

# LIGHTING EQUIPMENT NEWS

JUNE 1992

## CIBSE honours Lord Ezra

Lord Ezra has been elected to honorary fellowship of CIBSE. A former chairman of the National Coal Board, Lord Ezra has a long-term interest in energy issues and launched the CIBSE research fund in March 1991.

Hugh Johnston, former deputy chief executive of the Property Services Agency was also awarded an honorary fellowship for services to the institution.

A silver medal for services to the institution was awarded to Alec Moir, of Oscar Faber Consulting Engineers, and a bronze medal to Bryan Lawrence, former senior lecturer at South Bank Polytechnic.

Six authors were given bronze medals and shared the Walsh-Weston award for a series of three papers *The effect on clinical judgements of new types of fluorescent lamps*. The authors were Margaret Halstead, formerly of Thorn Lighting, Dr Adrian Hill of the Oxford Eye Hospital, Peter Lovett of the National Health Service, Dr David Palmer, formerly at the Institute of Ophthalmology, Dr Mike Pointer of Kodak and Dr Tim Sonnex, dermatologist.

## In brief ...

● **Freestyle Lighting** is a new luminaire design company formed by Selma Lamkin and Dennis Leech, who were formerly with Courtney Pope Lighting. Freestyle is located at 21 The Enterprise Centre, Cranborne Road, Potters Bar, Herts EN6 3DQ.

● **Eterna Lighting** has acquired the range of lighting previously marketed by Metamec Clock and Lighting.

● **A Rowley Consultancy** has had its quality management system for the design of hazardous area lighting certified by Lloyds to BS5750 Part 1.

● **Swarovski** is celebrating its 25th anniversary this month with a special party at the Victoria and Albert Museum where some of its products are on display.

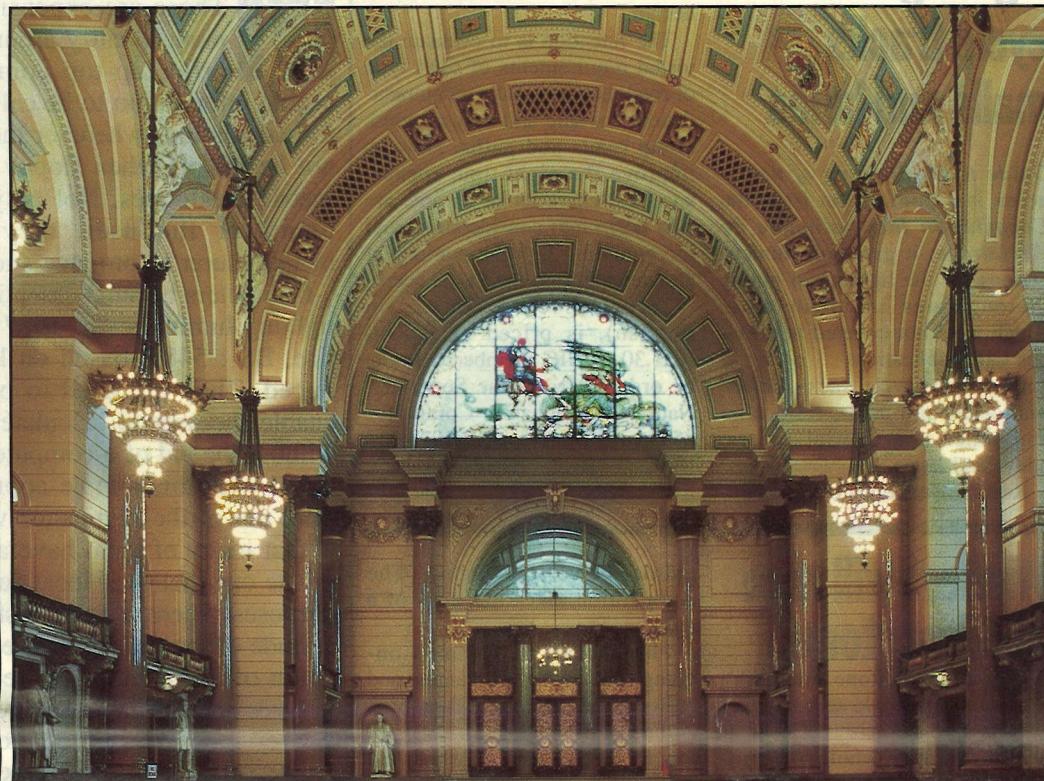
● **Thomas and Betts** has acquired American Electric, which will bolster its presence worldwide.

● **Osrarn**, as part of its worldwide ecological marketing policy, is using recycled material for its lamp packaging.

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## Facelift for Liverpool's St George's Hall



When the Tall ships race from America ends on Merseyside in August it will be in St George's Hall, Liverpool that Prince Charles

welcomes back the crews of almost 100 ships taking part in this celebration of the 500th anniversary of Columbus' discovery of the Americas.

St George's Hall, built between 1842 and 1855 is acknowledged as one of the finest neo-classical buildings in the world, a masterpiece of the Victorian age.

The original lighting for the hall consisted of 10 magnificent gasoliers each weighing 15 cwt. They were an essential although inadequate supplement to daylight.

In November 1990 Erco Lighting was asked by the consulting engineers William E Hannan and Associates, to submit proposals for improvements to the lighting of the Great Hall. The brief called

for lighting to enhance the architecture and provide suitable illuminance for a variety of functions.

The 10 chandeliers, now converted to electricity, were to be retained and other luminaires were to be concealed. Downlights were not acceptable.

The solution was a combination of washlights and floodlights at cornice level using 500W tungsten halogen lamps to uplight the barrel vaulted ceiling and increase the ambient light in the hall.

This gives even illumination of the ornate plasterwork right to the centre of the ceiling and allows wide spacing of the luminaires.

Medallions in the ceiling are highlighted by 70W metal halide floodlights.

A lighting control system allows six light scenes to be selected by push-button and this covers all anticipated requirements.

## Changes to Parliamentary Lighting Group

The recent election has brought about a few changes in the highly successful British Parliamentary Lighting Group. Former chairman Betty Boothroyd has now gone on with considerable acclaim to become Speaker of the House. Other notable changes include Croydon North West where Humphrey Malins lost his seat to the Labour candidate Malcolm Wickes, Birmingham Selly Oak which Anthony Beaumont-Dark lost to Labour candidate Lynne Jones, Stockport which Tony Favell lost to the Labour

candidate Anne Coffey, and Rossendale which David Trippier lost to the Labour candidate Janet Anderson.

Retiring BPLG members include William Benyon, Barney Hayhoe, Neil Macfarlane, Peter Roast and Ted Garrett. Dr Ian Twin and George Robertson continue as chairmen.

The British Parliamentary Lighting Group was founded nearly ten years ago to campaign for brighter, safer streets. It has now grown to become one of the biggest and most active of the all-party groups in Parliament, campaigning not only for better street lighting, but also for energy efficient lighting, lighting that complies with the new health and safety legislation, and lighting for motorways.



## Taking the indirect route

A new floodlighting system illuminates the apron at Frankfurt Airport without causing glare.

Current airport floodlights frequently dazzle pilots - whose eyes are adapted to the dark - while they are taxiing their aircraft from the runway to the apron area, especially during wet weather. The new system aims to keep the pilot's eyes adapted to darkness until the aircraft is safely parked.

The lighting installation developed by Siemens Lighting does not illuminate the apron directly, but refracts light off an array of reflectors, so the brightness of each image is greatly reduced.

In Frankfurt the installation comprises three 21 m masts. A platform halfway up each tower supports eight high-performance spotlights which point upwards, illuminating a 4.6 sq m reflector near the top of the tower. This reflector is made up of a hundred 40 sq cm segments each comprising four dish-shaped specular elements that split the light into smaller beams to illuminate the apron area.

So, everything on the apron appears evenly lit, without dark and light zones. And objects such as aircraft and vehicles can be seen in detail and not just in outline, as with more conventional lighting systems.

## Light at the end of the tunnel

A major improvement in business confidence is reported by Thorn Lighting. The last three months trading at Thorn are understood to have been good and, in addition, the company is taking on 21 people at Spennymoor and nine at Hereford. To cope with growing order books, 58 temporary staff have also been recruited this year. This is the first time production workers have been recruited by Thorn for two years.

Substantial contracts have been won for the Sensa luminaire for offices, which has inbuilt photocell and presence detector, and both Spennymoor and Hereford

factories are exporting to Europe, Asia and the Middle East.

In the long term, however, an upturn is needed in the construction industry and Thorn estimates that it will take 12-18 months for the lighting specification/project business to improve.

