

# LIGHTING EQUIPMENT NEWS

JULY 1992

## Thorn Lighting profits up

Thorn Lighting helped Thorn EMI to report pre-tax profits of £255.1m in the year to 31 March 1992. The lighting company, which last year reported a £1.4m loss, was turned around in the course of the year and ended up making a £12m profit.

Speaking to shareholders, Colin Southgate, Thorn EMI chairman said, "Lighting performed well in tough conditions and, as well as gaining a bigger share of key markets, increased its profits and operating cash flow through skilful management of its assets."

For the lighting industry, last year was tough by any standards. In most operating territories, Thorn Lighting made market share gains in France, Germany and the UK, and continuing productivity improvements increased profits significantly.

Cost-cutting measures included factory closures in Finland and Sweden and the sale of the peripheral South African lamp manufacturing business. Substantial stock reductions were also made.

Sweden, Germany and France benefitted from investments in automated production machinery and a £3m Technology Centre was established at Spennymoor in the UK. Market and product spread was extended by the opening of sales offices in Spain and Thailand, and by the acquisition of Philips' airfield lighting business.

## People in brief...

• Graeme Brook and Keith Astin have been appointed managing director and marketing director of Crompton Lighting.

Graeme Brook was with the Hawker Siddeley Group for 24 years and has seven years' experience in the lighting industry. Keith Astin comes from US component manufacturer Thomas & Betts.

• Shyam Brahmbhatt has been appointed regional export sales manager at Crabtree Electrical Industries, with responsibility for Africa and the Middle East.

• Rowena Gardner is now joint marketing manager at Hitech Lighting and Silvertown Lighting.

• Jim McKee has become sales manager, and Alan Coulling assistant sales manager, at Swarovski UK.

## INSIDE THIS ISSUE

News	1, 2, 3, 24
New products	4, 5, 6
Energy efficiency in the public sector	8, 9
ElectroTech preview	10, 11, 12, 13
Spain:	
British Pavilion, Expo '92	14, 15
Lighting the Olympics	16
Letters to the editor	18
Where to buy directory	19, 20, 21, 22
Catalogue directory	22
Classified advertising	23

## Student lighting designer award

A student from Ravensbourne College, London, is the £1500 winner of The Lighting Association's Student Lighting Designer of the Year Award.

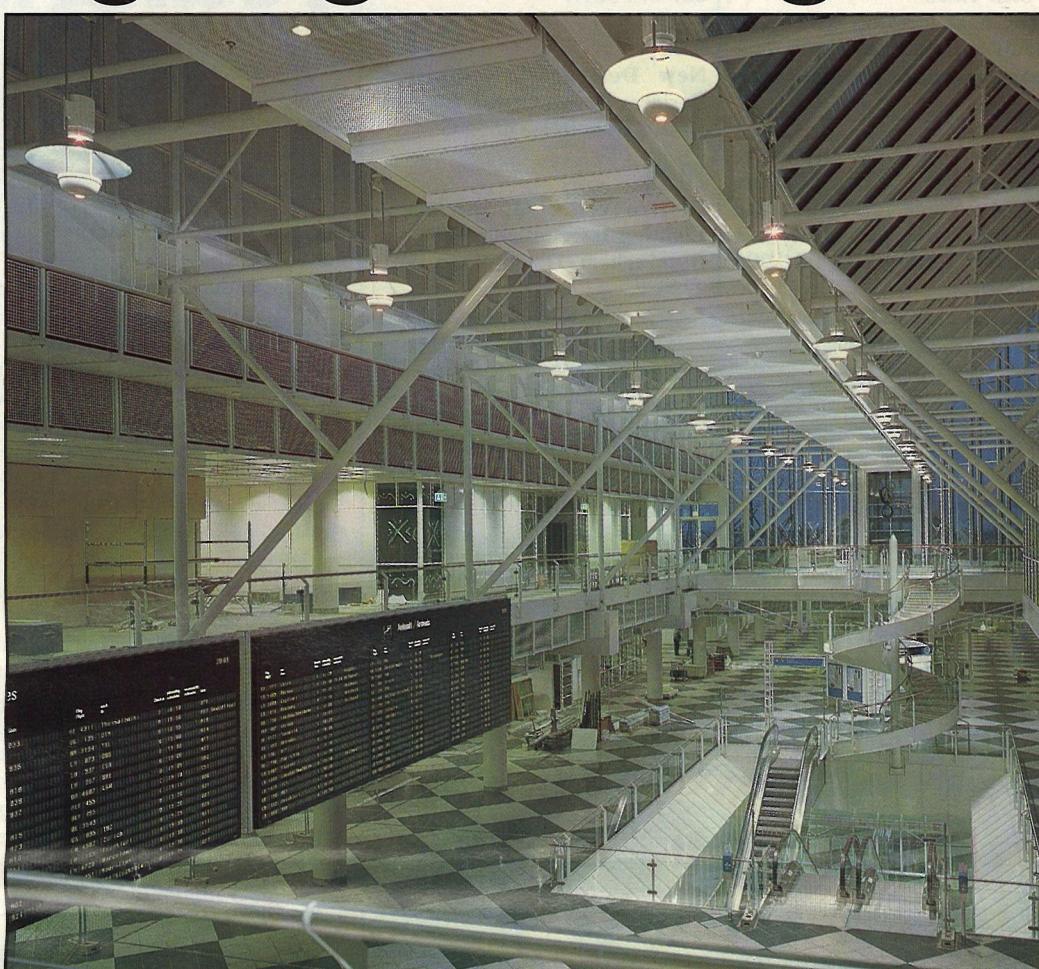
Stephen Judge designed a reading lamp using a 35W 1v dichroic lamp. His entry was judged the best of 18 prototypes submitted by finalists selected from an original entry of several hundred.

Second place went to West London Polytechnic student Joel Thompson for an ingenious emergency light which cuts in when the mains fail. 'Powerplus' so impressed the judges that it

received a special award from Philips for a modern lighting application, in addition to the £750 cash prize. And the Royal College of Art's Charles Seiber took third place, for Perch, a battery-operated light which clips on to a music stand to help musicians playing in darkened orchestra pits.

The judges were impressed with the overall standard of entries, which they felt showed great awareness of modern light sources, promising use of new lighting technology and research on the part of the students.

## Lighting for the high life



Munich's new Josef Strauss Airport at Erding, north-east of the city, is designed to cope with an expected 14 million passengers a year.

The Terminal 1 building, constructed using industrialised building methods, forms four modules, each of which is an independently functioning unit – almost an airport in miniature in its own right – some 210 m long.

The whole facility, incorporating 124 check-in desks is over a kilometre in length with a gross floor area of 176 000 sq.m.

In spite of the appreciable size of the terminal, passengers can easily find their way because of the modular organisation of the building and its transparency. Screening, lighting and colour provide a comfortable and pleasant environment.

A feature of the building is the considerable levels of natural daylight and the choice of metal halide lamps in neutral daylight

colour to enhance the impression of natural light.

The lightness and elegance of the structure are emphasised by using secondary pendant lighting in the form of purpose-designed luminaires by Luis Poulsen.

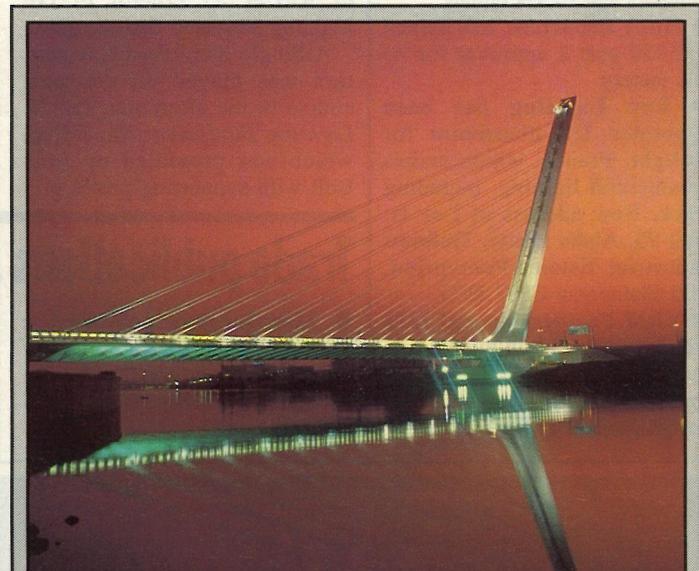
A total of 1600 HQ-I lamps in 70W, 150W and 250W versions is used in these fittings. The choice depends on the ceiling height of the space and the local illumination requirements. In addition, two colours are used for orientation – blue to indicate routes and black for flight information.

The lighting installation has also been designed with economy in mind – 14 000 Dulux DE lamps in 13W, 18W and 26W versions are used in recessed fitting throughout the building.

25% and prolongs lamp life by up to 30%.

The colour temperature of the light source falls within the colour concept for the scheme. It heightens the large scale character of the building, which is emphasised by the use of white as the basic colour. To this is added silver, supplied by building elements with aluminium, steel and galvanised finishes. In addition, two colours are used for orientation – blue to indicate routes and black for flight information.

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Designed in the form of a giant harp, the Alamillio Bridge at Expo '92 provides a dramatic visual link between the Isle of Cartuja which houses the world fair and the thousand year old city of Seville on the opposite bank of the Guadalquivir River.

The roadway with its clear span of 200m is suspended from a 152m high pylon, inclined at an angle of 58 degrees to the horizontal, by means of 13 pairs of tie members arranged in the form of a harp.

Equally dramatic in its own way is the floodlighting installation by Philips which ensures that this landmark is as prominent by night as it is during the day – a particularly important consideration given the fact that Spaniards normally keep late hours and events continue until the early hours of the morning.

Metal halide lamps are used to light structural members. While the pylon is lit with 26 Arenavision fittings with 1.8kW metal halide lamps, 27 projectors illuminate the tie members with 2kW metal halide lamps. The carriageway is lit from below by 8 Venecia floodlighting projectors with 1 kW metal halide lamps.

Presenting the final dramatic touch, the top of the pylon houses 4 HNF 206 fittings with high pressure sodium lamps which send light beams sweeping off into the sky.

## LA has much work ahead

Policing standards and developing new export initiatives are two of the major priorities for the Lighting Association in the year ahead said incoming president Peter Hunt at the association's annual general meeting.

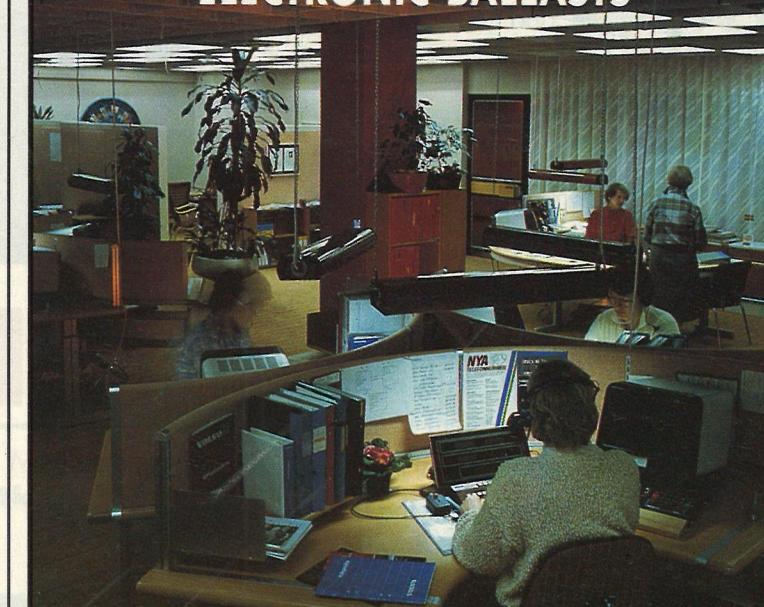
The association has taken on a technical services manager who can advise members how to improve their manufacturing procedures now that many companies are seeking BS 5750 status.

His responsibilities will also include spot checks of members' premises to ensure maintenance of standards.

In addition, the association's own specialist test laboratory is now fully operational. It can undertake testing to all major UK and European luminaire standards.

On the export front, the CELMA policy of recognising only one lighting exhibition in any member state has made it possible for the LA to talk to the DTI about support for joint trade missions to overseas shows.

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# NEWS

## In brief...

● **Litetask** and **Rada** have teamed up to form a marketing partnership. They are planning to hold seminars on air handling technology.

● **R Hamilton** has acquired Woods Electrical Accessories which produces high quality hardwood accessories such as dimmers and socket outlets.

● **Huco Electronic** has gained BS5750 part 2 approval for its UK factory.

● **Lex Lighting** has been appointed UK distributor for Holight, France, which makes commercial lighting, including track. New address of Lex is: Unit 25, Alpha House, Treforest Industrial Estate, Pontypridd, Mid Glamorgan CF37 5YG.

● **YRM Partnership** and **ISIS UK** have established a joint venture under the name YRM ISIS to undertake building product design projects in the EC.

## Lighting golfers play at Moor Park

Thirty-one members and twenty-three guests played at Moor Park on 2 June, the weather and course were great and everybody had a most enjoyable day.

In the morning there was a Greensomes Stapleford Competition on the high course, with prizes presented by Dave Bonnie of Anxter. D Proctor of GE Lighting presented first tee gifts.

A Single Stapleford Competition was played on the west course in the afternoon, for the *Lighting Equipment News* Cup, which was presented by John Bull with supporting prizes pre-

sented by John Butler of Staff Lighting. Rod Flint of Moorlite presented the guests' prizes. Bruce Watts and Tony Smith also presented prizes for nearest the pin and the longest drive.

Winners of the Greensomes were: first, Bill Walker and B John; and second, J Baron and S Martinelli. Winners of the Single Stapleford were: first, Mark Bailey; and second Bill Walker. Longest drive was won by P Haycroft, and nearest the pin by Stan Thiel.

The next meeting will be on 15 July at Camberley Heath.

## Trade publications...

● **Menvier** has published a shortform catalogue and price list of its emergency lighting and fire detection systems (tel 0295 256363).

● **Osram** has a 20-page brochure on low voltage luminaires and their application, particularly in a domestic setting (tel 081-904 4321).

## DIARY

### JULY

**6-8**

**Light measurement.** An advanced module in the LIF certificate course. To be held in London. Details from Lighting Industry Federation, 081-675 5432.

**9**

**Lighting for VDUs and the visual aspects of offices.** One-day course in Birmingham arranged by CIBSE. Details from 081-675 5211.

**9-12**

**New Designers' Exhibition.** Business Design Centre, London. Details from 071-359 3535.

**20-24**

**ElectroTech '92, including Lighting International.** NEC, Birmingham. Details from 0483 222888.

# CIBSE

The Chartered Institution of Building Services Engineers

## Calling all young lighters

Hugh Ogus, vice chairman of CIBSE Lighting Division, when chairing this year's Young Lighters of the Year awards presentation, said: "You cannot invest too much in the youth in our industry, for they are our future". This affirmation was borne out 100% by the quality of the papers produced by the four finalists at the Young Lighters' Awards in April, providing the greatest possible motivation for CIBSE to continue with this annual incentive scheme for young people in the lighting business.

In presenting last year's awards, Hugh Ogus also launched the 1992 CIBSE Young Lighters of the Year scheme, under the continuing sponsorship of Marlin Lighting.

The Young Lighters' scheme targets those in our profession or industry who will be under 30 years of age on 16 March, 1993, the date when the 1992 winners will be expected to present their papers. These may be on almost any lighting-related topic - the more innovative, controversial and stimulating, the better.

Entrants will be required to produce a 200-300 word synopsis by 15 October, for consideration by the Papers Committee of CIBSE Lighting Division. Selected entrants will then be invited to proceed to complete their papers in a form suitable for a 15-minute presentation, which will be held next March.

For some reason, the bulk of entries for the first two years of the scheme came from the London/south east area, and CIBSE is keen to elicit greater interest from the rest of the country. Educational establishments and training officers throughout the 14 CIBSE regions are urged to stimulate interest among students and trainees.

There are no restrictions on who may enter, so long as they meet the age limit criterion. Lighting engineers, designers, scientists, representatives, anyone with some career interest in light or lighting may enter.

The timetable for 1992 is as follows:

Apply to CIBSE for the information pack now.

Send synopsis to CIBSE by 15 October.

CIBSE selects entries to be short-listed on 15 November.

Finished (15-minute) papers to be sent to CIBSE for comment by Papers Committee by 21 January.

Final go-ahead given to authors by 15 February.

CIBSE Young Lighters of the Year meeting held in London on 16 March.

All enquiries about the Young Lighters should be directed to the secretary of CIBSE Lighting Division, 222 Balham High Road, London SW12 9BS. Tel: 081-675 5211; Fax 081-675 5449.

**Karl Pike,  
Secretary, Lighting Division.**

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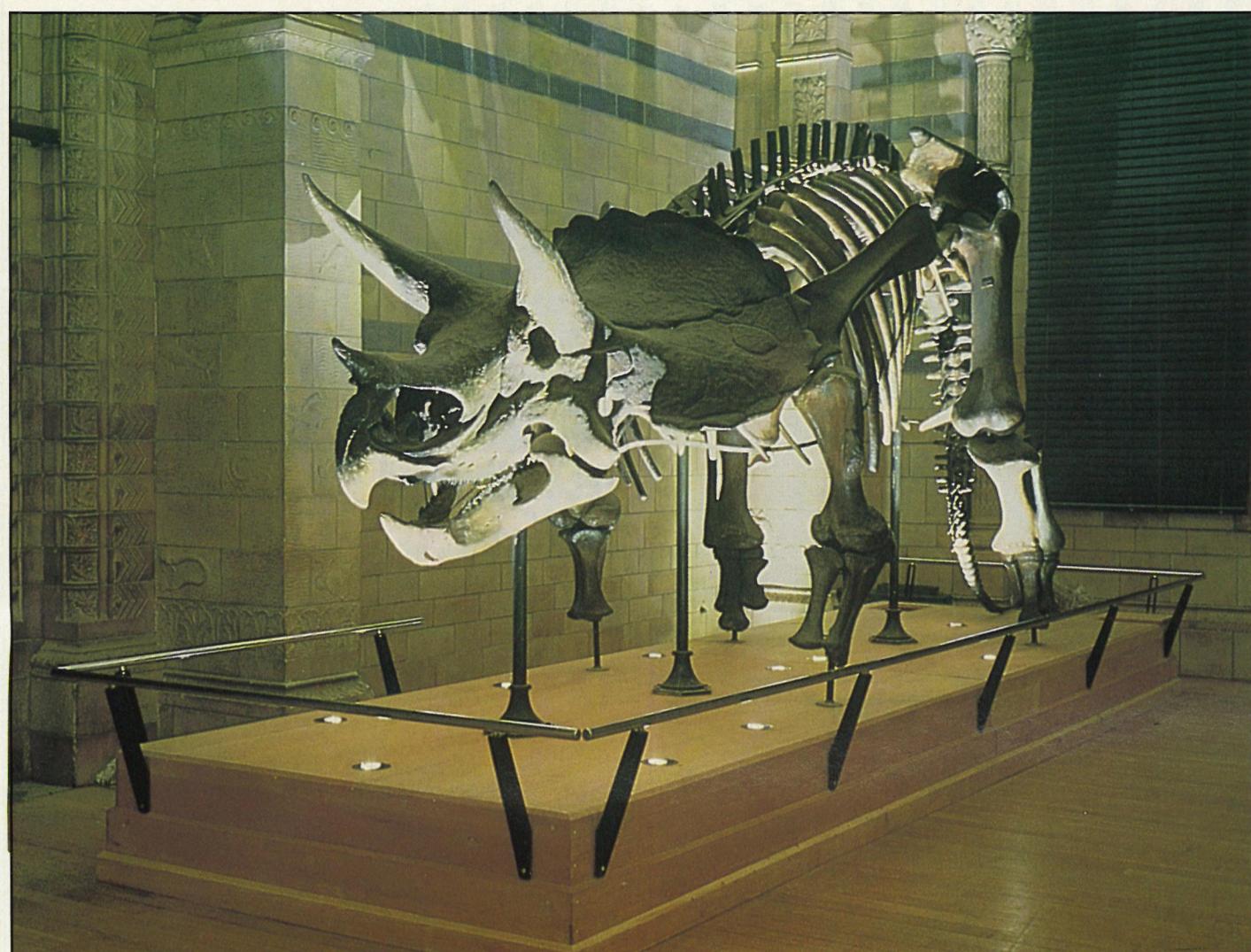
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## The bones of the matter

A unique fossil collection has been 'brought to life' using models, casts and computer displays in the new permanent dinosaurs exhibition at London's Natural History Museum.

