour that I've never ever done before in these clubs. The number of times we've put nearly the whole show up and then taken half of it down to re-adjust the supports so we can get more height and built case structures to put the ground support on. Crazy things I've never done before and I hope I'll never have to do again! It was meant to be INXS in the clubs with a stripped down show and I suppose it is stripped down compared to ten semi-trailers with half a semi-trailer of wardrobe. But at the end of the day they still have their high standards and they can't bring that down. We're calling tonight's show 'Madison Square Selinas'. The hours have been long too, we've been going in at 9am and not leaving until 3am - it's concert hours in club conditions, which is really hard. We've done three shows, had a day off, another three shows and so on all the way through."

The lighting rig consisted of 10 VL5s, four 5ks (all with LSD colour changers) and six 2ks on the floor with 156 chocolate in them - each unit silhouetting a band member. All the 2ks are on floor stands at variable heights to give an asymmetrical 'TV mess' look. The 14 Raylights have ColourMags all on single channels and there are four 4-way Molefays with colour changers - two on the downstage edges for washing from stage left to stage right, all channelled asymmetrically, and two above the band, usually somewhere just off centre with one downstage and one right at the back. There are also two white lightning strobes linked together on the backdrop,

as well as two Molefay Duets behind the drum kit. The backdrop is a plain white cyc with two red curtains pulled back to give a theatre proscenium effect similar to the album cover.

"We tried using a ripped cyc because we wanted a stripped down look," Sean said. "I wanted to have wires hanging out of everything and have no riser dressings. Just filth on stage, messy and industrial, but the band wanted it neater. So the stripped-down-in-the-raw look turned into stripped down in the raw with a polish and borders."

Perhaps we're seeing the start of grunge lighting design, I suggested?

"Well Michael seems to be into the grunge bands at the moment," replied Sean. "But he was also after something very stark and flat, hence the VL5s. The show starts in open white with the band silhouetted. As INXS didn't want too much colour, Sean had to tone down its use which, as a self-acknowledged colour junkie, he found hard. Most of the songs on the set list are upbeat with the exception of 'Mediate' and a new song called 'Full Moon'. There are a lot of numbers where you can't see the band perfectly but then we all know what INXS look like.

"For control I'm using a Jands Event which is switched over wide so it has 120 channels," said Sean. "The new software in the Event has a build record function in it which is like a Vari\*Lite preset focus function. I can programme in my 10 cues for the Vari\*Lite focus and all my other cues are built from that, which means that every day I only have to touch up 10 cues. It has some really nice timing software so you can do very effective slow moves and cross fades. Although the band originally said they didn't want a bump and flash show, it's more of that than a cross fade show so the VL5s aren't getting to do all they can. It's the best desk I've ever used. In America and Europe they're not going to be using any Vari\*Lites.

"The most frustrating thing about touring with Australian acts here is that everything is in the clubs with small budgets. So this has been a dream come true. I've had a budget to play with and the lighting still fits into eight feet of truck."

I asked Sean if he got upset when Australian bands chose to use foreign crews once they hit the big time? "I can understand bands picking someone like Roy Bennett as their lighting designer because we don't have anybody in this country who is experienced at that level. But I do think an Australian band should use Australian operators. I'm a colour junkie but if someone designs a full white show I can still hit a button at the right time and in the right place. "This time INXS have employed two Australian backline techs, but whereas they used to have an Australian sound engineer, they now have an English one. There certainly is annoyance in this country about



Back to basics for INXS.



them not employing Australians because there is a lot of talent here, but what drive do you have when the biggest band in Australia employs Americans or English designers? I could slog my guts out for years with an act and then once they crack the American market, they could drop me for somebody else."

Although Sean now has to leave the tour, the band have a 12 month work visa already approved for him so, if it is quiet in Australia during the next few months, he may give LSD a ring. Ideally, he would love the opportunity to work as a board operator for someone like Jonathan Smeeton whom he describes as one of his main inspirations. "It's been a dream of mine since I was a little kid to be a lighting designer," said Sean. "It might never happen here. You're always on the gamble because geography is against you. The only band in Australia that can afford to do these shows employs Americans."

Front of house sound engineer Benji Lefevre is well-known in the business for his work with acts such as George Michael, the Rolling Stones and more recently Keith Richards' solo tour in Europe and America.

"When INXS played Concert for Life last year, they heard my work for the Stones so they asked me if I would do that event with a view to future work. I was on probation! I try to give the band a lot of input musically and arrangement-wise as to how it looks and sounds from my perspective. It's really a very selfish thing, but I have the best seat in the house and if other people enjoy the way I mix sound, it's a bonus for me. I'm not a technocrat, I couldn't take the board to pieces and fix it. There are a million people you can hire to do that. I like to use my imagination in the audio world and try to make things larger than life. INXS really enjoyed someone coming at them and saying 'hey, what is this, what about that?' They kept in contact throughout the year and then asked me to do the pub tour."



LD Sean Hackett.

"We've used an older system purely because its configuration is more suited to the venues with strange little balconies and nooks and crannies. With full range boxes you can't focus the different elements of the PA so well. I decided to use a modular system for that reason and it's worked out well. It's raw, it's loud and I think INXS write good songs. They are musicians of great ability, but I think they've always wanted to be considered as a rock band. I can keep the arrangements in mind but give it some balls and that's what we're looking at."

In Australia, the sound equipment was also supplied by Jands and included their modular system and a Yamaha PM3000 console. In addition there were two effects racks with three AMS's, three SBX90s, a couple of graphics for inserts, noise gates, DBX900 rack noise gates and 900 rack limiters as well as BSS limiters for the vocals. In America and in Europe Benji will be using a Harrison HM5 console with an extender and mostly the same effects apart from the compressors. He will also be using a DMP7 which will be midi-ed up to the effects machines to run all the sequence triggered applications from the stage so he can preset levels, sounds and balances. "Harrison is my preferred mixing environment,"

said Benji. "They are excellently built and maintained and as a road desk they are extremely versatile. I've used them for a long time so I know them inside out. I find that the Australians really like their music, and they like it in a hot and sweaty situation. In a small venue the vibe is so essential and it's really refreshing to do these shows. I know the band are tickled pink. The great thing about the pubs is that you're projecting what's happening on stage much more, in audio terms, because you're actually hearing what's coming off the stage. In a stadium an acoustic drum kit is lost, whereas in a club it already has its own sound."