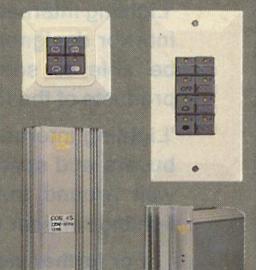
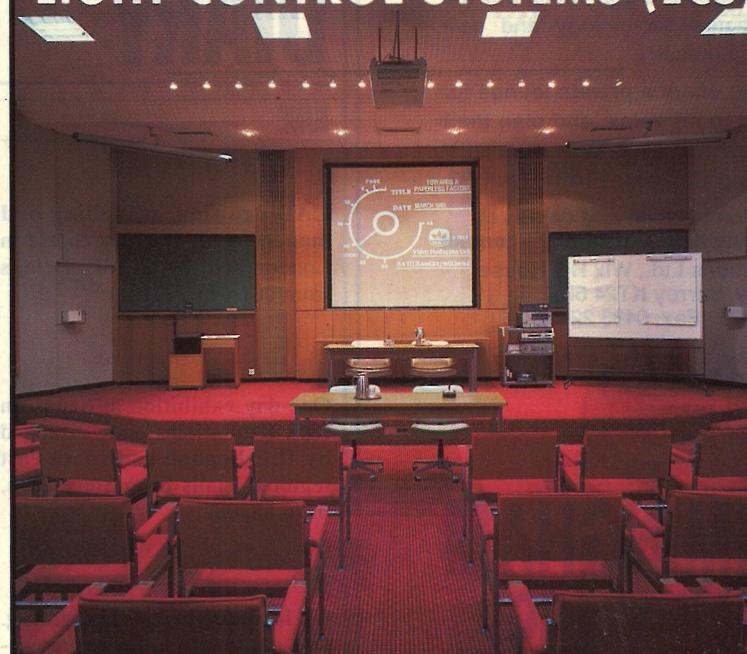
Thorn's approach has been to invest its way out of recession. Projects have included £1 million for a new fast and flexible manufacturing line for linear fluorescent luminaires in its German factory, the £3 million technology centre recently completed at Spennymoor, and robotic manufacturing cells installed in its

Swedish factory. A new training centre, representing further investment, will be opened at Spennymoor in early June.

A recent survey of manufacturers conducted by the Lighting Industry Federation showed that 52% of respondents anticipated that sales will increase over the next four months compared to 7% anticipating a decline.

An LIF spokesman said, "The improvement appears to be stronger in the industrial sector compared with offices, and stronger in the north than in the south east, but all sectors and all regions are improving."

## LIGHT CONTROL SYSTEMS (LCS)



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# NEWS

## Wide variety promised at Litec '92

Litec '92 will be held from 22-24 September, when members of the Institution of Lighting Engineers and others interested in lighting will meet at University College of Swansea.

Lighting for wide motorways is the subject of two sessions on the first day, followed by lighting for churches, and then developments in heritage lighting. Ageing and vision will also be considered.

Fluorescent lamps and photoelectric cells for street lighting will be studied, as will lighting columns and their corrosion.

Wednesday will start with computerised night scouting and go on to consider the work of the *Commission Internationale de l'Eclairage*. Among other papers that day will be one on electrical safety on the highway.

Computer programs for lighting design and maintenance will be demonstrated at a workshop in the afternoon, along with test equipment for electrical safety. An open forum will follow on regulations and recommendations.

Thursday will start with road lighting as an accident counter-measure and then, in contrast, move on to a guided tour of lighting at Expo 92 in Seville.

Domestic security lighting, light source trends in the USA, and lighting for the Channel Tunnel approach area conclude the conference.

For full details of the programme, accommodation arrangements and fees contact The Institution of Lighting Engineers, 9 Lawford Road, Rugby CV21 2DZ (tel 0788 576492).



## Lighting INTERNATIONAL AT ElectroTech '92

ElectroTech '92, the largest ever exhibition of its kind in the UK, provides a comprehensive display of new developments and technology from the electrotechnical and power supply industries. Incorporating Electrex and Power Plant International, ElectroTech '92 is host to 'Lighting International'. 'Lighting International' in Hall 5 is where architects, interior designers, contractors and specifiers will be able to see the new technology and new products of the lighting industry.

'Lighting International' offers a private lounge for buyers and specifiers to sit, relax, and plan their visit around the show, as well as a specialist lighting seminar running alongside ElectroTech '92.

For further visitor information and details on pre-registration - saving time and money - contact ElectroTech Exhibitions Ltd., Wix Hill House, West Horsley, Surrey KT24 6DZ. Tel: 0483 222888 · Fax: 0483 224321



## NEC BIRMINGHAM 20-24 JULY 1992

Daily 9.30 a.m. until 6 p.m. Last Day 4.30 p.m.

## Will you sponsor Blackpool lights?

Blackpool's famous illuminations have been hit by the recession and the local council is seeking a sponsor for this year's event.

The illuminations are enjoyed by some 17 million visitors a year and cost over £2.5 million.

"The lights are the jewels of Britain's tourism industry," says a spokesman for Blackpool Council, "and we need help to maintain and improve them. With a captive

audience of many millions of people every year, the event offers great marketing and publicity opportunities for companies."

A number of sponsorship packages have already been put together and the council would like to hear from any company that is interested in blazing a trail along Blackpool's golden mile (contact Barry Morris on 0253 25212).

## Lighting urban cycle tracks, malls and lanes

*Guide to the lighting of urban areas* is a publication from the *Commission Internationale de l'Eclairage*. It gives recommendations for the lighting of public thoroughfares in urban areas which were not covered in previous CIE publications

It includes cycle tracks, pedestrian areas and malls, residential and other non-arterial routes, alleys and lanes.

Recommendations cover analy-

ses of lighting criteria, environmental aspects and installation design.

The intention is to evaluate the visual requirements of each type of road user and make recommendations for safe and easy progress along roads and paths. How to improve the night-time appearance and character of an area are also taken into consideration, and incorporating lighting equipment aesthetically into the visual scene.

Technical report No 92, (in English), is priced at £28.40 (£21.30 to NIC members). It can be ordered from The Secretary, National Illumination Committee of Great Britain, c/o CIBSE, 222 Balham High Road, London SW12 9BS.

## Winners will race at Silverstone

A day at Silverstone, including instruction in single seater racing cars, will be the prize for 32 winners in Osram's wholesaler promotion on the use of its metal

halide Powerstar lamps. The competition takes the form of a quiz.

This is part of Osram's ongoing educational programme and follows its recent Halogenius competition on tungsten halogen lamps, the winners of which are going on a visit to Munich.

## Golf winners

The Lighting Industry Golf Society held its last meeting at Denham Golf Club, when a single Stapleford competition was played for the KSM trophy with supporting prizes presented by Existalite. Winner was Jim Page, with John Driver second and Bill Walker third.

Industrolite presented prizes for the Greensomes Stapleford competition in the afternoon which was won by Steve Haggis and Fred Sherman, with Bill Green and Peter Ray coming second.

GE Lighting presented the guest prize as well as first tee gifts.

## Lighting for entertainment

The Light and Sound Show '92 will take place at Earls Court 2, London, from 6-9 September. Today, 124 exhibitors have reserved stand space.

This comprehensive exhibition covers disco, theatre, live entertainment, TV and film sectors, and also reflects the increasing diversity of the exhibitors into areas such as theme parks, leisure centres and interior design.

For more details contact Philbeach Events, on 071-370 8214.

## DIARY

### JUNE

#### 2

**CAD drawing, modelling and management.** One-day course in London held by CIBSE. Details from 081-675 5211.

#### 4

One-day exhibition at Sandown Park Exhibition Centre arranged by ILE London and south east region. Details from Steve Lain, 0276 683082.

#### 9

**An introduction to daylighting.** One-day course in London organised by CIBSE. Details from 081-675 5211.

### 10

**Electricity at work regulations.** One-day course in Manchester held by CIBSE. Details from 081-675 5211.

### 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.

# CIBSE

The Chartered Institution of Building Services Engineers

## Computers in lighting design

Many manufacturers publish comprehensive photometric information in book or catalogue form. These are expensive to produce and inconvenient to carry around. At the present, very powerful lap-top computers are available which enable information to be called up quickly and to be used for calculations wherever they are required. The day cannot be far off when floppy discs supplant bulky photometric catalogues. Not only will these be more convenient for the user, they will be cheaper for the manufacturer to produce and easier to update.

Computers became essential for manufacturers of street lighting luminaires in 1987 when the BS Code of Practice, BS : 5489, based on luminance design, was introduced. They are used to produce design tables which enable the user to calculate the layout of an installation without the aid of a computer. But most users are not satisfied with this simple approach, they generally want a print out of the luminance values over a grid. The result is that many of them have acquired their own computers or use one that their local authority has acquired for other purposes. There is some justification for this independent attitude of the users because the manual method of calculation of illuminance for residential streets is somewhat tedious and design tables are not produced for motorways as they vary so much in geometry.

One of the first applications for computers in lighting design was for floodlighting schemes, especially those for sports activities. Because of the large number of floodlights normally used and the fact that they are at different aiming angles and distances, calculation of an illuminance grid by manual methods is a horrendous task, where repetition for optimisation purposes is well nigh impracticable. This is the sort of job where the computer comes into its own and its use is certainly justified.

In many of the papers at the Lighting Division's recent National Lighting Conference, the computer had a central role.

A case in point was provided by a paper on the building of Kansai International Airport in Osaka Bay, Japan. The contract for the structural and service engineering was awarded to a UK company. Among other things the company was responsible for lighting the airport terminal building, which is over a mile long. To satisfy the Japanese clients an illuminance grid with points spaced one metre apart had to be produced for the whole floor space. This amounted to half a million values in all.

One may ask, why do clients ask for such unnecessarily detailed data when information for a few sample areas would be ample?

It is worth noting that in the design of the Kansai Airport building visualisations were used to assess the suitability of the lighting design. A legitimate and beneficial use of computers.

Papers on the visualisation of interiors illustrated applications of the computer that have the potential for improving lighting design. In the last few years, visualisation has developed from an interesting academic exercise to a practical proposition. There are two factors that have made this possible: the development of suitable programs and the easy availability of very powerful computers.

There is a danger that the computer is becoming the master, and we must be on our guard against this and the addiction to larger printouts with no practical relevance. However, these comprise a small minus compared with the benefits the computer is conferring on lighting design.

Ron Simons,  
Chairman,  
Lighting Division

# NEWS

## New president for CIBSE

Brian Moss, chairman of Nu-Aire which manufactures ventilation and air conditioning equipment, is the new president of the Chartered Institution of Building Services Engineers.

