

LIGHTING+SOUND

International



Photo: Clive Bardo

Flickers at the Phantom
(see story this issue)

PLASA

published in association with the Professional Lighting and Sound Association

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£1.50

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Ian H. Rowse
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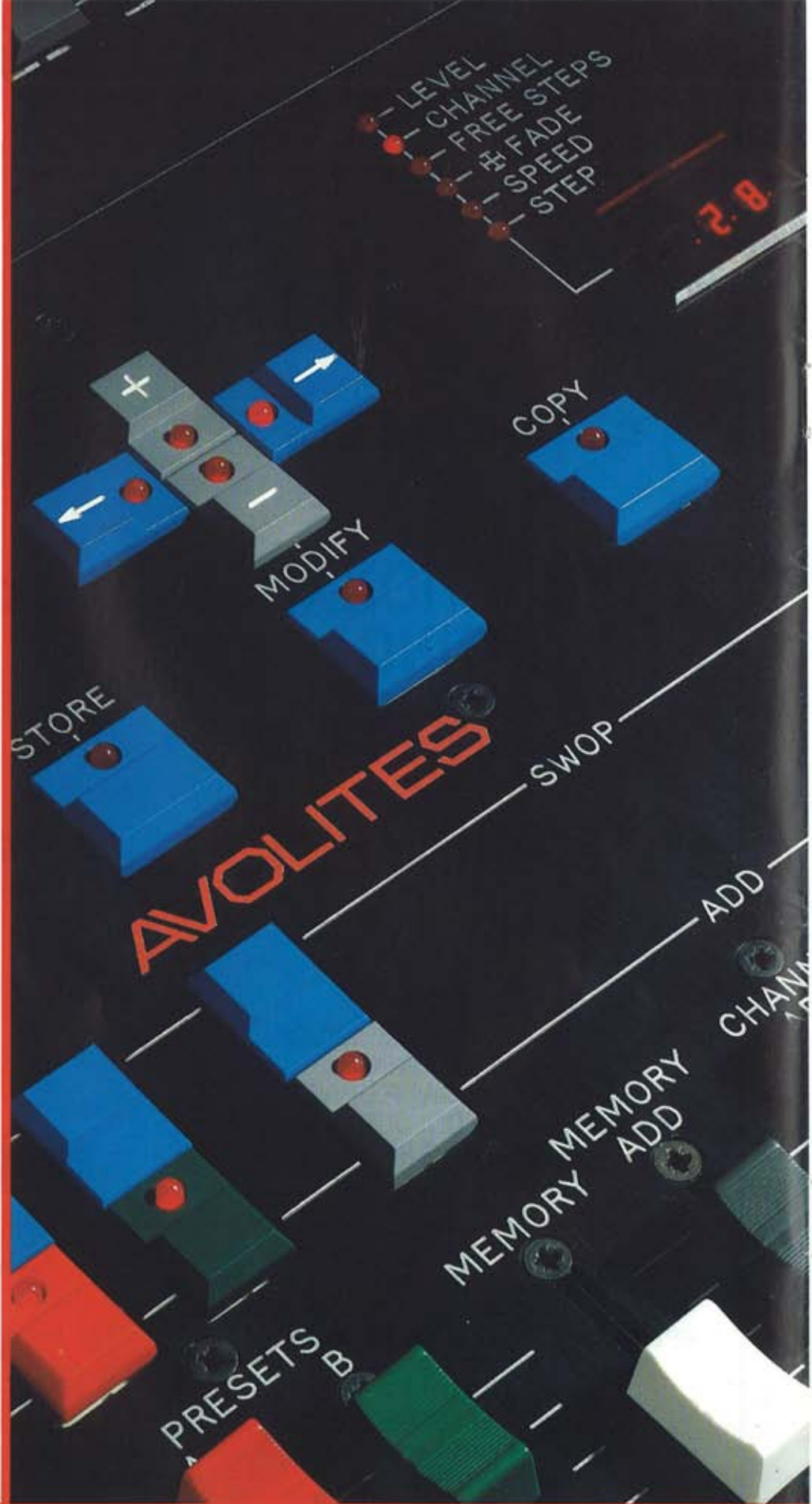
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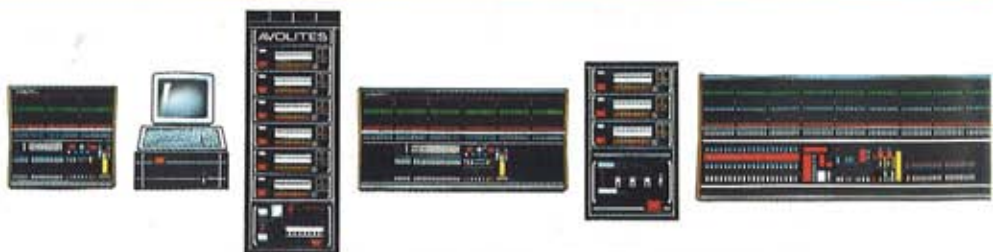


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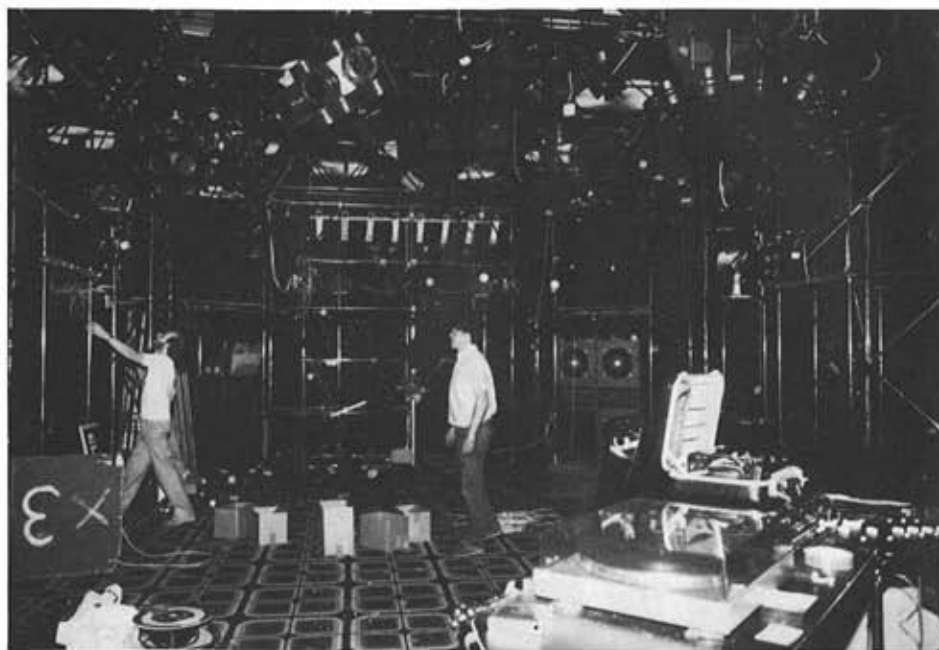
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Creating the Atmosphere

Preparations in progress on Avitec's stand at the 1986 Light and Sound Show. See feature this issue on 'Design and Designers' including an interview with Tony Kingsley.

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International

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NISEL

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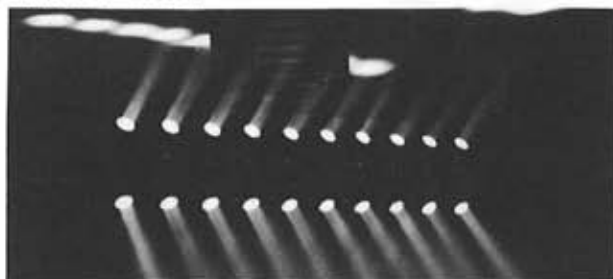
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Strand In Italy

Strand Lighting has 'agreed to acquire' Quartzcolor Ianiro SpA of Rome, the world's leading manufacturer of television and film studio lighting products.

Strand has been the worldwide distributor of Quartzcolor Ianiro products for several years, and this acquisition will ensure that Strand Lighting will continue to provide the studio lighting market with top quality products and after-sales service, say the company.

Hat-Trick for Theatre Projects Consultants

Theatre Projects Consultants have just announced three new appointments as consultants to major arts projects in the UK.

In Sheffield they have been appointed sole advisors to the Lyceum Trust, "which has been formed to restore to full theatrical use the Sheffield Lyceum, built in 1897 by W. G. R. Sprague, and was last used as a live theatre in 1968". The Lyceum is one of Britain's finest number one theatres awaiting restoration, and stands directly opposite the highly successful Crucible Theatre, for which Theatre Projects were also consultants in 1971. There is at present no major theatre in the City or South Yorkshire capable of taking national opera and ballet companies as well as all those pantomimes, musicals and drama productions which would benefit from being presented on a traditional proscenium stage, as opposed to the thrust stage of the Crucible. Theatre Projects' first task will include the updating of their own feasibility study of 1983 and assisting the Trust in placing the Lyceum in its context, both as part of the leisure and tourist provision of the area, and as part of a combined South Yorkshire application for capital funds from the EEC.

In Kirklees, the metropolitan area of which Huddersfield is the principal town, they are advising the Kirklees Theatre Trust on the creation of a new theatre. At present the area lacks any purpose-built performance space for either visiting professional productions or major community groups. In preparing proposals Theatre Projects Consultants will be working closely with the officers of the Library, Museum and Arts Division of Leisure Services for Kirklees Metropolitan Council, and with the Department of Technical Services, who are architects for the proposed theatre.

In Milton Keynes Theatre Projects, together with Coopers & Lybrand Associates, have been appointed to undertake a joint feasibility study for the Development Corporation. This requires a detailed study of the concept of a joint auditorium/concert facilities for Milton Keynes. The study will be used by the Corporation to progress the development to full design stage and to support the Corporation's search for funding.

In Sheffield and Kirklees the Theatre Projects team is being led by Iain Mackintosh and David Staples. In Milton Keynes, Anthony Field, Richard Pilbrow and David Staples of Theatre Projects Consultants will be working alongside Susan McKenzie and Jonathan Rouse of Coopers & Lybrand Associates.

New Base for Eurolight

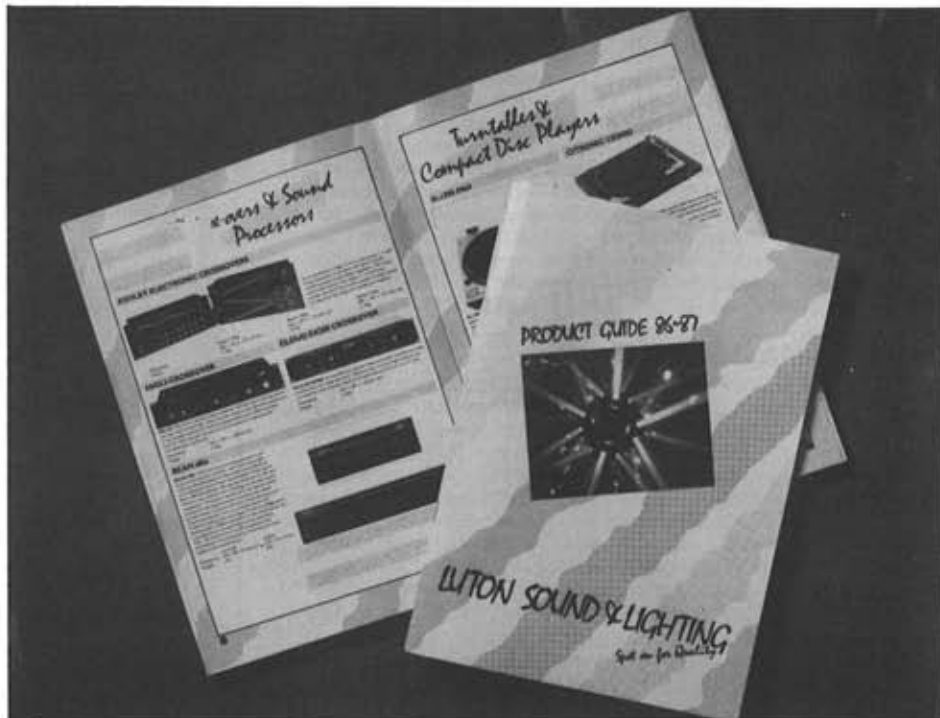
Since restructuring and moving away from the Eurolight MSL banner, Eurolight Limited have recently moved into a new purpose built factory at Feltham Middlesex. Managing director Nick



A new concept from Quartzcolor Ianiro is the Mobile Lighting Module - a self-contained lighting unit comprising a Sirio 12k HMI, a 15k generator set, and a fully articulated boom arm. It is designed for anchorage to a vehicle or for independent use on location.

Mobsby told L+S: "The choice of a factory unit is to enable us to concentrate on manufacturing more of our own products including the Micron and Microlite range of lighting control computers, load patching systems, stage management consoles, paging and show relay systems, overhead lighting bars and grids, and a revolutionary new theatre management system to be launched in 1987.

"The restructuring has enabled us to establish departments within Eurolight which will not only deal with our own manufactured products but also to continue to market Green Ginger dimming and control and Technical Projects/Canford Audio intercom systems," he said. "A new department was established earlier this year to offer consultancy services to entertainment venues, and this is really an extension of the services which



The new Luton Sound and Lighting 64-page Product Guide is now available and contains the company's complete and comprehensive range of sound, lighting and special effects equipment for clubs, theatres, and mobile discotheques. Many new products are featured including the new Hendy Power Station Series speakers, HH VX series amplifiers, Laser Systems' Line Scanner, digital delays plus many new products from ICE, Tannoy, Audio Technica, Zero 88, NJD, Nisel, Optikinetics, Copperluz, Le Maitre, and Power Drive.

Serving both the UK and overseas, Luton Sound and Lighting are main dealers for most leading manufacturers and also supply their entire product range to the trade through their Trade Distribution Division -Hendy Distribution.

The new Product Guide is packed with illustrations, technical and useful information and details of the company and its range of services. To obtain your copy complete with latest price list contact Luton Sound and Lighting Limited, 75 & 82-88 Wellington Street, Luton, Beds LU1 5AA telephone (0582) 411733.

Eurolight have offered since 1974. Current consultancy projects include a new media centre in Norway with theatres, cinemas, and a concert hall, and the refurbishment of a theatre in Spain."

The company will be continuing with their television lighting department and are currently involved in completing three installations of new lighting and communications systems at the Inland Revenue studio in Worthing, Henley College in Coventry, and Austin Rover's studio in Oxford. This department undertakes the complete design of studio lighting systems, cyclorama systems, communications and intercom systems, camera facilities panels, overhead barrel grids, and interior design.

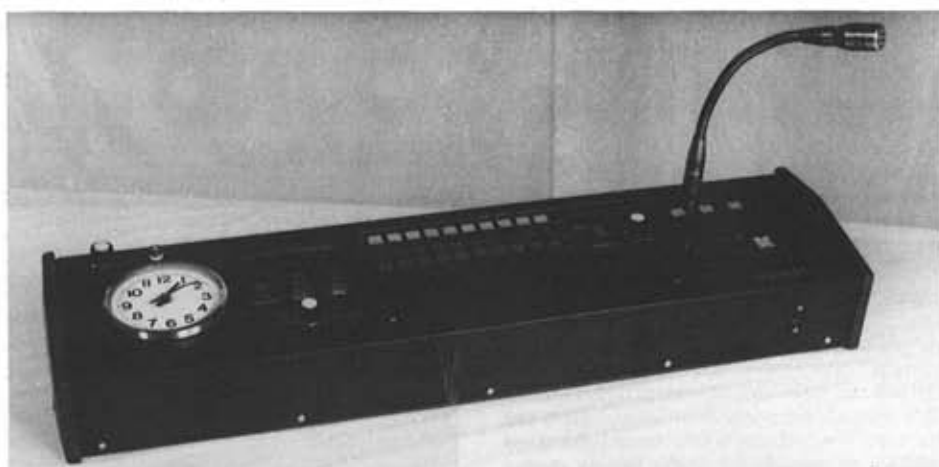
Eurolights' computers have been selling particularly well just lately with installations at Bristol Hippodrome for 'Singing in the Rain', in Holland for NOS Dutch National TV for outside broadcast use, and in Norway for a 3500-seat amphitheatre.