The museum's curators demanded that nothing was attached to the walls of the Grade 1 listed building - and this

included lighting.

So, a large framework supports a walkway from which many of the exhibits are suspended.

The display panels, hung from 2.15m high metal posts set into the floor, have been illuminated with Hitech's 70mm Exel spotlights. Set onto over 200m of track, these form a continuous

loop around the display panels.

Power is provided by low profile toroidal transformers which fit neatly into the limited space behind the display panels.

Exel spotlights are also used with integral transformers to highlight six banners at the entrance to the exhibition.

Skeletons, including triceratops,

are lit using wallwashers as uplighters, with baffles to prevent glare.

Small 50W low voltage reflector lamps with bayonet caps have been used in the spotlights for ease of relamping, and 50W LV dichroic lamps with spot or medium beams are fitted to the wallwashers.

## Going micro

Building services control in Makro stores at Poole, Cardiff and Croydon is now provided by Telemecanique TSX-17 micro programmable controllers (PLCs).

The PLCs control lighting, heating and ventilation in the stores as well as external lighting. A manual override is provided as well as interface to store fire and security systems.

The control system was designed to save energy, increase flexibility and reduce maintenance. Reduction in panel size and cabling was also a prime feature.

The control system enables the time period programming of all principal building services. Two on/off periods a day can be programmed in for each service and these are easily overridden by a simple hand-hand terminal.

Three levels of lighting are available in any one store area, while the regular weekday schedule is completed by a special day programming that accounts for specific requirements for Saturdays and Sundays.

An additional feature developed by Makro is the permits the automatic 24-hour changeover of lighting duties to ensure the even usage of light fittings.

## Currie award winner

Top student on LIF's advanced certificate course is Robert Ibbotson of Erco, who wins the David Currie award.

The trophy and a cheque for £1000 were presented by Valerie Currie and David Rowden, managing director of Holophane Europe. Holophane, which has sponsored the award since 1986, has now increased the value of the prize from £750 to £1000.

The runners up, out of a total of

46 entrants, were Anthony Philpot of Surelux and Gerald McGee of Lighting Design Services.

The aim of the award is to encourage higher standards in lighting schemes. It commemorates David Currie who was engineering manager with Holophane Europe for 16 years and became a leading figure in quality assurance and lighting education.

The three finalists were

required to make 20 minute presentations on a lighting topic, followed by a 20 minute discussion with a panel of lighting specialists. Topics ranged from the lighting of art galleries, hospital wards and floodlighting.

The judges included David Loe of the Bartlett School of Architecture, Bryan Matthews a building services consultant, and David Pritchard director of the LIF courses.

## New initiative on energy

An independent Energy Savings Trust is to be set up this year in a new initiative to save energy and so reduce carbon dioxide emissions. The trust will develop and propose programmes to promote efficient use of energy.

The government will invite the trust to make proposals for a pilot scheme of local energy efficiency advice centres for domestic and small business consumers with the aim of determining whether such centres would be cost effective.

British Gas, OFGAS, the government and 11 regional electricity companies are acting together to establish the trust.

## Eastern expansion

A new factory has been opened in Kakegawa, 250 km south of Tokyo by Osram-Melco Ltd, the joint venture between Osram and Mitsubishi. The opening ceremonies were performed by a shinto priest. The 17 000 sq m two-storey factory building was built at a cost of over £64 m. It will concentrate on the production

of T8 fluorescents, compact fluorescents and HID lamps. The site also houses a 1900 sq m three-storey office block, and a new warehouse is planned for completion later in 1992.

The company, which employs some 500 people, has a turnover of around £68 m (1990-91 figures) and is growing at the impressive rate of 11% per year.

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# COMMENT

## Inspiring confidence

This year, one way or another, Spain seems to be the centre of attention in Europe. A trio of major events marks the five hundredth anniversary of the discovery of the Americas - the World Exposition in Seville (Expo '92 in short), the Barcelona Olympic Games, and the celebration of Madrid as the European city of culture.

The first two of these events have been marked by a spectacular building programme - with investment in lighting installations on the same scale, as anyone who leafs through this issue will soon note - and all this has set the Spanish building industry positively humming for the past four of five years.

But Spain is noteworthy in other ways. Recent government investment in infrastructure to bring the country up to northern European standards has created a huge demand for imported capital equipment, technology and professional consultancy. And Spain is a major beneficiary of EC structural funds, which account for nearly 20% of the expenditure on regional development and infrastructure.

So, all in all, the country offers outstanding marketing opportunities for the lighting manufacturer set on expansion - hence, the choice of Spain as the first country to be targeted in the marketing lighting seminars to be organised by Single Market Briefings and sponsored by Lighting Equipment News. This will be held in London on 16 September - for full details see page 15.

Of course, the disadvantage of using key projects to kick start the economy - and this is true of all promoted rather than organic growth in an industry - is that when such major projects end, everything may go flat overnight leaving the industry once again in a situation of recession.

Thus, the much vaunted government attempts to transfer several thousand civil servants, currently esconced at the Department of the Environment offices in Marsham Street or elsewhere in Whitehall to the relatively inaccessible depths of Docklands, may well have the short term effect of creating work for the fitting out trades in the building industry, including building services such as lighting.

But, in the longer term, economic recovery needs to be built on sterner stuff. There is no substitute for genuine confidence in the future of the economy - and that is currently missing here in the UK.

# LIGHTING EQUIPMENT NEWS

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Associate Editor: Barbara Trigg

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Advertisement Manager: Jim Hughes

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Classified Sales: Alastair Moyes

Production: Angela O'Donnell

Circulation: Kirtee Parmar

Publisher: John Bull

Group Publisher: Nigel Foster

Directors: R W Osborne, (Chairman), G J F Brigg (Managing Director), N C G Foster, D L Jones, D B Wright.

Published monthly by Maclean Hunter Ltd,

Maclean Hunter House, Chalk Lane, Cockfosters Road, Barnet, Hertfordshire EN4 0BU.

Telephone: 081-975 9759. Facsimile: 081-975 9753

Telex: 299072 MACHUN G. Northern Area Office,

Tel: Cannock (0543) 72771.

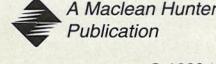
Origination by Facsimile Graphics Ltd, Coggeshall, Essex.

Printed by E. T. Heron & Co. Ltd, Heybridge, Maldon, Essex.

Annual subscription £55 (£5 per copy including postage) but free to executives in the UK and Ireland meeting the terms of control.



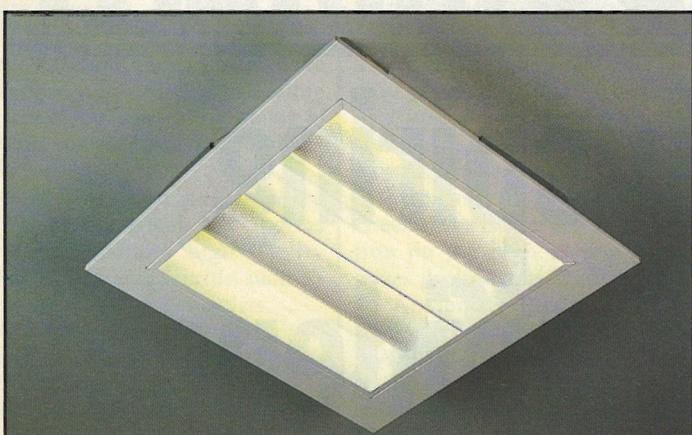
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# NEW PRODUCTS



## Perforated against glare

Skylighter is a square, recessed luminaire from Hitech Lighting that uses two 36W PL compact fluorescent lamps. It has curved, perforated metal, anti-glare shields over the lamps.

The mild steel housing has a one-piece flange to avoid corner

joints and is suitable for either 500mm or 600mm square ceiling modules.

There is a matching wall light, and a suspended luminaire that gives both upward and downward light.

Reader Service No 158

## Coloured lamps

### save energy

Coloray is intended as an energy saving replacement for coloured incandescent lamps, especially reflector type lamps.

It has been introduced by

Advanced Lighting Industries and consists of a 10W 2D compact fluorescent lamp with a square white plastic reflector and re-usable, high frequency, electronic adaptor.

A wide, even, beam of light is produced. Coloray is available in seven colours plus Warm White.

Reader Service No 159



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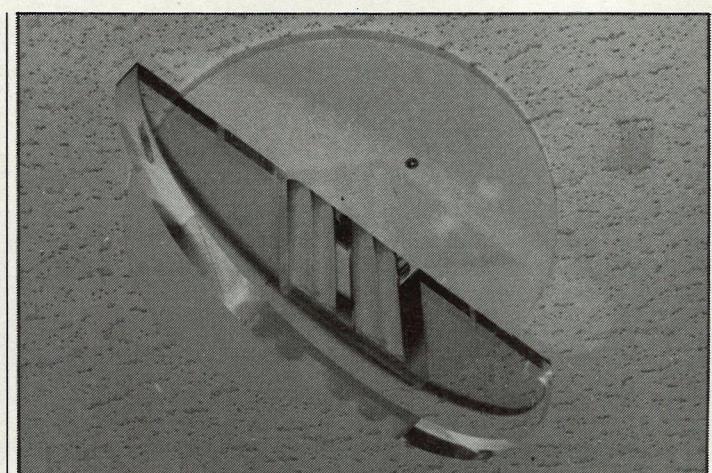
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## Decorative and functional downlights

For example, one model has a half-moon shaped attachment with the lamps forming "fingers of light" through the centre of the shape. Others have floating diffusers.

There is also a circular, louvred downlight which offers specifiers an alternative to square 300mm x 300mm luminaires in VDU areas. It is stated to comply with category 2 requirements in the CIBSE LG3 Lighting Guide.

Most of these luminaires are supplied complete with power factor correction.

Reader Service No 160

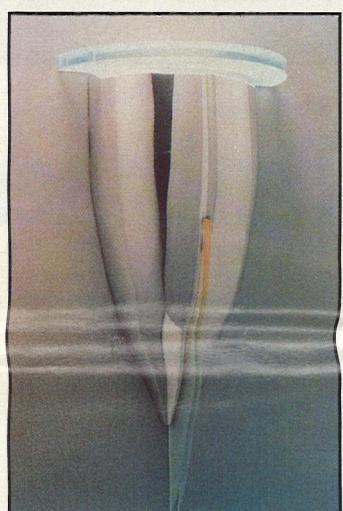


## Table lamp influenced by Glasgow

Glasgow Glow is a table lamp from Fine Art Lamps, USA. The design is inspired by the work of the architect Charles Rennie Mackintosh.

The metalwork of pewter-painted iron, supports a ceramic urn with pale green glaze highlighted with dark khaki shading. A coolie style shade completes the table lamp, which stands 680mm high.

Reader Service No 161

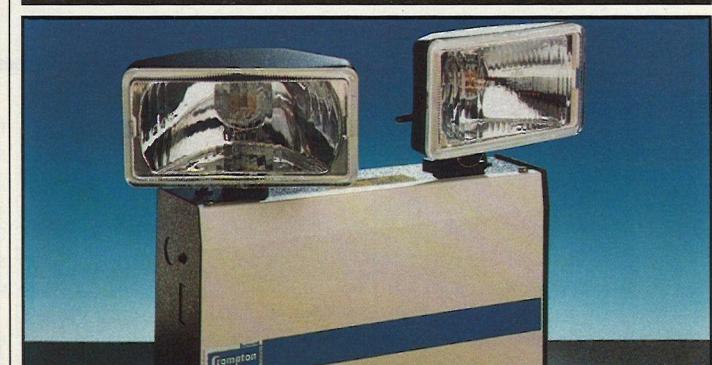


## Unusual wall light

Ouidah wall light from Into Lighting Design uses a 200W tungsten halogen lamp. The curved housing is of either lacquered or polished aluminium with frosted glass decorative attachments. It is 510mm high and 270mm wide.

Made in France by Luminaires Roland Jamois, it is intended for applications such as banks and hotels.

Reader Service No 162



## Emergency lighting for industry

Duospot emergency spotlight units from Crompton have been designed for use in industrial areas such as warehouses with high ceilings.

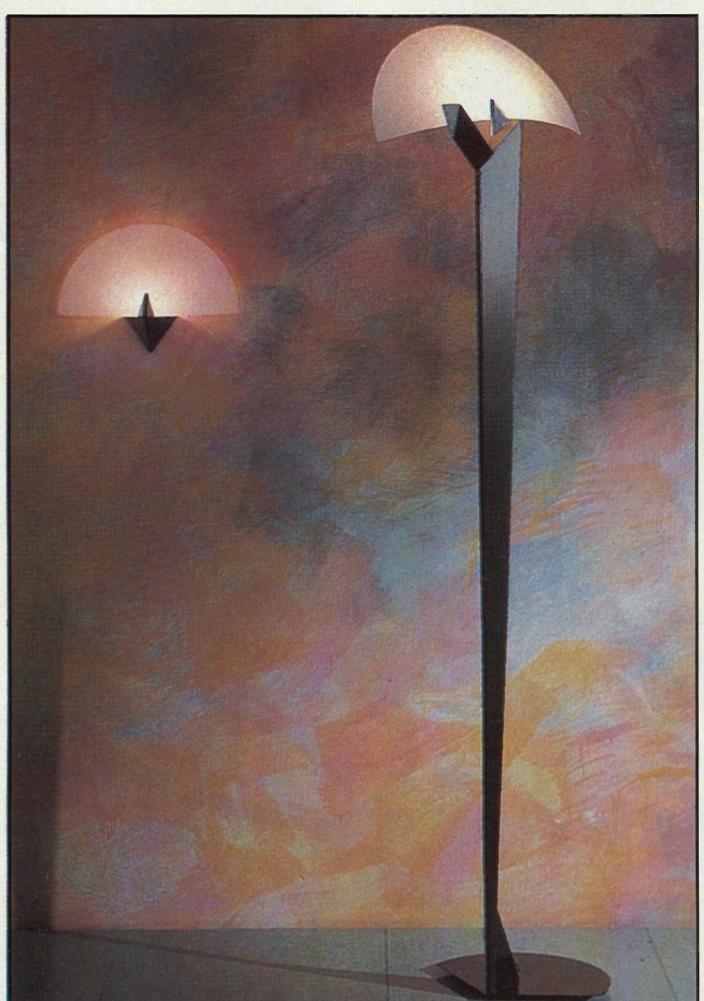
Two adjustable, tungsten halogen, projector lamps are mounted

on a rugged sheet steel enclosure. Each Duospot is complete with 12V sealed lead acid batteries and circuitry for monitoring the mains supply, recharging batteries and switching over on mains failure. A red indicator light verifies that all connections are correct.

Four models are available using either 10W lamps to give a three-hour duration, 20W lamps with either one-hour or three-hour duration, or 55W lamps with a one-hour duration.

Reader Service No 163

# NEW PRODUCTS



## Nun uses Murano glass

Nun is the name of a floor standard and matching wall light from Europa Lighting Technology.

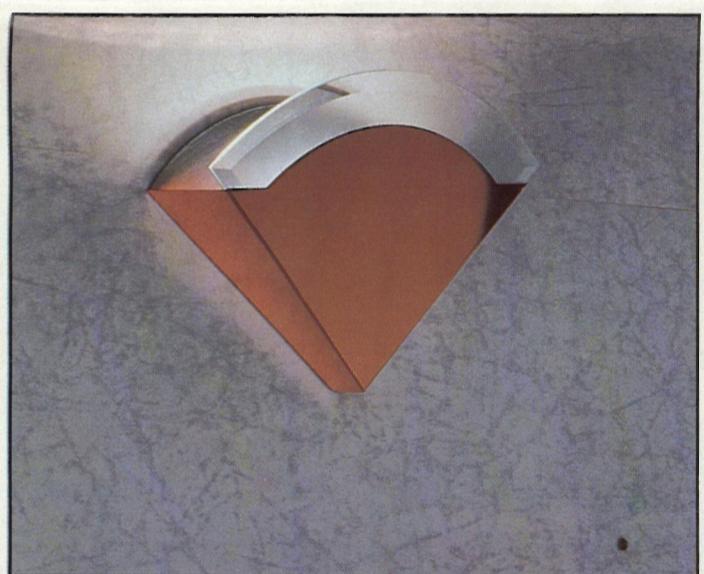
The design features a curved Murano glass diffuser in either amethyst or white and uses a linear, mains voltage, tungsten

halogen lamp.

Metalwork is black lacquered steel.

A dimmer switch on the floor standard allows a choice of lighting levels. The wall light is 400mm wide.

Reader Service No 151



## Copper finish for modern and traditional lights

Targetti has introduced a range of lighting with a natural copper finish to meet the increasing popularity of natural materials. The shine and colour are protected by a transparent varnish.

The range includes a selection

of low voltage spotlights on rods either 300mm or 500mm long. They use a 35W tungsten halogen lamp.

In addition, there are two mains voltage, copper, wall mounted uplights. Karif (illustrated) is a slim line, flat cone shape with a satin glass diffuser. It accepts a 300W tungsten halogen lamp.

Steps is a shell-like classic design which uses a 200W tungsten halogen lamp.

Reader Service No 152

mounted onto a ceiling plate using a hinge/slot-in device and plug-in electrical connection.

Applications include factories, warehouses, maintenance workshops and assembly areas where the mounting height is between 3m and 5m.

A polished aluminium reflector maximises light output. The housing is white coated sheet steel.

Reader Service No 153

## Luminaire is easy to install

Lobay luminaires from Hubbell use either 150W, 250W or 400W tubular high pressure sodium lamps. They have integral control gear.

Installation is easy because the rectangular luminaire body is



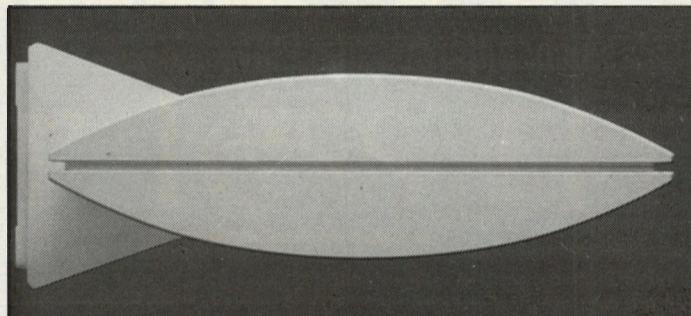
## Low voltage outdoor light

A low voltage wall light from Commercial Lighting Systems incorporates an electronic transformer and is designed for outdoor use. It accepts either 35W or 50W tungsten halogen capsule lamps.

The luminaire is ingress protection rated IP54. It is made in

Germany by Meyer and is available in either white or black.

Reader Service No 154



## Asymmetric uplights are wall mounted

A series of asymmetric, wall mounted uplights of various lengths has been added to the Spheros range by Zumtobel. They have the characteristic elliptical cross section of the ceiling mounted fluorescent luminaires.

There is a choice of linear

tungsten halogen, PL compact fluorescent, metal halide, or linear fluorescent lamp. The metal halide models have an auxiliary lamp to cover run-up periods.

The housing consists of two textured aluminium extrusions held together with diecast aluminium end-pieces. A diffuser is fitted in the upper extrusion.

The wall bracket includes a fixing plate which allows an adjustment of 4° upwards or downwards to compensate for uneven wall surfaces.