I asked Benji if he had had any backlash being an English guy working for an Australian band in Australia? "I think a lot of Australians feel sorry for themselves," he replied. "It's the same for anybody, anywhere. If you want the gig you have to go after it. You've got to pursue it with all your might, all your heart and all your passion. If you don't then you're not the person for the job. Peter Lothian has branched out on a couple of things overseas and people like him. I hear this thing about people getting stuck in Australia, but what about those that get stuck in England! You only get stuck somewhere a) if you don't get a lucky break or b) you're not good enough. If you are good and follow it with passion, you'll get through. It's the same for the technicians. How many huge French bands do you know?"

"It's fairly quiet in England at the moment. I think television has a lot to answer for. With the advent of MTV it made music go in a weird direction because people are now so worried about what their videos look like and how they present themselves they seem to forget and lose the urge to be really creative musically. Instead of making people take notice of them with their music, a lot of acts try to make people take notice of them with their videos."

Catriona Forcer

*\*Ed St John, Sunday Telegraph, May 2nd, 1993*

## Michael Bolton Sheffield Arena LD: Peter Morse SD: Monty Montfort

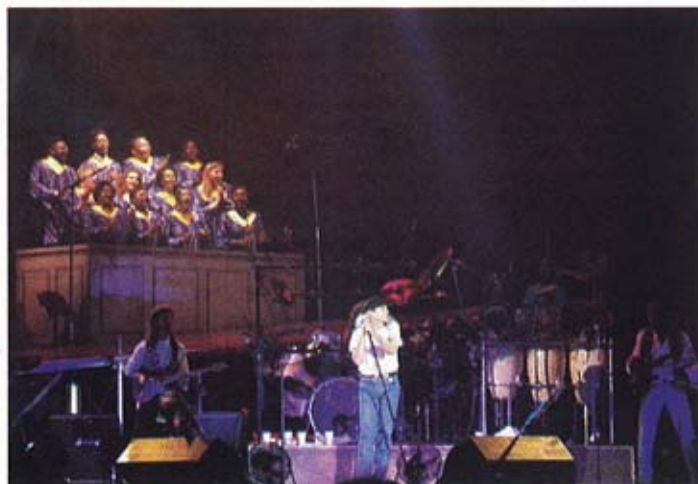
Michael Bolton's show was in many ways not dissimilar to that of Bruce Springsteen three weeks earlier; the set was very simple, the lighting system was relatively compact and the overall focus of the show was most definitely centred on the performer and his band. Michael's audience however, predominantly middle class women in their 'thirty somethings' and were decidedly more partisan in their adulation for their chosen idol. Despite his slightly downbeat and curtailed performance due to a heavy cold, the sell-out 10,500 capacity crowd were on their feet from beginning to end, and at times their screams

reached the ferocity of those heard at a Beatles show in the sixties. In keeping with tradition, this had little to do with Michael's songs, instead being inspired by his offer to remove articles of his clothing. Some things never change.

The Maryland Sound PA, shipped in from Baltimore, was controlled front of house by Monty Montfort, an eloquent and enthusiastic exponent of his craft. He exhibits genuine excitement for the tools of his trade talking animatedly about all aspects of his system from the tiniest detail of the 160 XT compressors with 'special hand wound transformers by Steve Guest' to the broad concept of how the PA is constructed to give greatest flexibility in all environments. Within this three-way system the pairs of 15 and 12 inch speakers are powered by Crest 8001 and 7001 amps respectively (the horns are running off Ramsa amps), with each pair of speakers run from a single channel of each amp. This allows Monty to "dial pairs in and out to attenuate the PA", as he

likes to distribute the different types of cabinet chequerboard pattern throughout the flown stacks, enabling him to avoid "cone cancellation" to give a true evenly distributed sound. The lows however are close coupled, though flown in an unconventional inverted 'L' at the off-stage end of the stack.

The whole is run front of house though a Gamble EX, 56 into 8 stereo with a Yamaha 3000 alongside it for the percussion instruments of the energetic (some say manic) Steve Scales, and for Kenny G, the support act. For those who don't know, Michael Bolton's early career featured a lengthy stint singing in Kenny G's band. I have to say this was without doubt the loudest show I've ever heard in the Sheffield Arena: not that that in itself is a bad thing, it was just somewhat of a surprise considering the maturity of the audience. My ears were certainly ringing for a while afterwards. Michael foreshortened his set by cutting most of the slow ballads as these put



Above, and right, layers of rich, saturated colours form the backdrop to Michael Bolton's current tour.



greatest strain on his infected throat. In fairness to Monty this led to a show of mainly high energy songs with little opportunity to pull back. Loud it may have been, but the balance was superb. The backing vocals for example were always clearly and fully in the mix, but never overpowered Michael's vocals. Monty explained that he achieved this by routing the stage sends completely out of the desk on an Aux send, through certain effects and back into the desk adding a couple of milliseconds delay to one of the two channels. Why this worked so well was beyond me, but work it certainly did.

The lighting rig was a simple affair of asymmetric 'V' shaped trusses (their apex to the back of stage) one within another, and a straight truss across the rear supporting three Kibukis and a backdrop. Peter Morse's design was originally conceived for the tour when it started in late 1991 and was intended for theatres and the US Shed circuit. The 'V' formation allows great flexibility for varying stage widths and is more than adequate for large arenas like Sheffield.

Jim Cozad (Peter's chosen lighting director) was a little vague when it came to defining exactly how many lamps are on the rig - no doubt due to the length of the tour. He has approximately 200 Pars with Color Faders on half of them, 22 VL2Bs and 14 VL4s (eight in the air and six on the floor) as well as 10 Telescan Mk111s (again split, two on the floor, eight in the air). The system is supplied by Meteorlites but the Telescans come from Obies in the US who are the main contractor for the tour. The most striking aspect of the show was Peter's choice of colours; like Jeff Ravitz on Springsteen he elected to use lots of rich and saturated hues but in this instance the combinations were perfectly balanced and looked fabulous. The dark leaf green and deep magenta combo used in 'Reach Out' was a personal favourite and looked gorgeous.