As befits his background – he is the first manufacturer to occupy the office of president since 1968 – Mr Moss intends to use his year of office to promote the practice of total quality management as the key to competitiveness and success in industry and commerce.

His commitment to quality assurance is total. During his period as president of the HEVAC Association he introduced manufacturers' quality assurance schemes and in 1985 when he became a member of NEDO's Building EDC, he was appointed chairman of a group set up to persuade building component specifiers to use British Standards and associated quality assurance schemes.

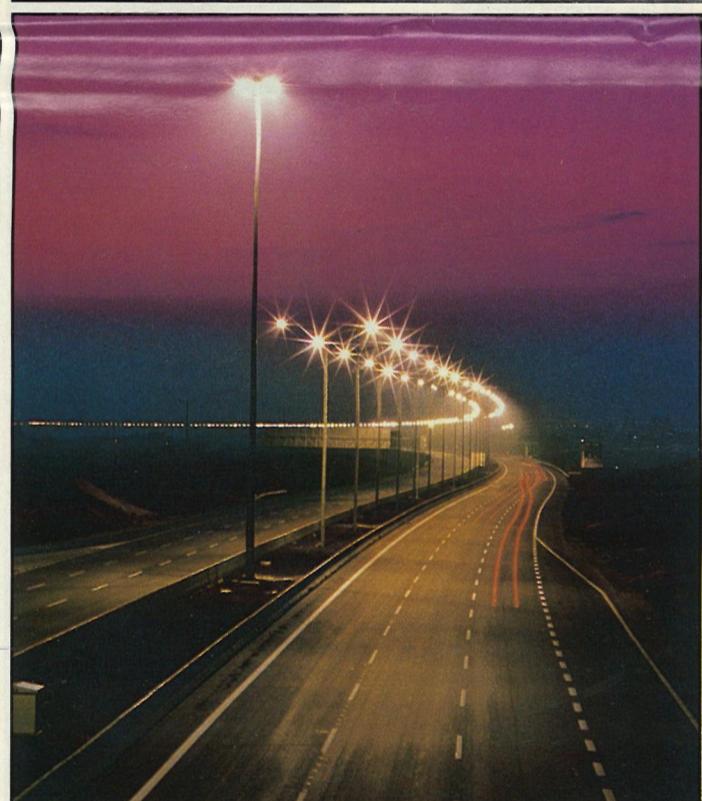
In his presidential address Mr Moss stressed the increasing competition in the UK market. As more foreign firms set up business in the UK during the next few years they would prefer to use their own national designers and contractors unless their British

counterparts demonstrated clear superiority. Reforming the structure of the building industry was an urgent task, but the institution's members could do a great deal at the level of their own firms.

The answer to continuing improvement was total quality management. This could not be imposed by management, all they could do was to provide the environment which encouraged a customer orientated attitude. Its essential feature was that everyone in the company was responsible for quality improvement, even those distanced from a company's final customers.

Responsibility had to be passed down to the lowest possible operating level, so this approach to business was characterised by the reduction in the number of management levels, better staff training and first class information systems.

On the other hand TQM was capable of producing far reaching beneficial results leading to higher productivity and growth and, at the manpower level, work became a far more pleasant experience. In short, we could all do better, and the key concept in ensuring improvement was to satisfy the user.

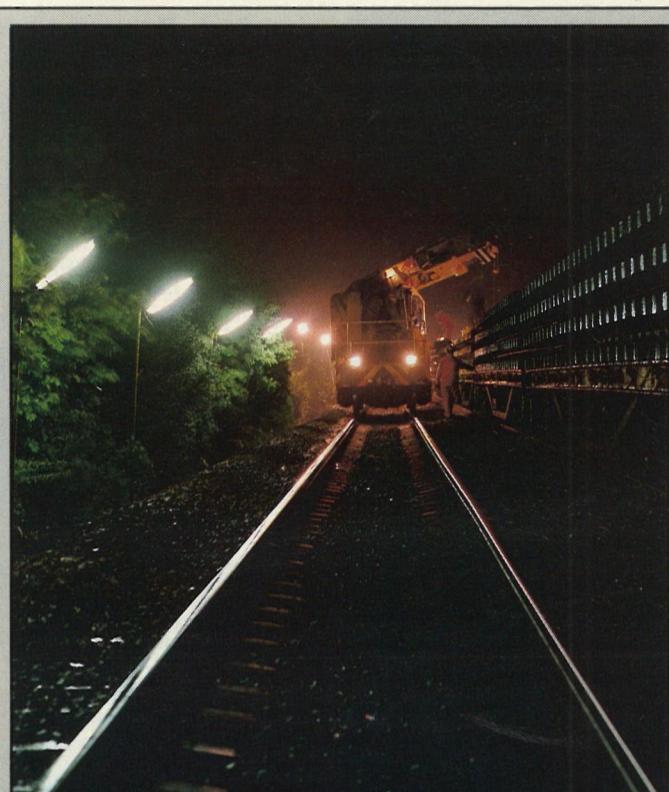


## Showing the way in Turkey

A 280km stretch of the new trans-Turkey highway the Tarsus Adana-Gaziantep motorway which will form part of a system linking Europe with Asia – has been lit by Siemens Lighting.

The company supplied high mast lighting for the first five intersections and toll areas. It has also provided main road lanterns for the carriageways in between these intersections and counter-beam lighting for a cut-and-cover tunnel.

In total, 132 high masts have been installed, 64 of which are at the major Tarsus-Pozanti intersection. Those used at intersections are fitted with four or six 1kW SON high mast lanterns, while masts to toll areas each carry six 1kW SON floodlights. The masts are all 30m high. Some 1850 road lighting lanterns have been used comprising 400W or 250W side entry SON-T lanterns, providing an average of two candelas with a maintenance factor of 0.8.



A highly successful use of fluorescent lighting for trackside maintenance work on British Rail resulted from co-operation between plant specialists of British Rail's Eastern Section based at York and Gewiss UK.

Safety problems in supplying temporary lighting using 500W tungsten-halogen floodlights on tall metal masts at intervals along the track have increased as the railway has become electrified with 25 kV overhead traction equipment.

The floodlights were brought down to a lower position on the trackside so that the metal masts were further from the overhead equipment, but this created excessive glare and patchy lighting with long shadows.

An experiment using fluorescent lighting supplied by Gewiss has been highly successful. The lighting has proved to be glare free and does not affect colour codes; it also provides good working conditions. The Gewiss Zenith industrial luminaires were also found to be extremely efficient compared with tungsten halogen floodlighting.

The use of fluorescents also led to considerable savings in the number of electrical generators required on site.

## Ring Electronics takeover

Emergi-Lite Safety Systems is to buy Ring Electronics Ltd on behalf of its Canadian parent company, The Kaufel Group. Ring Electronics is an emergency lighting manufacturer with an annual turnover of more than £1.2 m.

The operations of Emergi-Lite (UK) and Ring Electronics will be coordinated to create a larger and more efficient manufacturing and sales network. Combined operations in conjunction with

associated company, Van Lien Holland BV, will make the group a significant force in the European market.

In the lighting sector, the Kaufel Group and its subsidiaries manufacture: emergency lighting and standby power equipment; mass transit lighting systems; industrial, commercial and residential lighting. Products and services are distributed principally throughout Europe and North America.

## Trade Literature in brief...

- Optelma has brochures on its Cosima decorative downlights, wall lights, pendants, table and floor lights made in France by Sedap (tel 0235 553769).
- Moorcroft has published a separate table lamp catalogue for 1992 (tel 0782 214323).
- Thorn Lighting's 1992 comprehensive catalogue of lighting fittings contains over 50 product ranges new to the UK. The 450 pages are colour coded for easy use (tel 081-680 9878).
- Menvier has a brochure that
- explains changes to UK emergency lighting practice (tel 0295 256363).
- Building Research Establishment's publications guide 1992/93, price £5, includes its videos, slide sets and software (tel 0923 894040).
- EIEMA has published its guide *Electrical installation – standards, safety and the law* which explains UK legislation simply and how it is being changed by EC Directives (tel 071-437 0678).

## Changes at Luxo

Thousand and One Lamps Ltd is to change its name to Luxo UK. After over thirty years of producing and selling Luxo brand products, the company will now reflect the international brand name used for trading in Western Europe.

EDL Industries has become a member of the Luxo International AS group. EDL a manufacturer of task lighting for industrial use, will maintain an independent identity in the market place and will continue to be responsible for its own marketing.

# COMMENT

## The calm before the storm?

Summer has come early this year and not only in terms of weather. A slight improvement in economic prospects seems to have led lighting industry people to decide to take a break before things really start moving in the sector again.

But, mostly, the industry is holding its breath and waiting for the outcome of the GTE sale – the next major strategic change that can be expected on the international front. According to a GTE spokesman the company is still on schedule to make a mid-year announcement.

One of the facts of life of a period of recession like the one we are just experiencing is that it accentuates trends. Stronger companies emerge still stronger while the weak get weaker or even go to the wall.

Stronger companies have been able to use the period of reduced demand to plan growth outside the UK in order to decrease their vulnerability to the constant ups and downs of this economy. They have also been able to invest for the future, so they become increasingly efficient and cost effective as demand begins to pick up.

Undoubtedly things will remain tough for the foreseeable future, leaving companies no margin for error. They will meet a continuing resistance on the part of the customer to allow profit margins – which have become very depressed over the past couple of years – to increase as the market improves, so an ongoing feature will be the attempt to squeeze better profit margins out of a static market.

The scope to decrease costs is rather limited, particularly in the luminaire field, where raw materials continue to increase in cost – and these probably represent some 40-50% of the cost of the product.