Reader Service No 155

## Choice of LV downlights

Starlight systems by Staff Lighting form a comprehensive range of low voltage tungsten halogen downlights. The luminaires can be installed in very shallow recesses, such as in show cases or shelf units, as well as in conventional ceilings.

Starlight E60 range has surface mounted thermoplastic housings which fit into a cut-out of either 58mm or 62mm diameter.

E80 range features flush mounted cover rings fitted into cut-outs of 78-80mm diameter.

Both ranges include fixed and tilting downlights as well as a variety of decorative accessories for suspension below the luminaires. These accessories include crystal, acrylic and metallic deco-



rative elements to create eye-catching glitz or hi-tech effects.

Lamps rated at 5W, 10W or 20W are used and there is a choice of either silver or gold coloured reflector.

Reader Service No 156

## Downlights for furniture



Hafele's range of low voltage tungsten halogen downlights is designed for use in all types of furniture, including office systems, kitchen and bathroom cabinets and merchandising units.

The 10W and 20W luminaires have an extremely shallow design. Recessed versions, for example, extend only 14mm into a shelf or cabinet.

An air-groove around the cir-

cumference is stated to prevent a build-up of heat.

The luminaires can be supplied with a diffusing disc if the user wants a soft, well diffused light. White, brown, black chromium and brass are standard finishes.

The lights come with a 2000mm long lead including plug contacts, and transformers fitted with electronic fuses.

Reader Service No 157

# LIF LINE

## Just how Euro are you?

Already 1992 is half over and yet what of the furore about the Single European Market and the wide ranging changes the year would bring? Was it all just hype? Rest assured some say... it is 31 December 1992 that the completion of the internal market of 12 member states will take place. On that date the objective of free movement of goods, services, money and people should have been achieved.

For some of us though, "1992" happened a long time ago.

Indeed, while the media have concentrated on the hype surrounding the date, 217 of the 282 internal market directives necessary to bring the Single European Market into being have already been adopted, which says a lot for the determination of the European Commission and the governments of the European states, and lends credence to the notion that a Single European Market is attainable.

For the construction industry, and more pertinently the lighting industry, the new approach to the EC legislative process has already resulted in European Directives coming rapidly into play and the scope of this legislation is becoming so comprehensive that no-one can afford to be ignorant of it.

For the lighting industry this bodes well in view of legislation already in place requiring suitable lighting in all places of work. If employers assume their legal responsibilities and take the necessary action as clearly laid out in the legislation, refurbishment of work places to meet new requirements should keep lighting manufacturers and specifiers in business for a long time!

One should not therefore feel threatened by the expanding European market, but rather take advantage of the sales and marketing opportunities it offers.

Two tips to heed are:

1. Expel the notion of import and export from your mind. The European market should be considered as an extension of the market across the Channel, in the same way that Northern Ireland is regarded.
2. Set aside all the common myths you have heard about marketing in Europe and go about it in a serious fashion.

The success of LIF's Joint Venture Group at the Hanover Fair epitomises how small to medium sized businesses have already taken the necessary steps and can now take advantage of the European, and wider international market.

The key is to understand and adopt the native approach and market as the native would. For instance, product certification is an essential requirement for any manufacturer trying to sell into the German market. To ignore this fact is to negate immediately any marketing strategy. British companies should therefore approach certification as a German company would, by getting the paperwork right, getting the fees paid on time, ensuring the product is as described in the paperwork and, *voila*, certification will be achieved.

LIF, for its part, makes every effort to keep abreast of developments and to inform members of the hurdles and the opportunities to be found in the legislation and European market practice. It is also a matter of such importance that LIF welcomes the opportunity to appraise trade allies on the new developments, as was the case at the recent Electrical Contractors' Association conference in Holland. LIF is in a prime position to do this, with its contacts and sources in CELMA, ELC, and CEN/CENELEC.

Health and safety in the workplace is also likely to take on a more crucial role in the Commission programme this year, particularly after July as the UK assumes the presidency for six months. LIF was quick to recognise this as an important vehicle and has made substantial representations to the EC and national government prior to the health and safety consultative documents being drawn up in the UK. The issue assumes particular importance when set against the backdrop of accidents affecting 10 million people out of 150 million employees in the Community as a whole and general compensation paid out of about 20 billion Ecu per annum overall.

One further aspect to be considered is that of the European Economic Area Treaty which is due to come into force on 1 January 1993 and is essentially intended as a single European market within not only the EC but, in addition, the seven EFTA countries: Austria, Finland, Iceland, Liechtenstein, Norway, Sweden and Switzerland. Whilst this will not be a customs union with a common external tariff and fiscal harmonisation, the EFTA countries will be implementing many of the existing EC directives governing the freedom of movement of goods, services, people and capital, and many new opportunities will be created.

So "1992" should not present any threat to the British lighting industry. As long as we take Europe seriously, keeping abreast of developments and aware of business opportunities, we'll have no trouble benefitting from the Single European Market. As they say, "It's up to you whether to be predator or prey."

# NEW PRODUCTS

## Co-ordinated street furniture



Abacus has a co-ordinated range of street furniture known as the SA series. It includes bollards, lighting and signage columns, litter bins, outdoor seats, barriers and fencing, display panels, bus shelters, telephone kiosks and public conveniences.

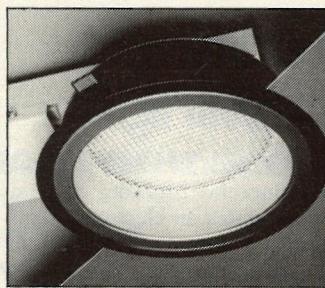
The aim was to produce a design that satisfied both aesthetic and anti-vandal requirements. By combining modern materials and new manufacturing techniques, the company has produced pieces with a consistent image that blends happily with today's urban landscape, be it traditional or contemporary.

Made from high grade aluminium alloy extrusions, all components are finished with a durable coating fused to the substrate at high temperature. They are available in any RAL colours.

Lighting and signage columns can be supplied with a number of combinations of signs and luminaires. All columns with lighting incorporate a concealed door for either control gear or a cut-out compartment.

The basic components are also capable of being combined to produce alternative designs and Abacus will work with designers developing new products.

Reader Service No. 164



### Energy saving recessed downlight

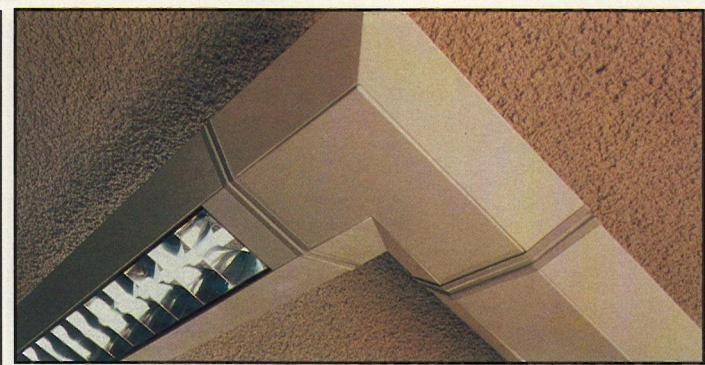
A range of shallow, recessed, twin lamp downlights for restricted ceiling voids is available from Profile Lighting Services. Either 7W, 9W or 11W PL type compact fluorescent lamps are used and emergency lighting facilities can be fitted on request.

An acrylic prismatic diffuser is fitted as standard. Alternatively low glare louvres are available in silver or gold colour.

The diameter is 200mm for the 7W and 85mm deep, while the 11W model is 220mm in diameter and 100mm deep.

They are particularly suitable for corridors, lobby entrances, stairways and toilets in public buildings, where reduced energy consumption and extended relamping schedules are considered important.

Reader Service No. 165



### Vector gains a corner

Moorlite's Vector range of suspended fluorescent luminaires has been extended by the introduction of a matching angle connector. This supplements the flexible and

solid tubular connectors.

The range can now be specified as continuously mounted, through-wired luminaires in straight lines, square or rectangular configurations. Alternatively, individual luminaires can be connected by the through-wired tubular connectors in a variety of layouts.

Reader Service No. 167

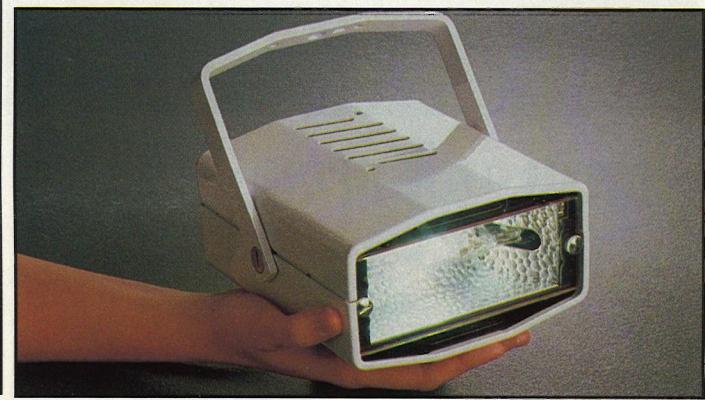
### Metal halide projector has UV filter

A stylish metal halide projector

from Compact Lighting includes as standard a front glass that filters out ultra-violet light, a timed ignitor and a tapped ballast with thermal cut-out.

Accessories available include barndoors, cowl and louvre.

Reader Service No. 168



### Display lamp saves energy

Energy-Glow is a 7W clear glass candle lamp produced for displays of decorative lighting. It is available in SBC, SES and BC cap sizes from CWD Distributors. This offers lighting shops considerable savings in running costs over the use of the 25W lamp in their displays.

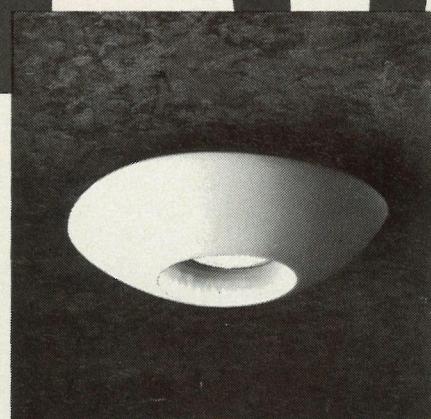
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**C** COLLINGWOOD  
ACCESSORIES

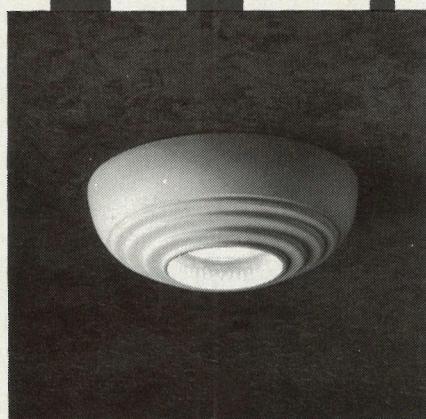
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Reader Service No. 5

# TORNADO



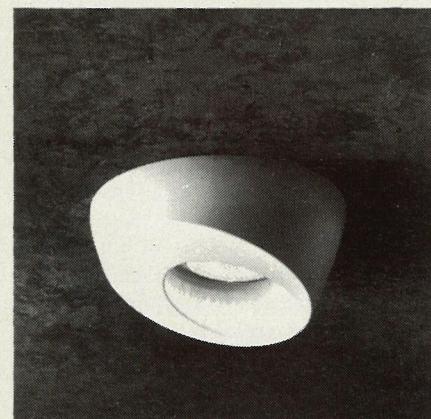
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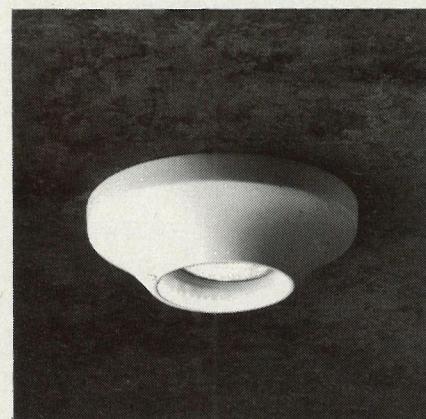
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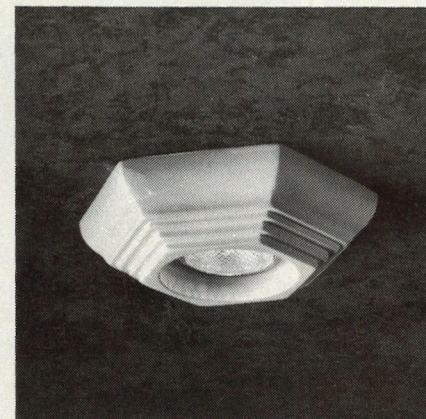
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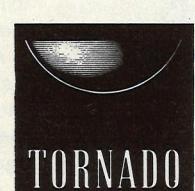


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Reader Service No. 6

Page 6

Lighting Equipment News, July 1992

# Installed user-programmable lighting controls for less than non-programmable.

National pre-launch preview:  
Stand 5B10, Hall 5, Electrotech 92

You can believe it. Studio 3 really will give you an installed, user-friendly, programmable lighting control for less than existing non-programmable systems.

**3-45 Kw loading** – Studio 3 can handle a mixture of:

- Tungsten • Low voltage • 35mm diameter fluorescent
- High frequency fluorescent • GLS lighting.

**BUS 12v SELV** – uses 2 wire, 12v, low voltage cable to transmit program commands from control panel to dimmer pack. Safe and easy to install.

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Complete this prepaid card today, for further information or a practical demonstration of Studio 3 in your offices and we will prove the benefits of specifying and installing Home Automation Studio 3 range.

Or simply telephone Dawn Lovelock on **0249-443422** now!

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- Please arrange for a representative to call
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We currently specify/install \_\_\_\_\_ lighting controls.

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Reader Service No. 7

The 1970s oil crisis prompted local authorities to seek ways of reducing energy costs including fuel conversion and the implementation of a variety of efficiency measures including, of course, lighting.

In 1984/5 the Audit Commission reviewed energy management in local government and found that many authorities had a good record. But it was estimated that further reductions of at least 12% could be made in energy used in non-domestic buildings. This would quickly save £100m a year – and more in the long term. Reviewing progress in 1990, the Audit Commission found that councils had secured less than one third of the medium term potential for energy saving of £23m a year. The Commission made various other recommendations including one that authorities should invest about 10% of their energy expenditure each year in energy efficiency measures.

The case for energy efficiency is now stronger than ever. Environmental worries have been added to the ever-present cost arguments. At the recent world environmental discussions, global warming figured largely on the agenda, and the government is now putting added emphasis on the promotion of energy efficiency. Since 1983 it has spent more than £90 million on an energy efficiency programme that has generated savings of more than £500 million a year.

Local authority annual energy bills, for offices, schools and service buildings, on street lighting and on transport, were well over £900m in 1989, while local authority tenants spend a further £2.5bn. All this represents significant potential for cost savings while, at the same time, reducing the carbon dioxide emissions from energy generation. The performance of individual authorities varies widely and while some authorities have secured short term savings, many others have made little progress.

Local authorities need to invest more in energy saving measures, set up proper systems for monitoring the benefits and improve all aspects of energy management. There is undoubtedly substantial potential for greater energy efficiency in local government.

#### Lighting the local government estate

The local government estate represents a wide range of services – schools, sports complexes, libraries and museums, police and fire stations, housing, office blocks and transport depots. Such property tends to have a high political and public profile and energy efficiency must not only be achieved, it must be seen to be achieved if government is to set the pace for energy efficiency in local industry and commerce, and convince charge-payers that they are getting value for money.

But proposed investment in energy efficiency must compete with other important claims on expenditure. As in the private sector, investment has to be justified by measurable results and payback. Even when resources have been allocated to energy management, ever-changing calls on local authorities and the reassessment of priorities to meet unexpected new responsibilities can thwart the best laid plans.

This is where lighting comes in. Lighting is both the most visible and the most neglected of the building services. Too often it is allowed to deteriorate without proper regard for the effect that it has on productivity, safety, security, worker morale and operating costs.

# Cutting energy costs in local government

**Local government must be seen to give good value for money to its chargepayers – and that includes using energy efficiently. The British Parliamentary Lighting Group believes improved lighting can be a very visible indication a local authority is investing in energy conservation.**

Improved lighting is a highly visible indication that a local authority is making the proper investment in energy conservation. Proper standards of lighting are essential for safety, comfort and productivity. Lighting refurbishment has measurable benefits and an identifiable payback. Savings from a typical 30% up to 80-90% can be achieved, together with much improved lighting levels, and other user benefits.

In 1988, Strathclyde Regional Council refurbished its own architecture and drawing offices at Paisley. The new lighting installation was part of a larger modernisation programme for the original lighting which was installed when this building was built in 1966. 36W cool white 26mm fluorescent tubes were used in surface mounted luminaires with high frequency gear. The use of high frequency control gear is the outstanding feature of the system, with the unit controlling one tube in each of the two adjacent continuous luminaires. This allows linear photocell control parallel to the windows on the long side of the building.

The energy control system is quite ingenious. The area is divided into two halves, each of which has two rows of twin fittings and photocell control of four successive lines of tubes along the length of the area. The control and distribution board has individual adjustment of photocell control with wide tolerance to avoid 'hunting' over each tube row in half of the room. There are facilities for individual override at the distribution board.

The system has been designed to give 800 lux maximum, and 300 lux minimum working through photocell controls and the setting of the time clock to suit the office situation. The system switches on at half-load from 6.30 – 8.30 am for cleaning to take place. Full lighting is available if necessary from 8.30am to 6 pm and the lighting is reduced to half-load again from 6.00 – 8.30 pm, after which it is then switched off completely for the night.

#### Regular cleaning schedule

A regular cleaning schedule is a final energy management feature of this efficient installation which achieved an improvement in illuminance of 220% with a reduction of the 45% in electrical load.

An installation such as this one, which was more than 20 years old, is probably due for rewiring anyway. Light fittings that are more than 10 years old will probably have deteriorated and, in many cases, more efficient versions will

be available making replacement a worthwhile investment.

At Strathclyde, for instance, the

use of high frequency electronic circuits has two major advantages over the conventional 50/60 Hz



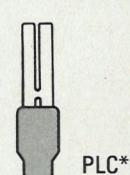
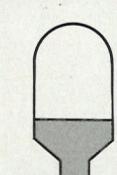
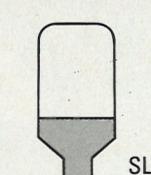
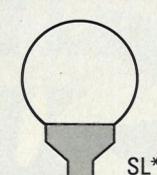
Strathclyde Council Offices, Paisley.

circuit: power savings of approximately 8% over traditional 38mm tubes, and give high light output levels with good colour rendering.

For most local authority offices, energy saving and an improved quality of light will be achieved if the following are replaced with modern louvre or high performance prismatic lens fitting using the newer 26mm lamps, and high frequency control

BECAUSE YOUR  
LIGHTING NEEDS DIFFER,  
SO DO OUR COMPACT  
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Philips Lighting



gear: 2ft 40W fluorescent lamps; old 8ft 125W fluorescent fittings; fluorescent fittings with opal diffusers; and 'De Luxe' warm-tone fluorescent lamps. Fluorescent tubes with bayonet cap connections, badly discoloured plastic diffusers, and painted shades and reflectors should also be replaced.

Local authorities are limited by capital controls and, while this is a real problem, better energy management alone could make a huge difference to lighting costs. Ideally some initial capital investment will be required, but the new efficient lighting installation will often pay for itself in 2 or 3 years or less.

Education authorities in England spend over £315 million a year on energy. Lighting accounts for somewhere between 9% and 12% of this figure. The Department of Education has recognised the considerable potential that exists for reductions in energy consumption and its recommendations include low cost, quick pay-back building improvements, and the incorporation of energy saving measures in building refurbishment.