Jim explained that the broad concept behind Peter's design was for "layers of lighting" - certainly it was a busy show with great interplay between the three different types of lamp. Ken Hudson on the Artisan and Shawn Welch operating the Telescans worked as a team with Jim and, despite the very relaxed attitude that comes with nearly 20 months on the same show, never failed to keep the cues tight, Ken Hudson producing some especially slick work on 'How Can We Be Lovers'. Interestingly, on another song from The Classic album 'When a Man Loves a Woman' the stage was lit in white by both VL2Bs and Telescans, the Vari\*Lites were in cone and the Telescans in something similar (though the image projected is a triangle instead of a circle). With almost no other light on stage it was noticeable how little there was to choose between the two lamps; I can only assume the Telescan loses a lot of intensity with this particular gobo. Jim ran the conventional lights from a Celco Gold, running the Color Faders on a PC with a nice little foot-controlled cue advance.

Michael Bolton, suffering under epithets like 'the thinking woman's Barry Manilow' worked very hard for his fans, despite his cold. His sojourn into the audience for a duet with Kenny G during 'Georgia' was especially well received and accomplished, in contrast to the rather hackneyed 'Shall I take my shirt off?' routine which, though it elicited the obligatory squeals, was ill becoming. Still, as Chris Adamson from ITB said: "This is a well presented show that always sells out, and whatever you may think of his performance, the fans love 'im."

Steve Moles

## PRODUCTION NEWS

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Colour co-ordinations from lighting designer Rocky Bell for Bobby Brown.

## Bobby Brown

Sydney

LD: Rocky Bell

SD: Danny Leake

They say it's not what you know, it's who you know. It couldn't have been more true in the case of lighting designer Rocky Bell whose brother just happened to be Kool from Kool & The Gang. It was courtesy of this family tie that he began his career in wardrobe. One day Kool asked him to try his hand at the lighting and that was that.

"I became fascinated by what I saw, bought some books and asked a lot of questions," admitted Rocky. He must have done something right because 14 years later he's still at it. Other groups he worked with include Frankie Beverley & Maze, Stephanie Mills, Johnny Gil, Keith Sweat and Anita Baker. The current 'Bobby Brown's Back' tour started in the US at the end of December '92 with a completely different show. This leg of the tour takes in Australia, the Philippines, Japan, Indonesia, Hong Kong and then a month and a half in Europe. It returns to the States at the end of July and there is talk of more shows being planned there.

"This is the first time I've worked for Bobby Brown," said Rocky. "There were a lot of things happening in the show already that I didn't want to make drastic changes to, so I just smoothed out what I saw to be the rough areas. I kept it more or less as it was with a couple of colour changes and focus changes, but nothing major."

In the USA the rig had a straight back truss with a smaller truss beneath it stocked with Emulators as well as Intellabeams. There were also four moving square pods, half with Parcans and the other half with Dataflash. Added to that were four truss spots, two on the actual square pods and two on the side of the truss. "This is a totally new design and I'm still feeling it out," explained Rocky. "It's an octagon within an octagon. The outer side has all my washes and ACLs, some Vari\*Lites (15 VL2Bs) and a bunch of ACLs in the octagon in the middle."

The show starts with the middle octagon lowered at an angle to the stage. The Vari\*Lites have a chase pattern around the octagon and within it, the inner octagon moves straight up at first and then tilts to the opposite angle, it travels above the set, Bobby comes up on the elevator to the top of the ramp and walks to the front, a Vari\*Lite cue goes straight to him, he then jumps off the top of the set and once he hits the floor the pyros are let off.

I'm using an Avo QM because it's my preferred board. It's accessible and everything I need is right there within my reach. I don't have to fish all over the board.

"What I really want to do is train other LDs to do what I do, to cover those accounts I can't handle," said Rocky. "Sometimes I get calls from three or four major accounts and I can't do all of them. I'd like to be able to give them to someone whose work I can trust, but I can only do that if I train them myself."

Danny Leake is in charge of the front of house sound, although he started out primarily in the studio learning his craft in England. "Over 11 years I worked my way up to chief engineer at Universal Recording in Chicago," said Danny. "I got back into records again and I started working with people like Johnny Gil and Janet Jackson. Johnny asked me about doing a Japanese tour for him because he was going as an opening act and he didn't want to sound like an opening act. I had never done front of house before, but I pulled it off and I found I really enjoyed it. Now I spend half my year doing studio work and the other half on tour. I did last year's Stevie Wonder tour with the Royal Philharmonic Orchestra. We had a live band, an orchestra, Stevie and his computers - it was interesting!" Danny recently worked on Eddie Murphy's new album and there is talk of Murphy opening for Bon Jovi in Europe this autumn, which would be interesting.

"For tonight's show I'm using a Soundcraft Europa for front of house which was hired from Jands who are supplying all the sound, mainly comprising a Turbo system. I had to bring out an extra set of subs because being a rhythm and blues/pseudo dance/rap thing the low end complement has to be a little bit heavier than the usual rock 'n' roll tour.

For outboard effects I'm using a 224XL, AMX16 and I'm also using an Ensoniq DP4 for spreading some of the keyboard sounds. Bobby's vocal sounds are primarily being mixed on an Eventide H3000SE. I'm also doing regeneration effects and I have a subharmonising unit which I use to add a little extra low end on the bass DBX end of the kick.

"Bobby is a pretty straightforward act although he does go from yin to yan and quite often from near silence to a really loud sound, so I run him through a limiter which warms his voice up a little more. If I wasn't using a Europa, say a PM3000 instead, I would probably take his vocal off the snake into the compressor and pick up gain there rather than pick up gain on the console. We have an outboard studio mic pre-amp that I use, a John Hardy M1. I have that mounted into a rack on the stage so we take his wireless microphone and put it into that and then run that to the monitor console and to my desk. So rather than run 100ft in mic level out to my console, it runs a line level which means it's less susceptible to noise and it's a much better signal for us to work with. The monitor desk is a Ramsa WRS 840/16."

Catriona Forcer



# BOOK REVIEW



## Auditorium Acoustics and Architectural Design

Michael Barron

Published by E & FN Spon

ISBN 0419177108 - £60.00

Readers of L+SI know from experience that the acoustics of a room vary widely from venue to venue, some easier to work with than others. Michael Barron's book gives us a chance to understand why these acoustic differences occur, but more valuably the book explores how we hear and establishes some important criteria for components of the sound reaching the listener. These should be of special interest to sound technicians working on live shows.

The sound technician today has a battery of equipment available to vary the sound in an auditorium: graphic equalisers to compensate for tonal distortions, reverberation to provide life in dry acoustics, and delay systems to strengthen the apparent sound source. We are familiar too with the need to place amplification loudspeakers in geographical locations such that they add to the apparent sound. Dr. Michael Barron shows that these techniques still address only the very basic needs of the listener and that there is much more to know and use.