So, companies can only insure their future by becoming better managed – they cannot expect to survive on design flair. Thus, a premium will be placed on cost control and getting goods moving speedily out of the factory to the customer – skills which were more or less disregarded a few years ago in an effort to get more – and more varied – products out onto the market.

Firms are increasingly looking at the products they offer in terms of value for money. This is not a constant factor, its parameters will vary with the type and value of the product.

In fact, the criterion for success will be to have the right product in the right place at the right price to satisfy the user. If we add to this trio of requirements the need to have it there at the right time, then we are back to the essence of total quality management so ably advocated by Brian Moss in his augural speech as CIBSE president.

## LIGHTING EQUIPMENT NEWS

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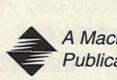
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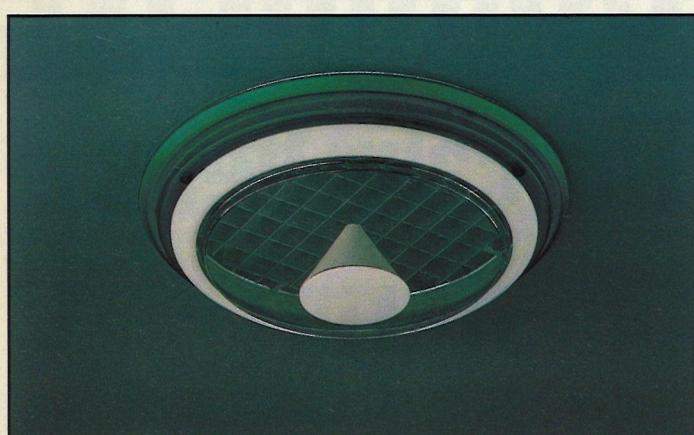
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# NEW PRODUCTS



## First QL downlights

The QL induction lamp can now be used indoors with a range of recessed downlights from Philips, which are suitable for entrances of hotels, restaurants and shopping centres with ceiling heights from 3m-5m, where access for maintenance is inconvenient and expensive.

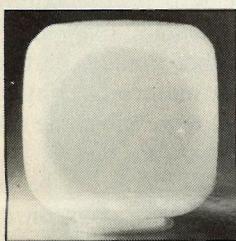
The circular housing of the KCS 101 085, illustrated, is made of painted aluminium and has a clear acrylic cover below the lamp.

It is also equipped with a symmetrical reflector and reflecting cone.

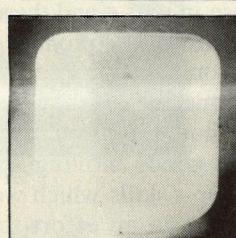
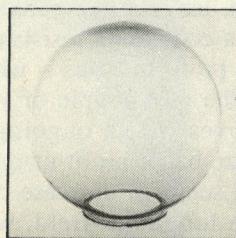
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HET105D	35-105VA SCREW DIMMABLE BLOCK	11.73	10.95	9.38	8.60	7.82	
HET105A	20-105VA CABLE	11.36	10.60	9.08	8.33	7.57	
HET105DA	35-105VA CABLE	11.73	10.95	9.38	8.60	7.82	

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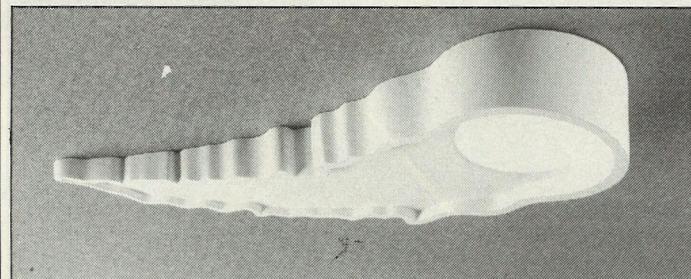
## Downlights have decorative setting

Optelma has a range of unusual low voltage downlights made in France. They are set in a wide range of different reinforced plaster sections that can be painted to

match the decor. The model illustrated is called Fan.

The downlight itself is fully recessed and accepts a tungsten halogen dichroic lamp from 20W to 50W. In most of the models relamping does not involve removing the decorative plaster section. Transformers, which are not supplied, are remotely mounted.

Reader Service No 152



## Versatile PIR detector

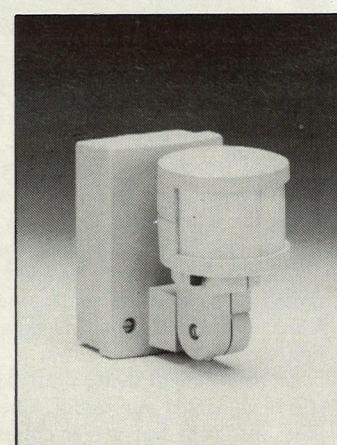
MEM 250 has added a passive infra-red detector to its product range.

Memscan 180 uses an unusual multi-lens technology. With a detection range of 15m through an angle of 180°, there are stated to be no blindspots. The detector head is also adjustable in both horizontal and vertical planes giving even greater flexibility.

The time delay on operation can be adjusted from 10s to approximately 21 minutes and light sensitivity from 30 lux up to 300 lux, with daylight override for permanent daylight operation or testing.

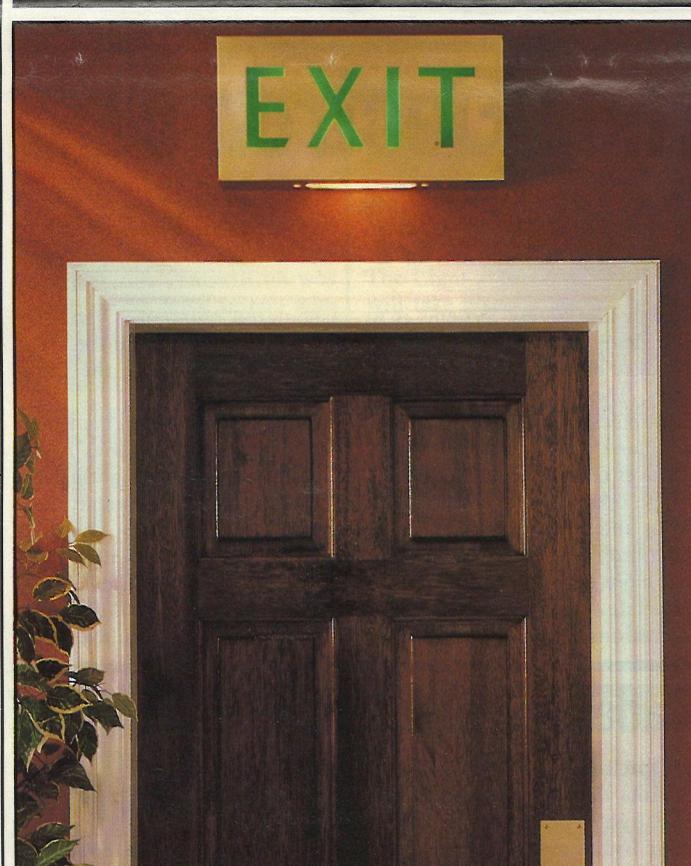
To prevent unwanted switching from boiler flues, trees, washing

lines etc, masking plates are supplied providing 10° scaling, enabling the problem area to be blocked off.



Rated IP54, the unit is capable of switching a load of 3500W.

Reader Service No. 153



## Slim emergency luminaire

Crompton Lighting has introduced an emergency luminaire, Egress, which measures only 62mm deep and can be supplied in a variety of styles to suit interior decor.

Designed to provide clear guidance to safety during an emergency, this slim luminaire is for use in environments such as offices, hotels, theatres, leisure centres, supermarkets and hospitals.

The luminaire's housing is available in chromium, brass, gloss white or satin black finish.

A choice of two front panels is offered: toughened glass with a translucent opal-white finish and one of four green legends (including pictograms), or a high quality metal exit stencil with an opal diffuser behind a green filter.

A translucent base panel provides additional downlighting, while the adjacent red LED indicates that the mains supply is on and the battery is receiving a charge.

Three gear-tray options are available for maintained, non-maintained and sustained operating modes, each incorporating 8W fluorescent lamps and a rechargeable battery giving sufficient capacity for at least three hours. Reader Service No 154



## Display lighting range

Siemens Lighting has introduced a collection of spotlights and downlights.

Three spotlight ranges are available, for metal halide, mains or low voltage tungsten halogen lamps. All are supplied with integral control gear or transformers as appropriate.

The spotlights have a choice of a three-circuit mains track adaptor or a surface mounting plate.

The SE500 metal halide and low voltage tungsten halogen series is available with either a wide beam distribution or an adjustable focus facility giving beams from 15° to 40°.

## Stylish spotlight projectors

Master range is a collection of low voltage projectors and recessed downlights by Philips for retail installations. The design owes much to the integral electronic transformer and use of high tech materials.

The range consists of 10 types of spotlight with a wide range of attachments, including barn-doors, honeycomb louvres and colour filters.

Further advantages include its wide angle of adjustment which varies according to connector between 350° and 360° horizontally and 45° to 90° vertically.



Reader Service No 156



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Reader Service No. 6

Lighting Equipment News, June 1992

# NEW PRODUCTS



## Versatile LV system

La Conch Lighting has introduced Universo, a range of low voltage fittings designed for bare wire installations.

Universo range consists of 14 designs from the simply practical to decorative feature lighting for exhibitions, restaurants, retail or office environments.