A good example of this is the lighting of one of the school



The gymnasium of Llanedery High School, Cardiff.

gymnasium at Llanedery High School in Cardiff by South Glamorgan County Council. The old lighting installation dated back to 1965 and, like many of its type, used GLS lamps in an enclosed fitting with a wire guard. In 1990, these fittings were replaced by high pressure sodium lamps in a modern compact luminaire. This

investment has resulted in a remarkable 76% reduction in the installed lighting load, while illuminance has doubled from 200 to 400 lux.

Added savings are achieved from the use of photocell controls which switch the lights off when there is enough natural light. A sensor has also been fitted which

turns the lights on when someone enters the gym and turns them off when it has been empty for a set period. The new lighting is not only brighter but safer. The school governors and local authorities are pleased with the energy savings, and the scheme paid for itself in just 18 months. In general, the replacement of

ordinary filament lamps will result in immediate energy cost savings of 50-75% - in this instance at low capital cost - whether they are in school sports halls, leisure centres, offices or even outdoor and security lighting installations. The additional benefit is reduced maintenance through much longer lamp life.

For most 'high bay' sports and leisure applications, mercury, mercury/tungsten and old fluorescent fittings can be replaced with high pressure sodium (SON) lighting. SON gives satisfactory colour rendering in most applications and is very energy effective. For lower mounting heights, modern fluorescent lighting is another alternative which, when used with high frequency control gear, can give energy costs almost as low as SON lighting, plus excellent colour rendering.

Most local authorities could benefit from an expert survey into how they use and control the lighting in their premises. In many local government buildings, and in schools in particular, large areas are often controlled by a 'switch near the door'. The lighting has no intermediate stage between all-on or all-off - the lights blaze away outside normal working hours, while the installations benefit from significant daylight provision. Each of these features represents a significant waste of lighting energy. Modern control systems can eliminate waste by reducing electrical consumption typically by 25-60%, and provide better working conditions.

### Lighting for energy conservation

The British Parliamentary Lighting Group (BPLG) is an all-party group of MPs which was officially registered in 1985, and exists to draw the government's attention to lighting, acting as a pressure group to promote certain causes including energy conservation, health and safety at work, public lighting and motorway lighting.

We have presented the case for more energy efficient lighting in the central government estate through meetings with ministers and government departments, including William Rickett, Director General of the Energy Efficiency Office, who was invited to address the BPLG at one of our meetings in the House of Commons. We have put forward

numerous questions in parliament to ministers in all government departments and have made considerable effort to influence UK energy policy during the past three years.

The pace of progress has been amazingly rapid. Lighting figures very prominently in the first report of the Ministerial Group on Energy Efficiency which was published in October 1991. This shows that government departments have already embarked on the road to greater energy efficiency. The BPLG is committed to monitoring these developments, all of which we believe will encourage local authorities to follow suit.

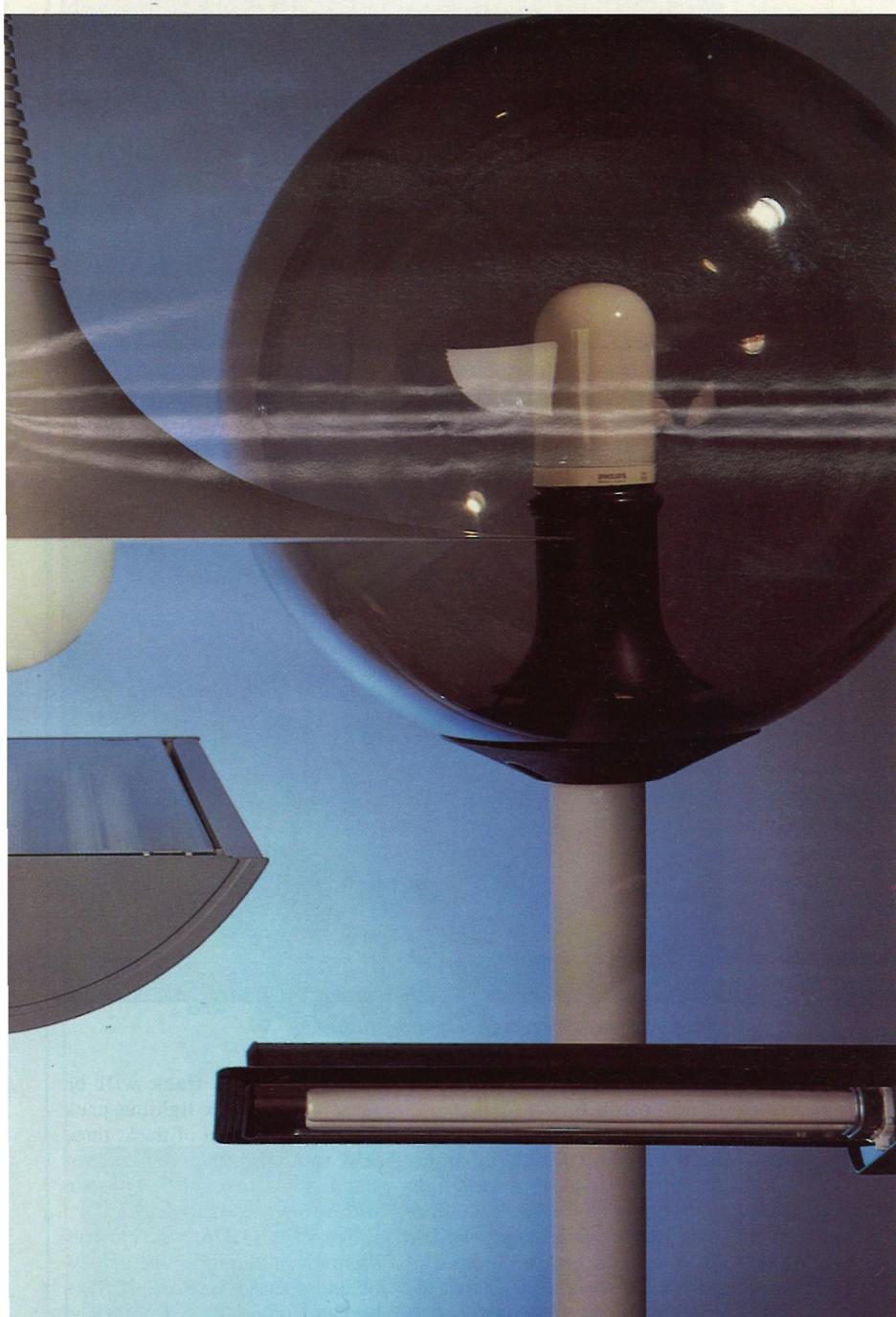
### A new government

Following the general election, the Energy Efficiency Office has now been transferred to the Department of the Environment to become part of the Environmental Protection Group under the new Secretary of State for the Environment, the Rt Hon Michael Howard. The Energy Efficiency Office will at present remain under the Directorship of William Rickett in its Palace Street offices. The other responsibilities of the Department of Energy have been transferred to the DTI.

The particular emphasis in government policy is now on the contribution which energy efficiency measures make towards reducing carbon dioxide emissions and limiting the risk of global warming, rather than conservation of natural resources or general cost reduction. The minister with particular responsibility for energy efficiency is the Lord Strathclyde.

The two case studies given illustrate the benefits that local authorities can enjoy through refurbishment of their lighting. The BPLG campaign in parliament has raised the profile of energy efficient lighting in all government departments and engendered commitment.

To ensure that the awareness and commitments are sustained at local government level the BPLG is currently visiting a selected number of local authorities to present the case, and intends to sponsor a number of lighting and energy audits - at no cost to the cooperating local authorities. So, local authorities who are keen to learn more about the benefits of energy efficient lighting should contact the BPLG immediately.



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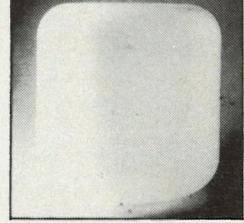
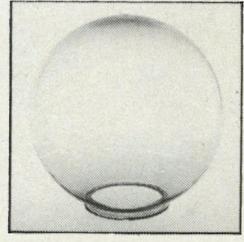
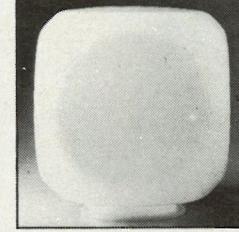
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# Lighting to look for at ElectroTech '92

Visitors from all over the world will gather at the National Exhibition Centre in Birmingham from 20-24 July for ElectroTech '92, the most comprehensive international electrotechnical and power engineering exhibition ever held in Britain.

It combines the previous Electrex and Power Plant events into one giant showcase for British industry. Over 1000 companies will be represented on some 500 stands.

Lighting International – an exhibition within an exhibition – will be in hall 5.

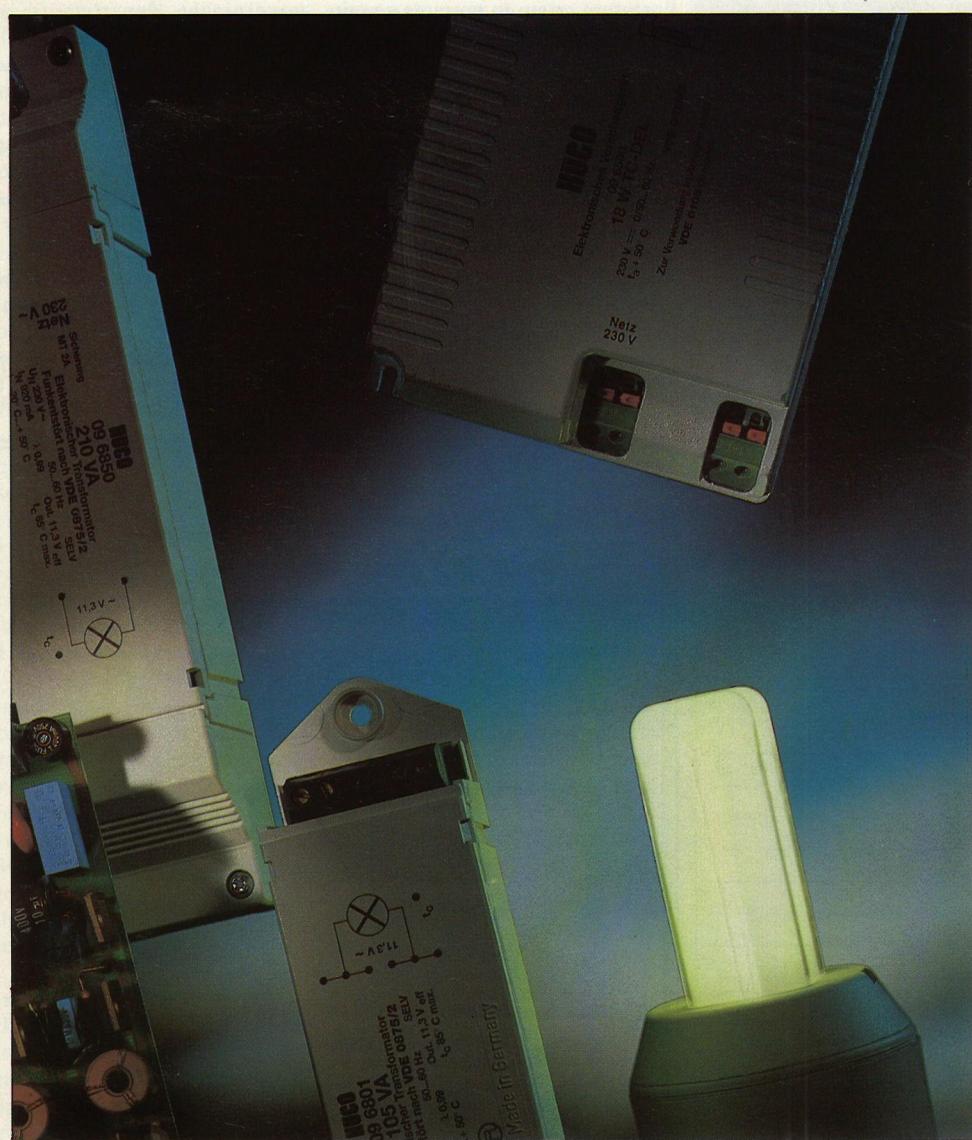
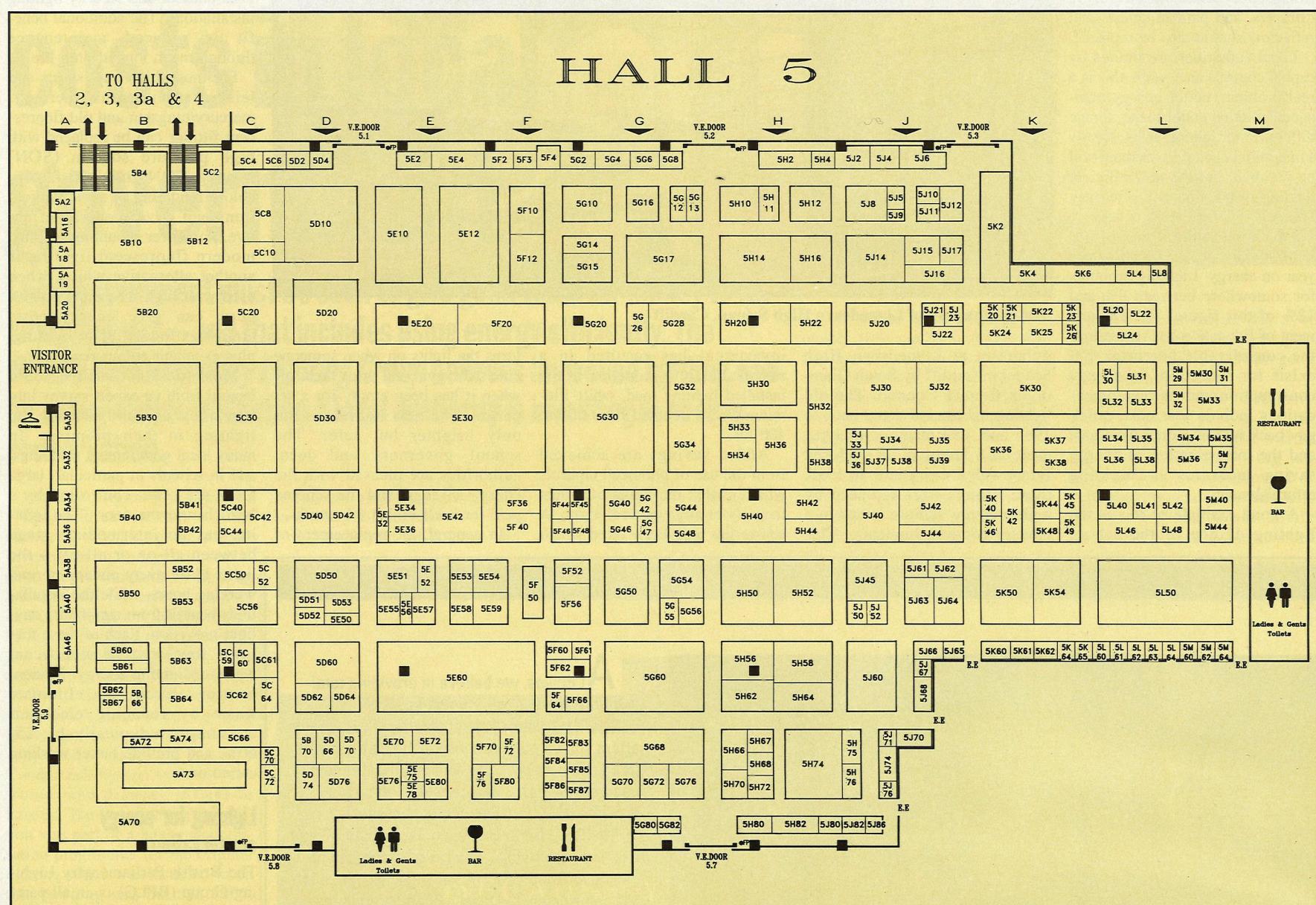
The following preview groups lighting products under four headings: lamps and luminaires; electrical accessories; controls, and associated products and components.

Stand numbers are given after each company name; the first digit refers to the hall number.

Tickets obtained in advance are free if registration forms are requested by 8 July and returned by 13 July. Otherwise, the entrance fee is £5 at the door. Further details are available from ElectroTech Exhibitions Ltd, Wix Hill House, West Horsley, Surrey KT24 6DZ (tel 0483 222888).

## Luminaires and lamps

GE Lighting (5B50) will launch its new one-name, one-brand corporate identity which includes



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**ELECTROTECH '92**  
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Hall 5 Stand 5A32  
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colour coded packaging.

Among the lamps shown will be Halogen-IR, which has a thin film coating to reflect infra-red radiation back onto the filament to increase light output; Biax compact fluorescent (PL type); 2D compact fluorescent, and double-ended metal halide.

LightShop, a miniature lighting studio for installing on wholesalers' premises, will be on the stand. It demonstrates colour rendering, colour appearance and beam angles.

LightGraphix (5C61) will be introducing new ranges suitable not only for general lighting purposes but also for installation in yachts, caravans and vehicles.

Footlight is a diecast, recessed luminaire, either round or square, for low voltage tungsten halogen lamps. There will also be a diecast, recessed wall unit using either compact fluorescent or low voltage lamps.

Midge is a miniature recessed light, ingress protection rated IP54, that uses a 5W festoon lamp.

Three sizes of enclosed, circular luminaires for surface or recessed mounting use either compact fluorescent or incandescent lamps.

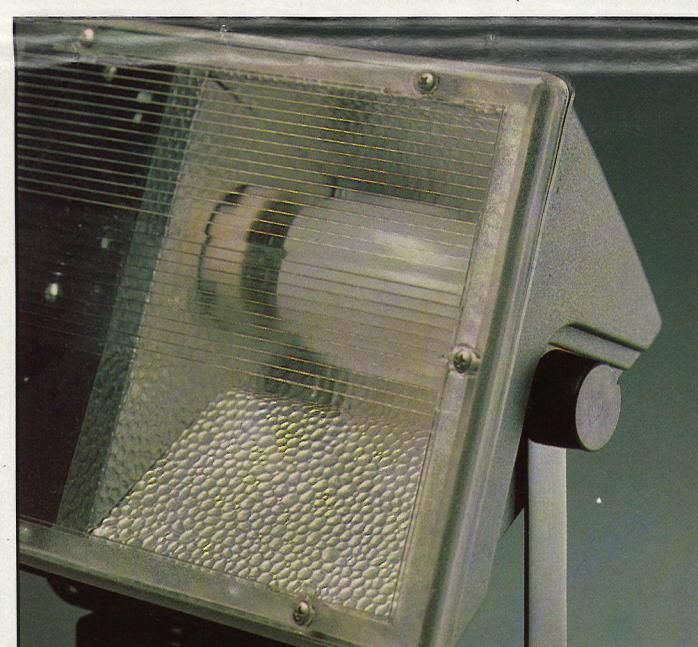
In addition, the company's decorative and commercial luminaires will be on the stand.

Gewiss (5K30) has more than doubled its product range since 1990 and now has over 2000 items available in the UK.

This Italian company will be exhibiting its products in four groups, which include a variety of electrical accessories.

Under the name Eurolite there will be discharge floodlights rated from 70W to 3500W and other industrial, indoor and outdoor luminaires.

Firstlight (5D42) will be showing for the first time at this



Sceptre floodlight from Fitzgerald Lighting.

exhibition and will have a number of new products.

The Saturn low voltage spotlight range with integral transformer consists of a wall light and single- and twin-light floor standards. A ring of tinted green glass is a decorative feature of this range. Metalwork is finished either white or gold colour.

Other new products will be Solar spotlights in R80 and R63 sizes and a small 40W Micro spotlight.

There will be a 300W tungsten halogen wall light with a mahogany effect finish; a range of six-panel glass coach lanterns and columns; octagonal, low voltage downlights finished in white or gold colour, and two ceramic wall mounted uplights using mains voltage tungsten halogen lamps.

A fully adjustable, low voltage desk light with a transformer in the base is finished either black or white.