*Auditorium Acoustics* is intended as a textbook on acoustics and primarily on the design of buildings so as to improve on some of our more recent past disappointments in the field. It is unusual for a book on room acoustics to concentrate on British buildings since most acoustics textbooks seem to emanate from abroad. Michael Barron's book provides a history of the study of acoustics and descriptions of a number of auditoria types but it is the first that I know of which has sought to codify objective and subjective judgements of so many of our auditoria. Divided into three main building types, the book examines in detail 12 concert halls, 12 theatres and eight multi-purpose auditoria.

Whilst the work is aimed at the student of acoustics, it is written so as to be easily accessible to less specialist readers and most sound technicians will gain considerable insight from reading it though, like me, they will perhaps be grateful that the mathematics is consigned to appendices! Considering sound

components in more detail will allow us to make major advances in the techniques used in performance. The codification of a number of hearing criteria enables us to assemble a number of sound palettes much as we use colour and intensity palettes in lighting.

People come to see and hear the live show and provided there is a view of the stage and sufficient amplification they go away happy, with the programme and perhaps the T-shirt as souvenirs of the event. But they also go away with the tape (and increasingly) the CD and on these recordings they will hear the music with higher levels of clarity, a stronger sense of intimacy and envelopment and an enhanced reverberation. They will be paying more for the live show tickets than for the recording so it behoves the performance industry to try and improve the quality of the sound which the punter hears. This way we can keep the differential cost of the ticket against the recording and still fill the seats.

As walkmans and hi-fi systems improve, the listener becomes more and more attuned to the very high acoustic quality which recordings now provide. But they also become attuned to high sound levels which make the ears lazy and can damage hearing. Personal stereos with earphones stuck in the ears and car radios are used to give particularly high sound levels. All of us have heard someone's walkman down the whole length of a Underground train as it rattles through a tunnel or the driving beat of a car stereo as it waits at a traffic-light - imagine what this is doing to the listener's hearing. Damaged hearing is now commonly found in people in their twenties resulting in loss of acuity, loss of ability to hear some frequencies and an habitual inability to hear low levels of loudness.

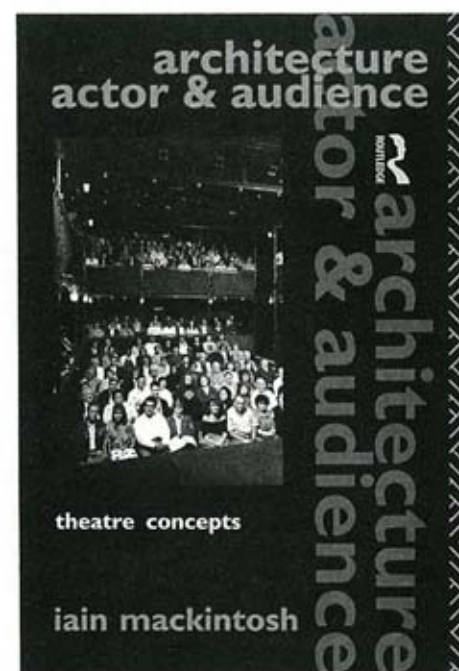
The performance industries are often unwitting contributors to hearing damage, winding up sound levels, encouraging loudspeakers to distort (producing damaging side tones) so as to sound 'amplified'. Whilst discos are renowned for this, the sound levels of West End musicals have also increased enormously over the years. A greater knowledge of the relative importance of the direction from which the sound is heard (the balance between direct sound and lateral sound), the ratio of early to late sound levels and other factors, will assist technicians to achieve a much greater feeling of intimacy, envelopment and greater clarity for the live show audience without winding up the gain. More like the recording and more pleasant to listen to, this subtle approach will require greater technical expertise but should ensure better performances and perhaps better seat prices for a wide range of musical and spoken events. As the microphone rather than the acoustic space increasingly becomes the receiver for the human voice and the musical instrument, we must know more about how we handle the output signals of our powerful sound systems.

For those technicians working in a specific auditorium, a greater knowledge of the likely causes of its virtues and its problems can only be an advantage. Over time small improvements to the physical acoustic conditions can be tried, to the benefit of the audience and to the interest of the sound technician. When the opportunity comes to undertake major changes to the building, the sound technician will have much to offer in practical experience and knowledge of the

auditorium. Above all he or she will have been able to develop skills in listening analytically to the sound achieved in different seats, with different sound sources and perhaps in different auditoria. These are the tools which Michael Barron's book offers.

Unfortunately as the book is aimed at the very limited acoustics textbook market it is very expensive at £60. It is all the more surprising then that it is produced very poorly with cheap covers, and sloppy typography with diagrams set at drunken angles on the page, solid text columns and some careless proof reading. Despite this most people working in the sound departments of the live show industry will find the book interesting and valuable - perhaps the local library should be asked to obtain it.

Michael Holden



## Architecture, Actor and Audience

Iain Mackintosh

Routledge - theatre concepts series

ISBN 0415031826 - £35.00

This neat little book in the Routledge 'theatre concepts' series (note the small capitals to denote a trendy 'Late Show' readership) is a summation of the thoughts of Iain Mackintosh circa 1990. For many humans - theatre-goers, theatre-makers, technicians and other mortals - the experience of going to the theatre is inspired by and remembered by, the production; or so we all think. Mackintosh has spent a good many years trying to convince those who go to theatres and those who build theatres that, in fact, what we are experiencing when we go to the theatre is part play, part performance and part architecture. It is this last part that causes Mackintosh to be so noisy, and that noise is here directed into a succinct, interesting and illuminating thesis on the contribution that past, present and future theatre architecture is making to the dramatic experience.

Such a polemic is not before time. As the television generation's pocket money becomes disposable income, now is the time to worry about whether the play-going experience of the future will enervate the couch potatoes and draw them into the theatre where they can hand in their remote control at the cloakroom. What Mackintosh tries to do in his book, is give



theatre architecture the emphasis it deserves in the relationship between actor and audience.

The book is divided into three sections: history, today and tomorrow. The history part is well stocked with facts old and new about the theatre buildings that have shaped the way theatres look today. We all know that the early theatre buildings housed thousands at a performance, but the author posits, sensibly, that the audience's requirement for comfort and thus the decrease in density (to about a third in the equivalent area) in modern theatres has been accompanied by decay in the propensity for concentration, 'connection' and in the overall quality of the theatre experience.