The lighting design division was recently to be seen lighting a mammoth fashion show in Vienna selling British fashion to the Austrians. Other projects currently underway involve further shows in Spain, Germany, and Japan.

"Exports currently account for 40 per cent of Eurolight's output due mainly to the technical advantage British equipment offers in the world's markets, and with this sector expanding all the time, the company are currently investigating the possibility of establishing overseas agents to sell their products and services," said Nick Mobsby.

"The new factory has enabled us to increase our workforce at a time when other manufacturers seem to be reducing theirs, and this will obviously produce new products based on technology which will help us to increase our market share.

"Eurolight has been trading now for 14 years, and has completed over 400 installations during the time. Apart from our year linked to MSL we have always remained independent, giving us many advantages when dealing with customers and also this enables us to tailor systems to customers' exact requirements," he said.



Eurolight's portable stage management console.



The Furze colour catalogue details the company's new product range.

New Furze Theatre Range

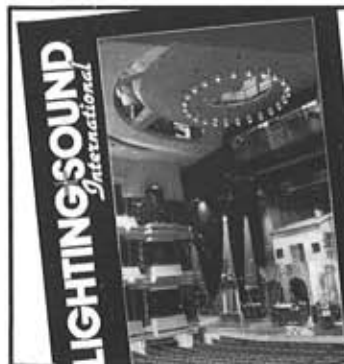
Crown House Furze Theatre Products of Nottingham has developed a completely new range of high performance floodlights, spotlights, advanced electronic dimmers and dimmer controls. In addition, a new curtain track system has been designed to allow almost total freedom in stage design, without the need for any elaborate supporting structure.

The new range, which has been designed from the outset to meet the diverse needs of school drama departments, community groups and the professional theatre in the UK, will also allow Furze to be more competitive in worldwide markets, say the company. To introduce the new additions to the Furze product line-up, the company has published a new colour catalogue which also includes details of their range of theatre equipment.

For a copy of the catalogue contact Derek Nesbitt at Crown House Furze, Wilford Road, Nottingham NG2 1EB telephone (0602) 863471.

Martin Audio in Israel

Formerly the Tel Aviv Cinerama, the Cinerama Club has opened its doors as probably the largest disco in the world, accommodating up to 5000 people, and also able to double as a live concert venue. The club's refurbishment represents a £1,000,000 investment, an important part of which is the sound system, designed by Martin Audio and commissioned and installed in conjunction with More Productions, Martin's agent in Israel. Above each side of the stage and dance floor are four Martin RS1202H mid-hipacks, each containing a M1230 mid-range driver, JBL/Martin horn unit, and twin JBK 2402H tweeters. Two more RS1202Hs are flown above centre stage, directed towards the dance floor, and two VRS800 cabinets are flown from each side of the stage. The system is driven from 11 Crown Amcron MT1200 power amps.



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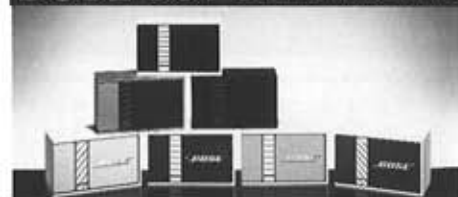
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The Day of the Sun Flower

Avitec's Tony Kingsley inspects the first consignment of Sun Flower projection units, newly arrived at Hitchin from Avitec Germany. Main picture shows the effect from 2 units in the company's showroom.



Increasing Laser Scope

Lasergraphix of Royston recently acquired the 'Lasermedia' graphics system, as an addition to its already extensive hire stock. Controlled by an IBM computer as opposed to the conventional 'desk' arrangement, the system can produce high quality, flicker-free graphics with individual characters and colour control is now possible. The company also has access to a library of pre-programmed animation synchronised sequences, lasting approximately four minutes, and they are already planning to make this available for hire, with alternative pre-programmed modules.

Lasergraphix have also announced another 'first' in the laser industry - the use of fibre optics. A remote laser-fed fibre-optic scanning head, weighing only one kilo, can easily be hidden, in trussing or exhibition stands, for example, to achieve a laser show from unusual or previously impossible settings. The scanning head can be positioned up to 200' away from the laser site, and up to four fibre ray units can be fed by one laser.

These systems are unique to Lasergraphix in the UK say the company, and make available for the first time unrivalled quality graphics and animation, colour modulation and fibre-optic utilisation.

For full details contact Lasergraphix Limited, Unit 15, Orchard Road, Royston, Herts SG8 5HD telephone (0763) 48846.

Rosco Roadshow

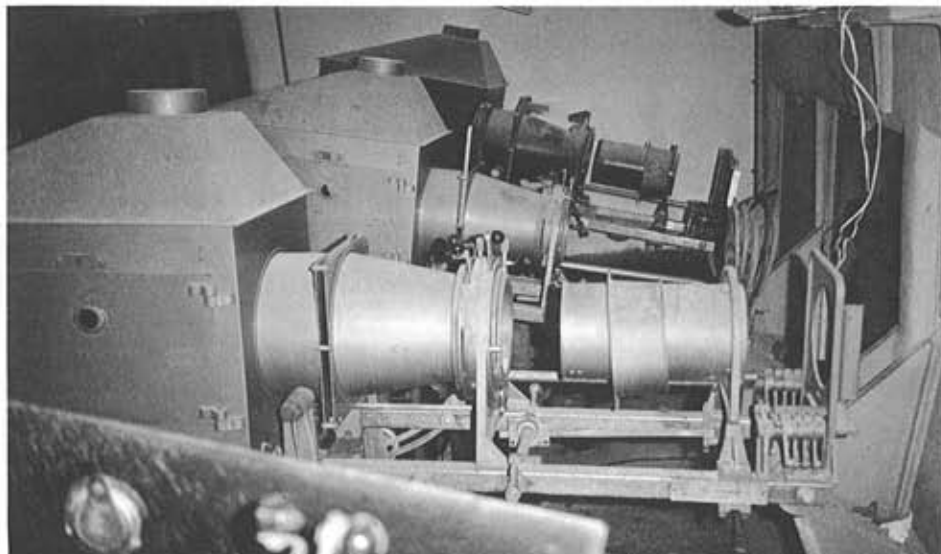
Over the coming two months Rosco will be on the road from Aberdeen to Plymouth with their product display and seminar-style presentation. Invitations have already been sent out by various Rosco dealers, but anyone wishing to pick up a few tips, and see the latest Rosco products can call the head office of the company on 01-633 9220 to find out when the show hits your part of the country, and obtain the necessary information and invitation.

Gemini for Wakefield

Strand Lighting have provided a Gemini memory lighting control for the recently re-opened Wakefield Opera House. Other Strand equipment at the venue includes 108 circuits of Permudimmers, 50 Harmony spotlights and 32 Coda floodlights.

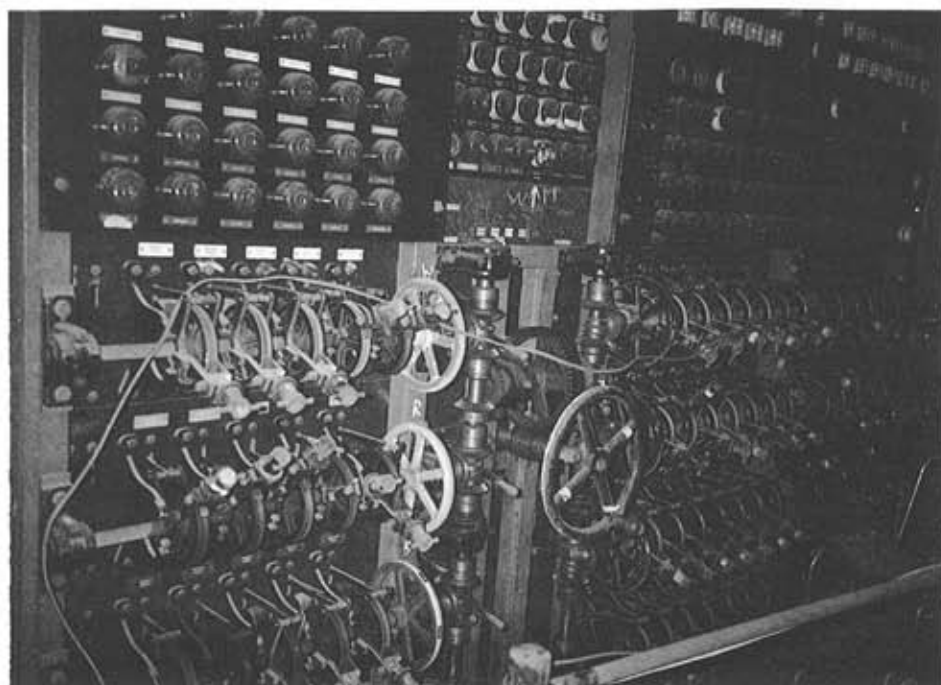
Soundtracs in Holland

Wisseloord Studios at Hilversum in Holland have recently installed a Soundtracs CM4400 console with CMS2 automation. It was part of a package supplied by Professional Audio Centre of Eindhoven that also include an X850 Mitsubishi digital recorder.



On the Way Out!

Some of the obsolete equipment about to be removed from Morecambe's famous Winter Gardens (see story page 7 previous issue).



Projecting the Right Image

Graham Walne

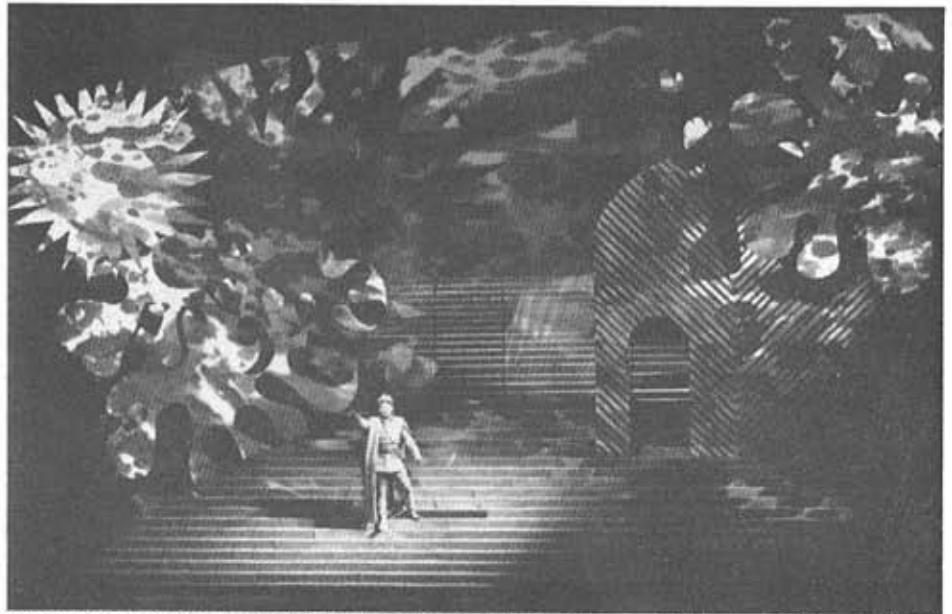
As technology becomes more of a feature of entertainment presentation and projection re-emerges as an important part of any designer's repertoire, in this first article in a series theatre lighting designer Graham Walne takes a look at the basic ground-rules on projection.

In the wake of Jean Michel Jarre's Houston extravaganza, the use of projection in major shows such as 'Time', and the re-emergence of projected 'scenic' effects in major discotheque venues such as New York's Palladium and London's Limelight, it is time we looked again at this basic but very cost effective method of producing exciting images, whether scenic or atmospheric, and for venues as diverse as stock producing theatres or clubs and discotheques.

I am concerned in this article with the two basic categories of projection: a static image as with projected text or scenery, and a moving image as with projected effects. The latter category I have deliberately curtailed from spreading into the more disco-oriented effects, because space would prevent me from doing them justice, and they will be the subject of a later separate feature article in this magazine.

Projection cannot be taken for granted, and there are few areas of audio visual work that are as pitted with potential disaster. Among many disappointments are images that are not bright enough, not large enough, or simply not clear enough. And these problems can be overcome by the correct application of appropriate formulae. Unfortunately, the answers appear so complex that many people are put off using projection at all and I consider that the formulae concerned are desirable, but not essential. My own methods rely heavily on trial and error.

In almost all cases the first mistake made is that insufficient time has been allowed to do the job properly. I follow the rule that all stage production projection work must be completed to be viewed one clear working week before other activities, such as lighting plotting. This way, there is time to re-photograph slides and change lenses, et



Scenery and projections by Josef Svoboda at the Royal Opera House mid-sixties production of 'Die Frau ohne Schatten'. A lot of current techniques both in projection and set design stem from Svoboda's innovative work.

cetera, if necessary. A similar but not alternative rule is that all projections must be tested beforehand, and if necessary in model format, if the full scale environment is not available. Give yourself enough time to make (and correct!) mistakes. If you want to use formulae, then read Richard Pilbrow's 'Stage Lighting' and read or see anything by Robert Ormbo or Pat Robertson. But don't just assume that because you use a set formula, you don't have to take precautions first.

Almost all projection equipment is expensive, and unless required permanently it is usually more cost effective to hire. This approach automatically puts the customer in

touch with specialists who can advise on the most appropriate location for the projector, most suitable lens, and also produce slides from artwork if this is required. Since most projectors can be hired by the day, tests well in advance of the main production are very cost effective.

I make no apology for repeatedly stressing the value of early tests and demonstrations. Gothic and expensive misunderstandings can arise because everyone carries in their head a totally different impression of what the eventual projection will look like. Whole productions or displays have been built around false assumptions, and when you are opening tomorrow, it is too late to start building scenery.

Other overall principles to remember are that most projectors incorporate a cooling fan which generates a certain amount of noise, and this may be obtrusive in some circumstances. Therefore the projector(s) may need to be housed in a ventilated but relatively sound-proofed enclosure. Also, the majority of projectors cannot be plugged directly into ordinary stage dimmers - not only because the dimmer circuit may not cope with the inductive load, but also because reducing the voltage to the projector overall may cause associated mechanisms, such as remote slide change or effects motors to lose power as well. It may be necessary therefore not only to hire special dimmers designed specifically to work with each projector, but also to power the associated mechanisms separately. Always ensure that a good supply of spare lamps is



Pani outdoors - Jean Michel Jarre's Houston spectacular.



One of the earliest uses of multi-screen projection using 36 modified Carousels back projected for the 1973 production of 'I and Albert' at the Piccadilly Theatre, London. Design was by Robert Ornbo.

available since most are unusual, and only obtainable from a few suppliers. And then ask yourself if the projector is absolutely vital to the production or display? If so, in the event of failure it may be necessary to know where a replacement can be obtained outside normal hours.

The majority of slide or film projectors comprise three sections. Firstly there is the lamphouse with associated ventilation, heat absorbent glasses and condenser lenses where applicable. Next there is the gate, where the object to be projected is located, and finally the objective lens which focuses this object on to the screen or area required.

The required size of the image is usually decided by the designer of the production or display, and the projection engineer or lighting designer then has to decide what equipment to use and where it should be located. Some projectors have a better range of objective lenses than others. The Kodak Carousel, for example, has one of the most versatile ranges of objective lenses in the world, and locating this machine is unlikely to be a problem. On the other hand, the large theatre scenery projectors have a limited range of lenses and therefore there are limited options available in deciding their location.



The Strand Cadenza effects projector.



Pre-delivery inspection at AC Lighting of a Pani BP4 HHI 4k projector fitted with automatic slide changer and high definition projection lens.