Two types of track will be seen: a 12V track lighting pack which includes 1m of track, three 20W spotlights and a transformer, and a mains voltage track system with two styles of spotlight.

Franklite (5D76) will show its decorative lighting for the domestic and contract markets, such as its San Remo range of brass and glass pendants and wall lights.

Menvier (5A70) will be featuring its emergency lighting information service. Visitors to the stand will be able to access a Building Regulations database.

New versions of the Converta-lite conversion kit will be shown.

NI Lighting (5F36) will show surface mounted and recessed, modular, fluorescent luminaires with interchangeable lighting controllers. Among these will be fittings suitable for hospitals.

Exhibited also will be luminaires with IP65 ingress protection rating.

Tamlite Lighting (5E60) is a



Low voltage tungsten halogen Footlights by LightGrapix for outdoor uplighting.



A low voltage spotlight by Tamlite.

first time exhibitor and will be on the Tamworth Electrical Engineering group stand.

New recessed and surface mounted, modular, fluorescent luminaires will be seen which meet categories one, two and three of the CIBSE Lighting Guide 3.

For use with PL compact fluorescent lamps there will be the Mini Mod range of 300mm x 300mm recessed luminaires with a choice of prismatic panels or louvres.

New also will be sealed, recessed fittings using either discharge or fluorescent lamps.

A range of surface mounted,

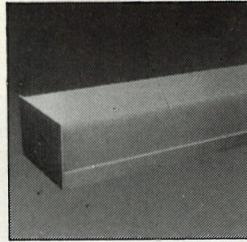
modular, fluorescent fittings with prismatic panels or opal diffusers includes a version for hospitals.

Other fluorescent fittings will be pelmet lighting for below kitchen cupboards.

For outdoor lighting there will be new security and amenity ranges using high intensity discharge lamps, and fluorescent fittings for lighting double-sided signs. The tungsten halogen floodlight range has been extended and includes fittings for outdoor car parks as well as sports arenas and factories.

Other companies in the group will be showing wiring and lighting accessories.

## GOOD HEALTH - ALWAYS



NI Lighting have launched their new 'practical' range of luminaires suitable for hospitals and public buildings. These incorporate night light facilities without the need of separate end box additions and jointed controllers.

Send for brochure or come and see the full range at 'Electrotech '92' Stand No. 5F 36.

**NI Lighting Ltd**  
Unit F2, Bramingham Business Park  
Enterprise Way, Luton, Beds. LU3 4BU

tion handlamp, which uses a tungsten halogen lamp.

A new development of the GVL group supply emergency lighting system panel will be shown.

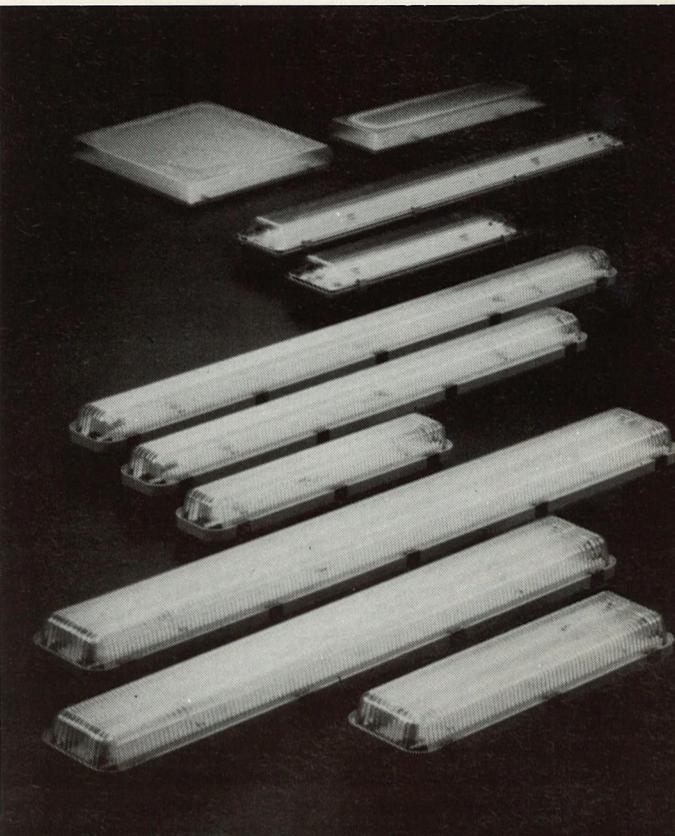
**Just Lighting (5C59)** will be showing its ranges of mains and low voltage downlights, track and associated fittings.

In addition, a large range of low voltage lighting transformers will be featured, again wholly UK produced.

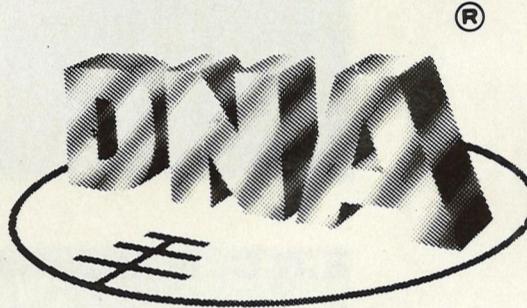
**Fitzgerald Lighting (5C72)** will have a variety of new products, such as a ballast that can be used either as a standard high frequency dimmable ballast for fluorescent luminaires, or, without extra components, linked to an energy management system.

A range of energy saving, surface mounted luminaires, including a circular model, is being introduced. These have been designed primarily with the 2D compact fluorescent lamp in mind.

A new 70W high pressure sodium floodlight with polycarbonate housing will be seen, while for sports lighting there will



Fluorescent lighting by Gewiss.



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AAN	STANDARD SERIES
APN	NOMINAL VOLTAGE: 250 VAC CAN: PLASTIC OR ALUMINIUM CAPACITANCE RANGE: 2.00 Mf to 60.00 Mf.
AAS	CAPACITOR FOR SERIES CONNECTION
APS	NOMINAL VOLTAGE: 420 OR 440 VAC CAN: PLASTIC OR ALUMINIUM CAPACITANCE RANGE: 1.70 Mf to 8.40 Mf.
ARC	RADIAL X2 FILTER CAPACITOR WITH INSULATED LEADS NOMINAL VOLTAGE: 250 VAC BOX: PLASTIC CAPACITANCE RANGE: 0.022 Mf. to 0.47 Mf.

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TER	PUSH-WIRE TERMINALS WITH DISCHARGE RESISTOR
CA-200	200 mm. 0.5 mm. <sup>2</sup> STRANDED OR SOLID LEADS
FA 2.8	FASTON 2.8 mm. SOLDER TAGS
FA 6.355	SINGLE FASTON 6.35 mm. TERMINALS
FA 6.35D	DOUBLE FASTON 6.35 mm. TERMINALS

### FIXING

M8 BOTTOM SCREW WITH NUT AND WASHER, SNAP IN SYSTEM ARE BOTH STANDARD. OTHER SPECIAL FIXING SYSTEMS ARE AVAILABLE OR CAN BE DEVELOPED.

### APPROVALS

BS 5750-4017, UNE, DEMKO and KEMA NORME FRANCAISE applied for

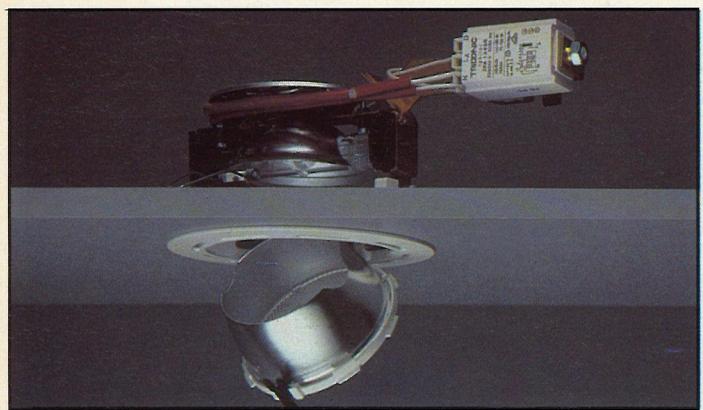
**For specifications, price and delivery contact Alan C. Runnette**

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A recessed downlight by Reggiani.

be 1kW and 2kW floodlights for either metal halide or high pressure sodium lamps.

Exit boxes, single and double sided, will be shown with a choice of legends including the running man symbol.

On Reggiani's stand (5C66) the family of Techne downlights will be augmented by three new ranges of metal halide luminaires.

The 7729 luminaire can accommodate the HQI-TS double-ended metal halide lamp within a ceiling cut-out of only 150mm because of its two-part reflector, which splits apart when the bezel is unhinged to allow re-lamping. This reflector gives an even level of illumination within a 70° beam

and means that a ceiling void of only 150mm is required.

Techne downlights models 7744/45/46 also use a 150mm diameter ceiling cut-out. They feature a narrow, 180mm-deep, cone-shaped reflector allowing a high level of beam control.

There are three similar luminaires but using 220mm diameter cut-outs and with 210mm-deep cones allowing higher efficiency and a wider light distribution. Both these ranges accept 35W, 70W or 150W single-ended metal halide lamps.

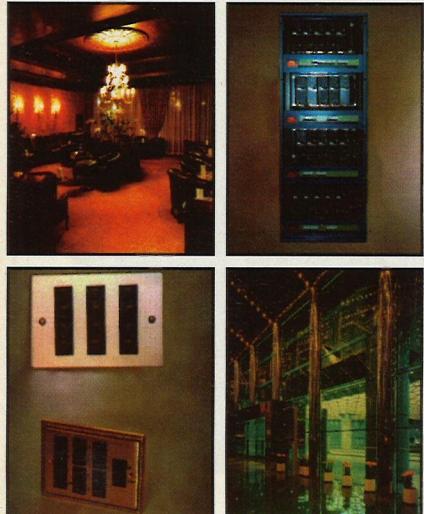
All three ranges incorporate ignitors for trouble-free lamp starting and heat sinks. White, black and gold-plated finishes are available.



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Page 12

## Electrical accessories

Crabtree Electrical Industries (5D30) will be introducing new products on a stand using state-of-the-art aluminium structure techniques and neon electrical symbols.

The new Powerstar range of MCCBs rated at up to 1250A will be shown, together with the existing Polestar and Starbreaker MCB and RCD ranges.

Additions will be made to the ranges of sensor security devices and Weatherseal industrial plugs and sockets.

Capital wiring accessories will be seen. They have shrouded, easily accessible terminals and a labyrinth construction which prevents front access to live parts of the switch. The concave rockers are also easy to operate.

Barduct (5H12) will exhibit its full range of busbar trunking systems, including the CC40 range of 40A, five-pole trunking which is suitable for lighting and small power installations.

Balcan Engineering (5A46) will be exhibiting a new electri-



Loading lamps into Balcan's new lamp crusher.

cally operated lamp crusher. It is loaded at waist height, which makes it safer and less fatiguing than top loading machines.

The Soakup sack system, for use with it, not only collects everything discharged by the crushing process, it also absorbs the liquid effluent so that it does not need to be discharged into drains.

A video is available from Bal-

can showing how the use of these crushers helps companies to comply with both environmental and duty-of-care legislation.

Wibe (5J32) will be showing new cable support systems. For small bore cables such as fibre optics Wibemesh offers a system based on light duty cable tray but with mesh infill.

Wibetray is a lightweight cable tray with 60mm perforated sides, boltless coupling and adjustable

bends, for quick installation.

A development in the Wibeladder range provides additional rigidity enabling the system to span up to 9m.

Wieland (5H40) will be featuring its new Lynx modular wiring system for use with luminaires in office buildings. It reduces installation time and servicing costs and allows easy repositioning of luminaires. It is based around the Wieland ST18 connector range used in the lighting industry.

Bowthorpe-Hellermann Distributors (5K40) will be exhibiting cable protection and installation equipment, including enclosures, PVC trunking and flexible conduit, markers, rail mounted terminal blocks, RCDs, MCBs and cleaning/maintenance chemicals.

A new Quick Strip tool can be used to strip both sheath and conductor insulation from cables sized from 1.0mm<sup>2</sup> to 2.5mm<sup>2</sup>.

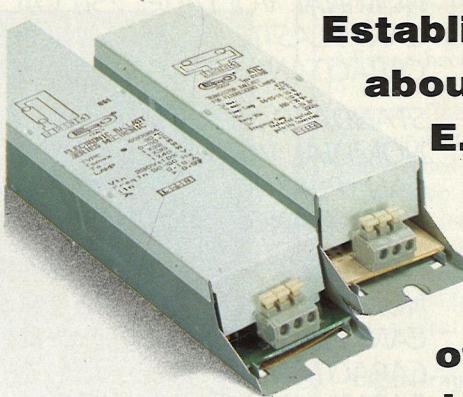
On show will be a new combined RCD tester, insulation check and earth loop impedance tester designed to meet the requirements of the 16th edition of the IEE Wiring Regulations.

# Enlightened

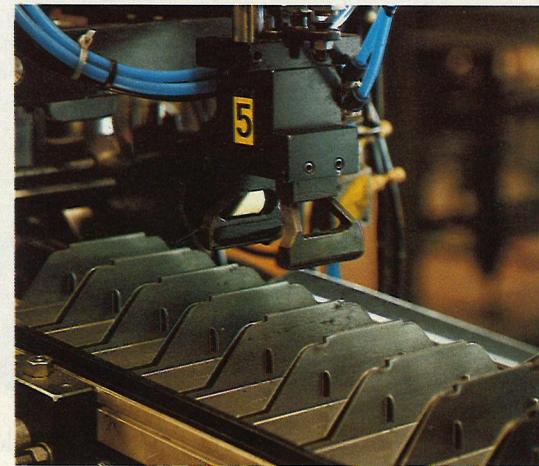
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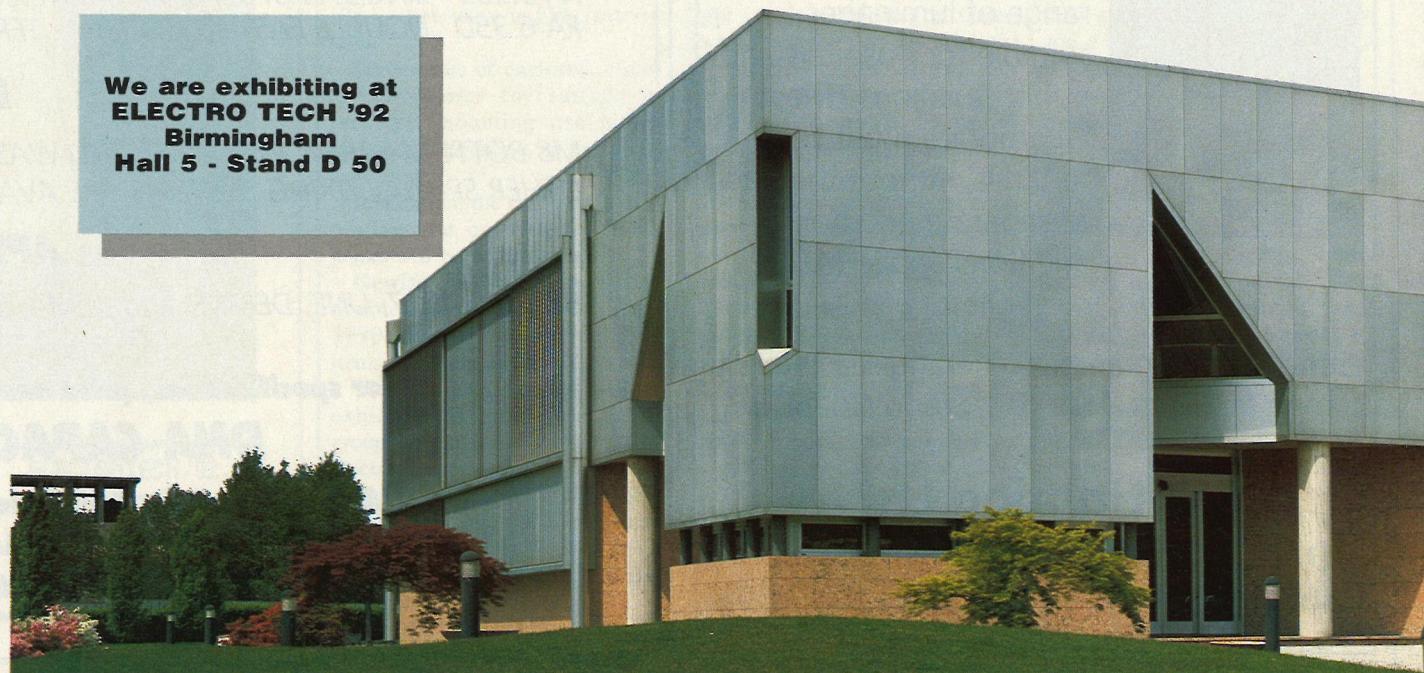
**E.R.C. is well known for the progressive development of new ideas in production techniques and products. It is this philosophy that has kept E.R.C. in the forefront of the industry.**

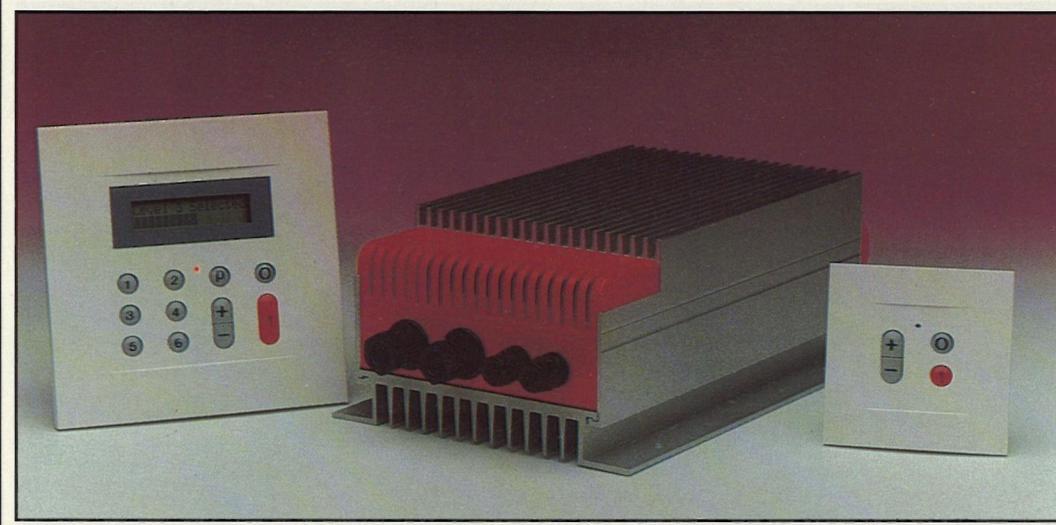


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**ELECTRO TECH '92**  
Birmingham  
Hall 5 - Stand D 50





Studio 3, a programmable lighting control introduced by Home Automation.

**Hager (5C30)** will display its energy management devices, consumer units and enclosures.

It will be introducing a combined MCB/RCD.

**BAF Industries (5E50)** will be launching its ceramic switched sockets, an addition to the Concorde range of ceramic light switches and dimmers.

BAF also offers this range with company logos. Matching porce-

lain door furniture is available.

**Sicame (5H16)** will include among its display a motorway and street lighting cut-out for termination of cables in columns and illuminated traffic signs. The one version has been designed to meet all applications.

**Switchtec Electronics (5M34)** will launch the Finder range of electrical accessories, for which it is now UK distributor.

### Lighting controls

**Home Automation (5B10)** is launching its state-of-the-art Studio 3 lighting control system at the exhibition. A special feature is that the end user can easily program and alter lighting levels.

The system includes dimmers up to a maximum loading of 45kW and a six-level menu-fed

programmable controller with the display in a choice of four languages. Commands are carried to the dimmer pack on a 12V two-wire bus system.

Clip-on face plates for the control units can be supplied in a range of finishes.

Studio 3 is stated to be economically priced.