Perfect sightlines, cosy armchairs and lashings of 'personal space' may be the architect's and designer's mode as they tidy up the theatre and cram in more space for scenic illusion or glossy spectacle, but all the good theatre experiences of the past and present, say Mackintosh, take place in small, rather uncomfortable and densely-packed spaces: "the actors are generally placed at one end of the space on a modestly-equipped stage. The audience is placed on three sides of the acting area, with the greater proportion to the front". So from the mid 1700's it was basically downhill.

If the theatres of the Eighteenth century were fine and dandy with an actor-audience relationship so close they could smell their respective professions, the rot set in when enter stage left, upstage of the proscenium, the set designer. To concentrate the noisy groundlings and make them at least face in the right direction to enjoy the lavish sets onstage, the lights in the auditorium began to be dimmed. The thin line between theatre and brothel began to blur. The social politics of auditorium design developed as the grubby unwashed were banished up to the gods and the posh socialites pushed-up their sets in the stalls and boxes.

On-stage the raked floors and massive stage machinery developed apace, but Mackintosh is clear to set his book firmly in the auditorium. An intelligent discussion of stage technology is included, but always from the viewpoint (correctly) of the auditorium. This is the right way to look at the work of Appia, Craig, Dalcroze and Poel - from how they appeared to the audience, rather than "how they were

done".

'Today' begins in 1953. In North America the fifties saw a boom in theatre building for universities and schools - "many of the new university clients reached for the books of Bel Geddes and Craig and got together with architects who had similar intellectual baggage bought at the Bauhaus". To redress this balance as well as the "damaging threat of the moving pictures" on theatre architecture, Mackintosh suggests the theatre world had to wait for the naissance of the theatre consultant. The new career, developed originally from an above-average understanding of the technology of modern theatre, was established by Richard Pilbrow in Europe and Jules Fisher in North America. Aware that a vacuum existed in knowledge of theatre architecture, the consultants value-added expertise in theatre planning to their more techie portfolio.

The involvement of an 'independent' voice to set the parameters for the development of theatre buildings cannot help but improve the overall design process. A balanced view of the theatre as production factory and a more aesthetically-sensitive vision which understands the actor-audience-architecture algorithm from the past, present and in the future is the key to the theatre that is to come. The concept of 'Multi-purpose (no purpose)' is given the much needed press it requires, but Mackintosh rests suitably long on the benefit of 'flexibility'.

Herein lies the point of his little book. Flexible theatres are usually small; they are seldom black (as in 'black box'); whilst they are substantially on one form, they are detailed in such a way as to be flexible in form as a bonus. This flexibility, suggests Mackintosh, can range from the three position forestage elevator in a lyric theatre (orchestra pit; audience-level seating platform; extension of acting area) to the archetypal Mackintosh courtyard theatre, the Cottesloe.

The latter is of a scale and design that allows substantial variation in layout, shape and look - if you don't like the seats in a configuration, pick them up and move them; don't like the colour of the walls, then get up a ladder and paint them. The theatre of the future, we are told, is untainted by the false idols of the past and the present: size (bigger is not better); perfect sightlines (those houses with 'perfect

sightlines are invariably despised by actor and audience; 'adaptability' (in trying to be all things the summed compromises are insuperable); star scenic designers (who seek to "demote human values for a shilling's worth of show" and who cannot manage to make magic on a near empty stage within a well-shaped space); the generalist architect who is unable to address the inherent - and unique - complexity of a building for performance).

No Mackintosh treatise would be complete without the enigmatic reference, here quite extended, to the sacred geometry. To explain would stretch this short review into a book, but *Architecture, Actor and Audience* makes a good attempt to unfold the mystery of ad quadratum architecture. Better still, it is actually quite interesting and lends considerable weight to the argument that theatre experiences are very much the product of the three elements of the title.

If accepted totally, Mackintosh's book is somewhat depressing for the enthusiastic director and designer, growing up in the late twentieth century with Zoo TV and Nintendo. Out of all vulgar cultural fundamentals develop the qualities of future art. If I believed Mackintosh's Luddite theory in its extreme, then I would give up all hope of adding to the next show I design - it would be time for me to apply for a government retraining scheme in acting or masonry. But the final chapter of the book ends with a lucid resumé of "Designing Theatres in the Mackintosh Way", 12 points that really do make sense in summing the past, the present, and a use of the past in future.

*Architecture, Actors and Audience* is a great read. Whilst the text is sometimes bogged down in long quotations from texts that would be better accurately referred to in a note, Mackintosh's thesis is definitive and conclusive, and as such is an important contribution to the design of theatres and the understanding of how we got where we are today. If you are an actor, an audience or an architect, or if you need to justify why you sell technology and to whom, then this book is worth dipping into with your cocoa. But perhaps we should question if so finite a conceit is entirely valid as more than a springboard for the exciting future of theatre design ahead of us in the digital age?

David Taylor

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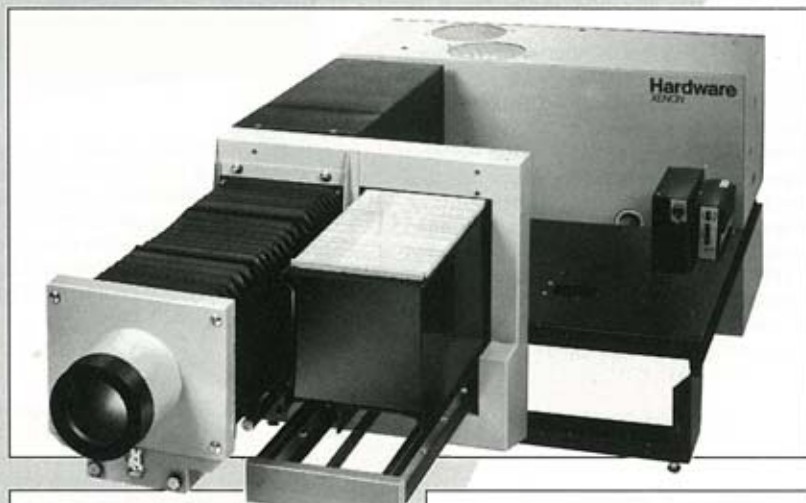
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# EQUIPMENT *News*

## Chorus 1200 Quartz Followspot

Selecon have launched the Chorus 1200 followspot for clubs, smaller theatres, schools and entertainment venues. Engineered from the Selecon Zoomspot 1200 Narrow luminaire the Chorus features all the essential requirements of a followspot: including an iris diaphragm, zoom lens optics (8° - 16°), braced yoke and platten spigot for rigidity, front and rear guide handles and adjustable yoke. At 16m in spot focus 1000 lux is provided. A full range of accessories are available including a four-colour manual changer, followspot stand and dimmer with remote control which mounts onto the yoke extrusion.