It is fairly obvious that the brighter the lamp, then the brighter the picture should be, and this is generally true. However, some lenses, especially the extreme wide angle ones, stop quite a lot of light, and this needs to be taken into account. Another important point is that the larger the gate, in other words the larger the slide or film, then more light will get through on to the projection surface. A bi-product is that the picture will be clearer, too. Bigger is obviously better. Finally, the quality of the slide or film is important. For example, a bold design in sharp contrasting colours could be projected with much more success from a small projector than could a highly detailed and coloured image such as a painting by an old master.

It is also fairly obvious that the image will show up much better if other light is kept off the screen or surface. This inevitably means that the projection engineer or designer must be involved in the overall design of the space or production at the outset if he is to have any hope of success.

The material of the screen is another factor to be taken into account. Whilst a projected

picture will show up on any surface at which it is directed, it makes good sense to use a proper screen surface which is designed to reflect the image. In some cases screen material has restricted viewing angles so that there is dramatic fall-off in intensity as the viewer moves to the side.

A fundamental aim is to overcome distortion. This is discernable as an undesigned elongating or broadening of parts of the picture, and it occurs when the projector is not square to the screen in either the vertical or the horizontal plane. In fact the distortion may not automatically be a problem if the subject is abstract, but it almost certainly will require attention if the subject is in any way rectangular. In most large cinemas for example, the screen actually tilts up towards the projection room although it is so slight that the audience is unaware of it. Another solution is to use a lens which can be adjusted to overcome angled distortions, although in my experience these are seldom useful unless the distortion is slight. By far the most satisfactory, although complex method is to use pre-distorted slides. In this case the artwork is photographed from the same angle that the projector will eventually make with the screen. The result is a distorted slide which will project an undistorted picture.

Back projection can be used to overcome many of the problems indicated so far. In this format the screen is between the viewer and projector. The projector would normally be backstage or in some equally accessible but hidden area, so that maintenance, slide change and fan noise are all more easily disposed of. Furthermore, the projector has more chance of being square to the screen, therefore avoiding distortion.

Special back projection material is desirable, and again have a specific viewing angle. All back projection material absorbs some light, and this should be taken into account when aiming for a specific intensity. Throws can be condensed into a small space by bouncing the beam off a mirror surface; a simple folded paper template of the beam is the best way to calculate the position and size of the mirror.

Of course the simplest and cheapest form of projection is the shadow projection often called Linnebach after the German engineer who used it extensively in his productions. The light source in this case needs to be as simple as possible, with no lens, and it is the only kind of projection where the 'slide' can be made up in situ as you watch the result.

Projection isn't necessarily cheaper than scenery, but it is usually easier to change, and is obviously less labour intensive. When used with respect, it can add exciting new dimensions to any situation.

SUPPLIERS

The list that follows is given for guidance only, and based on information on the writer's current files and from past user experience. Any companies not included are invited to send information to the magazine for inclusion in the second article on Projection to be published in our February issue.

Gobos

These metal slides or masks can be inserted into the gate of profile spotlights. Whilst the technique is usually associated with rather fundamental shapes such as foliage, gobos can now be sophisticated by means of a supportive mesh. A wide range of standard

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gobos is available, and specials, such as company logos, can easily be manufactured. A very cost-effective way of producing evocative symbols. Generally a gobo and holder can be purchased for under £10 with a special costing under £50. For the best results use slightly out-of-focus, with several pieces of colour.

DHA Lighting Ltd.
7 Bishops Terrace, London SE11 4UE.
Tel: 01-582 3600.

DHA are an enterprising outfit, quite prepared to listen to your problem and custom build although they do carry a very wide range of standard gobos.

Donmar Productions
22 Shorts Gardens, London WC2.
Tel: 01-836 1801.

Donmar produce an award-winning Catalogue - The Donmar Reference Manual - of products for which they are agents.

Moving Effects

In this context I am referring to projecting a relatively realistic image which moves, a technique used for flames, waves, clouds etc. and this should not be confused with cine.

Strand Lighting
PO Box 51, Great West Road, Brentford, Middlesex.
Tel: 01-560 3171.

Strand have updated the classic 252 2kw effects projector and it is now known as the Cadenza FX. A wide range of effects wheels is available. However, the whole package, that is lamphouse, effect and lens costs over £1,200.

DHA Lighting Ltd.
Contact Kevin Shaw for details of an interesting range of effects produced by gobos with animation discs and gobo rotators. Not as realistic as the Strand Cadenza FX, but costing less than £150. Also ask them about their excellent range of fibre optic devices.

Optikinetix Limited
38 Cromwell Road, Luton, Beds LU3 1DN.
Tel: (0582) 411413.

Quite simply the best range of effects discs around. I lost count after 60 discs, both abstract and realistic alike, and further beam modifying is possible. Fairly punchy at 24v 250 watt. World

market leaders in effects projectors with the Solar 250, now an industry standard. Most recent addition to their range is the Quasar Xe 900 Strobe Projector. Ask for their excellently produced catalogue. It will tell you practically all you need to know in this area of effects projection.

White Light
57 Filmer Road, London SW6.
Tel: 01-731 3291.

Essentially a hire company, but also worth contacting for sales of ADB effects projectors (rather like the Strand FX), stylised water ripples, gobos, and strobes.

Squire Light and Sound
call 01-272 7474 for details of your nearest dealer. A famous disco and club designer and supplier of the more effect orientated projection equipment.

McCormack Electronics
Units 2d, e and f, Wavertree Boulevard South, Wavertree Technology Park, Wavertree, Liverpool L7 9PF.
Tel: 051-220 2943.

Keep an eye on their 'Moonflower' and 'Mini-Moon' products; these units project 90 pencil rays of controllable and colourable light. Well worth contacting for something slightly different.

Avitec Electronics (UK) Ltd.
80/81 Walsworth Road, Hitchin, Herts SG4 9SX.
Tel: (0462) 58961.

Avitec offer the 'Sunflower' - which sounds similar to the 'Moonflower' - five colour changes, rotatable, vibration motion and sound to light. Information is scarce as we go to press. Also ask about their other wide range of products include Clay Paky projection equipment from Italy.

Coemar/W.B. Lighting Ltd.
4 Tenter Road, Moulton Park, Northampton NN3 1PZ.
Tel: (0604) 499331.

Contact WB Lighting for full details of the Italian Coemar range of effects including the 'Mantra', which projects a fan shaped spectrum of colour, with oscillation, rotation, and sound to light facilities.

Slide Projection

This technique is used mostly for AV work, scenery, and sophisticated trade show presentation.

Kodak
PO Box 33, Swallowdale Lane, Hemel Hempstead, Herts HP2 7EU.
Tel: (0442) 61241.

Yes, there are other 35mm slide projectors, but the Carousel is the industry standard. Call Kodak for your nearest dealer.

AVE (UK) Ltd.
16 Southsea Road, Kingston, Surrey.
Tel: 01-549 7521.

If you like the idea of the Carousel, but need something more powerful, then AVE can help. A wide range of equipment is available on sale or hire.

Strand Lighting
Agents for Pani, simply the best large screen slide projectors in the world. How many others do you know where you need to reduce the intensity? Pani's come in 4kw, 5kw, and 10kw sizes, for 7" slides.

Have Facilities
Unit 5, Indecon Court, Mill Harbour, Millwall Docks, London E14 9TN.
Tel: 01-538 4033.

This company specialises in hire and installation of a whole range of audio visual equipment. Projection equipment includes Pani BP4 HMI's, as used in 'Time', a full range of Carousels, AVL control equipment, and Hokushin 500w xenon projectors, 400w Carousels, and 16 and 35mm cine. Man to contact is Mark Huffington.

AC Lighting Limited
Unit 4, Spearmast Industrial Park, Lane End Road, Sands, High Wycombe, Bucks HP12 4JG.
Tel: (0494) 39076.

Sale of the complete Pani range - also able to advise on where you can hire the appropriate Pani equipment. Talk to them about special versions such as remote slide change.

Electrosonic Limited
815 Woolwich Road, London SE7.
Tel: 01-855 1101.

A very experienced name in the field of multiscreen 'Multivision' projection, and products include distortion control lenses. Ask for their excellent guide to AV.

DHA Lighting Ltd.
Producers of all kinds of slides from original artwork including pre-distorted. Also agents for the Cibachrome colour film which is more stable and longer lasting than conventional film.



The Electrosonic 'MSC' multi-media computer system integrates projection, lighting, special effects and video for the larger presentation.



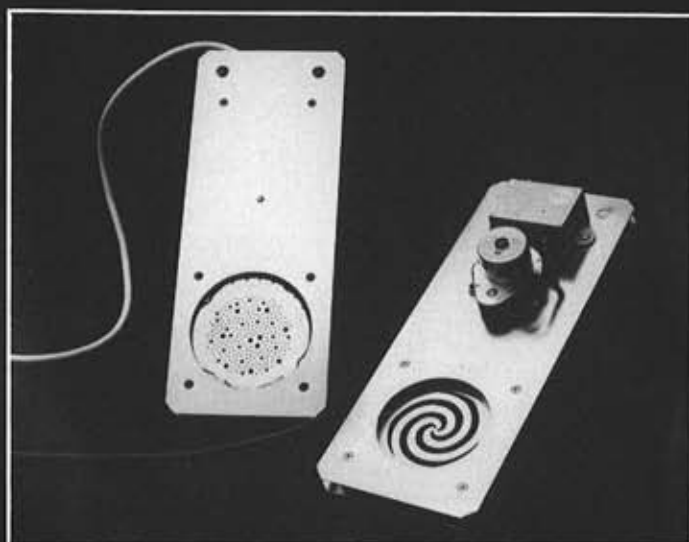
Electrosonic's new 'BSC' multi-media computer program for use with IBM PC and compatibles.



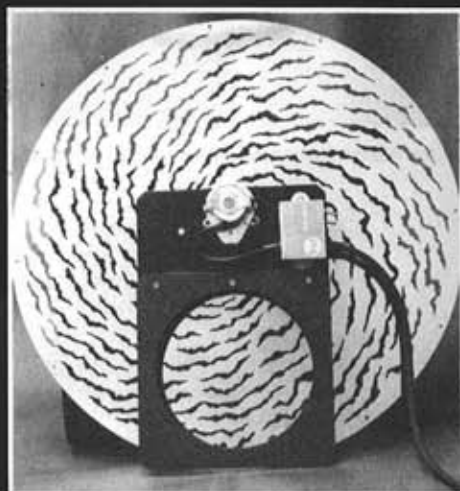
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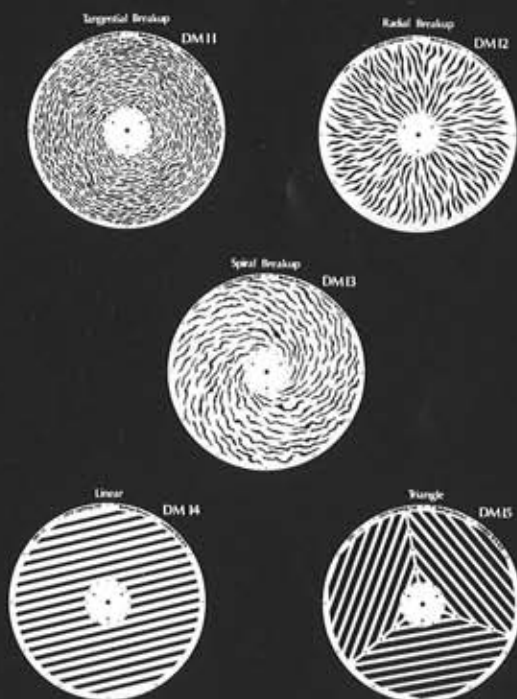
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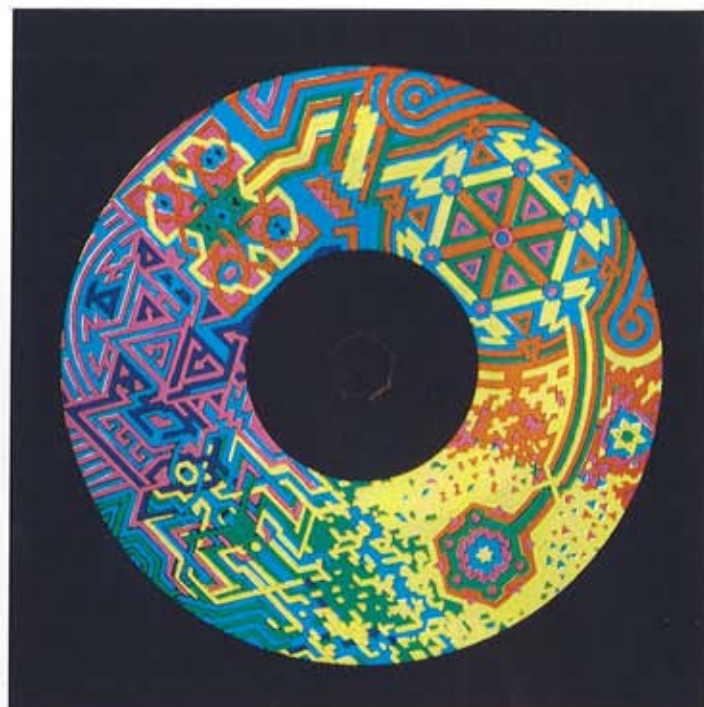


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including distortion correction, offering monochrome
and colour (Ektachrome or Cibachrome) in glass
or glass-less mounts. In addition we sell and hire fibre
optics and have a full screen printing service for
costumes and sets. For further information please call or write

D.H.A. Lighting Limited,
7 Bishops Terrace London SE11 4UE,
01-582 3600 Tlx 935639 GOBOCO G



A selection of 6" effect wheels from Optikinetics designed for use with their Solar 250 projector - the industry standard. This particular range of effects wheels totals 36, and above, clockwise, are 'Orient', 'Maze', 'Decade', 'Aviation', 'Myth', and 'Zodiac'.



A Pani BP1.2 1200w HMI projector fitted with effects wheel, effects lens, and electronic dimming shutter pictured at AC Lighting of High Wycombe.

Cine

Unless your building already has a projection room, 35mm is rarely worth serious consideration since it invites a vast and complex array of licensing regulations. 16mm, however, has fewer restrictions, and in most applications comparable picture quality on small stages. The cost of producing film itself is obviously higher than that of producing any of the other kinds of projection mentioned in this article, and in my experience multi-screen slide or video is more cost effective.

Sound Associates

23 Redan Place, Queensway, London W2 4SA.
Tel: 01-229 0101.

If you really are serious about 35mm then these people will help you with the correct planning and installation of the Cinemascope range, including sound systems and screens.

Elf Audio Visual Limited
836 Yeovil Road Trading Estate,
Slough, Bucks SL1 4JG.
Tel: (0753) 36123.

Bell and Howell
Bridgewater Road, Wembley, Middx HA0 1EG.
Tel: 01-902 1954.

These two famous names are not the only 16mm manufacturers but they do cover most of the market from small portable machines to larger permanent installations. Don't forget B&H's overhead projectors which can be used in situations other than the classroom. B&H also make the Hi-Beam TV projector and Elf also make the Caralite xenon slide projector. Elf are agents for the Premier range of 35mm accessories such as joiners, splicers, and rewinders.

Museum Electronics
147 Nether Street, London N12 8ES.
Tel: 01-445 7086.

Manufacturers of an interesting automated projection system which dims the lights and operates the curtains too; based on the 16mm B&H machine.

Video

This is possibly the fastest developing sector of the whole projection field. For most theatre and concert work only the very expensive machines will register - remember that video projectors must be at a fixed distance from the screen and often this can only be a certain size. These factors require that before you proceed you ask what it is that video can do for you that no other kind of projection can. Look out, however, for laser video projection, which promises to be free of many of the current problems. At the

smaller end of the market look out also for large screen monitors (up to 37" currently) which give a much better quality of picture than any small projector.