**Superswitch (5D10)** promises a range of sophisticated dimmers and security lighting products.

The switches will include remotely controlled, touch sensitive and rotary types, together with matching on/off switches, extension controls and time delay switches.

Foremost among the security products will be model 2304, a programmable light switch complete with time display, and model 2305 photocell security switch which turns lights on at dusk and off after a chosen number of hours.

Passive infra-red control units will be among other security products.

**Danlers (5A36)** will exhibit electronic switches for controlling residential and commercial light-

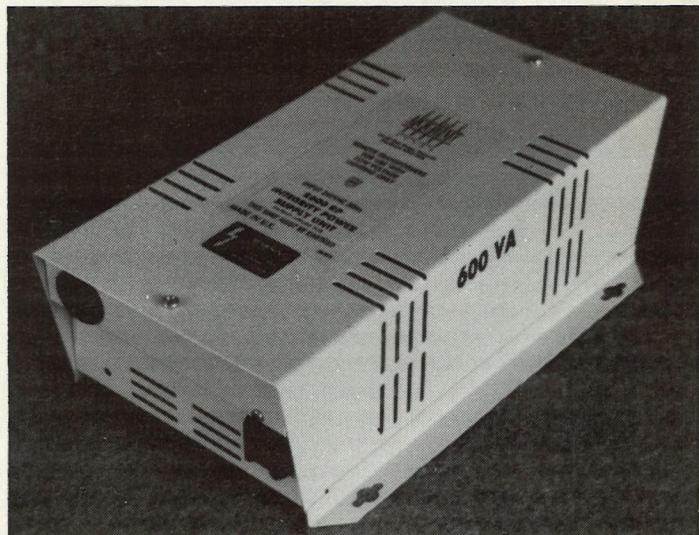
ing. There will be occupancy, infra-red and ceiling mounted plug-and-socket types.

A wall mounted, two-wire control enables wall switches to be replaced without altering the wiring.

**BatiBUS Club International (2B20)** will have a stand to demonstrate and promote the use of BatiBUS technology in the design of products.

provides the correct voltage to any number of lamps, from one 20W lamp to a maximum of 12 50W lamps. A mixture of luminaires, such as downlights and track lighting, can be run from one unit.

The research and development department at **Ano-Coil (5B64)** has produced new finishes for the anodised aluminium used by lighting manufacturers making



Accent Lighting's Integrity, multi-load power unit.

### Associated products and components

**Tridonic (5C62)** will launch its single and twin lamp PC-A electronic ballasts which can be dimmed down to 1% of light output. These ballasts monitor and control lamp power rather than lamp voltage alone and are claimed to give constant light output throughout lamp life.

Other electronic ballasts shown will include one for 150W metal halide and high pressure sodium lamps.

Low voltage lighting transformers built into enclosures suitable for remote mounting will be displayed, along with a compact 50VA stand-alone transformer. Dichroic reflectors for low voltage and metal halide lamps will be shown.

Chokes for fluorescent and discharge lighting will be on the stand, plus superimposed pulse ignitors.

**Accent Lighting (5F52)** will show a 600VA Integrity multi-load power unit for low voltage lighting. It incorporates a resettable miniature circuit breaker which responds to any fault, acting faster than a fuse, and it cannot be tampered with.

One Integrity power supply

louvres and reflectors. This material, which will be shown on the stand, is particularly suited for louvres used in VDU areas specified in the CIBSE Lighting Guide 3.

**Chloride Industrial Batteries (5G72)** will include batteries suitable for use with emergency lighting among its display.

**DNA Capacitors (5B52)** has extended its range of Snap-in system capacitors for fluorescent lamps to include a 35mm diameter model (9mf-20mf). This and other capacitors will be on the stand.

**Huco Electronic (5A32)** will show energy saving, environmentally friendly products, including an award winning adaptor for compact fluorescent lamps. There will also be an all-electronic, dimmable 18W ballast for compact fluorescent lamps.

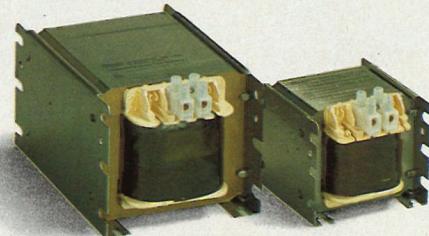
**Cymap (5J38)** will be exhibiting its range of software packages for wiring and lighting design, including the new AutoCAD Services Library.

**CADLink Wiring and CADLink Lighting** packages process calculations and readjustments accurately in seconds.

The Services Library tailors an AutoCAD system to the electrical engineer's needs.



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# Exhibiting flair

Steel, glass, water and fabric sails are used to dramatic effect in the British Pavilion at Seville – and lighting is used to heighten the sense of excitement.

The British Pavilion at the Expo 92 fair in Seville includes a spectacular 25 m high water wall, thought to be the largest in the world.

Designed to reflect Britain's maritime history, the building is a showcase of British originality and technological prowess and has been floodlit by Thorn Lighting.

The lighting scheme was designed by Tom Harris of consulting engineers Ove Arup and Partners in conjunction with Thorn and architects Nicholas Grimshaw and Partners.

Grimshaw, whose work includes the Financial Times printing works and the International Rail Terminal at Waterloo, was chosen for the £14 million project from a short list of six international practices. His brief was to design a pavilion that would symbolise the spirit of a nation and convey a memorable message to the world.

The design brings the sound and presence of moving water to the dry, hot island of La Cartuja, on which the exhibition is based – where summer temperatures can reach 49°C.

designed and made in Britain before this 'kit of parts' was shipped to Spain and erected on site in just 42 weeks.

The main steel structure is supported on deep piles driven 18 m into the Cartuja earth. Many of the wall and roof trusses were made up in one or two pieces. The longest were 25 m long and had to have a police escort from the northern Spanish port of Santander. The whole journey from the Coventry factory took five days.

Three million litres of water are constantly on the move over the water wall, pumped by solar-powered pumps from the pool at the base to 1400 nozzles at the top. The nozzles are adjustable to create a multitude of effects between a slow, leisurely fall and a thundering cascade.

The west wall is exposed to the full force of the afternoon sun. It is constructed from steel freight containers which hold a large quantity of water. The heat absorption capacity of the wall is enormous. It acts rather like the thick walls of a mediaeval cathedral, evening out the fluctuation

of temperature inside the building.

The late morning sun falls on the south wall and is prevented from penetrating the building by bowed fabric walls. The unusual shape of both the south and north walls is formed by the curved tubular spine of the bow spring trusses which span 25 m from roof to ground.

The fabric sails which stretch between each spine are supplemented on the south by additional shading panels.

On the flat roof are 150 S-shaped panels of solar cells which provide the power for the water pumps. The roof is protected from the excesses of the sun by shading louvres which ornament the roofline.

Two thousand visitors an hour are expected to visit the British Pavilion over the six months of the exhibition. They move around

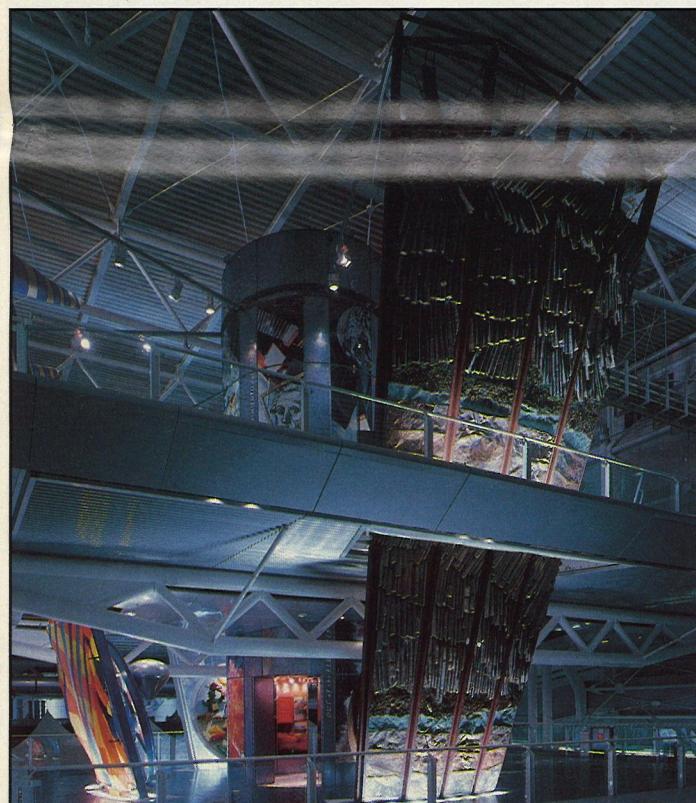
the five-storey building on a series of long sloping travelators and walkways.

Visitors will see video sculptures, an electronic tapestry composed of 275 screens giving a variety of images of Britain

## Lighting scheme

The lighting scheme incorporates 122, 150W metal halide 'Sunspot' floodlights. These compact fittings give 12 000 lumens and relatively low heat output. They use a variety of front glass attachments to give different light distributions and peak intensities to

Exterior view showing the fabric sail wall illuminated from within.



The displays are lit using metal halide, while fluorescent fittings provide ambient lighting.

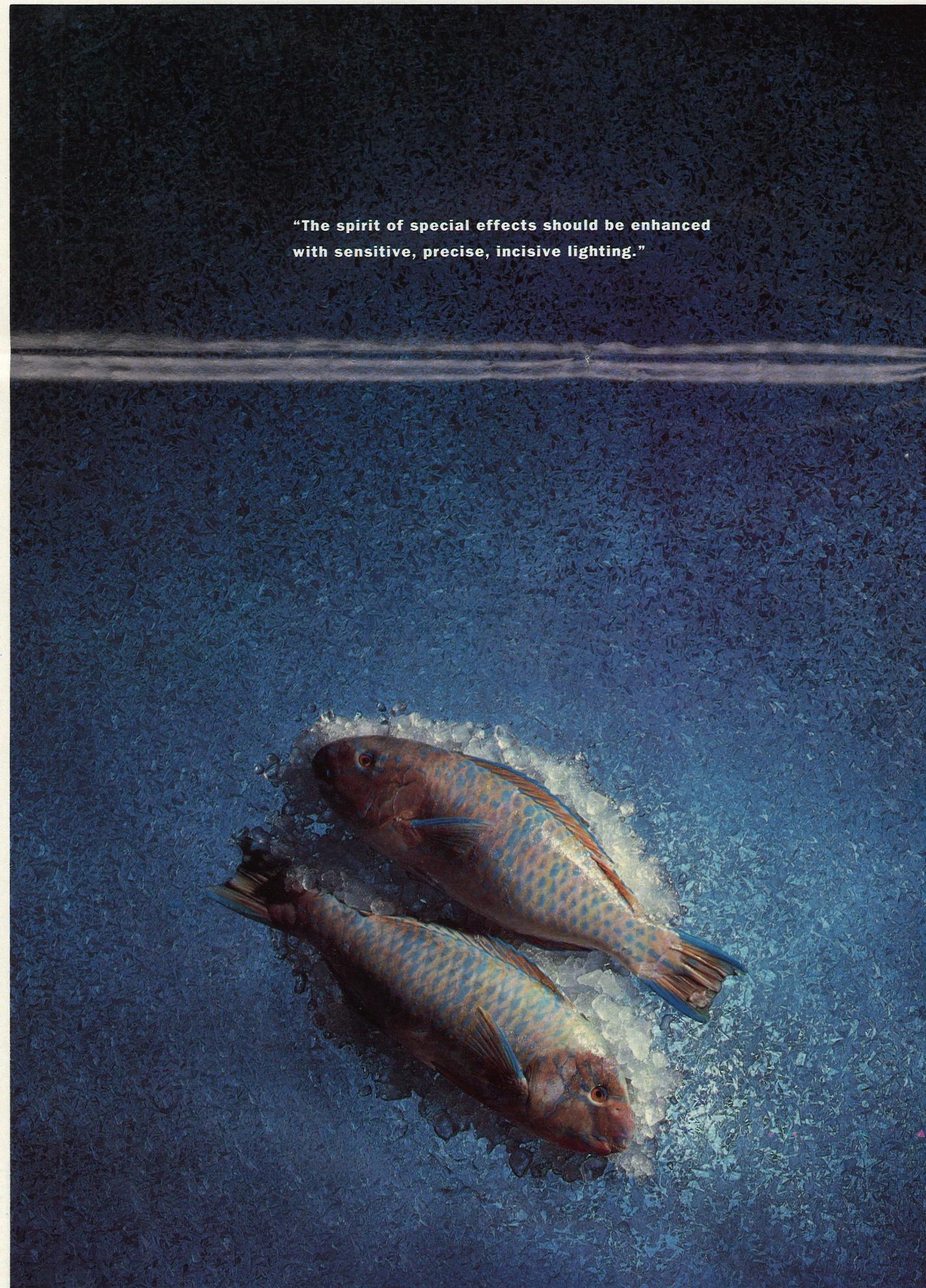
Visitors approaching the pavilion from the east see a crystal box, 25 m high, 70 m long and 40 m wide. The whole eastern entrance facade is a cascade of falling water rushing over the glass wall before dropping the last 5 m into a wide moat which extends inside the building.

A giant Union flag can be seen through the water wall.

Two 'curtains' of water mark the entry point – a narrow bridge passing over the blue waters of the moat.

Once inside, visitors enter a cavernous interior, similar in size to Westminster Abbey. Some commentators have found it strongly reminiscent of the interior of Sir Joseph Paxton's Crystal Palace of the 1851 Great Exhibition.

The structure uses the latest techniques of steel and glass assembly. Every element was



**"The spirit of special effects should be enhanced with sensitive, precise, incisive lighting."**

suit the structure.

The vast wall of falling water is stunningly lit from within. The effect is repeated with the north and south fabric sail walls.

In addition, ninety 250W metal halide Area floods uplight the S-shaped solar roof panels, and underwater tungsten projectors enhance the bottom of the water wall. This avoids the floating appearance that can arise if the base of a building is underlit.

Circulation lighting is provided by hundreds of fluorescent luminaires installed at low level, behind the semi-transparent skirting of the walkways. Compact fluorescent downlights are located under the decks in the main areas.

The cool white metal halide light is ideal for the southern Spanish climate. Positioning of the floodlights was crucial to prevent glare while successfully modelling the contemporary lines of the pavilion.

#### Key principles

The lighting of the British pavilion observed the three key points of good exterior floodlighting – not to use too much light, to



Floodlights uplight the S-shaped solar roof panels.

remember the characteristics of the building are as important as the illuminant, and the use of shadows to make a useful contribution to the final effort.

The lighting designers had to consider the key viewing positions and the main visual impact points. Rather than overlighting the structure, restraint on the number of floodlights results in a coherent light and shade pattern across the field of view.

Reflections from glass present difficulties for floodlighting and care is needed to avoid excessive

spill light and glare. Merely installing floodlights at ground level makes surfaces look dull and lifeless. So the building was lit from within as well as from outside. Highlights and shadows are created by the positioning of units rather than using light sources of contrasting colour.

Glare is reduced by locating the fittings away from the normal eye line.

The solar panels on the roof are illuminated by ninety 250W metal halide area floods in uplight mode.

#### Inside light

Inside the structure careful thought was needed on positioning. The building was well served by daylight often conflicting with the TV screens and the illuminated displays.

The trusses are painted white. 150W metal halide Sunspots floodlight the steel structure. Tom Harris chose these because of their high intensity and accurate beam control.

Narrow beam floodlights use different front glasses, achieving a variation in beam. A mixture of stippled and prismatic lenses give symmetric and di-symmetric beam performances. The prismatic versions are softer than the stippled types and produce a slightly broader beam.

The floodlights ensure the large open space inside the pavilion is visible from the outside, through the water wall.

#### Water wall

Two methods are used to light the dramatic water wall. Internally, large quantities of 150W Arcstream Sunspots light the dry side of the wall from the top level.

Externally, chains of 220V Molitor underwater fittings with PAR38 300W tungsten lamps are submerged in the ground level reservoir outside the building and are positioned to light the jets of water and spray to about five m.

More Sunspots are installed at high and low levels inside the building to light the fabric sail walls. At night these walls appear to glow. Narrow beam floodlights avoid spilling light onto the supporting steel work.

Fluorescent batten luminaires are installed at low level, behind the translucent skirting of the

around 40 lux to enhance the exhibition displays.

Because the building frame supporting the exhibition areas is almost entirely separated from the building structure, installation of the lighting systems was difficult and involved abseiling. The technique will be used in the ongoing task of maintenance.

To complement the advanced design features, the pavilion's environmental control system ensures a high degree of energy efficiency. It also provides a cool, comfortable environment for the visitors.



The entrance area with its 3kW tungsten underwater fittings.

walkways; while compact fluorescent downlights, under the decks, provide ambient light to the concourse display area.

Tom Harris believes the effect would have been better if the floor had been brighter – instead of black. Even so, it works quite well.

The exhibition theme, 'Britain in Partnership with the World', is expressed through the four elements of Earth, Wind, Fire and Water. These features are lit with Arcstream Opera 150W floods. Ambient lighting levels are

The building management system also provides lighting control.

Work started on the design of the British Pavilion in January 1989. Fifteen months later construction work started on the Expo site – completed in time for the April 1992 opening.

It has been a massive project, but one which truly represents a showcase for Britain, demonstrating innovation and inventiveness, technical expertise and an optimistic vision of the future.

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Page 15

## COOLSPOT

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## Concord



The Montjuic Olympic Stadium where the opening and closing ceremonies will take place.

# Lighting in the fast track

Spain is in the news this year. At the end of this month the Olympic Games open in Barcelona — one of a trio of world class events to commemorate the five hundredth anniversary of the discovery of the New world. *LEN* looks at the lighting of two of the major Olympic venues.

The Twenty-fifth Summer Olympic Games, to be held in Barcelona, will take place on four Olympic sites, each of between 140 and 230 hectares, located at strategic points in the city. These areas — Montjuic, Diagonal, Vall d'Hebron and Parc de Mar —

contain most of the competition venues and training facilities as well as the necessary accommodation and services for the Olympic community.

Principal venues are the Montjuic Olympic Stadium, where all the athletics events and the opening and closing ceremonies are to take place, and the spectacular Palau d'Esports Sant Jordi which houses the gymnastics, handball and volleyball competitions.

Philips Lighting has supplied the lighting for all the major Olympic sites, including some 4000 floodlights in installations meeting international standards for the televising of sporting events, which will permit an estimated 15 billion viewers worldwide to receive high quality, colour television pictures of the events.

Centre of attention is the Montjuic Olympic Stadium, with its capacity of more than 65 000 spectators. Its nine-lane, 400m track is the setting for all track and field events, and the finishing point of the marathon and walking events.

Originally built for the Barcelona International Exhibition of 1929, the stadium has been completely renovated and only the original facade remains. An impressive feature is the 150m long by 30 m high dome.

a spectacular roof some 13 000 sq m in area which rises to 45 m above the level of the sports track.

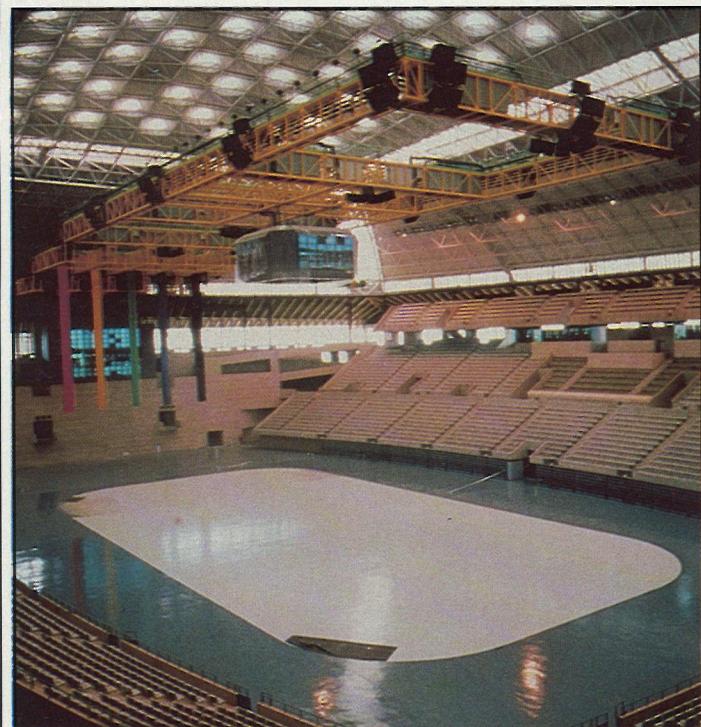
The building, designed by world-famous Japanese architect Arata Isozaki, is formed by joining the Sports Palace and a smaller multi-purpose building under a single free form roof made of a three dimensional steel structure.