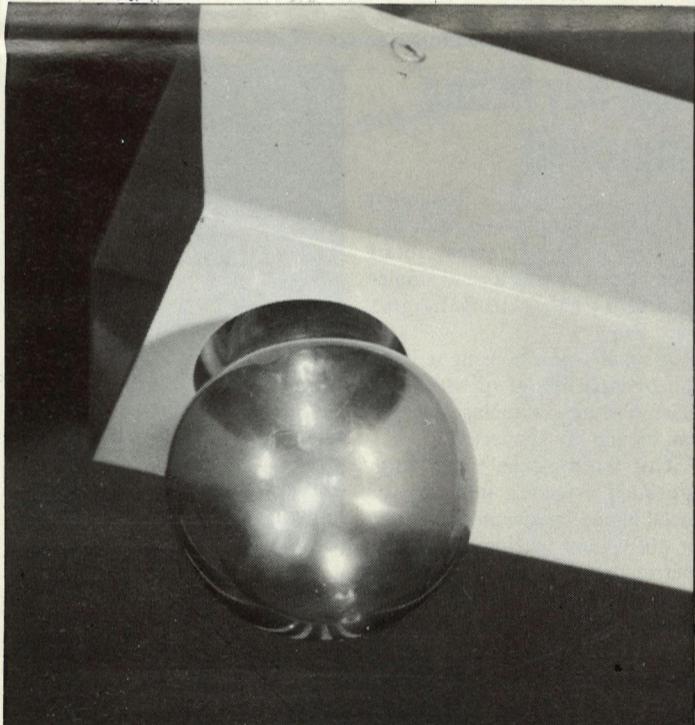
The range includes fittings suit-

able for vertical installation in stairwells, as illustrated.

Most of the luminaires are supplied in a chromium finish, with the more decorative models in a variety of colours.

An extensive range of accessories and components meets more specific requirements.

Reader Service No 157



## Lamps give a starlit sky effect

Glitter lamps, for use where a decorative effect is required and access is difficult, are available from Michael John Lighting.

Each lamp contains 10 tiny 1W seed lamps and gives an effect like 10 sparkling stars. The seed lamps are wired in parallel so that if one goes out the others remain lit.

Their long life gives special maintenance advantages. If used for 10 hours per day the company says they will last for about 11 years. In addition, they are guaranteed for three years from date of installation.

There are five versions, each with either ES or BC cap. The A60 is the size and shape of an

ordinary household lamp, the G60 is a globe shape 60mm in diameter and the G95 a 95mm diameter globe. These three types are rated 10W 24V and can contain red, blue, green or yellow seed lamps as an alternative to clear lamps.

G50 is a golf ball lamp 50mm in diameter with either clear or coloured seed lamps, rated at 6W 24V. Finally, there is the T29, a single-ended tubular version with clear seed lamps only, available either 63mm long and rated at 10W 24V, or 23mm long rated at 6W 24V.

Michael John can supply appropriate transformers and will also custom make U-shaped aluminium channels, pre-wired with lampholders and colour matched to decor, ready to accept Glitter lamps.

Reader Service No 158

## Outdoor lighting offers choice

Decovision is a range of decorative amenity lighting from Philips. Benefits include ease of installation and maintenance, mounting flexibility due to a 45° angled spigot and compatibility with a wide variety of lamps and modules, which are all interchangeable.

The range comes in two basic shapes: a sphere and a new Duo-cone design. Both are in opal, clear and gold tinted versions, while the sphere is also available in frosted versions.

Choice of light sources includes high pressure sodium, mercury, White SON, metal halide and compact fluorescent (PL, PLC or SLD).

Luminaires can easily be



assembled in a workshop. The electrical connection is by plug and socket, while the luminaire is secured in place with a single Allen-head bolt.

Reader Service No 159

## Low glare bulkhead

Elemsystems' Columbus bulkhead luminaire has been designed for compact fluorescent or mercury lamps.

A special light controlling shield, which works as a filter giving downward illumination yet

at the same time offering ambient upward and outward light, minimises glare.

The housing is made from diecast aluminium, with stainless steel guards and a clear polycarbonate diffuser. Available in a choice of three polyester powder coated colours (white, grey and black), Columbus conforms to IP66 ingress protection rating.

Reader Service No 160

## Outdoor lanterns have detectors

Q-lux has added two outdoor luminaires with passive infra-red detectors to its range of lanterns.

The fittings consist of a traditional globe with a detector in the base of the arm and a six-sided decorative black lantern with the

detector at its base.

When mounted at a height of 2m, the detector offers 90° coverage over a distance up to 15m.

The detector can be adjusted to keep the light on for any time from 5s to 12 minutes after the last movement. A further adjustment allows the luminaires to be switched on and off at different daylight levels.

Reader Service No 161



## Downlight is easily relamped

Designed with size in mind, the Micro downlight from Hitech Lighting requires a cut-out only 70mm in diameter, and has an overall depth of 85mm.

It uses either 20W, 35W or 50W, 12V 50mm dichroic lamps,

and is available in white, black, gold or chromium finishes. A black anti-glare baffle can also be supplied.

The fitting is suitable for applications requiring an unobtrusive luminaire and can be installed in ceilings from 0.7mm to 25mm in thickness. A bayonet-action lampholder facilitates relamping from the front of the fitting.

Reader Service No 162

# LIF LINE

## ICEL makes its mark in Europe?

As from the 1 June 1992, the Industry Committee for Emergency Lighting, (ICEL) will restrict the use of its much valued product mark to a very special group of products.

The ICEL mark was first introduced as a certification mark in 1978 to coincide with its standard ICEL1001 : Part 2 : 1978. The standard was the result of co-operation between BEAMA and LIF to publish an industry standard for construction and performance of battery operated emergency lighting equipment. The standard was produced to complement the BS code of practice for the emergency lighting of premises, BS5266, and designed to fill the gap caused by the absence of a suitable British Standard for emergency lighting equipment.

With preparation for the single market the EC standards making body, CENELEC, adopted the IEC standard for the construction of emergency lighting luminaires and this became a harmonised standard and was published as EN60-598.2.22.

In 1991 BSI published the same standard under a BSI number, BS4533 : Part 102.22. At this point if the standard had been complete to the satisfaction of the UK industry, ICEL would have ceased its own schemes there and then, but there were seen to be two significant areas of shortfall. Firstly, ICEL had always promoted the use of flame retardant materials in the construction of the housing of these products and users had seen the sense of this. It was seen as desirable from two points of view: to be able to contain any fire resulting from fault conditions inside the luminaires; and also to limit the spread of fire along what might be used as an escape route in the event of a fire.

There has been no reason to change this logic and, indeed, there may well be a review of the original IEC standard to look at this requirement shortly and bring it into line.

The second, and more important requirement of ICEL, has been the need to establish the performance of a luminaire. It has long been the practice of mains luminaire manufacturers to provide detailed performance claims in the form of isolux or polar diagrams to give guidance to the user on the correct selection and use of their luminaires.

These are mostly derived from tests carried out by the manufacturer, and the results claimed by some less scrupulous manufacturers have always been questionable. At normal lighting levels it may be that differences in claimed and actual performance lead to visual discomfort but, rarely, it is argued to a dangerous situation.

However, at the low level of illumination (0.2 lux) required in the UK for emergency lighting, the amount of light obtained and how this light is controlled is of paramount importance and inaccurate design data may result in accidents and even deaths.

For this reason ICEL identified the need for the photometric performance of emergency lighting luminaires to be linked to safety, and has implemented a photometric registration scheme, in advance of its European colleagues, that requires the photometric performance of self-contained luminaires to be:

- n independently tested by a recognised test house and;
- n the test results and the manufacturers' claimed data to be registered and made available to third parties for verification.

ICEL has taken this scheme into the European standards-making scene. Along with the more general requirement for third party testing, registration and verification of photometric data for emergency lighting luminaires is being considered.

## 1993 and all that

By now we are all aware of the avalanche of directives and supporting UK legislation that is going to have an impact on us all over the next few years. In lighting, and of particular interest to installer and user alike, there are the Construction Products Directive, The Sign Directive, and The Workplace Directive. These are of interest as they will all have some impact on emergency lighting.

Standards are now reaching their final stages of development and agreement, and are awaiting mandating by CEN and CENELEC. They will come into effect, it is thought, within some if not all of the directives mentioned.

If these standards come into force they will have a very marked effect not only on the emergency lighting schemes on the design board today but also, due to the retrospective nature of the Signs and Workplace Directives, on existing buildings.

Changes in requirements are likely to cover not only the levels of acceptable emergency illumination but also the siting of the luminaires, the installation of the system and the type of record keeping.

The implications for the general public are safer levels of emergency illumination in a wider range of buildings. The implications for designers are that a recently designed system may need to be completely reinstalled and the installer may not only be faced with an increase in work as we pull out of a recession but also with an enlarged workload from the greater scope of regulations and an upgrading of existing installations brought about by the retrospective nature of the regulations.

With a deadline of 3 years after introduction of regulations for the complete upgrade in systems one wonders if industry can cope!

There are, needless to say, many more directives with significant impact on the lighting industry including the disposal of waste materials, including packaging, energy labelling and not least electromagnetic radiation (EMC). The race against time for the European Commission to meet its 1993 deadline and to have achieved a playing field with the abolition of internal barriers to trade has resulted in the new approach directives. Drafted and accepted by member nations in skeletal format, these have left industry and consumers with costs, implications and consequences yet to be fathomed.

What would appear to be sound advice, therefore is when someone offers a service designed to meet all current EC requirements, bite that hand off!

# NEW PRODUCTS

## Luminaires hang on telescopic arms



Shopkit Design has a 12V cable system with suspended luminaires on telescopic arms.

Parallel tensioned cables are fixed wall-to-wall 85-450mm apart. The telescopic metal arms are attached to these cables with crocodile clips.