Mediatech

call 01-903 4372 for your local office **Kadek Vision**. An experienced hire company for a wide range of video equipment, including the low cost Barco projector and computer graphics.

Link Electronics

North Way, Andover, Hants SP10 5AJ.
Tel: (0264) 61345.

Agents for the Talaria range of video projectors. This unit is small but is one projector that doesn't disappoint.

Screens

Roscolab Limited
69/71 Upper Ground, London, SE1 9PQ.
Tel: 01-633 9220.

A very useful name to know, not only for their famous back projection screen material but also for the best colour filters, smoke guns, and scene paint. Also ask for their range of mirror surfaces.

Gerriets

Unit 9b, Tower Workshops, Riley Road
London SE1 3DG.
Tel: 01-237 0041.

Arguably the best range of materials around, not only for front and back projection, but also of fabrics and textured material.

Harkness Screens

Station Road, Borehamwood, Herts.
Tel: 01-953 3611.

99% of the time you sit in a cinema you sit in front of a Harkness screen. So if you need a big screen with moving masking and all the trimmings, then contact no one else. They will also supply smaller portable screens too.

First in a Regular Series

The Atmosphere Creators

John Offord talks to Avitec's Tony Kingsley

The Avitec Group, with operations in four countries, is Europe's largest club lighting and sound equipment distributor. The British company, Avitec Electronics (UK) Limited, is based at Hitchin in Hertfordshire, and run by managing director Tony Kingsley, a dynamic and forthright individualist, whose name is synonymous with club lighting and sound in this country.

Established in 1980, Kingsley's outfit began by supplying equipment to trade customers, and very occasionally end users. Today, it is in the forefront when anything related to club and discotheque design is concerned - from the style of the venue itself, to the installation of lighting and sound equipment.

This natural development began when people telephoned Avitec's offices to ask what sort of equipment was suitable for a particular operation. "It was all from small beginnings," explained Tony Kingsley. "We always had a showroom from the very beginning, where we laid out the lighting. This was a very significant factor. We were learning all the time, and looking at different venues, and most particularly the German installations, which at that time were very much ahead of anything in England.

"The progression really came when we took Mecca representatives across to the Bundeskanzlerfest - the German Chancellor's annual party. The German discotheque association VDDA was the prime mover behind this scheme which encouraged the Chancellor to have within his party a purpose-built discotheque tent. It was obviously attended by some very important people, and was built by about six companies under the direction of Udo Fischer - who was a designer then working for Avitec Germany.

"Sometime later, after designing the Discorama lighting extravaganzas in 1981 in Münster in Germany and in Hilversum in the Netherlands, Fischer was employed to design Mecca's Birmingham Powerhouse, and that was our first major UK design. From the Discoramas the idea of the Super Disco in London was born and this took the 1982 Light and Sound Show by storm."

Udo Fischer went on to design the light show at Mecca's Bristol Studio, and as design briefs expanded Peter Danne began to get involved with projects in Germany, and Avitec also used Ralf Bergmann. The company now has its own in-house design team led by Peter Danne and Paul Dodd.

"We normally tend just to advise customers, but if they want drawings and layouts we can do this," Tony continued. "And if a customer has no idea on lighting at all, we do provide a different service, with drawings and all the necessary information. We are in a position to provide to trade customers a complete package of sound



Tony Kingsley.

equipment, lighting equipment, rigs - absolutely everything - and in the future we are looking to offer installation materials, because many of our clients haven't got access to specialised equipment. We tend to act very much in a design advisory capacity for our trade customers.

"We are also researching light fittings and architectural lighting so that we can supply them as part of a scheme. There is a whole range of lighting that isn't used in this country and many specifiers are interior designers. We would like to be involved in this also, so that we can be of help to both the club owner and the interior designer in future.

"There are always a multitude of club owners who are looking for something different, which is not always necessary as there are so many badly designed places, in



Avitec's sales director Andrew Morris (left) discusses a project with Tony Kingsley.

terms of lighting, scattered around the country. If you put a Krypton in the wrong place it will look a mess, and there's no use spending £8,000 unless the rest of the lighting will work with it. Another example is if a laser is used on its own it is of no use whatsoever, but if used in conjunction with the right lighting effects and with a good operator it can be magic.

"So there is still a lot of progress to be made within the existing state of things. In many cases it is just as effective to spend money on re-designing based upon equipment already installed."

I asked Tony about the relationship between spending on a venue's interior design and the lighting equipment. Was it better in some cases to concentrate the expenditure on the equipment rather than on the interior?

"Mecca did that originally at the Birmingham Powerhouse. They spent £5000 on a tart-up and £100,000 on lighting and sound. But it didn't work as well as it should have done, and they ended up spending another £30,000 on the decor, and now it's much nicer. I'm the last person to say that having good lighting and sound is the beginning and end of it. It's the total ambience of the place - the 'atmosphere creation' is not just about lighting."

So where are we at with the state-of-the-art in club design?

"Just under a year ago Peter Danne designed the lighting for the Stardust in Wolfsburg, Germany. It is a totally new concept, and had a relatively large budget of some £200,000. Pneumatics and hydraulics were involved, and basically the whole concept is of a hidden lighting rig, and its attendant surprise factor. Your breath is completely taken away with something that happens during the course of the evening. It is completely hidden before it appears, and if you walked into the place you would have no idea it was there.

"My only criticism is that there could have been a more comprehensive lighting scheme that was then overridden by this stupendous surprise effect - a result Peter was looking to achieve but had insufficient in the budget to make possible.

"Historically by taking Mecca to Germany to see what was achieved by Udo Fischer the Birmingham Powerhouse came about, and I believe that inspired a lot of other operators to spend. First Leisure spent, and so did companies like Aureon. They saw what Mecca had done, and the money it was bringing back. I think the industry went forward as a result - indirectly through Udo Fischer and Avitec. Mecca had the courage to do it, so all credit to them, but on the other hand, we were their inspiration behind it.

"Wolfsburg has now inspired people to look forward again. On the subject of movement, my argument is that unless it is going to be dramatic, it is not necessarily worth the expenditure. For instance, with stage and rock lighting you can have the different groups of light cans moving without the rig



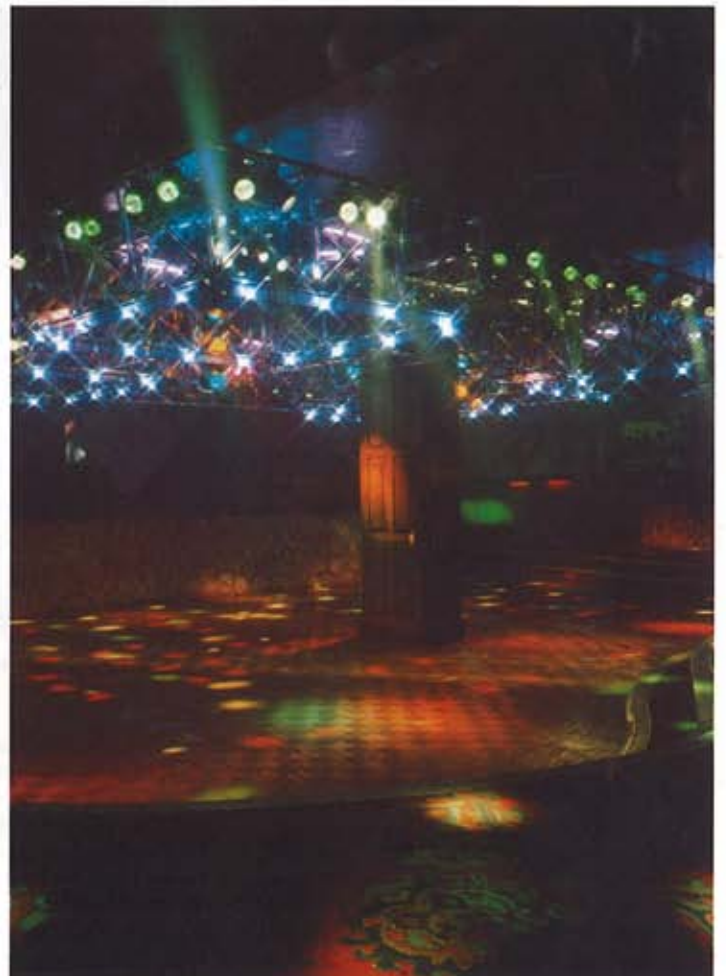
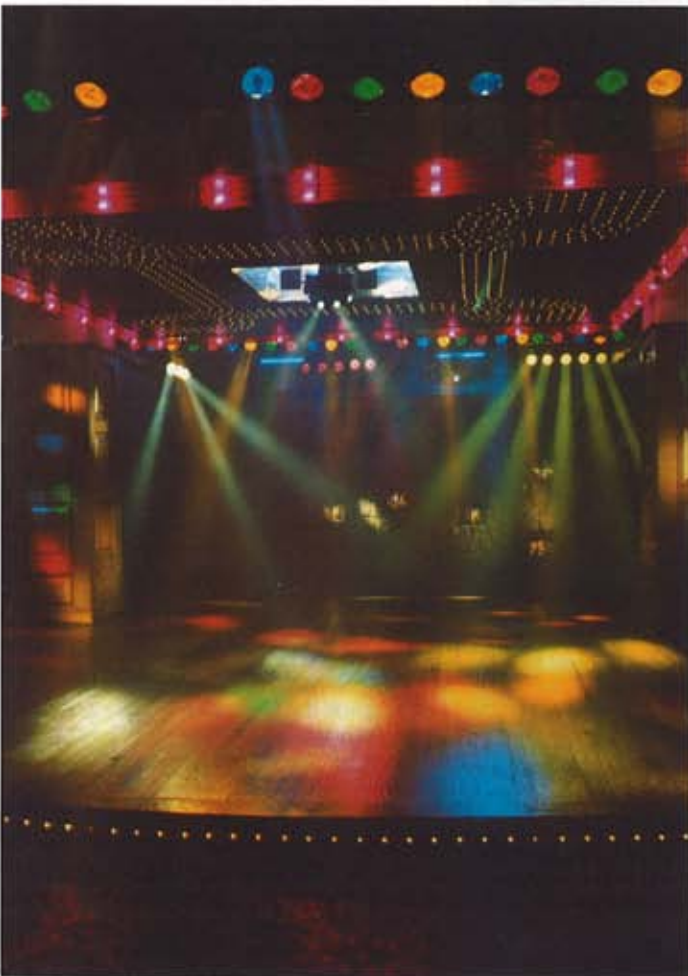
The Powerhouse, Birmingham designed by Udo Fischer - Avitec's first major UK design.



Stardust, Wolfsburg. Lighting design by Peter Danne.



Group Northern Design were responsible for the interior design scheme at the recently opened 'The Palace' in Blackpool. Lightfactor were main lighting contractors and also responsible for sound and laser installations (a full feature on the venue will be included in our December issue).



Two recent design projects from Starlight Design. The 'Prince of Wales' discotheque and lounge bar at the Durham Ox Hotel near Leicester (left), and 'Jesters' discotheque at the Tudor Court Hotel in Draycott, Derbyshire.

actually moving an inch. But there is no doubt that in the right environment, something moving and mechanical can be very exciting. But there is not always the need for it."

One of Tony Kingsley's most satisfying recent projects was for Sweeting's at Bedford, where Avitec assisted with the design. "We argued a lot with Chris Sweeting, in a good two-way relationship, but I think the result was worth it. It was one of the few places where there was enough money in the budget to do the job right.

"At the end of the day the key to effective lighting design is making the most effective use of the least amount of lighting."

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Miniature Theatre Rig Lights Architectural Model

Theatre Projects Consultants has recently completed a scheme which brings theatre techniques into the world of architectural marketing. The Broadgate office complex, a project of Rosehaugh Stanhope PLC, has been modelled in miniature in a blacked-out Portacabin situated on the viaduct above Broad Street Station in London, and illuminated by a number of tiny replica theatre lanterns suspended on a miniature truss system.

The latest computer-aided design techniques were used to develop the lighting design, which utilises 31 Light Projects 'Birdies' and some more conventional theatre lighting instruments, controlled by a digitally programmed dimmer system.

The low-voltage fittings use small tungsten-halogen dichroic reflector lamps, and each unit was fitted with a local transformer (incorporated into the suspension clamp) and a frame for conventional theatre colour filters.

"The brief was to create a simple-to-operate lighting scheme that allowed for

complex, multi-part scenes to be played back by an unskilled operator," said David Taylor, the designer of the scheme. "Lighting states change from night to day scenes and also accent key parts of the three large models. The Light Projects Birdies are quite accurate reproductions of the precision equipment available to the theatre lighting designer and we were able to utilise a lot of instruments within the small, low-ceilinged space."

The lighting scheme for the complex models of London Bridge City was also handled by the architectural lighting division of Theatre Projects Consultants, and the division has recently been appointed by Arup Associates where David I. Taylor and Alan Russell are acting as consultants for the highly specialised lighting of the central arena of Broadgate which combines detailed architectural lighting with a rig of extra long throw performance equipment, achieving theatre lighting levels from spotlights around the circus perimeter.

John Offord

Starlight Design - an Independent for Independents

Home base for Starlight is far removed from the mad, zany, noisy, flashing-light world of discos.

Husband and wife team Marion and Graham Smith set their business up two years ago amid the rural peace of the little village of Aurd, deep in the Cambridgeshire countryside.

Both got their grounding with Tony Kingsley's Avitec operation: "I was sales manager there and when Graham was made redundant from his job as an engineering manager he was offered employment with Avitec. We were already married at the time," explained Marion.

Marion had built herself a strong reputation in the business for reliability, doing what she said she'd do. "That stood us in good stead when we went on our own," said Graham.

They had decided to deal on a retail basis only, direct with club owners and pub operators, but within a week of starting Starlight they revised their ideas as a lot of trade people who had been dealing with Marion wanted to keep on doing so.

"We found problems in that, though, because we'd work out a scheme for a trade customer, an installer, price it, and then find he'd gone elsewhere to buy the gear because it was 5p cheaper," said Graham. "It happens too when you deal direct with club owners. There's always a chance that they will pick the bones of your scheme then place the order elsewhere."

So now Starlight hedge their bets and operate both trade and retail and doing installation as well as design and supply. They are importers too, bringing in lots of gear from Italy and Spain, with Kreluz, from the latter country, much in demand.

"We also probably sell more tivolì light than anyone else in the industry. Miles and



Marion Smith at the 1986 Light and Sound Show.

miles of it," said Graham.

"Lots of people seem to believe we sit here and solder up lamps in the evening, but in truth we buy everything in."

Starlight do not have many dealings with the big chains or the brewers: "Our contracts are usually with independent club operators," said Marion.

They carry out a steady flow of installations. "Recent projects have included two discos in the same hotel complex near Leicester, two discos in the Tudor Court

Hotel outside Derby, Valentines Club at Crowborough in Sussex, Potters Holiday Camp at Lowestoft, and Raffles in Norwich."

Starlight take a stand at the PLASA Light and Sound Show each year and have found it yields work from outside what might be regarded as their natural catchment area. "We are due to start work shortly on a club at Hamilton in Scotland," said Graham.

Commissions range from as little as £5,000 to many thousands. "There's a trend away from the very expensive hi-tec scheme though, with more emphasis being placed on the decor of clubs these days. People don't want a lively dance floor area - they want somewhere to sit down with pleasant lighting, soft surround music, and an attractive decor."

This is seen as a way of attracting older audiences back into discotheques, though, as Graham pointed out: "Nine out of ten club owners will tell you they are going after an over-25's audience, but then you'll go down to the venue and find it full of 17 and 18 year olds. That's usually because they have the wrong idea of how to attract an older audience."

Graham tends to do his designing in the middle of the night. "I wouldn't be doing it if I didn't enjoy it. I could earn a lot more money doing what some people might term to be 'a proper job' But the disco industry is like having a bug - it takes you over and the enthusiasm you find within it is infectious.