Selecon's PC 2000.

Selecon have also released the new 2.0/2.5kW range comprising two fresnels and a PC with either 2.0kW or 2.5kW lamp. Using a 250mm suppress glass lens the high performance 2kW SF2000/25 has a beam angle adjustable from 7° to 60°. All are available fitted with a G22 lampbase for use with CP92 2500W or CP92 2000W lamps.

Operational feature includes Selecon's posi-slide no metal-to-metal focusing system, focus reference scale, lamp tray with integral extruded side hinge, micro-switch power cut-out and a yoke which can be positioned anywhere along the length of the body.

For further details contact Selecon in Auckland, New Zealand, telephone (64) 9 3601718.

## DJS 1000 from Peavey

Peavey Electronics have released the DJS 1000 sound reinforcement system.

The system is a two-piece, three-way, sound reinforcement system consisting of a bass module and a compact two-way satellite speaker. The high-efficiency bandpass bass module puts out an impressive amount of solid low end. According to Peavey the well-defined sound of the two-way satellite speaker projects over the crowd, especially when mounted on the 5/8" mounting stand (included with the system) which may be inserted into the built-in holder of the bass module. When this patented system is being transported or stored, the satellite speakers fit into the vent cavity of the bass module.

A built-in, two piece, passive, three-way crossover channels the full-range input to the bass module and satellite speaker, where it is further sub-divided to the satellite mid-bass and constant directivity horn-tweeter. (The speaker cable to connect the bass module and satellite is included with the system). Each enclosure is compact, lightweight, and covered in high-durability carpet material and reinforced with metal corners. A black expanded metal grille on the satellite speaker provides driver protection.

For information contact Peavey Electronics (UK) Ltd in Corby, telephone (0536) 205520.

## Trackspot from Lightwave

Lightwave Research is releasing a new version of the Trackspot automated moving light with a number of engineering improvements including: higher light output, wider beam angle, lighter weight, smaller dimensions, and easier lamp replacement.

According to the company, modifications to the optical train in the new fixture have boosted the light output by 30%, using the same lamp source; the QT-8500. The engineering changes have also improved the lamp accessibility, making lamp replacement quicker and easier. The lens tube assembly has also been re-designed to produce a wider beam angle. The new fixture has a 12 degree beam angle.

In addition, Trackspot is now more compact and light-weight than the original. At 25 1/2" (64.75cm) long and 23 pounds (10.4kg), it is 1 1/2" (3.8cm) shorter and 2 pounds (.9kg) lighter than its predecessor. A unique feature of the fixture is its range of control options. It can operate as a complete system with synchronized choreographed programs without a controller. The programs are built into the fixture and stored on an EPROM. Synchronization is accomplished by a master-slave link throughout the system. Other control options include the Trackspot Special Analog Controller, Lightwave Research LCD controller, 0-10V analog control, or DMX-512.

For more information contact Lightfactor in the UK, telephone 081-575 5566.

## Intelligent Colour from Spectacolor



New Jersey-based Show\*Pro have recently introduced the Spectacolor intelligent colour changing luminaire. It features seven dichroic filters plus white, mounted on a quality stepper motor. The unit has two speeds, accepts manual gobos and has a programmable strobe effect with 0-7 flashes per second. It can be controlled by any 0-10V analog or DMX512 controller with automatic detection of the incoming signal.

Addressing of up to 16 channels of each light and colour with possibility for individual or master control of light channels is one of its features. The Spectacolor can work in a stand-alone performing colour change, dimming and strobing according to a pre-programmed sequence. Beam diameter is three feet at 15 feet distance and six feet at 30 feet distance. It is fan-cooled and can work in any position, and uses an ENH 250W/120V MR-16 lamp.

For more details contact Show\*Pro in Hackensack, New Jersey, telephone (201) 646 9522.

## Quattrastar



Light Engineering have released 'The Quattrastar'. This new effect is like four mini moonflowers in one, but because of the arrangement of the optics all the beams also change width as they revolve. In its basic form it is a white effect. There is an optional four colour filter available if desired.

For more information contact Light Engineering in London on 081-520 2336.

## Four From Crest

Crest have now added four new amplifiers to their Professional Series. Soon to be launched in the UK and distributed by Audio Projects, are the P10001, P10004, P9001 and P7301 power amplifiers.

The 10001 delivers up to 7000W in just four rack spaces. For maximum efficiency when space is tight and power requirements are a bit lower, Crest has created the new 10004 Pro Series amplifier. In just four rack spaces the 10004 packs four channels, each delivering up to 1400 watts into two ohm loads. Both the 10001 and 10004 amps feature a new 'sliding I' circuit that virtually eliminates distortion.

Another addition is the new 7301 Professional Monitor amplifier. It's been designed for bi-amping stage monitors. Channel A is optimized for low frequencies, while channel B handles the highs. The 7301 has a built-in fourth order Bessel crossover and each channel has an independent limiter with attack and release times which are determined by the crossover frequency selected. The 9001 is the newest development in this series and takes up just three rack spaces with an output of up to 5000W.

For further information contact Audio Projects, telephone 081-740 0057.

## Alpha AX215 Enclosure

A new addition to the Alpha range from Carlsbro Electronics, the AX215 enclosure consists of two 15" drivers supported by a constant directivity high frequency horn. Backed up by a steep slope passive crossover network, the AX215 delivers 300 watts at 4 ohms and is designed for vocal, PA and recorded music applications.

Build quality of the Alpha Series has been improved by the use of additional bracing to reduce potential resonance. Cosmetics include a kick proof metal grille, tough black textured vinyl finish, heavy duty corners and recessed bar handles which eliminate rattle.

For further information, contact Carlsbro Electronics in Kirkby in Ashfield, telephone (0623) 753902.