Shallow dish shaped reflectors are anodised black with a matt white finish underneath. They can be adjusted up and down the arms. Dichroic reflector lamps rated at 20W throw light upwards onto the metal reflectors.

There are two versions of the luminaire: the S6 with a 230mm diameter reflector has parallel arms, while the S7 has a 144mm diameter reflector with arms that diverge.

Transformers rated at 400VA can be supplied with the system.

Reader Service No 163

## Lighting track that bends

A flexible 12V lighting track that can be bent to a minimum radius of 300mm is available from Megalit. The ribbon format is 40mm deep.

Roll-Mob track has a maximum capacity of 25A and is supplied in 3m, 5m and 10m lengths which can be joined. There is also a kit consisting of 5m of track, six

spotlights, five surface mounting plates and one plate for use with suspended ceilings. A magnetic plate covers the surface mounting fixing to conceal the screws.

Spotlights for 50W dichroic

reflector lamps or capsule lamps with aluminium reflectors are used with the track.

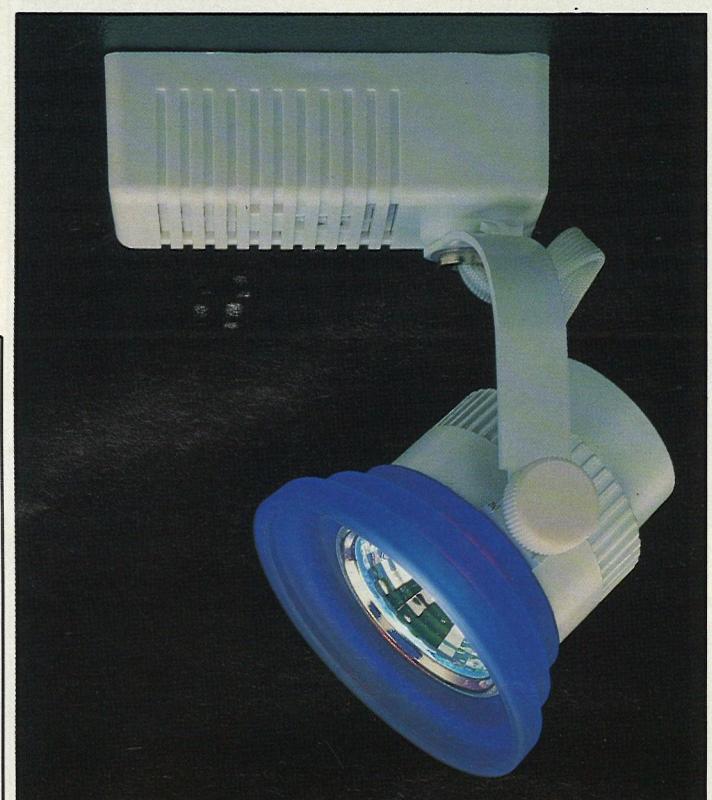
A 300VA transformer is also available.

Reader Service No 164

## Spots have coloured cones

Lumitron has added a selection of Harlequin low voltage spotlights to its Explorer range of display lighting.

A feature of the new fittings is peach, blue or frosted decorative glass in three shapes: a stepped



cone, a smooth cone and an extra deep cone.

They accept either 20W, 35W or 50W 50mm diameter dichroic lamps. Electronic transformers

rated at 50VA are integral with the fittings and are incorporated in either the track adaptor or surface mounting plate.

Reader Service No 165

## TRILUX – Lighting for life

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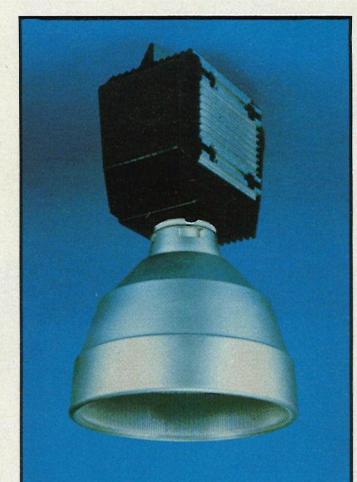
## High bay fitting improved

Thorn Lighting has launched Hipak 2, an improved high bay luminaire for factories, retail sheds, exhibition halls and similar locations with ceiling heights over 5m.

A smaller gear housing reduces the overall height of the luminaire. The gear is replaceable and can be quickly connected.

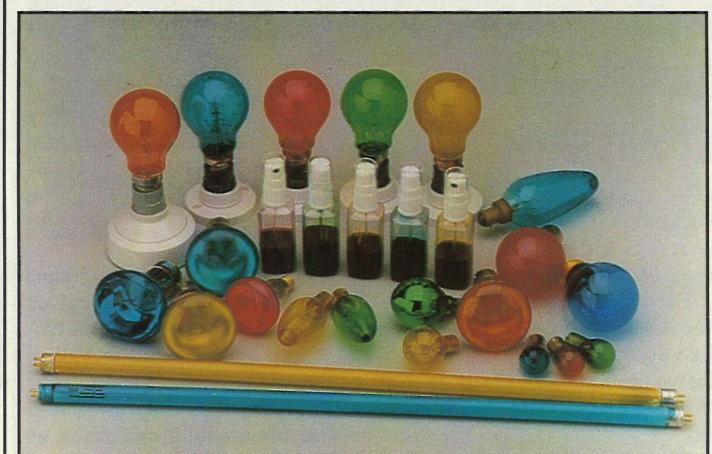
This fitting uses either high pressure sodium, mercury or metal halide lamps rated at 250W or 400W and retains the photometric performance of its predecessor, but has an expanded range of applications.

The accessories enable it to be



used in clean rooms such as pharmaceutical operations and food processing areas.

Reader Service No 166



## Kits colour lamps

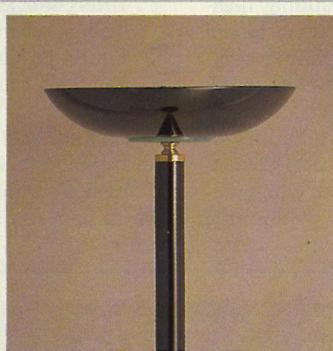
A kit to colour lamps is available from Combined Export Traders. Each kit will colour up to 15 incandescent lamps either red, blue, green, yellow or orange, or a smaller number of larger lamps

such as fluorescent tubes.

The lacquer is stated to be durable and heat resistant. A pump action spray is packed with each kit, together with instructions, to allow lamps to be converted to festive lighting for patios or indoor parties.

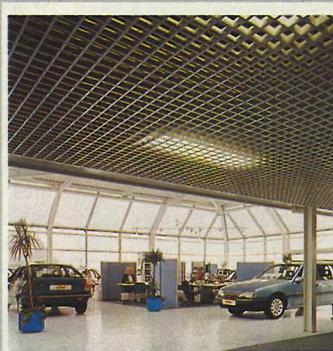
Reader Service No 167

# The Lighting Group



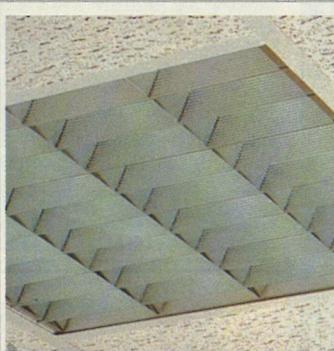
**Manhattan**

Timeless elegance in a range of finishes to suit any environment, this beautiful 300w halogen uplighter with fitted dimmer and lamp. Supplied in photographic flat pack at "take-away" prices.



**Royale**

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**T-Lite**

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**Espia**

A versatile low voltage spotlight available with integral electronic transformer or in a remote transformer version. For use on Lighting Group low voltage track or as a surface mounted unit.



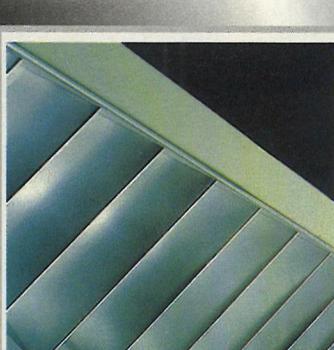
**Lexis**

Superbly designed, this low voltage task light is supplied with lamp, safety glass and dimmer. This covetous classic is now available for retail distribution at a previously unattainable price.



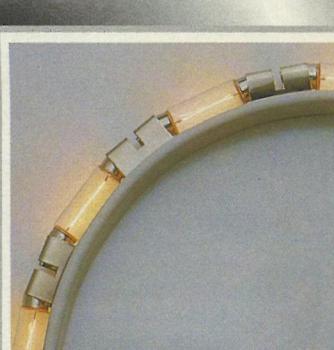
**Strada 2**

An ultra slim twin lamp luminaire for use as a continuous linear system or individual fitting. Suspended or surface mounted, available for 1200mm and 1500mm T8 lamps.



**Widelight**

The range combines both surface and recessed luminaires for individual or continuous mounting to meet interior lighting applications where quality of light is important.