The massive roof structure was assembled with all its components and finishes at ground level and then jacked up into its final position.

Here Philips provided the full range of sports lighting, spectator lighting, the decorative lighting of the roof and service area lighting.

In designing the installation, two main objectives had to be met: firstly, energy was to be saved by only providing high levels of lighting to the immediate competition area; secondly, attention was to be focussed on the activity taking place at that moment, thus improving visual comfort for the spectators.

Flexibility was a key requirement. The sports areas, had to meet the lighting requirements of the various sports at different levels including training, amateur competition, professional competition and full colour television broadcasting.



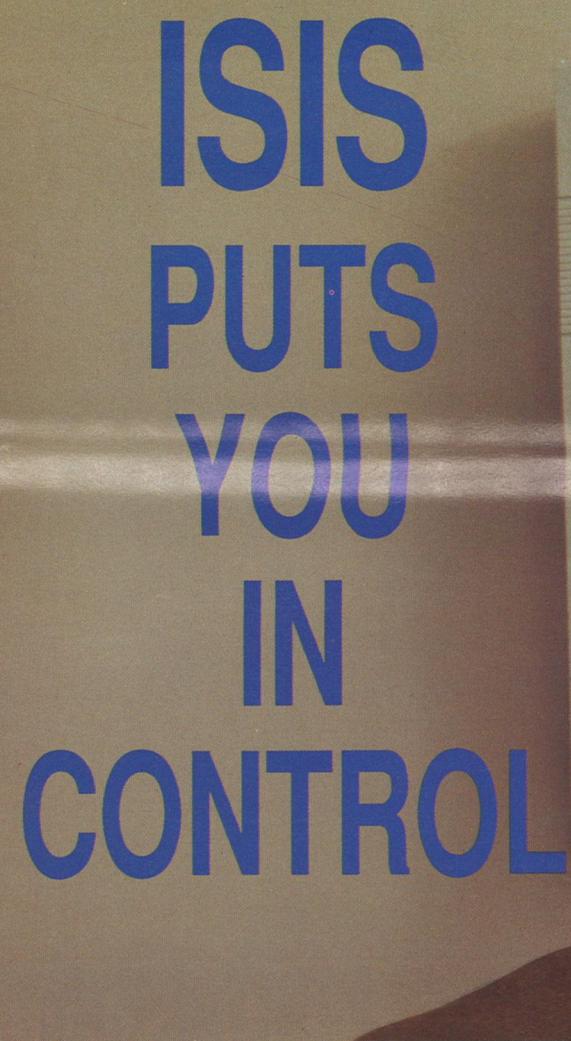
The Saint Jordi Sports Palace.

A modern lighting system was required for the Olympics, and Arenavision was eventually chosen as the organisers needed small floodlights which could be integrated into the edge of the roof of the stadium. On the opposite side of the track location of the luminaires was predetermined by the projections in the facade, and lighting on five slim posts was used.

The new 17 000 seat Palau d'Esports is also located at Montjuic. It comprises a 128 m by 106 m competition area topped by

A total of 240 floodlights is used, each fitted with a 2kW metal halide lamp. These are positioned symmetrically along the longitudinal axis of the track on two catwalks at heights of 31 m and 35 m. The installation provides for a high level of visual comfort and minimises glare.

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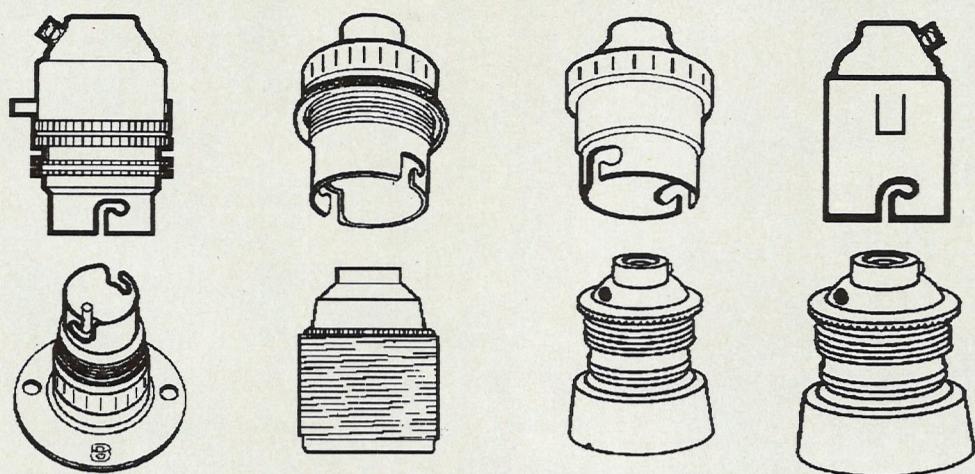
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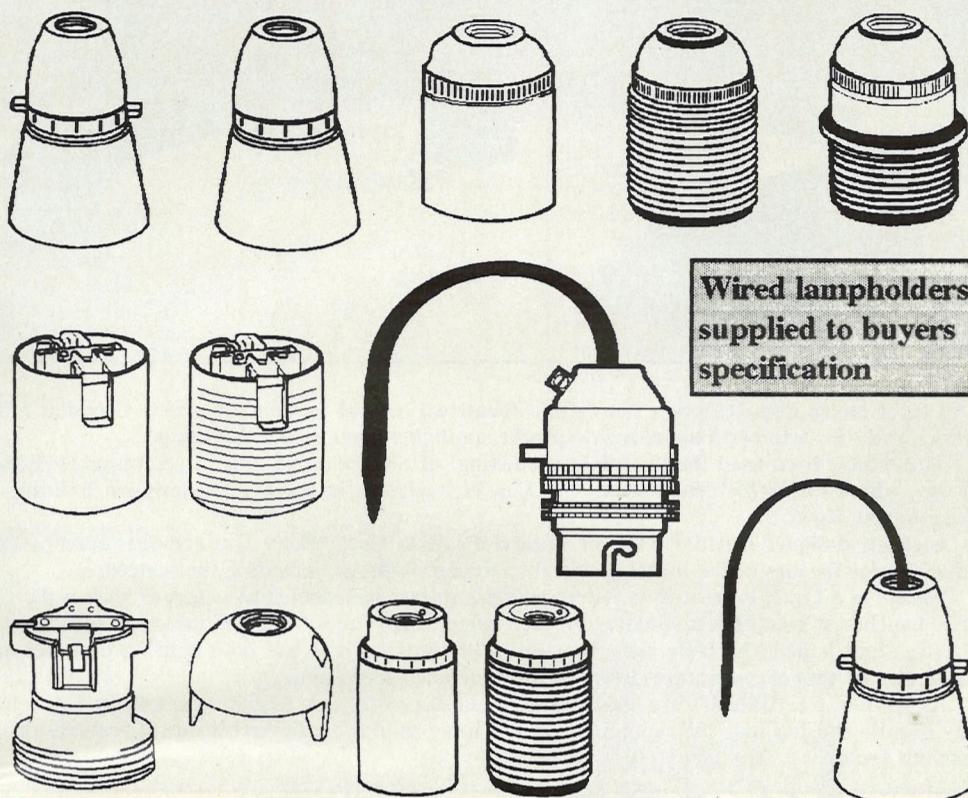
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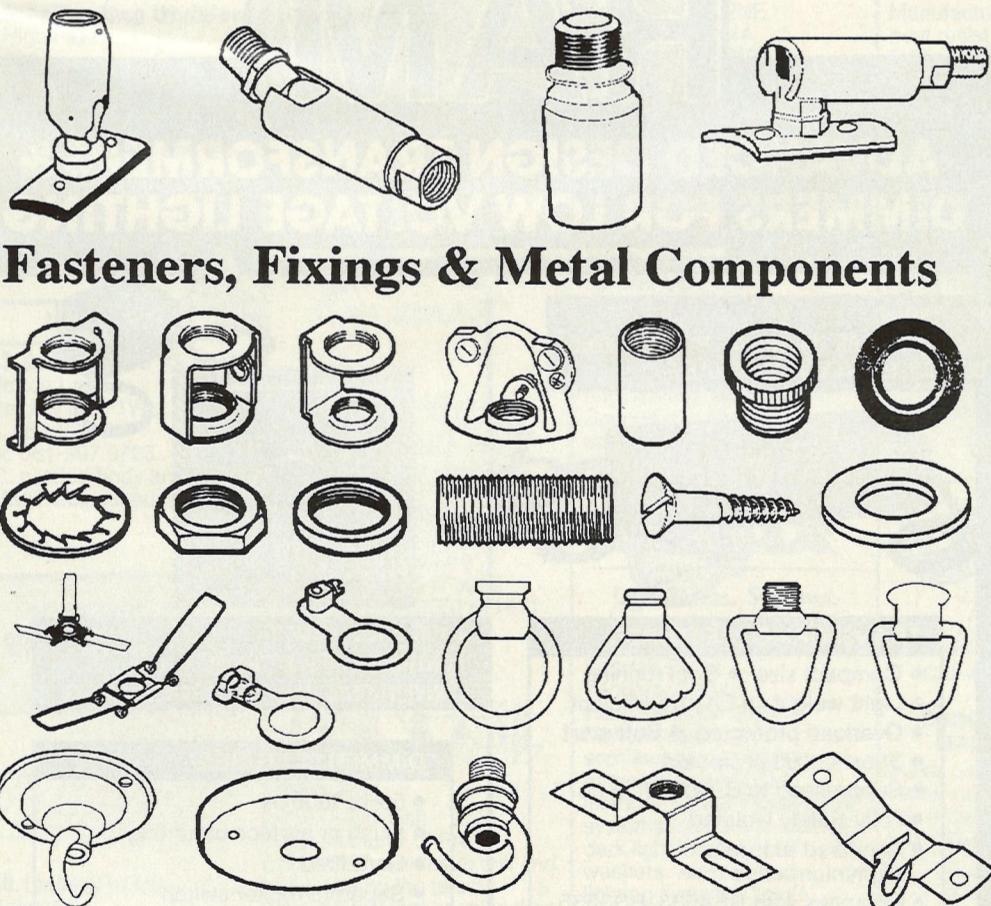
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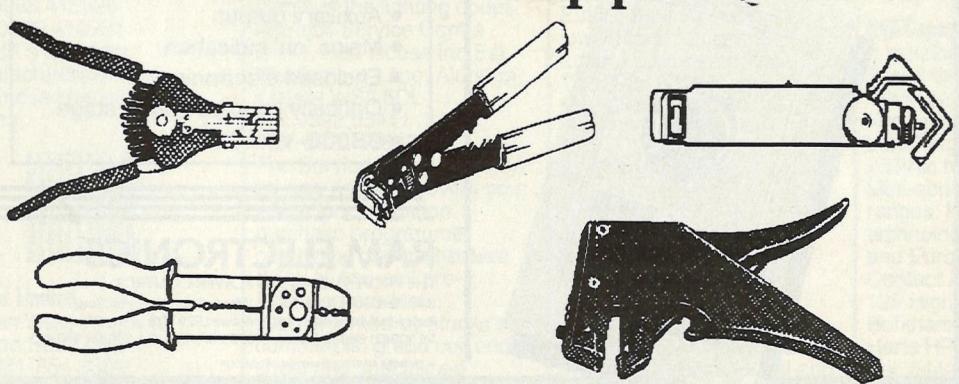
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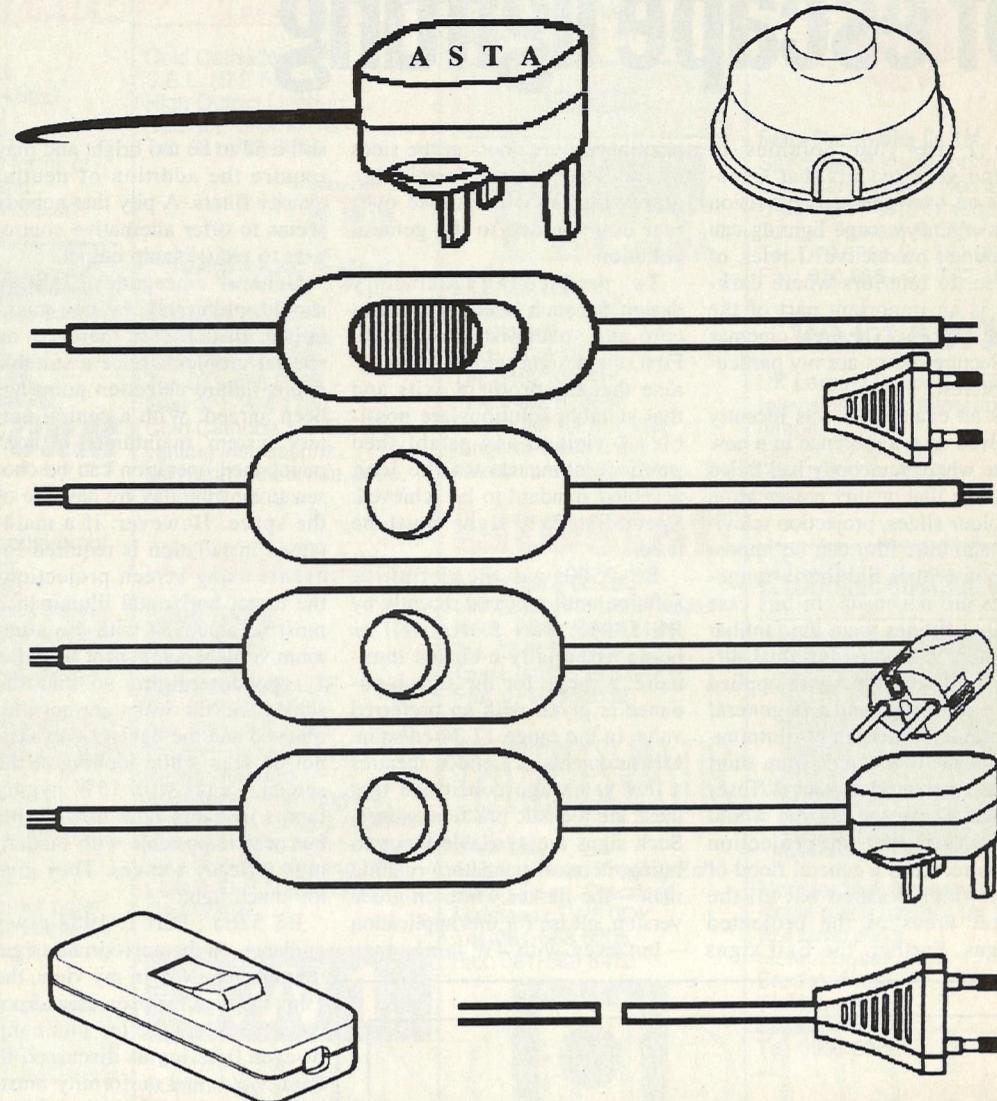


## Tools - Cable Strippers

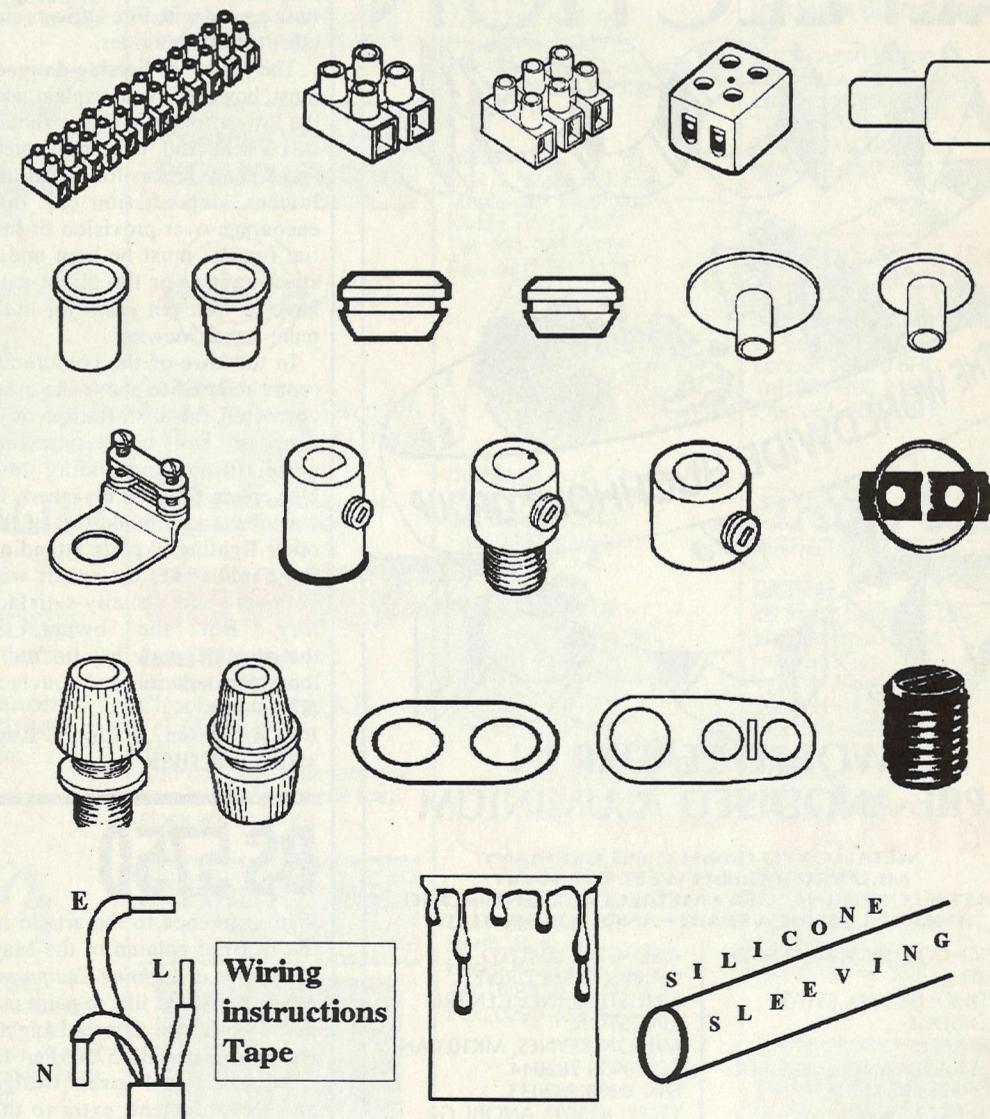


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## LETTERS

# Over-provision of escape lighting

May I use your columns to remind your readers that sometimes an over-generous provision of emergency/escape lighting can be counterproductive? I refer, of course, to interiors where darkness is an important part of the visual process. Theatres, cinemas and lecture rooms are my particular interest.

To produce a satisfactory design for such interiors requires care and specialist knowledge. First, the designer needs to recognise that the problem exists and that suitable solutions are possible. A visit to any established public cinema shows the long accepted standard to be achieved. Specialist Exit signs must be used.

BS 2560 was the definitive solution until replaced recently by BS 5499 : Part 3. As well as being essentially a closed luminaire, a range for the sign luminaire is given with an preferred value in the range 17-34 cd/sq.m. Measurements in London theatres a few years ago confirmed that these are realistic practical values. Such signs are available incorporating the now mandatory running man - the darker white-on-green version, please for this application - but even with 4W lamps they

still tend to be too bright and may require the addition of neutral density filters. A pity that nobody seems to offer alternative control gear to reduce lamp output.