## Mini Effects

The Effects Company have introduced the Mini 500 and Mini 500 remote to their range of smoke machines. Based on an update of old aerosol machine technology, the machines have thermistor electronic temperature control with an independent thermal fuse, which should ensure that problems with the block are a thing of the past. Serviceability has been improved by providing a removable rear panel, thus all components are 100% accessible. The solid brass aerosol base has a reservoir to contain fluid, and an IEC connector allows the machine to be used whilst disconnected from the mains supply. The standard three-holes on the front allows for the attachment of accessories/ducting, etc. The Mini 500 Remote may also be controlled via an EC50/100/200 (timer) controller or from any 0-10 volt control desk. For further details contact The Effects Company in Crawley Down on (0342) 718399.

## Dimension/Artistic Timecode

Sound reinforcement company Dimension Audio, in association with manufacturers Artistic Licence, has developed a 1U device that will generate timecode from most CD and CDR digital outputs. In addition to reading the Absolute Time information found on CD and CDR formats from the IEC 958 and SP-DIF digital output, the system features dual alpha-numeric display and outputs in Film, EBU, SMPTE and DF standards. Source standards include: LTC, Midi-TC, Crystal, Tacho and Composite/Mixed synch from video. The timecode will also burn-in on video monitors if required. Further information is available from Dimension Audio in London on 081-877 3414.

## Addition to Compulite Range

The Compulite Animator range of moving light control desks has recently been expanded with the addition of the budget priced Animator Compact designed specifically with smaller touring production and hire companies in mind.

The Compact is capable of controlling up to 24 moving lights of most types with a maximum of 12 parameters per spot which can include complex combinations like those used on the new Golden Scan 3. A selection of 12 of the most commonly used moving light parameters are pre-programmed into the desk, but the user also has the option to define up to 12 other automated lights. In addition, the Compact can also control up to 240 conventional dimmers of which up to 96 can be configured as colour scrollers. A trackball is provided for pan and tilt with the option of locking movement in either direction. Digital wheels are provided for dimmer and iris or colour adjustment. 99 libraries (or preset focuses) for each spot are provided for position, colour and gobo.

Compulite are also launching a new 6-way DMX splitter box housed in a 1U high 19" rack mounting case. This unit features virtually complete isolation between outputs with a separate optical coupler, driver and power supply for each of the six outputs. The unit will function with both standard DMX-512 and High End Intellabeam protocols.

For more information contact Compulite in London on 081-961 9750.

## HH Pro Series V

HH Electronics have released a range of Pro Series V enclosures. The new range of six enclosures features speakers designed and manufactured by HH and constructed using optimum cone profiles, pressure diecast magnesium chassis and massive magnet assemblies, for reliability.

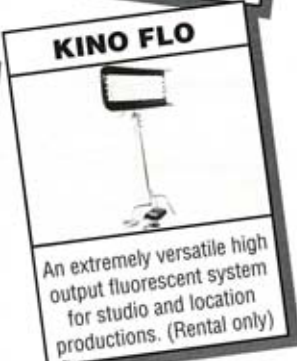
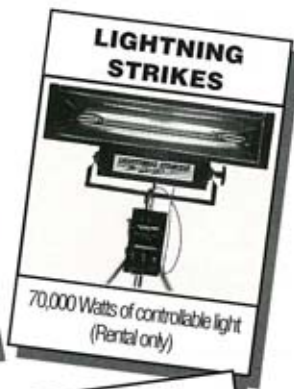
Particularly worthy of note is the inclusion in the Pro Series V range of the newly redesigned HH HF300 bullet radiator, which features a fluid cooled voice coil for high power handling, plus an aluminium ring radiator for extra wide dispersion. The company claims that, the HF300 brightens up top end frequencies without adding the accompanying distortion associated with some similarly sized units, say HH.

Aiding the performance of the Pro Series V range is the latest development of HH's crossover network technology, which provides smooth signal transmission and low distortion, with extra protection for the HF300 high frequency units from unwanted low frequencies.

Pro Series V enclosures also offer traditional HH looks as well as a sturdy new vinyl covering, steel kickgrilles and the heavy duty corner protectors.

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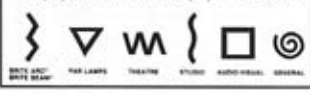
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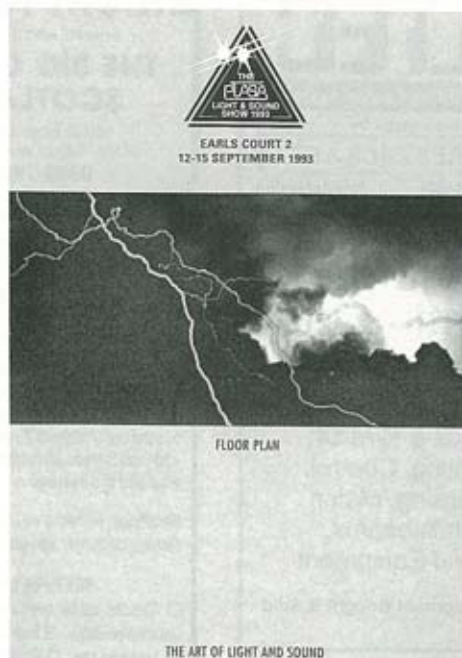
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# VIEWPOINT

## David Hoare on Touch Sensitive - Controlling Light and Sound

### Introduction

The live industry has instigated and had thrust upon it major changes in terms of the technology it uses, particularly over the past ten years. Digital processing power has unleashed a new world of sophistication across both lighting and sound. The lighting domain has embraced the technology wholeheartedly, with digital controllers now commonly being used within the industry.

Within live audio, however, the debate continues over the benefits of maintaining the analogue signal path, based on the premise that the ear is probably more sensitive than the eye to signal changes and to signal noise. Where digital audio is applied, the quest continues on towards 20 or 24-Bit processing to fulfil the quality requirement. So what has happened to the humble control surface amidst all this debate?

The answer is somewhat surprising - not a great deal, particularly in the audio domain. Control technology has developed in line with the advent of Digital Signal Processing (DSP), producing a new generation of smaller, sophisticated devices which offer new avenues to develop control surface ergonomics. Digital encoders are readily available, but, as yet, are mainly seen on lighting consoles and rarely on audio mixing desks. However, in some instances, the control surface may well have shrunk, without this entailing a radical reappraisal of the general layout and ergonomics. Greater functionality and more facilities may be available, via assignability (now commonly applied in lighting consoles), but still using the traditional tools of control.