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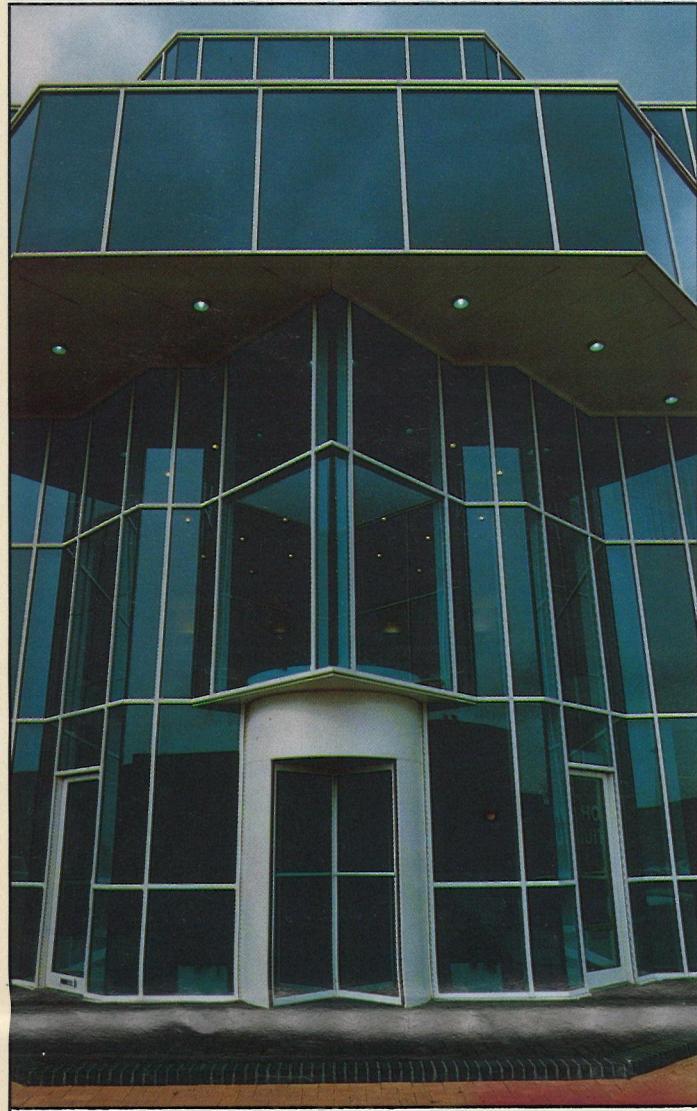


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# It's easier by bus

**Flexibility is a key requirement in today's commercial buildings. Jeremy Bowman of Merlin Gerin discusses this and other advantages of bus systems over conventional wiring.**



This office building at Heathrow by Orbit Developments uses Batibus. The system lends flexibility to properties with multiple tenants and frequent changes of use.

**M**icroprocessor based controllers have been with us for some time now and while the energy saving control methods they offer have changed little in recent years their cost has come steadily downwards to such an extent that the widespread installation of control equipment is being held back by installation costs.

Bus systems offer low installation costs and if care is taken will enable integrated control systems to be applied to thousands of small to medium sized buildings unable to afford them till now.

A conventional control system consists of a controller linked to input and output devices by what some refer to as a spider's web of control wiring. This is because each switch, sensor or detector must have a dedicated cable to send a signal to the controller.

In the past when the controller was an expensive piece of equipment this was a tolerable situation. Now that the cost of controllers has reduced so much the cost of installing control cabling can be a third or more the total system cost.

Enter the BUS.

A sensor or field bus as some call it reduces the installation costs of a control system by carrying all these signals on a single bus cable – usually a twisted pair.

Control cabling can be reduced by as much as 50% – 90%, and with only one cable running to the controller it no longer has to be hidden away in the plant room.

## What is a bus?

The official term for a bus is Binary Unit System. The idea is to send coded messages down the cable in the form of 1s and 0s so that receivers controlling lighting circuits, for example, can switch lighting on when required. This is done by an electronic interface that can send and receive the signals. A bus may have hundreds of interfaces, so they need to be capable of identifying themselves.

Each interface to the bus is coded and this "address" is used when a message is translated so that it can reach the appropriate destination and the message can be decoded by the intended receiver/s.

Buses have been around in the computer industry for a long time, and in buildings have been used for fire detection, intruder detection and energy management in a more limited way. The really exciting thing about buses for building control is that the cost of the electronic interface has come down – low enough now to add to a switch or circuit breaker and still save money on the installation.

Traditional wiring presents problems of control and fault tracing. Consider a 5000 sq m warehouse with nine areas, each with its own distribution board. Each area is to be switched locally and from a grid plate in the entrance lobby. Conventional two-way wiring would do the job and would be considered by most to be a simple solution. The problem with this arrangement becomes apparent when one of

the lighting areas is switched locally. Switching all the lights on centrally then becomes a task of trial and error, because some switches are in the up position and some down.

Now, consider a bus system wired to each area with interfaces controlling the lighting circuit breakers in each distribution board. The bus cable just needs to run from one distribution board to another. The power supply is also required to go to each of the distribution boards. Control of the lights is by ON and OFF push

buttons locally. The gridplate in the lobby is replaced by master ON and OFF push buttons. Timed control of all circuits can be incorporated easily by adding a controller to the bus.

The Merlin Gerin range of Batibus compatible control products is capable of calling up each interface to check everything is functioning. Not only does this provide a regular maintenance check but it almost eliminates control cable tracing when the system is first installed. The ISIS control units do this by seeing if all devices are connected and give a message detailing any faults found. This is a big advantage over some mains borne systems currently available that communicate one way only and cannot verify receipt of a message or system integrity.

## Multi-vendor or proprietary buses?

An advantage of a multi-vendor bus network is that it is possible to avoid a specification problem with new buildings. A number of manufacturers have launched their

own communication buses. This leads to several buses running alongside each other for control of, for example, heating, air handling and lighting when one could do the job just as well. Not only does this more than double the control wiring cost compared to a multi-vendor bus, it also means an unnecessary barrier is put up to the exchange of information between systems.

Moreover, should a particular manufacturer withdraw its products on its own bus system the customer is left with an obsolete system. With a standard bus alternative equipment will be offered by others.

Buses offer low cost and flexibility for the future. Many clients – particularly local authorities – have multiple sourcing policies. When it comes to building management this forces them to run two or three incompatible communication systems in their building stock. A multi-vendor building bus promises availability of products from a choice of companies all using the same communication system. This means that follow-on work for system exten-

sions and change of use can be sourced as competitively as the original system.

The possibility of a multi-vendor system where products can be selected from a range of manufacturers is, therefore, attractive.

Multi-vendor products may operate under three categories:

### □ Coexistence

This is where different manufacturers' products use the same cable but work independently of each other.

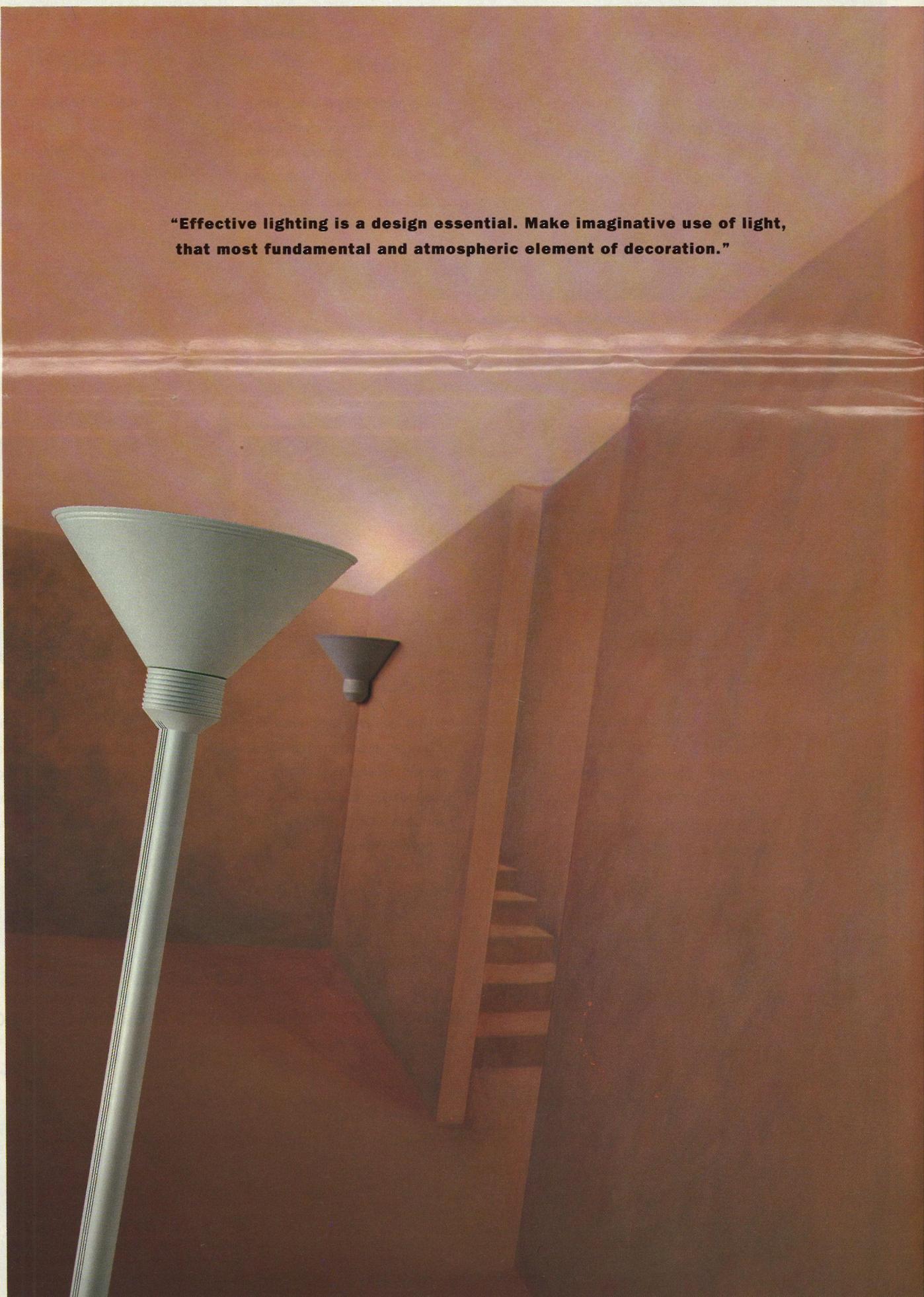
### □ Interoperability

This is where, for example, a sensor from one manufacturer can work with a controller from another or where a lighting controller shares a time clock with the heating controller.