General emergency lighting should, preferably, be non-maintained. In that case there are no special problems once a suitable mains-failure detection point has been agreed. With a central battery system, maintained or non-maintained operation can be chosen to suit the day by day use of the space. However, if a maintained installation is required for events using screen projections the target horizontal illuminance must be achieved with the minimum vertical component from BZ 1 type downlights so that the screen and the walls are not illuminated and the light sources cannot be seen while looking at the screen - easy with 15W pygmy lamps in black hole downlights but near impossible with modern high efficacy sources. They give too much light!

BS 5266 : Part 1: 1988 gives guidance on the appropriate target illuminance. Not, in my view, the 1 lux average for open areas from para. 5.3.3. but 0.2 lux minimum or even 0.02 lux as discussed in Para. 9.3.4. and uniformity must, surely, be much better than 0.025 to avoid hot-spots. CIBSE documents LFG 5 and TM 12 give similar recommendations. The precise figure may have to be a compromise agreed with Fire Officers and other safety authorities.

The job of the lighting designer must, however, be to explain why the lowest tolerable figure should be chosen. And, talking of tolerances, those factors for end of life lumens, depreciation etc. that encourage over-provision of initial lumens must be kept under strict control or the client may have to wait ten years for optimum screen viewing.

In the case of the conference centre referred to above the users corrected the installation on a temporary basis by disconnecting some fittings and adding dark blue colour filters to the others. In our view and, I think, that of the other lighting experts attending the conference, the result was both safe and visually satisfactory. But the owner of the premises now has to find a long-term solution and convince officialdom.

Bob Anderson, B Eng, C Eng, MIR, MCIBS

## BS 5750

With reference to the article in the In Brief column of the May 1992 issue of *Lighting Equipment News*, we would like to point out that 4 years ago Concord Lighting was granted BS 5750: Part I.

Because Part I covers Design and Development, extra to the criteria covered by Part II, Concord Lighting, therefore, has the distinction of being in all probability the only UK lighting manufacturer offering quality assurance from the drawing board to installation.

Judith Barnett  
Concord Lighting



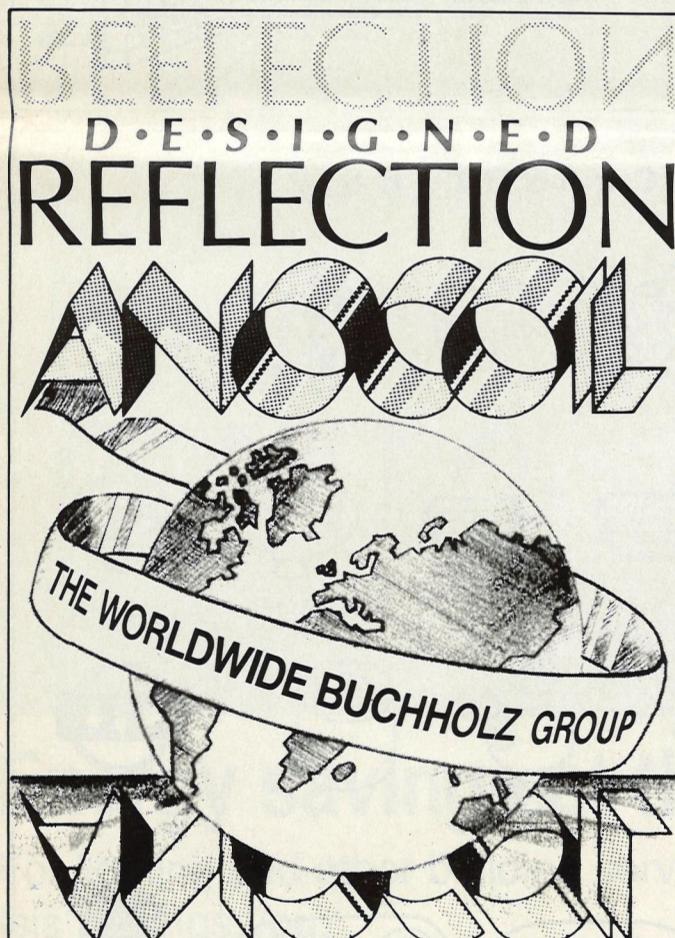
An eight metre high sculpture provides a theatrical central feature for a new Croydon office block with the help of 23 metal halide profile spotlights from Strand Lighting.

These have been used for 'highlight modelling' of *Square in a Circle*, a sculpture by Danny Lane, which forms the centrepiece of a 27m high atrium in the Seifert-designed building in Lansdowne Road.

Lighting designer David Taylor, of Theatre Projects Consultants, was commissioned to light the exterior facades of the building and the circulation areas, including the sculpture.

*Square in a Circle* is created in distressed glass sheets, surrounded by a carved glass wall, with two benches of glass sheets standing on their edges. Eight and a half thousand lux of white discharge light is directed from six projectors at the atrium roof but both lighting designer and sculptor felt that the sculpture deserved more detailed treatment.

Altogether, ten Hilite 23s are used. Four are on discreet, track fixings recessed into high quality granite finishes and the remaining six are integrated into the architectural features of the atrium facade.



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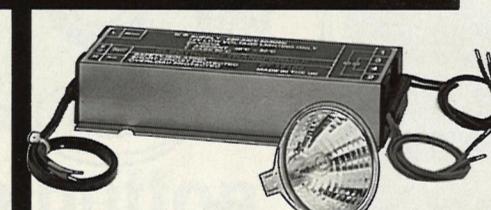
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Page 18

## RAM

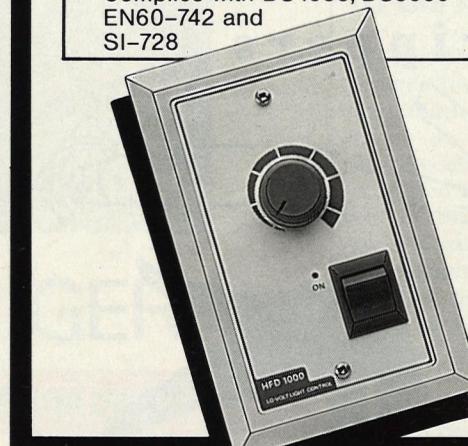
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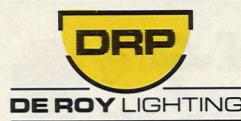
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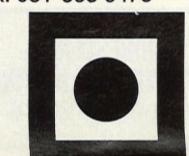


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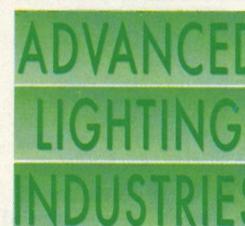


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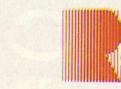
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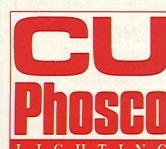


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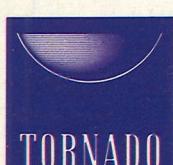


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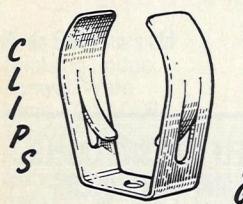
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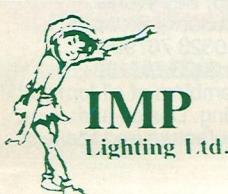
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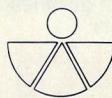


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# CATALOGUE DIRECTORY

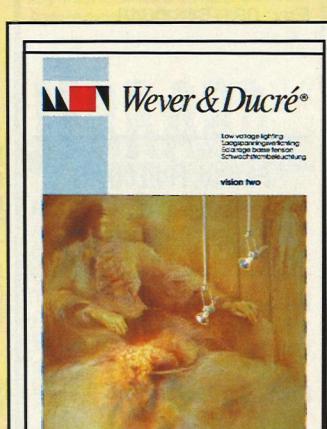
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The new generation 'Series 90 DC Emergency Lighting Central Battery Systems' from Channel Safety Systems incorporate the latest microprocessor control technology, constantly monitoring the status of battery and charger circuitry. Available in the range 24v to 110v from 100W to 28kW as standard: circle 95



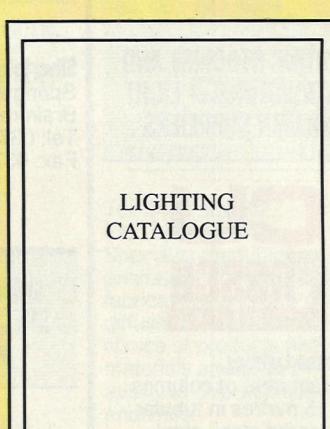
Wieland have extended their range of ST17/ST18 compact connectors, the 1992 catalogue shows many new products: 3 Pole, IE320 approved, 250V; 5 Pole, compact, crimp, 250V; 2 Pole, low voltages system, 50V; 'Tronic' LV electronic transformer. This range offers a versatile and cost effective modular wiring system which is easy to install, reposition and service: circle 92



Wever & Ducré, a dynamic specialist manufacturer with over 8 years experience successfully marketing to discerning customers worldwide, offers an exclusive and comprehensive range of infinitely superior state of the art luminaires for commercial and retail applications. Products are made to perfection with only top quality traditional materials considered in a range of finishes: circle 90



New from Trilux, 3E LIGHT is a complete system for lighting modern offices. Utilising the latest TC 55 watt compact fluorescent lamps as well as state-of-the-art digital electronic control gear, 3E LIGHT provides the ultimate office lighting solution combining pleasant ambience lighting for general and circulation areas within the office together with individual task lighting control at the workstation circle 95



## LIGHTING CATALOGUE

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developing catalogues and one of  
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lighting specifiers then this  
section can help you.  
Contact: Alastair Moyes on  
081-975 9759: circle 97

## Regional Sales Managers Lighting Maintenance LONDON & BRISTOL OTE £25K+Car

A well established Group subsidiary requires two experienced Sales Professionals to promote the Sales of Planned Lighting Maintenance, Lighting Refurbishment & Electrical Appliance Testing Services.

Candidates aged between 25-40 will ideally have experience in selling lighting maintenance services to the major retail, commercial and industrial sectors and be conversant with the energy management aspects of lighting.

This is an exciting opportunity for enthusiastic, self motivated professional sales persons to expand their career with a large group company.

An attractive salary plus commission will be paid together with a car and usual large company benefits.

Please apply to the Managing Director,  
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Sovereign House, 2 Sovereign Park,  
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**Tel: 081-961 3888**

## LIGHTING ENGINEER SHEPSHED

Illuma is a market leader in display lighting, a privately owned and highly successful manufacturing company.

We now require a Technical Sales Person to work at our factory in Shepshed, Leicestershire. Dealing with telephone enquiries, preparing quotations and lighting schemes.

Ideally you should have lighting design experience, and technical drawing ability.

This is an excellent opportunity for a young person to join a truly progressive company.

Please apply in writing to:

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You will be an Incorporated Electrical Engineer with at least 5 years' experience in street lighting engineering since completing your HNC. Preference may be given to members of the Institution of Lighting Engineers.

An essential car user allowance is payable and you must hold a valid full driving licence. Car loan/leasing schemes are available on attractive terms. Assistance with relocation expenses will be available where appropriate in accordance with the Council's scheme.

Reference Number ERE/13/LE

## SENIOR TECHNICIAN (STREET LIGHTING)

Up to £17,553

Based in Glenrothes, you will lead a small team preparing street lighting maintenance schemes and providing a support service to the maintenance unit.

You must have an HNC in Electrical Engineering or an acceptable equivalent and at least 3 years' experience since qualifying. Preference will be given to candidates with street lighting experience. A valid full driving licence is essential. Assistance with relocation expenses will be available where appropriate in accordance with the Council's scheme.

Reference Number ERT/14/LE

Write for an application form and further details (quoting the appropriate reference number) to the Administration Section, Roads Division, Fife House, North Street, Glenrothes, Fife KY7 5LT or phone 0592 763481 (Ansaphone) after 5 pm. Closing date Monday, 6 July 1992.

We Are An Equal Opportunities Employer  
Applications from people with disabilities will be particularly welcomed

## SALES AGENTS REQUIRED

We are leading manufacturers of an extensive range of infinitely superior lighting products for commercial and retail applications.

We should like to hear from experienced persons with established connections within the industry selling to the Specifier Market, Consultants, Architects, Local Authorities, Major Contractors, Wholesalers, etc.

An above average earning potential will be offered to selected applicants.

Please respond directly to **Barry Simpson, Wever & Ducré, 113 Marshall Avenue, Bognor Regis, West Sussex PO21 2TA.**  
Tel: 0243 869783 or 0860 820157

In addition, we should also like to hear from discerning companies interested in becoming STOCKIST DISTRIBUTORS of the exclusive Wever & Ducré collection.



## SALES ENGINEER

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Established manufacturer of emergency lighting products requires a sales engineer to promote products to specifiers, contractors and wholesalers in the above area

Excellent opportunity to increase your earnings through bonus scheme.

Reply to: Box 1524, Lighting Equipment News, Maclean Hunter House, Cockfosters Road, Barnet, Herts EN4 0BU.

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Please write in strict confidence, with full CV to:

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Offers are invited for a decorative Lighting Business (Leasehold) established for 10 years in North East Manchester. '91 turnover £130,000 (with staff).

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Applicants should have at least 5 years practising experience and come from an architectural/engineering background. Skills in project management and the coordinating of projects will be a fundamental requirement. Knowledge of Apple Macintosh desirable.

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Applicants must have past experience in designing specialist lighting fixtures for manufacture and be familiar with sources and suppliers within the lighting industry. A good drawing technique is essential and knowledge of the Apple Macintosh desirable.

Please send CV's to the above address.

## SALES ENGINEER

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THORN Lighting is a world leader in lighting systems, developing and manufacturing products for every sector of the industrial, domestic and specialist lighting market. Key to our success is an effective, professional sales service to Specifiers and Consultants. To strengthen this we are looking to appoint a Sales Engineer in the South East.

Based in Borehamwood, Herts you will be responsible for securing orders from specifiers, engineering consultants and end users for a range of lighting control products, prepare specifications and advise on energy efficient lighting systems. To be effective you must be highly motivated and have a proven track record in sales. You must also possess excellent communication skills and have HVAC control application or lighting equipment knowledge. An ONC or equivalent in electric/computer engineering would be advantageous. In return we offer a salary commensurate with your background, a company car and an attractive range of company benefits.

If you're interested and have the necessary skills and commitment to make a positive contribution to the continuing success of the company, please send your C.V. along with details of your current remuneration package to Mr. S. Singh, Personnel Manager at **THORN Lighting Limited, Elstree Way, Borehamwood, Herts WD6 1HZ**. Telephone: 081-905 1313.

A THORN EMI Company





A new lighting installation highlights the architectural features of the Harvey Nichols department store in London's Knightsbridge.

Lighting the building presented Sylvania with problems as the facade is so flat that fittings had to be fixed to the external wall, giving very little angle on the beams.

Ninety six Sylvania SON extra and Metalarc floodlight fittings were used together with SON extra 50W, 70W and 150W high pressure sodium twin arc tubes to bring out detail in the red brickwork. White stonework elements in the Knightsbridge facade are illuminated by 100W M100 metal halide lamps.

## Energy centres for Eastern Europe

The EC energy commissioner, Cardusoe Cunha, has inaugurated EC energy centres in Moscow, St Petersburg and Warsaw.

A total of nine energy centres has now been established in Eastern Europe, within the framework of the THERMIE Programme. They will act as focal points for information and advice on all

aspects of European Community energy technology.

During their first year the centres will carry out nearly 200 energy technology assessment and promotional activities including energy technology and market evaluations, seminars and publications. These activities are designed to assess the market potential for EC equipment and pave the way for industry-led energy technology transfer and cooperation.

## BRE advice on energy management

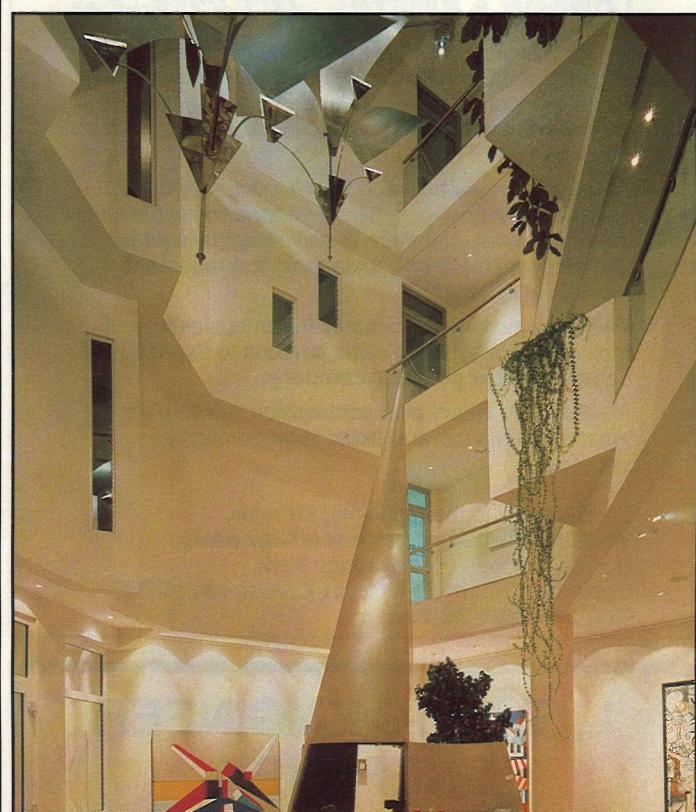
Energy saving advice in buildings is now available in a new BRE Information Paper which outlines good practice principles to ensure proper energy management.

'Energy audits and surveys' gives advice and information on

the resources required for audits and surveys, preliminary audits, site surveys and how to evaluate them, and implementation of the recommended measures.

Copies of IP 12/92, 'Energy Audits and surveys', are available from the Building Research Establishment, Garston, Watford WD2 7JR, price £2.50 including postage.

# Quality in light



When a financial services company specialising in accountancy, tax advice and trusts came to furnish new premises on a prime site in Nuremberg, the brief for interior design and lighting stressed the need to emphasise quality and the company's belief in investment in quality.

An architectural feature of the four storey building is the full height entrance hall. A stainless steel obelisk with an integrated bar immediately catches the eye. Together with a polished marble floor and the reception desk, it gives a businesslike impression of cool self-confidence – and this impression is reinforced by the lighting.

Ambient lighting to the lower part of the hall is provided by low voltage Osram Decostar tungsten halogen downlights that emphasise the stark modern lines of the architecture. The stainless steel obelisk is picked out by two metal halide spotlights each equipped with 150W Osram HQI-TS lamps.

Two sculpture-luminaires suspended in the upper part of the hall increase the feeling of spaciousness. The light objects, constructed out of stainless steel and aluminium, use three 150W HQI-T lamps to give indirect light reflected off the aluminium sails which form the upper part of each sculpture.

## IN YOUR NEXT ISSUE

The August issue of *Lighting Equipment News* will look at the changing practice in the field of emergency lighting.

This includes European legislation on the types of buildings

which will require emergency systems and standards, and a review of recent research which is now challenging long-held views as to the appropriate type and location of luminaires.

## ELECTRONIC TRANSFORMERS FOR LOW VOLTAGE LIGHTING



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TYPE	DESCRIPTION	OUTPUT	25+	50+	100+	500+	1000+
HET105	20-105VA	SCREW BLOCK	11.36	10.60	9.08	8.33	7.57
HET105D	35-105VA	SCREW BLOCK	11.73	10.95	9.38	8.60	7.82
HET105A	20-105VA	CABLE	11.36	10.60	9.08	8.33	7.57
HET105DA	35-105VA	CABLE	11.73	10.95	9.38	8.60	7.82

PRICES ARE EX. WORKS AND NETT OF VAT



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## Wieland ... making light work of interconnection

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