### Control Criteria - comparing lighting and sound

Every production presents a unique set of challenges to the lighting and sound engineers, but for the sake of discussion, one can draw some general comparisons between the overall control criteria for lighting and live sound. The control components for both applications are often the same - pots, faders, joysticks. Engineers in both disciplines need to be presented with clear visual status information and they need to be able to respond quickly to a live event or problem.

Lighting designs arguably rely more strongly on complex pre-set cue programmes and sequences, whereas within sound designs, cueing plays an important, but less substantial role. Therefore, the onus is heavily on the sound engineer to 'mix' the sound for a production second by second. The ability to react to a problem is critical for the sound engineer, for without sound the show stops. The application of digital technology within lighting consoles has opened the door to new types of controllers being introduced and accepted more readily than in its sister discipline. A useful example is the endless belt controller, which provides an instant visual reference through LEDs positioned behind a translucent belt and relies on logical forward/backward movement rather than turning a pot from left to right. With appropriate adaptation for audio requirements, would this not provide the sound engineer with a better ergonomic solution than he is used to? Or does the audio industry tend to adopt a more



David Hoare's career spans 20 years in the electronics industry. He graduated from Imperial College, London with a BSc in Electrical Engineering and went on to hold senior positions at Scantronic and Metal Box Engineering. David joined Penny & Giles in 1991 where he is closely involved with new technologies to enhance manufacturing and test procedures in line with P&G's BS5750 accreditation. He's also been involved in developing new product lines for new track technology and digital control methods.

conservative attitude to change in the control surface domain?

Smaller, less expensive desks and control surfaces will inevitably require smaller and cheaper controllers, each of which incorporates more functionality. These control surfaces will be linked to other pieces of outboard equipment to provide a sophisticated, yet flexible, control environment. The industry is moving towards networked processors, each of which can be highly innovative, functional and flexible with a relatively inexpensive price tag. By 'mixing and matching' these processors, a complete system can be built on the network. MIDI-based processors, for example, are now becoming more accessible and available at reasonable prices. Control devices for these processors can be more innovative, as the processors are not 'traditional' and are, therefore, not strictly bound by industry mores. One of the constraints on change comes down without doubt to budgets. DSP is still a relatively expensive technology, which may only be warranted for big budget productions and the systems designed for that purpose. The spin-offs in terms of ancillary equipment do not, however, necessarily fall into this category and may provide more cost-effective solutions in the medium-term.

This presents manufacturers with a major challenge, involving a careful analysis of products and concepts which may not have been developed for their specific application. We must avoid the danger of burying our heads in the sand and not looking beyond our own front door. Equally, as an industry, we should not write off new ideas just because of the initial price tag - the more widely a new concept is used, the lower the ultimate cost.

End users have come to expect a rather alarming rate of change, involving a constant investment in R & D programmes to satisfy market needs. Put this against the challenge of the current recession, and you get one of two things - a highly innovative and responsive industry or sudden

death. There's nothing like a recession to act as a catalyst for the design process! Users, however, may also end up being presented with some highly original and unfamiliar solutions as a result. Openness to change has to apply to both sides of the coin.

### Where Next?

Whilst the industry considers the fruits of recent technological advances, development continues. With respect to control concepts, we are not too far away from the realisation of solutions for 'mixing by thought', or applying virtual reality techniques. Touch sensitive devices exist but are largely undeveloped in this area of business.

Integration is likely to become a buzzword, as electronics are compacted to satisfy the requirement for more facilities in less space. Before long, we may be debating the merits of non-contacting input controllers and self-learning devices as we progress further down the route of Application Specific Integrated Circuits (ASICs), DSP and field programmable chips.

### Conclusion

We must not lose sight of the fact that new technology is driven by the user as well as the manufacturer. Ultimately, the user will dictate the success of a new idea. New concepts must provide user-friendly control for a host of complex tasks and they must offer good value for money - that is one very clear message from recent years. There is a growing need for open-mindedness on both sides, as technologies continue to converge and the range of applications for any given controller widens. New breeds and species of lighting and audio equipment may well necessitate new operational procedures and techniques, involving users deviating from the traditional path and trying something completely new.

Whilst the control requirements for lighting and sound applications are very different in certain respects, there is enough commonality to warrant a greater co-operation between the two disciplines as to future directions. A convergence of functions and technologies might result in a console which could fulfil some tasks across both areas within a production. The time for talking is certainly now.

There is no doubt that both sides of the industry have a great deal of valuable experience and information which is not being shared to the full. Maybe what is needed is a meeting of minds, chaired by an organisation such as PLASA, the AES or APRS or a combination of all three, to provide a proactive force for change and a forum for debate?

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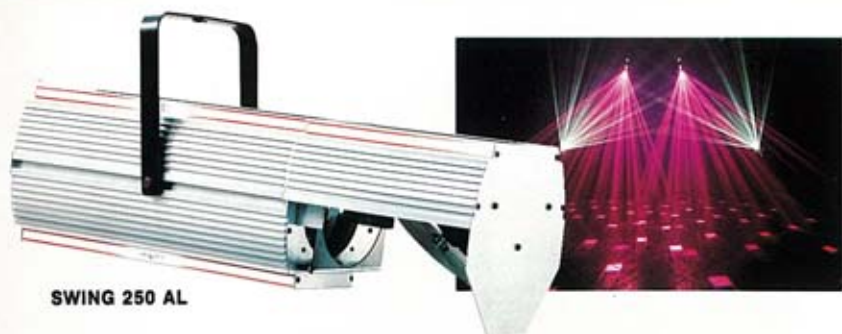
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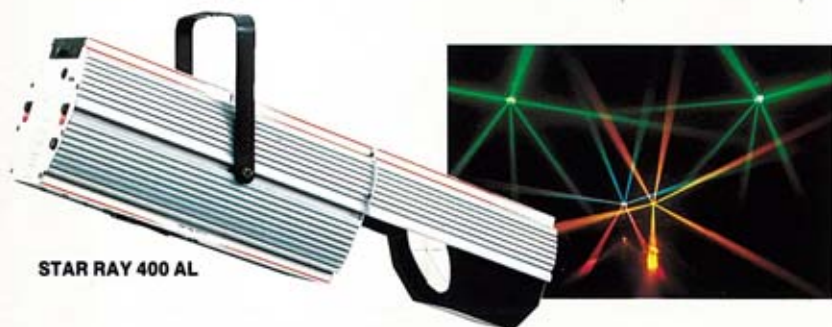
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