It's a great thrill to watch a scheme develop from putting your own ideas onto paper into a finished club full of people enjoying themselves," he said.

Although Starlight import Kreluz they don't stick to that company's products, but use what they deem best for the particular job in question. "It's not a case of 'what have we got in stock?', but of 'what's the best thing to use?' Thus we use similar items from various manufacturers - each of our schemes really is custom-tailored to the needs of the client and his venue."

Roger St. Pierre

Dick Carrier - Colour and Chrome

Roger St. Pierre

Light and Sound Distribution is a company which, like Topsy, has just grown, now boasting an annual turnover of more than £1 million. Late last year it was split into two divisions with Ian Levene looking after the wholesale side and Dick Carrier heading up LSD Design and Contracts to handle the installation operation.

One of the disco industry's best-known personalities, Dick originally trained to be a chef and worked as such in the restaurant of a major South London department store after leaving college.

But, in his spare time, he was a working deejay. "I started deejaying in 1965 and worked as a professional jock between 1969 and 1976."

It was in 1970 that he carried out his first installation, a lighting and sound scheme at The Fountain in the Mile End Road.

"Then Keith Hardy asked me to do some relief deejay work for Goodhews and that eventually developed, in 1973, into a full-time job as entertainments co-ordinator for the company which at its peak, had 12 clubs in London and the South East, including Thursdays in Kensington, Cheeky Pete's in Richmond and Charlie Brown's in Tottenham.

"I'd been intending to go into the hotel division of Goodhews but Ray Bain persuaded me to stay in the disco division which was expanding apace while hotels and restaurants were then in something of a decline."

Having built quite a reputation for developing new discos, Dick was a natural for being head-hunted and, after a time, his old friend Keith Hardy, who had left Goodhews by then, persuaded Dick to join him in CDC, which has been set up to bring in Rotalite from the USA and market it over here.

That venture, which taught Dick a lot about club installations, only lasted eight months and then he was approached by Mick McManus of Le Maitre at the BADEM exhibition in 1979 to market Le Maitre's range of lighting and effects.

"Light and Sound Distribution was very much Mick's idea. He already had a set-up called This 'n' That Wholesale and as a partner in Le Maitre he wanted a wholesale company which could concentrate on wholesaling Le Maitre products throughout the UK as imported lighting was beginning to steal the UK market."

Dick had the right connections to make a success of LSD, and he made a strong pitch of the 'Buy British' idea. Products were found to meet the resultant demand. What became Light Processors started out as the Le Maitre Lumiere and Dick built the business by formulating packages of Le Maitre products - pinspots, light curtains and so on - and then adding on equipment from other manufacturers.

Having been a trained pâtissier, Dick's latent design talents soon found a niche in putting together entire schemes for club owners: "It started off as specifying Le Maitre products, wiring them up and providing the control system to make it all work and then the industry started wanting us to supply other parts and the wholesale side of things developed apace.

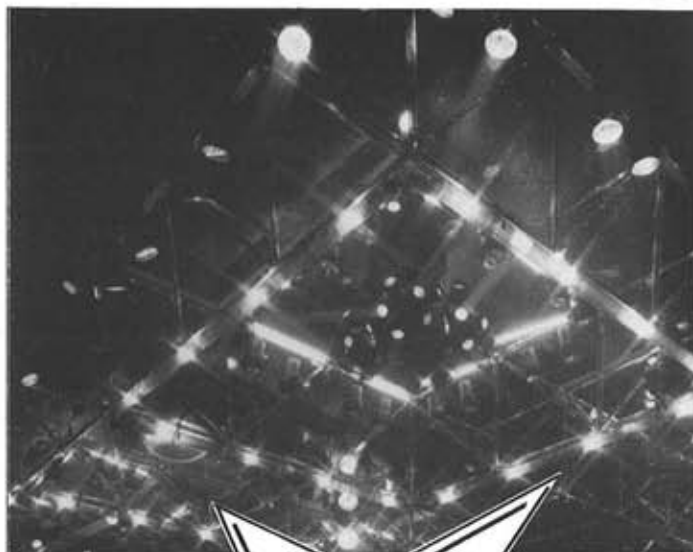
"Our first major job was at Close Encounters in Limerick, a £30,000 scheme back in 1982. That came about through my friendship with Tony Johnston who was secretary of the Discotheque Owners Association in Eire. We did at least ten Irish installations over the next couple of years."

Then, in 1984, LSD did its first job for Whitbreads, whose Aureon Entertainments is now the company's major client. "We've been involved one way or another in 38 of their clubs around the country - carrying out everything from a minor refurbishment to a major re-fit, working closely with such design groups as Reflex Interiors, Trevor Stone Associates and Mick Gibson Design."

One of the more recent projects has been the 1,000 capacity Coliseum in Luton, with a £40,000 budget for a complete re-launch of the venue under its new name - its previous incarnations having been Caesars Palace, Sands, and the Tropicana Beach.

Dick does not believe in hi-tec moving rigs but uses a lot of chrome and mirror on his ceilings. "It makes the lighting very flexible. You can colour-wash chrome to any colour you wish. If a ceiling is black then it is always going to be black. We have our own contract cleaners to keep the chrome and the mirrors sparkling - it's just one aspect of our on-going maintenance service.

"The heart of an LSD scheme is always a Light Processor controller. Instead of building a lighting system and then trying to find a controller that can cope, we build the lighting around the controller - and the Light Processor range has consequently been evolved to cope with the dictates of what we want to be able to use. Light Processors are designed both to suit the lighting designer and to be easily worked by a light jockey. They are simple and compact but offer a comprehensive range of facilities."



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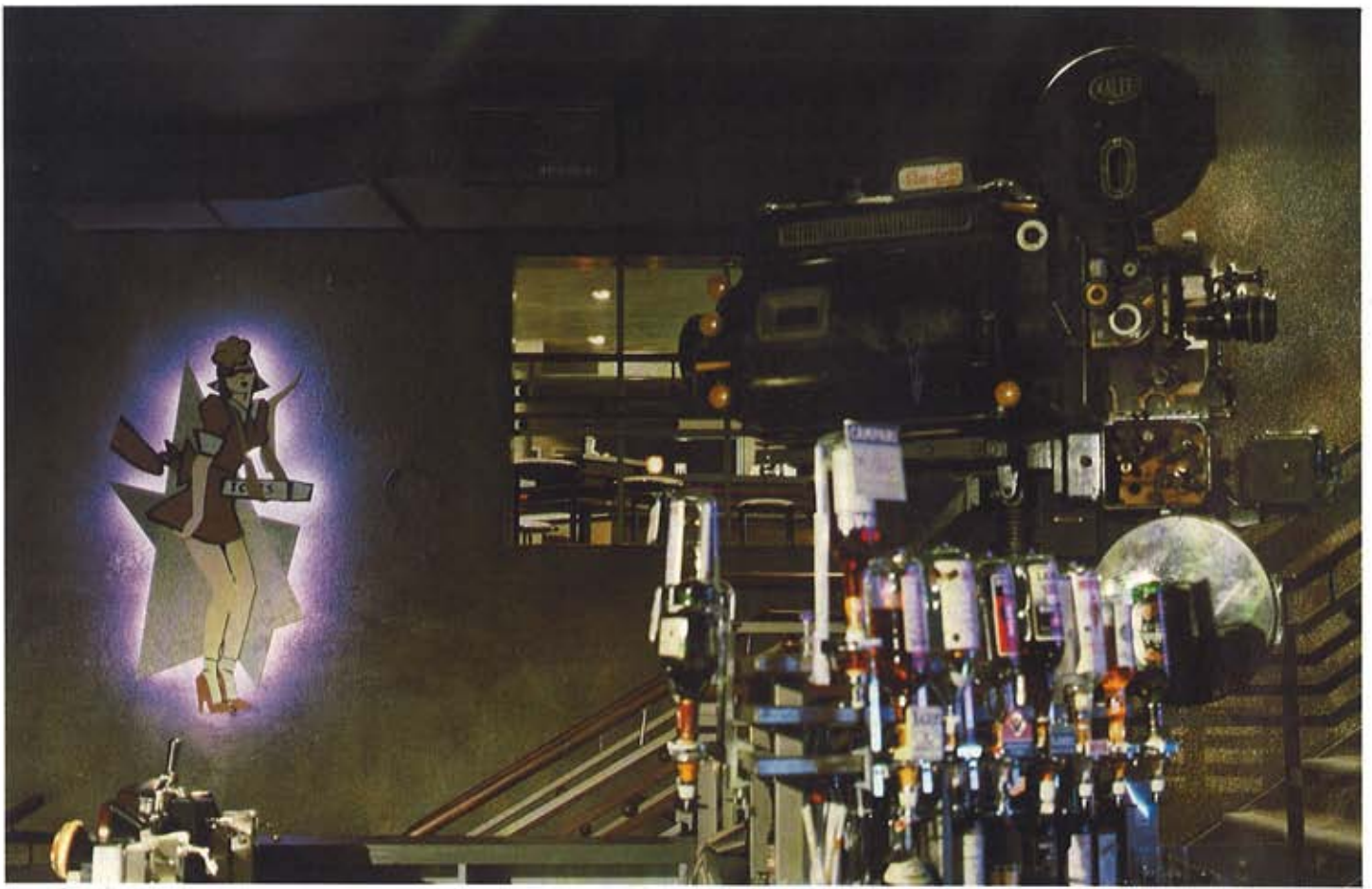
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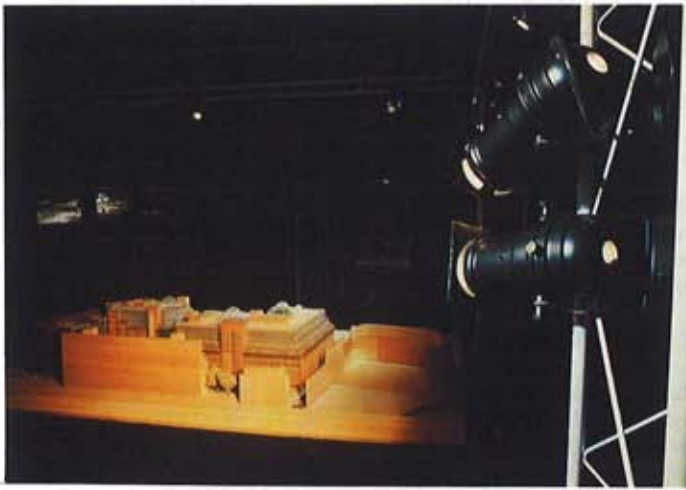




Violet Milkshake, a thirties-style usherette, provides the graphic identity for 'The News', recently converted from the old News Cinema in City Square, Leeds. The specially designed relief motif is back lit from a neon source, and appears four times within the venue. An even bolder creative stroke was to feature two of the old cinema projectors, one of which is shown above with the back bar fittings. The design was by Bulldog Design Limited of Horsforth, Leeds, who specialise in club, hotel, and pub schemes. Other projects recently brought to fruition include Mr. B's at Weston-super-Mare in Somerset, and Buddies at Broughty Ferry.



Custom-built light bars at Mr. Smith's in Warrington are moved by means of Origa pneumatic cylinders, and controlled by a purpose-built control system. The complete scheme was designed by Graham Barron for Satel, with rigging by Astralloy, lifting by Dagar, sound by Abacus, lighting by Satel and installation by Action Light. Current projects being worked on by Graham Barron of Satel include The Quadrant at Bootle, and The Carlton in Liverpool.



Theatre Projects - a miniature theatre light rig lights an architectural model.



Midnight Blues at the newly re-opened Grand Hotel, Brighton. Design was by Michael Sassoon Associates and installation by Stretton Sound.



Dick Carrier at 'Easy Street', Croydon - a "chrome on mirror" scheme for Aureon Entertainments.



Malham Limited - the Frontier Club, Batley.

Malham - Surprises in store from the Masters of the Massive

Massive, custom-designed centrepieces have become the acknowledged speciality of South London based Malham Limited.

But, says James Eynons, son of company boss Dennis Eynons and the man responsible for Malham's adventurous designs: "The interest we have generated has always outweighed our capacity to produce."

As a solution, James is now spending a lot of research and development time in trying to modify what has, till now, definitely been a "one-off" type fitting into a more practical form. "When Peter Stringfellow opened the Hippodrome, his lighting got incredible publicity and set in motion a strong fashion for massive centrepieces, just as, with Stringfellow's, he had earlier started the fashion for stainless steel ceilings and lashings of chrome. There was a real trend for operators of even the smallest clubs to ask not just for a lighting scheme but for ambitious moving systems.

"But while club owners have been impressed by these huge centrepieces, they have been a bit reluctant to spend an awful lot of money on one light fitting enclosed in a 12 foot circle. What they are now looking for is smaller versions of the same sort of thing and it has to be said that the effect of three much smaller, simpler, pieces built into a scheme will be more versatile and more exciting than the effect of just one complex

monster fitting.

"In practical terms too it will offer far better value for money as we will be able to ship the pieces in fully assembled form rather than having to transport them in bits and make them up on site.

"So we are taking our Centaur and looking at ways of making it simpler, cheaper, smaller and - very important - far less heavy and cumbersome. That way we will obviate the usual worries of club owners that their lighting rig might actually pull the ceiling down!"

"Once we get it right, we will be able to build them on a steady production basis rather than just to order. We can then hold them in stock and actually go out and sell them.

"Peter Stringfellow's Hippodrome rig had to be big because the place itself is so big, but it led to a lot of people going over the top - now they are being more practical about it.

"We've also been thinking seriously of building moving rigs and offering the structure without any lighting attached at all so that owners or installers could put their own lights onto it. We can fit stainless steel trays and have made the appropriate tooling so that the rig can be engineered to accept Pulsar, SIS or Light Engineering fittings.

"The flexibility of this means that people

buying one of our rigs don't have to throw away their existing lighting fittings. They can be added to the rig, infilling whatever they want us to provide and creating an integrated system, all of which can be wired up on the ground for ease of installation. That way, the whole thing ends up in metal trunking."

Another new design on the drawing board is oversize art deco style lights which promise to be really stunning. "We are also doing a lot of work on up-grading our control system and we are already installing fully computerised lighting systems." One recent such project has been at the huge Frontier Club at Batley in Yorkshire.

"Currently we are also doing a lot of lighting installations at ice rinks. We did a lot of this work years ago at Top Rank rinks - disco music has always been a large part of the ice skating scene - but the rinks we are working on now are brand new, council-operated ventures. At the moment we are looking after projects at Romford and Chelmsford.

"There are a whole new set of problems to cope with. We are having to use a lot of stainless steel, not just because it looks good but because, given the damp atmosphere, rusting is a great problem.

"These new rinks have a skylight 140 feet long by 6 feet wide running the length of the building which means that, unless it is dark outside, it's difficult to make the disco-style lighting look effective, and there's an added problem in that the ice itself - and that's 140 feet by 40 feet - reflects pinspots straight back up!"

Roger St. Pierre

Rick Marston - Who Pays the Disco Man?

As successful retail discotheque equipment traders for the past 18 years, Disco Supplies of Chadwell Heath in Essex found installations a natural extension of their existing business.

Richard Marston, who runs the business with partner Bill Platten and a close-knit and highly experienced team, takes up the story: "Bill and myself were both working deejays for many years and we used to be proud of the on-the-road knowledge that experience gave us, but the discotheque world has moved on enormously since then. Now, though, it's our day-to-day contact with equipment as retailers which gives us an edge over other designers who often simply choose gear from out of a catalogue.

"As retailers selling equipment in bulk we soon get to know which items are reliable, which give value for money and so on. We have first-hand knowledge so we know exactly how different effects should be installed and used.

"There are lots of designers who know what kind of scheme they want to end up with but don't really know how best to achieve it.

"From an initial enquiry, we will set up a first site meeting, get to know the client, what he is trying to achieve and, very important, the kind of budget he has available. Once we've found out his roof limit we can then start planning a suitable scheme to match his requirements with his finances.

"We do quite a lot of low-budget work for

the breweries - fun pubs rather than out-and-out discotheques. The bigger schemes tend to be for private operators.

"Like lots of design and installation companies we find the biggest problem can too often lie not with designing and completing a successful scheme, but in securing our money at the end of the day. It's understandable that a client wants to hold back some of the money for a time to allow for snagging, but these days a lot of club owners take liberties and reek havoc with your cashflow. It's as if they are only willing to pay up once they know they are packing extra people into the club. Working for the breweries is much better, even if their schemes are modest, because even if it takes a little time, as with all big companies, you know for certain you will be paid at the end of the day."

In designing a scheme, Rick likes to work from the top right on down to the dance-floor itself.

"A lot of designers only concern themselves with what goes on to the ceiling but we believe the dance-floor should be an integral part of the scheme," said Rick. "We've built a good reputation with our custom-built stainless steel floors and we also use SGM illuminated floors a lot."

Disco Supplies' biggest installation scheme in money terms came to £38,000, but that was down to the client specifying expensive equipment rather than to it being a particularly large installation.

"We treat each new job as a new challenge, and try to give each venue an individual touch rather than having a 'trade mark' design style which we use on every job," he added.

Recent work has included major installations at Sorrell's on London's Commercial Road, at Reflections in Lowestoft, and at Courtlands, a squash and social club in Southend.

Roger St. Pierre

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New Role for the Mechanics

Burnley's Mechanics' Institute re-opens as an Arts and Entertainment Centre

Until quite recently the residents of Burnley in Lancashire had become accustomed to the deteriorating state of a large Victorian adjunct to their Town Hall. Now they can share the amenities offered by its award-winning renovation, thanks to an imaginative scheme created by the local authority.

The Mechanics' Institute opened in 1855, and was one of a number of similar centres throughout the North provided to improve the education and expertise among the expanding workforce. In the interim period it had been a ballroom, a cabaret, gaming and bingo club before closing in 1979. Although some of these uses were perhaps less attractive than others, they at least ensured the premises were to some degree maintained.

The renovation has been planned entirely by the local authority's architects in conjunction with the writer as consultant. Apart from the main auditorium, the Institute offers two large meeting rooms in addition to spacious foyers and bars and the lower ground floor will be leased to the Mid-Pennine Arts Association for their offices, workshops and galleries.

The main auditorium comprises 400 retractable seats facing a proscenium 28' x 14' with a 23' deep stage. Listing restrictions meant that the overall building envelope could not be changed and therefore flying height and wing space are restricted - although they are an improvement compared to the old



Burnley Mechanics' Arts and Entertainment Centre was re-opened in two phases in August and September this year.

building - and the auditorium now possesses three useful lighting catwalks, one of which also faces into the hall for theatre-in-the-round work.

It would be easy to respond to the Mechanics' by resurrecting the mechanical groans usually associated with multi-purpose halls, and of course the venue does have its share of compromises. As the consultant specifically responsible for the technical equipment layout and design I am only too aware that the hindsight of 'those who come in later' is the perfect science, and takes no account of either budget limitations or of an uncompromising fire officer.

Graham Walne

Lighting Installation:

- 120 way Strand M24 with FX wing
- 12 500w Coda/3 floods
- 16 650w Prelude 16/30 profiles
- 10 650w Prelude fresnels
- 30 1kw Harmony PC spots
- 10 1kw Silhouette/15 profiles
- 10 1kw Silhouette PC spots
- 2 Solo follow spots
- 14 Semaphore colour changers

The installation includes independent circuits, colour change outlets and additional power for visiting companies. Playlight Limited supplied the equipment, and Hadens were responsible for the electrical contract.

Sound Installation:

- 1 Toa 16/4 mixer
- 1 amplifier/equalisation rack
- 1 Electrovoice centre cluster
- TL806D low frequency system
- HP420 long throw HF horn
- HP940 short throw HF horn
- 2 Toa 3-way portable speakers for fx/foldback
- 1 Revox lo speed tape deck
- 1 Teac cassette deck
- 2 Fostex monitor speakers
- 1 pair AKG K130 headphones
- 4 PL88L dynamic cardioid mics with stands
- 2 PL6 supercardioid mics with stands
- 1 24 way xlr control room patch bay
- 8 single loudspeaker outlets for stage
- 1 4-way loudspeaker outlet for bridge
- 1 10-way mic socket stage box

- 1 10-way mic socket orchestra box
- 1 4-way mic socket bridge box

The equipment was supplied and installed by Page One, and the electrical contract was by Hadens.

Communications:

- 1 SM console with paging to foh/backstage intercom outlets
- orchestra cue light control
- 1 show relay mic
- 23 3w cabinet speakers for foh/backstage
- 6 BP111/smh210 intercom belt/heads
- 19 combined facilities panels incorporating intercom and CCTV outlets

The equipment was supplied and installed by Page One, and the electrical contract was by Hadens.

Stage Equipment and Drapes:

- 24 9m alloy hand operated suspension barrels
- 6 internally wired lighting barrels, 2 at the sides
- 1 intermediate tab track handworked with satin tabs
- 1 rear banjo track handworked with black-grey tabs
- 4 sets black borders and legs

The equipment was supplied and installed by ASG.

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Light + Sound Show 87

With visitor registrations to the 1986 Show totalling over 5300, a big increase on previous events, the committee of PLASA has given exhibition organiser David Street an early go-ahead to take bookings for the 1987 Light and Sound Show. Members of the Association will have first option of taking the same site, whether shell or site only, as they had for the 1986 Show - provided the necessary order is placed and deposit received by December 31st this year. For the first two weeks of January, members will then have the option of taking any site still available. From January 15th onwards, the plan will be open to all comers.

1986 exhibitors can expect a mailing or telephone call from the organiser during November. David Street told L+SI that he expects a very quick response, and asks member exhibitors in particular to get in touch with him well before the deadline to avoid disappointment.

The Show moves a little away from the summer rush next year, with the dates at Novotel moving into September proper, from the 6th to 9th. A central sound source will be available for any exhibitor requiring it, and this service will be provided free of charge.

To ease entry procedures, and provide less of a burden for the PLASA treasurer, there will be no charge for visitors registering in advance, but the same £3 charge will apply to those registering on the day.

Contact number for David Street is 01-994 6477, and for the PLASA general secretary Roger Saunders (08956) 30718.

The Last Sonimag? Freddie Lloyd reports

The hottest, smokiest, sweatiest, and longest exhibition of them all on the international club exhibition circuit is going out of favour with the Spanish industry. The big boys of Kremesa, Eurolux and Satel expressed their doubts on its viability against the newly-launched Expomusica in Madrid which first saw the light of day in 1984.

The 24th annual Sonimag was still as big and healthy as ever, but really attracts the wrong audience for the discotheque business to what is essentially a hi-fi and video show.

In many ways it will be a shame to lose the event from our calendar, but there is certainly a state of confusion as to what is happening in the Spanish market place. The entire 'business' consisted of the aforementioned Kremesa, Bose, Satel, and Polycris, with large stands and an unholy alliance of Kreluz and Eurolux sharing another. Celco, with Keith Dale at the helm, was one of the only Brits to actually have a stand.

With the notable exception of Kremesa, everyone claimed business was down, blaming it on everything from the Common Market to bombs on Spanish beaches. Suffice to say that the first Sonimag I attended in 1981 had a far bigger discotheque presence than this year's show. Polycris were so disenchanted, evidently in the main by the quality of the attendance, that they disappeared off home leaving the stand manned by a couple of young ladies.

Bose had a very novel inflatable object looking very much like a huge bunch of bananas suspended over the stand area. It was extremely effective until the air compressor failed, draping large amounts of plastic sheet over their sound equipment.

Kremesa were busy launching 'Alien' on the unsuspecting world. It is their latest effect, and priced at around 1,900,000 pesetas - or £10,000 in the UK.

Paul Dodds of Avitec was doing sterling service with a laser show and Tod Wells looked like he

Exhibition Diary

Discotec/Hogatec

November 24-28, 1986.
Dusseldorf Messe, West Germany.
Dusseldorf Trade Fairs, 6 Albemarle St. London W1X 3HF.
Telephone: 01-493 3893.

Nightclub & Bar EXPO

January 5-7, 1987.
Bally's Grand Hotel, Las Vegas, USA.
NightClub and Bar Magazine,
305 W. Jackson Avenue, Oxford, Mississippi 38655.
Telephone: (601) 236 5510.

Frankfurt Music Fair

February 7-11, 1987.
Frankfurt Fair Centre, Frankfurt, West Germany.
UK Representatives: Collins and Endres,
18 Golden Square, London W1R 3AG.
Telephone: 01-734 0543.

ABTT Trade Show

March 5-7, 1987.
Riverside Studios, London.
ABTT, 4 Great Pulteney Street, London W1R 3DF.
Telephone: 01-434 3901.

SIEL 87

March 28 or 29 - April 3, 1987.
Porte de Versailles, Paris, France.
Organisation: Bernard Becker Promotion,
161 Boulevard Lefebvre, 75025 Paris.
Telephone: (14) 533 74 50.

Pub, Club and Leisure Show

April 7-9, 1987.
Olympia 2, London.
Angex Ltd., Europa House, St. Matthew Street,
London SW1P 2JT.
Telephone: 01-222 9341.

Nightclub & Bar EXPO

April 13-15, 1987.
Georgia International Convention Center,
Holiday Inn Crown Plaza Hotel, Atlanta, USA.
Nightclub and Bar Magazine,
305 W. Jackson Avenue, Oxford, Mississippi 38655.
Telephone: (601) 236 5510.

USITT Conference/Exhibition

April 22-25, 1987.
Hyatt Regency, Minneapolis.
Show Manager: Richard James, 486 Fullerton
Court, San Jose, CA 95111.
Telephone: (408) 225 6736.
National Office: 330 West 42 Street, Suite 1702,
New York NY 10036.
Telephone: (212) 563 5551.

Expo Musica, Madrid

April 22-26, 1987.
Madrid, Spain.
Organised by IFEMA (Institucion Ferial de Madrid), Avda
de Portugal, s/n Casa de Campo, 28011 Madrid 11011.
Telephone: Madrid 470 10 14.

AUDIO VISUAL 87

April 27-30, 1987.
Wembley Conference Centre, London.
EMAP/MacLaren Exhibitions Ltd.
PO Box 138, Token House, 79-81 High Street,
Croydon CR9 3SS.
Telephone: 01-688 7788.

SIB Rimini

May 4-8, 1987.
Rimini, Italy.
Ente Autonomo Fiera Di Rimini,
PO Box 300, 47037 Rimini, Italy.
Telephone: 0541/773553.
UK enquiries: Disco & Club Trade International.
Telephone: 01-278 3591.

Lighting World 5

May 11-13, 1987.
New York.
National Expositions Company Inc.
49 West 38 Street, Suite 12a, New York NY 10018.
Telephone: (212) 391 9111.

Sound Comm 87

May 19-21, 1987.
The Business Design Centre, Islington, London.
Organisers: Batiste Publications Ltd.
Pembroke House, Campsbourne Road, Hornsey, N8 7PE.
Telephone: 01-340 3291.
(Assn. of Sound and Communications Engineers).

NAMM Exposition

June 27-30, 1987.
McCormick Place, Chicago, USA.
Larry R. Linkin, 500 N. Michigan Avenue,
Chicago IL 60611, USA.

PLASA Light and Sound Show

September 6-9, 1987.
Novotel, Hammersmith, London.
Exhibition Bookings: David Street,
Telephone: 01-994 6477.
General Enquiries: PLASA general secretary,
Roger Saunders, 1 West Ruislip Station,
Ruislip, Middlesex.
Telephone: (08956) 30718.



The Bose stand at Sonimag, Barcelona.

was making money. Pulsar's Ken Sewell looked hot in his suit, and everybody was choking on the vast amount of smoke that seems to be essential

to display Spanish product.

If it wasn't for the sun, the booze, and the lovely ladies it wouldn't be worth going - or would it?

ON TOUR

Keith Dale

**Carlona Forcer talks to
lighting designer**

Andy Liddle

How did you enter the field of lighting design?

When I was at school I wanted to work in the theatre, so during a careers visit to the Haymarket Theatre in Leicester I asked the chief electrician for a job. Two weeks later I started as a casual on strikes and fit ups on Saturday nights through to Sunday.

When I left school I started an apprenticeship at the Ministry of Defence as a radar technician but I didn't enjoy it. I was doing a few small shows with about a dozen old theatre lights which I had bought, along with a simple lighting desk. Eventually they became more important to me than my apprenticeship, and I chucked my job in and spent the next 14 months pestering the hell out of hire companies to give me a job.

What was your first break into the business?

In 1981, when I was 18, Light and Sound Design in Birmingham gave me a job as lighting designer for 'New Order'. So from working as a casual in the theatre I went straight in at the deep end. It was absolute chaos! For example, our European tour itinerary consisted of a scrap of paper with the first address on it which was given to the truck driver. The organisation is a lot better now!

For Light and Sound Design I also crewed for UB40, The Style Council, and a couple of heavy metal bands. I learnt a lot this way, but I must have been a real pain because I was quite young and I thought I knew it all. I also did a couple of tours working for Tasco.

Tell me about your designs for New Order.

The original brief for the New Order set was for blue light, broken white light, and subtle cues. There are a lot of 240 volt lamps (CP 60's) and some Raylights, plenty of profiles with gobos, and quite a lot of lamps that you wouldn't normally see on a touring lighting system. I use many individual lamps on one channel, which I think is becoming a popular thing to do because it makes your system much more flexible.

I don't find the brief of mainly blue lighting restricting because there are more shades of blue than any other colour. I once had on one system 27 shades of blue ranging from steel to dark urban blue. I love the combination of amber against a deep blue wash - in fact there's a bit of amber sneaking into this show. My pet hate is primary green - I can't stand it.

Is this going to be a big tour?

No. New Order don't go in for big British tours, but we are touring the USA for two months before Christmas. We had four dates in Scotland about three weeks ago, and now we're doing four more. New Order are only just starting to push themselves.

What shows have you seen and particularly liked?

I've never seen a show where there wasn't something I found interesting. I've worked with a lot of designers who haven't done anything for me, though. I was impressed with Jane Spiers' design for the recent Depeche Mode tour. We supported them at a recent show in Copenhagen and it was brilliant. Years ago I saw an early Thompson Twins show and the designer's use of gobos really impressed and influenced me.



'New Order' at the Royal Albert Hall on October 6th this year - lighting design Andy Liddle.

Is there any artist you would like to design for?

Bowie - but then doesn't everyone? Plus the Bunneymen, and come to that everyone whose music I really like.

Have you worked on any other forms of lighting design?

Yes, I've been involved in a few different things. Earlier this year I worked on the Kompass Rally 1987 Sales Conference at Blackpool for Mainstage Lighting.

How about film or video work?

I've been involved with a small amount of video work, mainly with New Order. I haven't ever really had the opportunity to have a real go at it, but I hope some day I will. New Order had a film made by Jonathan Demmy (who made the Talking Heads film 'Stop Making Sense') for their single 'Perfect Kiss', and there was this elderly French guy directing the lighting who used to work with Jean Cocteau. He was amazing to watch.

I like the atmospheric lighting of some of the movies like 'Blade Runner' and 'Aliens'.

How about a return to the theatre?

I would like to take on some theatrical work, but to be honest it takes years to build a reputation in



Andy Liddle - pestered the hell out of hire companies to give him a job.

theatre and even longer to make any money. It really is a labour of love. I like working with bands and I feel that I am now coming to the stage where all my experiences and influences are coming together, and I look forward to creating more designs in this field.

Equipment on Tour

QUEEN

1986 European Tour

Information provided by Zenith Lighting and Theatre Projects.

Control

1 x Avolites QM 180 console
5 x Avolites 72 way dimmer rack
2 x Triple Remote 75m control multicore
5 x Mains run at 200ft: each 5 wire 300a

Lamps

730 x Par Can Raylights mounted on bars
131 x single Raylights
68 x ACL's
16 x Groundrow 4 cell (1kw) units
4 x 6 lamp Par 64 Maxi Brutes
250 x Stage multicore cables
8 x Short throw truss-mounted HMI Pani 1200w
6 x Front follow spots (Super Troupers)

Structure and Rigging

22 x 2.4m Telestage Mk3 truss sections

4 x 1.5m Telestage Mk3 truss sections
6 x Mini beams (Slick Systems) 24ft
4 x Half ton chain motors
46 x One ton chain motors
1 x Avolites computer motor control system - 30 way
6 x Regular motor controllers, 4 way + 6 way
2 x Genie Super Towers
320 x 3 ton shackles
240 x 2 ton shackles

Varilites

30 Active + 3 spare, with appropriate control

Miscellaneous

55 x Colourmag (LSD) colour changers + control
24 x Intercom ways + spares (spare master)

Credits

Lighting Designer **Roy Bennett**
Lighting Director **Simon Tutchener**
Pre Production Co-ordinator **Brian Croft**
Production manager **Jon Cadbury**
Lighting Technicians **Steve Moles, Tim Phillips, Gerry Mott, Bob Batty, Guy Forrester, Dave Hill (Varilites)**

Phantom Flickers

Cover Story

Re-creating the gas-lit atmosphere of the 1870's at 'Phantom of the Opera'

John Offord talks to David Morgan of Action Lighting

Within the reviews of London's latest Lloyd-Webber musical 'Phantom of the Opera' at Her Majesty's Theatre was talk of spectacular stage effects - a thousand candles arising from a subterranean lake and a 'gas lit' re-creation of the Paris Opera House in 1870's.

An investigation as to how the effects were created took us via lighting designer Andrew Bridge and his office at Imagination to the workshops and warehouse of Action Lighting in West London. Here, tucked away behind the enormous stocks of electric lamps, we found an Aladdin's cave of lighting effects. Most of these have been developed from an original idea by Robert Clutterham when he was designer at the old Marlowe Theatre in Canterbury. About five years ago he created a flickering candle effect using a PP3 battery and an electronic timer, switching power between two small bulbs moulded in resin to the shape of a candle flame.

Soon afterwards, Robert Clutterham was introduced to David Morgan who had formed Action Lighting with the object of using his long experience in R and D and photographic lamp marketing at Osram GEC to sell tailor-made packages of lighting effects, starcloths and any other needs of lighting or scenic designers that could be created by using electric lamps.

When Clutterham left the UK to work overseas for three years, a deal was struck for Action Lighting to manufacture and market the concept of the electronic flicker candle.

"After some simple development and production tooling the product was launched at the 1981 ABTT Trade Show at the Round House where it was commended by the committee," explained David Morgan. "The first major order was from English National Opera who took a substantial number for their production of 'Tosca' at the London Coliseum. After this success the Royal Opera House Covent Garden placed orders for a programme to convert existing practicals in chandeliers, flambards, and various walk-on effects. Over the intervening years thousands of components and fully made practicals have been supplied to theatre companies around the world."

The story now moves to the summer of this year when the lighting design team for Phantom called a meeting at Imagination's offices. This was to discuss the need to create the effect of 1860-1890 gas lighting and an effect for candles to arise through stage traps and emerge on stage as though from the depth of a mist-covered subterranean lake. "It is this latter scene which has drawn a spontaneous ovation from audiences as the Phantom pilots Christine, his chosen protégé, across the lake through 'a thousand' flickering candles to the ethereal sound of Lloyd-Webber's music," said David Morgan.

Within a week of the first meeting a prototype candle flame, more powerful than previous models, and incorporating a small permanent light source, was created by



David Morgan (left) discusses final stages of development of the Phantom of the Opera's gas flame effect with Christopher Clark.



The flickering candle in a hurricane lamp is one of many standard products available from Action Lighting that incorporates the company's electronic flicker candle effect.

Action Lighting's technician, Christopher Clark and was successfully demonstrated to production electricians Howard Eaton and Mike Odam. "With the easy part over, the next requirement from Andrew Bridge was for a gas flame effect to stand in silhouette from scenic creations of theatre boxes at the Paris Opera House in the period concerned. Many hours later a casual visitor was asked the question, 'What is it that you see in the far corner?' He pondered carefully, and replied: 'a bunsen burner'. An hour later a delivery van driver replied to the same question with the answer 'a gas flame'. Then, and only then, was 'gas flame Mark IV' considered fit to submit to Andrew Bridge for inspection. Without further modification, approval was given, and the units, together with attendant power supplies, were made into practical effects."

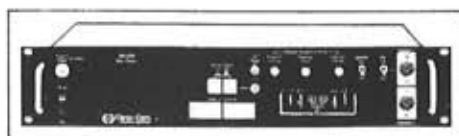
Action Lighting's involvement with Phantom did not end here, however, for whilst

the main lighting rig was supplied by Robert Luff Theatrical Hire, a daily and sometimes hourly delivery service of all the associated equipment such as lamps, plugs, connectors, cables, fuses, and terminals were being supplied by the sales side of the organisation. Robust, low voltage lighting was suggested and supplied for the crashing chandelier, and small dichroic reflector lamps for other on-stage effects.

As a tailpiece, during the week of previews, producer Cameron Mackintosh asked Newman Advertising to make the flambards and lanterns mounted outside the building pulse with light in the manner of a gas flame. Take a walk down London's Haymarket and you'll see the result: Action Lighting's gas flames flickering - whatever the wind and weather.

The future? "Well how about a 10,000 bulb finale for 'High Society' - in three colours, and with a 27 circuit control?"

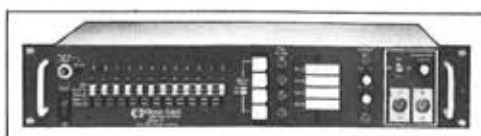
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People . . .

After nearly six years with Optikinetics, managing director **Colin Freeman** has resigned from the company. He told L+SI that he was taking "a bit of a break to consider the possibilities for the future". He definitely hoped to maintain an association with the industry.

Back at base, **Neil Rice** and **Phil Bruncker** will widen their responsibilities to cover Colin's previous area of operations, and sales manager **Julie Garton** will also pick up a larger share of the action on UK sales.

Peter Wynne Wilson, design engineer for Panchan informed us that following the recent departure of **Peter Roberts** from the company, **Adam Dredzen** is now handling UK and export sales.

Samuelson Lighting Limited, the major film and television lighting hire organisation, has announced that TV client liaison manager **Daryl Vaughan** is to become a director of the company.

Vaughan joined Samuelson in 1984 from Rank Strand, where he spent 18 months in the studio lighting UK sales department. Since his arrival, Samuelson's has significantly increased its share of the television market, and with a number of projects on hand both for the BBC and for independent TV companies such as LWT, looks set to gain as high a reputation in television as it currently enjoys in the film industry. "Over the last two years Daryl Vaughan has contributed enormously to the success of the company," said managing director **Graham Anderson**.

Mick Anderson has joined the Entec team as PA/Sound manager. Mick has been with Concert Sound for the past four years, and was responsible for the production and running of all rigs. He has vast experience 'on the road' as an engineer, tour manager, back line, etc. and has looked after such acts as Tina Turner, Dire Straits, and Paul Young.

We are (reliably?) informed that the small but perfectly made **Hughie Leslie** has deliberately

"disinformed" people with various news about buy-outs and take-overs of Donmar with the sole purpose of attracting invitations to lunches from prospective purchasers anxious to get at the truth, and put themselves in the running.

It is certainly **not** true that Leslie commandeered **James Bishop's** personal Zero 88 Mercury control, scooped at the recent PLASA Show. It's a well known fact that Hughie Leslie hates discos, and anything to do with them. It is true that staff at Donmar sent Leslie hot foot off to see the PLASA Show at Hammersmith the day after it was all over.



Daryl Vaughan.

David Catterall of Zero 88 had his car stolen and driven into the front window of a jeweller's in Manchester recently. Nothing was stolen from the shop, but what did take the criminals' fancy was the lighting equipment in the car. "Show's they had good taste," said sales director **Freddie Lloyd**.

Mark Sutton Vane, laser artist at the Laserium in the London Planetarium at Madame Tussaud's has reported to L+SI that a major programme of re-equipment and expansion is due to commence, and continue through the winter period. Early news is that a major presentation of spectacular proportions will be taking place in the new year when the equipment has been commissioned.

The Laserium used to be run by Mark for Laser Images Inc. It is now fully owned, and operated, by Madame Tussaud's, with Mark staying in charge.

Club and discotheque designer **Norman Gray** has moved from Chelmsford in Essex to 22 Newbridge Road, Weston, Bath, Avon BA1 3JZ. His most recent (and acclaimed) project was Sweetings in Bedford.

The short join-up of the resources of **Nick Mobsby's** Eurolight memory lighting control business and **Mike Sweetland's** MSL operation has come to an end. Although the two principals will still work as associates - "the two sides of the business just didn't fit," Sweetland told L+SI.

MSL's Manchester operation will remain the same, but considerable effort is being put into the London end - the 'Theatre Projects' Shop in Mercer Street. "We will be expanding the filter side in Covent Garden, and everything that goes with it," Mike Sweetland explained. "We have the largest filter stock in Europe, and intend to build the stocks up even further. We have also brought back lighting stencils, both in London and Manchester". MSL has also become a North of England agent for Le Maitre products.

Nick Mobsby told L+SI that since the restructuring, Eurolight Limited have now moved into a new purpose built factory at Feltham Middlesex (see separate story).

EQUIPMENT *News*

Arrival of the Alien

Kremesa's Alien is due to go into production early in 1987, reports Avitec's Tony Kingsley. The unit spins eccentrically (i.e. at a preset angle) with four sets of external Par 36 50 watt Spotlux lamps, with the bottom set able to wave back and forward through 45°.

Internal lamps comprise three 500 watt quartz (in three colours), 2 x 500 watt quartz lamps plus one 100 watt quartz lamp, and also in the internal section are two giant strobes and twenty ministrobes. A total of eight motors are switched by the comprehensive controller, which also gives full control of the various lighting circuits.

The Alien is designed to be supplied complete with Kremesa's own telescopic crane unit, which can move the effect up and down by a full three metres. Diameter is 1280mm, with a drop of 630mm. Weight is 80 kg.

Full details will be available soon from Avitec Electronics (UK) Limited, 80/81 Walsworth Road, Hitchin, Herts SG4 9SX telephone (0462) 58961.

New Miniature Mics from Audilec

Southend-based Audilec Distribution has announced the launch of two highly versatile miniature condenser microphones from Audio Technica. They see the AT831a and the AT803a as major new additions to the sophisticated 800 Series range.

A special feature of the AT831a is its unidirectional (cardioid) pick-up pattern. While most miniature microphones respond equally to sounds from every direction, the AT831a rejects sounds from the sides and rear. This reduces noise, increases gain before feedback, and improves isolation in recording applications, say Audilec.

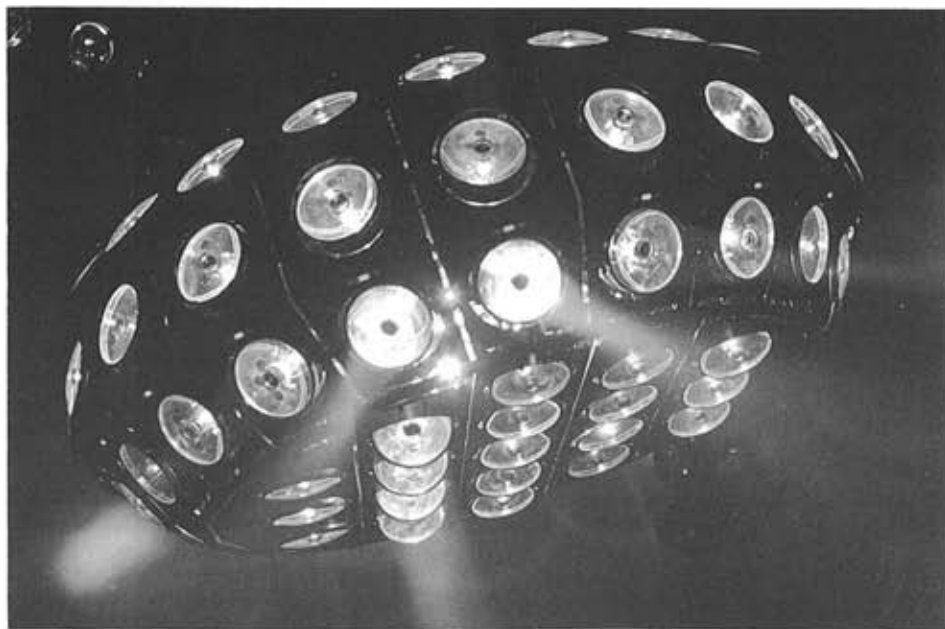


In addition to the standard clothing slip mounting, a musical instrument adaptor is included to attach the AT831a to an acoustic guitar or other instrument. The adaptor permits the microphone to be moved in and out to 'fine tune' the proximity effect for best musical balance.

Small in size, the AT803a gives excellent voice and music reproduction and is ideal for use in such locations as the lecture and conference room and the studio. The unusually flat, peak free response is subtly tailored to achieve natural yet articulate voice quality when used on tie, blouse or lapel.

Its response is said to be ideally suited for musical instrument pick-up, and its small size amplifies placement - in a drum kit for instance - while reducing visual distractions. Sound distortion is greatly reduced as the AT803a operates in sound pressure fields as intense as 130dB with no more than 1% THD.

For further information contact Audilec Distribution Limited, Unit 16, Laurence Industrial Estate, Eastwoodbury Lane, Southend-on-Sea, Essex telephone (0702) 511661.



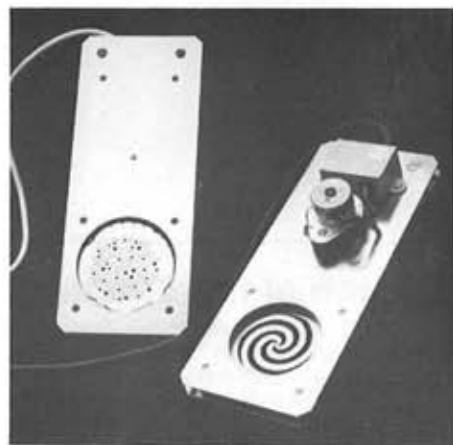
Kremesa's Alien - due to arrive January 1987.

A New Dimension for the Gobo

I recently designed a show which required a host of moving effects, and whilst the old 252/new Cadenza would have been quite acceptable it proved far too expensive for my budget. Remembering something I saw at the Eastbourne entertainment exhibition, Entertainment 84, I contacted DHA Lighting for help.

The result is a new range of moving effects produced by conventional gobos inserted into conventional profiles, but with the addition of a motorised animation wheel fitted into the colour runners. At present the unit fits Leko's, Sil 15 and 30's, T Spots, Harmony's and Cadenzas. The discs are made from etched stainless steel like the gobos, and currently available in 'break-up' form with five pattern options, some being more realistic, others more psychedelic. There is an option of 1, 2, 5 or 10 rpm motors, and all are fitted with reversing switches.

In my experience I would strongly advise using these effects in 2k's since the combination of gobo



DHA Lighting's new Gobo Rotator.

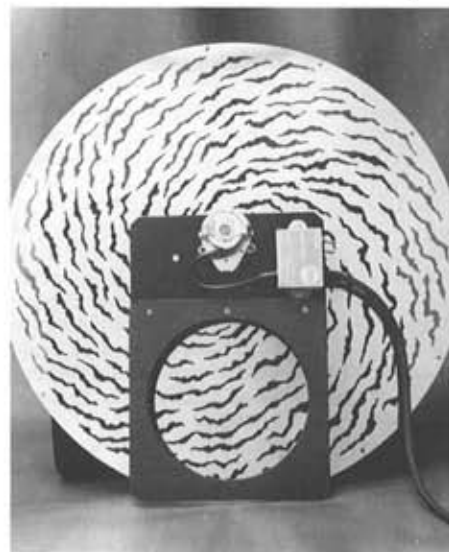
and disc tends to lose a lot of light. The really fascinating thing about them is that when inserted into a variable beam profile there appears to be no limit to the combinations of focusing (in some positions the effects even appear to change speed) and when used with broken pieces of colour (some of which can be attached to the disc itself) the overall effect is impressive.

Another similar product now being launched is the gobo rotator and again this accepts a standard gobo. Again, this looks impressive slightly out of focus with broken colour, and again there is a choice of motors.

A very important factor uniting all these effects is the price - around £150 - and the real advantage is that they fit standard available profiles.

For further information contact DHA Lighting Limited, 7 Bishops Terrace, London SE11 4UE telephone 01-582 3600.

Graham Walne



DHA Lighting's new Animation Disk.

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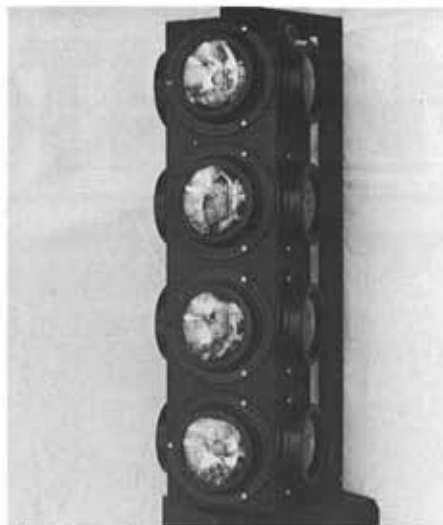
Another Jivelight Trio

The Jivelight 2.5kw Dimmer is suitable for resistive and inductive loads including neon. There are three colour neon indicators for visual status appraisal, and a flash button for instant full power. An upper limit preset provides for energy preservation, and the lower limit preset for setting minimum safe lighting levels. The unit meets BS800 for low interference levels, has a tamper-proof fuse on the front panel, and is designed for flush or surface mounting.

The CR16 Cylinder Rotator is a 16 x Par 36 lamp rotator for either horizontal mounting or floor mounting. It has a 40rpm standard speed with 60rpm available on special order. The toroidal transformer minimises overall weight, and the CR16 has a connector block type plug and socket for easy disconnection. The motor and lamp are separately wired.



Jivelight's 2.5kw dimmer.



The CR16 cylinder rotator.

The Jivelight Low Voltage Transformers are suitable for mounting in any situation, arrives in an attractive plastic-covered metal box, and meets BS415 on electrical safety. Type TX50 is for single 12v 50w lamps, and Type TX100 for two 12v 50w lamps. Both units have a tamper-proof 20mm external fuse, come with two metres of mains cable, and output is on an internal connector block.

For full details of all products contact Jivelight Limited, Greyhound House, 18 Greyhound Road, London W6 8NX telephone 01-381 0868.



The 12V 50w TX50 from Jivelight.

Launch of the Sceptre

Launched in London in mid-October, Eltec's 'Sceptre' is a full-facility memory lighting control system which has its own built-in keyboard and interface electronics. It requires connection to the BBC microcomputer solely to provide the processing power required; thereafter the BBC micro is not directly involved in the operation of the system, all system functions being invoked from the Sceptre keyboard.

The system can be divided into four basic sections. The 'Editor' section allows lighting arrangements to be built up, adjusted and recorded; the 'Playback' section is used to recall and replay recorded lighting arrangements; the 'Display' section puts system status information on the screen as required; and the 'Backup' section controls the remote storage of recorded information on floppy disc.

Up to 120 channels can be controlled, and there are 199 memories as standard. Disc storage of many entire shows on one disc means that access to hundreds of memories within seconds is possible. Two independent playbacks are used to control the total lighting intensity on stage at any time, giving great flexibility to the system, and allowing complex fades to be performed easily.

Manual overrides on each playback can be used to give instant control of the system output, or they may be used as manual playbacks which can be loaded from system memory. Lighting arrangements may be added or subtracted in either playback to form composite arrangements with a minimum of setting up time, and lighting changes may be speeded up or slowed down easily at the touch of a key. Pause, Continue and Cancel give the facility to halt and restart fades. If required,



The Sceptre, Eltec Drama Lighting's brand new brainchild.

the system can go back to the previous cue without the need for a long sequence of instructions. Complex sequences of lighting cues may be strung together such that an entire show can be replayed simply by pressing the Fade key on each cue line.

Blackouts are easily achieved at the touch of a key, over any specified time. In addition, the Blackout state may be programmed to be other than all channels at zero intensity. Comprehensive Display Modes offer 5 system displays through which any system status information can be examined. A programmable chaser is incorporated to enable defined sequences of lighting patterns to be performed automatically, to create a variety of special effects.

Up to nine different shows may be saved and loaded from disc. This gives a system capacity of almost 2000 memories without having to change disc, and full storage disc protection is provided to ensure shows are not accidentally overwritten.

Each channel may have its output limited to

Nexo PC Line

Nexo have just introduced a new range of loudspeaker units. Called the 'PC Line', they consist of three main cabinets, the PC115, PC212, and the PCSub. The two main units have horn loaded bass and highs with direct radiated mids while the sub unit has been computer optimised to give area reduction and low frequency response. These compact cabinets only require one amplifier channel per unit used in conjunction with a common PC Processor which enables two way operation incorporating the sub unit.

Featuring rigging points and provision for stands and brackets, the PC Line can handle 700 watts and give 133dB SPL @ 1w/1m. The PC Line which incorporates the same high qualities as Nexo's established Integrated and MSI systems have been designed for applications where space and budget are critical.

For further information call Bruno Wayte at Paul Farrah Sound on 01-549 1787.

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some maximum level, which can be of great use if lanterns are knocked out of focus or if a lantern has a dense colour filter, and so on. A manual control board may be used with the system as a manual playback should this be required, and its contents can be loaded into memory at the touch of a key.

Recorded memories may be mixed together to generate new lighting arrangements quickly and efficiently, and flexible editing means arrangements are easily programmed using assignment keys. 'And' and 'Thru' keys, along with incremental keys, allow rapid construction of the desired picture on stage.

The number of control channels is adjustable to 120, allowing extra equipment to be attached as available, or a reduced system to be created if required for small events. The system is expandable in multiples of 12 channels to 120, positive or negative output, either type being extremely simple to install.

A disc-based program allows any recorded show to be printed out for reference, and a help function gives a brief description of the function of any key and can be obtained instantly without disturbing any system function. An expansion port is provided to interface with remote keyboards, effects desks, rigging units, etc. Internal processing is to 24 bits resolution, with all critical functions interrupt driven to ensure that fades are accurately controlled, while the display is continually updated and the keyboard response appears instantaneous.

For full information and details of demonstrations in your area contact Eltec Drama Lighting Limited, Unit 2, Cain Valley Trading Estate, Station Road, LLanffyllin, Powys SY22 5DD telephone (06918) 48801.

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New from Soundcraft

Developed for touring and fixed installation sound reinforcement, Soundcraft's new Series 8000 console has evolved from the Series 800B, and includes new input/output and master modules, and is available in both front of house and stage monitor configurations.

The new input module offers the latest in input amplifier design (resulting in lower distortion and improved noise figures), full 4-band parametric equalisation, with switchable 'Q' (bandwidth), 8 individual auxiliary sends with each pair having a Pre-Off-Post fade switch. Individual 8-way routing is also featured, along with LEDs to indicate peak and signal presence.

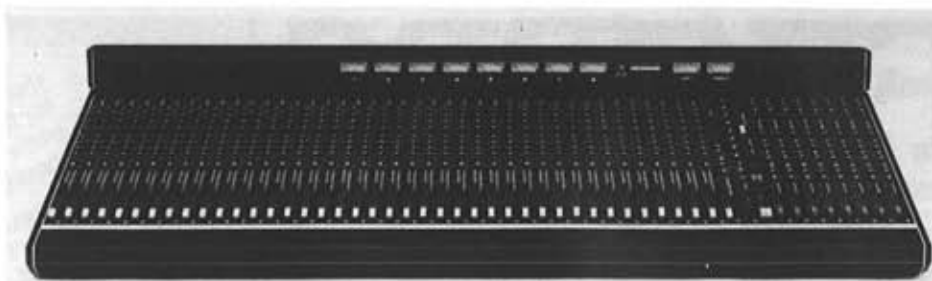
The Series 8000 offers the choice of the well established 8013 and 8016 Effects and Matrix outputs, and the 8014 Aux Master, all with new electronic design enhancements giving even better performance specifications. The monitor version is fitted with the familiar 8010 input modules.

The new Stereo Master will incorporate more comprehensive talk-back facilities than before, enabling the user to link the front of house and stage monitor desks and there is provision for front panel external microphones. There are two independent mix outputs on two pairs of linear faders. The second mix output can be derived from either Pre or Post main fader, so that independent house and recording signals can be derived. A headphone circuit for monitoring either of the stereo mixes and a cassette playback input also feature on the module.

Following the pattern of all new Soundcraft consoles, the Series 8000 will be produced in raven grey livery, and became available from the end of September in 24, 32 and 40 input channel frame sizes.

Launched by Soundcraft in June as an addition to the Series 200, the 200SR is a dedicated sound reinforcement console developed to complement the series 200B which was specifically designed for recording installations. The Series 200SR is ideal for small bands, clubs, and virtually any modest PA installation, as well as being highly suited as a component part of larger systems, say Soundcraft.

The console is available in 8, 16, 24 and 32 chan-



The new Series 8000 in the Soundcraft Performance Series - 40 channel version.



The Soundcraft Series 600 Patchbay.

nel rack mounting configurations, and will also be in the raven grey livery of Soundcraft's newer consoles.

The Series 200SR features separate microphone/line inputs (with phantom power for condenser microphones), 4 band equaliser, four auxiliary sends and routing to four output groups. The output section has four dedicated effects returns with equalisation which can be fed to the stereo mix via the associated group fader.

Also announced in June the development of the Series 600 Patchbay, configured for 8 to 16 track

recording, further extends the flexibility of the console in the recording studio market. The Patchbay gives better access to signal paths within the console and has allowed Soundcraft to expand the capabilities of the Series 600 to cope with 24 or even 32 track applications. This is made possible by the addition of extra monitor modules.

For full details on all products contact Soundcraft Electronics Limited, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, Herts WD6 5PZ telephone 01-207 5050.

Reference CD Player from Technics

The SL-P1200 reference CD player from Technics includes developments such as FF1 laser pick-up system, high resolution digital filter, and Class AA circuitry which is used here to isolate the voltage control amp from the current control amp. Freed from this load, the voltage control amp is able to transfer the high density data of the CD format to later circuit stages with much greater accuracy. By use of dual high speed D/A converters, one for each channel, the SL-P1200 performs simultaneous digital-to-analogue conversion.

To avoid the danger of digital and servo circuit signal interference, the SL-P1200 has all its audio circuitry, including the power supply, in a separate block. To deliver positive response, the SL-P1200 is equipped with an analogue-like front-end with the emphasis on flexibility, accuracy and comfort during manual operation. The controls are made of heavy duty parts and are mounted on a slanted panel for access convenience.

Exclusive to Technics is the 2-speed search dial cueing facility, giving the user the feeling of direct control enjoyed when using a turntable. By using



Technics' SL-P1200 compact disc player.

the dial the disc can be 'spun' either by cueing forwards or backwards in precise 0.1 second steps at two speeds: slow for 1 second of programme time per rotation; fast for about 30 seconds per turn.

Helpful for the DJ is the rocker control function of the SL-P1200. This rocks over the length of one pit-track and will certainly come in handy for fade-ins and fade-outs with other CD players or sources. There are numerous other advance functions.

The SL-P1200 is now available through the Technics authorised dealer network, and is expected to sell at around £800.

ART's DR1 Digital Reverberation System

The DR1 digital reverberation system with performance Midi represents Applied Research and Technology's top of the line system, employing a 16 linear D-A converter. With its new 1.2 software update, performance Midi enables the operator to simultaneously harness and control any two of the DR1's reverb functions from any Midi based device, plus the ability to operate a pair of DR1's together.

In the DR1 ART has produced a reverberation system that offers not only 100 user programmable presets that won't go down when the power is switched off, but also another 40 factory presets. Full function remote control gives increas-



ART's new DR1 digital reverberation system.

ed access to virtually all the DR1's parameters to include 'pre delay', 'decay', 'min decay', 'H.F. damping', simulated room 'position', 'diffusion', 'midi' programming and programmable 'preset' sequencing.

A dry kill switch at the rear of the DR1 removes the dry signal from both outputs when external mixing is desired whilst input signal level is indicated by an LED bar-graph display on the front panel.

For full details contact Turnkey, Brent View Road, London NW9 7EL telephone 01-202 4366.

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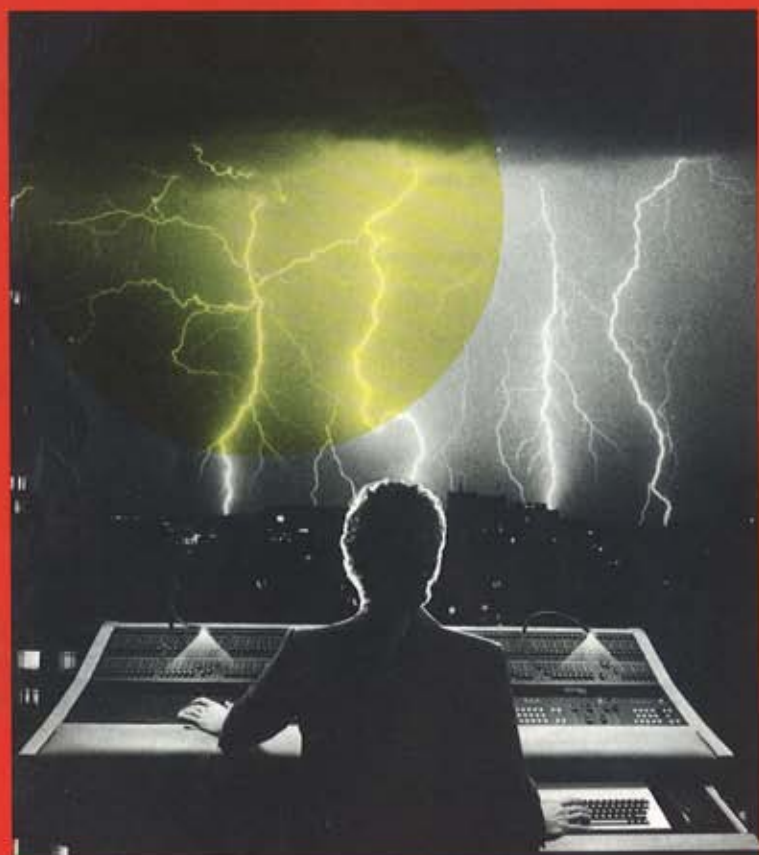
LIGHTING+SOUND
International

telephone John Offord
on (0323) 642639


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# CELCO SERIES 2

## lighting control



SERIES 2 CONTROL BOARDS



SERIES 2 DIMMER SYSTEMS

MCS COLOUR CHANGE CONTROL

The *Series 2* range of lighting control systems are designed and manufactured by Celco Limited.  
For further information please contact our distributors: **U.S. Sales** - Celco Inc, 262a Eastern Parkway,  
Farmingdale, NY11735, U.S.A. Tel: (516) 249-3662 **Worldwide Distributors** - Cerebrum Lighting (Sales &  
Hire) Ltd., The Stage & Effects Lighting Centre, 168 Chiltern Drive, Surbiton, Surrey KT5 8LS, England.  
Tel: 01-390 0051. Telex: 892337 Celco G