### □ Interchangeability

This is where one manufacturer's product directly substitutes for another.

It has to be said that there is no rush by manufacturers to tackle the last option but there are substantial benefits available from the first two.



**"Effective lighting is a design essential. Make imaginative use of light, that most fundamental and atmospheric element of decoration."**

**European standardisation**

The standardisation process across Europe is well underway and international technical committees have given their support to three main contenders for the building control sensor bus level.

These are BatiBUS; European Installation Bus (EIB); and ESPRIT-HS.

BatiBUS is generally accepted to be the most advanced, with products commercially available and many thousands of installations already in place.

While individual specifications vary, the buses offer these major advantages:

- the possibility of integrating building services on a common communication system;
- the ability to lay a cable network and attach devices as required;
- the ability to change the control scheme, and to add or subtract devices from the network to meet changing building control needs;
- the ability to source product competitively from a range of manufacturers.

This can only help all parties concerned. The specifier will be able to select the communication bus first, then select compatible equipment from different manufacturers and still end up with an integrated system.

The electrical contractor will find he can get involved with building control because bus systems are straightforward to install and trouble shoot.

The building owner will enjoy a higher specification building that can more easily accommodate change of use.

The building occupier will enjoy a greater level of control and reduced running costs.

Use of energy in thousands of small- to medium-sized buildings will be better controlled.

**Conclusions**

The thousands of BatiBUS installations across Europe to date are testimony to how effective sensor buses can be for building control. The growing list of manufacturers joining bus associations indicates the importance they place on their products being able to communicate using a generally accepted standard.

**ICI catches the bus**

Five areas in total were relit when the lighting installation at ICI's Macclesfield plant was refurbished. As this was a retrofit, ease of installation was a major consideration.

The system was required to provide lighting control for all three corridor areas - each of which was approximately 120 m long - and amenity areas for the pharmaceutical manufacturing plant on the site. It had to provide from 100% down to 12.5% of the lighting load over a 24 hour/ 7 day period relating to shift patterns worked at the plant.

In addition to simplicity of installation, ICI was looking for a system that was simple to control, user friendly, and simple to operate - all at the right cost.

The ISIS BatiBUS system was eventually chosen for the following reasons:

- low cost;
- simplicity of control and program modification;
- recabling work was reduced to a minimum;
- the cost payback period was acceptable.

**Operation**

During each 24 hour period, the corridor and amenity area light

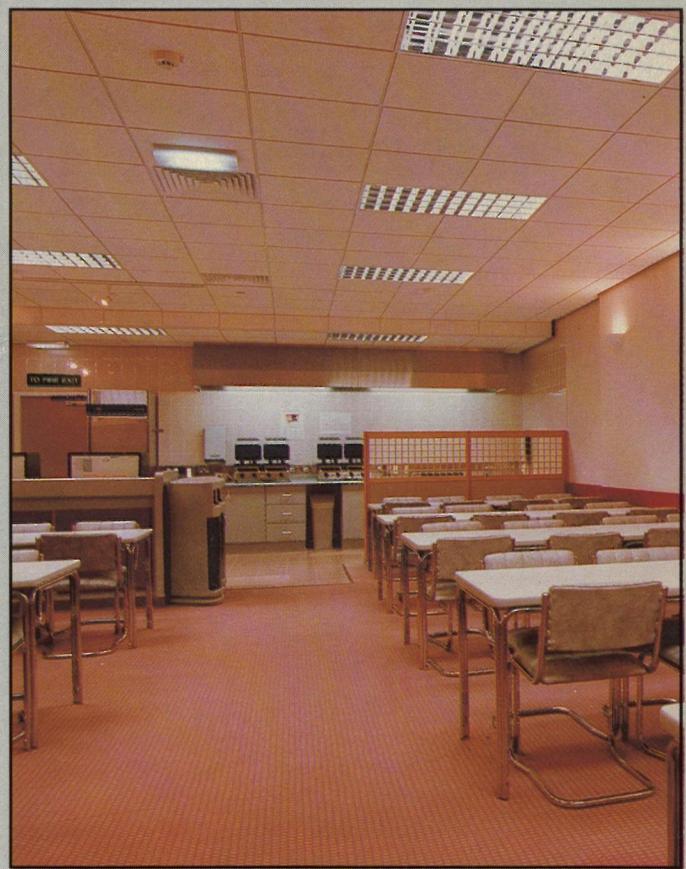
ing load is reduced to 12.5% for 5 hours, and for a further six hours the level is reduced to 66%. For the remainder of the period - peak shift time - the lighting is on full.

Prior to the installation of the BatiBUS system, the lights were left on all the time. Three ISIS controllers are connected to the one BatiBUS Network; all three control corridor lighting, while two others are used as a support network for the amenity areas.

To maximise life of the fittings and control gear, the selection of the lamps giving reduced lighting levels is rotated over daily and weekly periods to even out lamp use, reduce maintenance and limit the number of lamp changes.

Installation was carried out by Boylston Controls, who spent a couple of hours being instructed on how the system worked. It was possible to bring the system into operation as each corridor was installed, thus ensuring a smooth transition from the old to the new systems. A final check by BCS found everything in order.

Above all the system is cost effective; the lighting load of 40kW gives a payback period of less than two years.

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# Variety adds spice to shopping centre

**Julia Brown describes the lighting of the Waterside shopping centre, Lincoln, which has imaginative lighting linked to time of day and the seasons.**

The marketing strategy for Lincoln's Waterside shopping centre, was clearly defined from the beginning of the project: to create a focal point for the people of Lincoln in a style that would not intrude upon, but do justice to, the town's historic buildings.

Lighting consultants were involved as soon as the ceiling plans had been fixed and the interior detailing was just beginning.

The building design used the natural slope of the site to create two mall levels, with a gallery and food court around an arena. As a result of this, the centre grew to have three distinct areas of different sizes and shapes each requiring its own lighting technique.

While the lower mall had little natural light and lower ceilings than other areas, the upper mall had abundant daylight and a double height ceiling.

#### Lighting design concept

The arena, dominated by a large dome overhead and windows providing a view of the River Witham, was the focal point of the centre and a meeting place for local people. Here was an opportunity to create some dramatic lighting for events and perhaps "street theatre" late at night.

As much of the centre was flooded with daylight, the first design consideration was to balance naturally-lit areas with artificially-lit areas.

From this need a concept grew and it was decided the lighting design would evoke the feeling of strong sunlight creating strong modelling and emphasis to the interior detailing.

To counteract the tunnel effect in the lower malls a high level of ambient light was introduced by a combination of metal halide downlights by Program Lighting and special, wall mounted metal halide uplights by Luna.

Light to the ceiling was especially important to keep the space cheerful. However, to achieve the required smoke ventilation in this area, parts of the ceiling had to have open cells. Conventional uplighting therefore would have allowed light to pass through the ceiling and illuminate the services above.

The design team developed the ceiling detail and lighting requirements together. The open cell ceiling was designed in bays, each containing one specially developed, suspended uplight by Sugg Lighting with its own large mounting plate. This glowing uplight throws rays of light from mains voltage, tungsten halogen lamps onto the back plate casting

shadows across the face of the open cell ceiling without allowing light to enter the void.

Between the bays, strips of solid ceiling allowed the use of the Luna wall mounted uplights with a tightly controlled light distribution.

As the upper mall, double height area, was predominantly glazed it was felt that natural light would provide most of the ambient light necessary for much of

the year. On dull days and during the winter some lighting effects would be noticeable if a powerful light source was used. Strong architectural features in the mall were emphasised by using narrow beam 150W metal halide floodlights from LDMS at roof level, some of which also cast pools of light onto the floor.

In contrast, a more diffuse light and an interesting feature was achieved by 150W metal halide uplights by Luna concealed in planters, casting shadows on the solid ceiling areas.

The picture was completed by semi-cylindrical wall lights by Luna, forming part of the rhythm of the decorative frieze, and which also serve as maintained emergency lighting. These fittings use 24W PLL lamps.

#### Arena

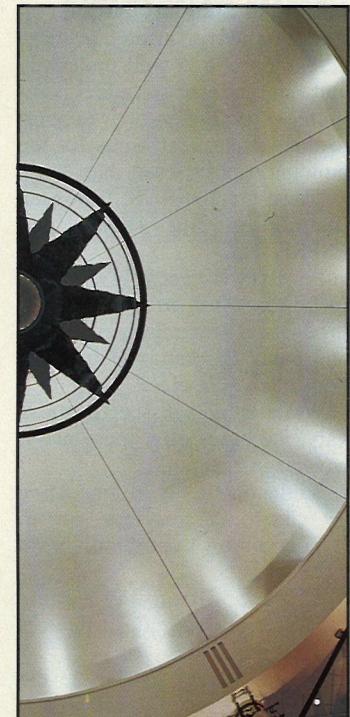
As the arena was seen to be the focal point of the centre it was treated like the backdrop of a stage. The height was emphasised by shafts of light up either side of the columns which encircle the area. Hoffmeister 300W PAR56 floodlights produced this effect.

To continue the sunlight theme, the dome section of the rotunda was uplit using narrow beams of light from metal halide stage projectors by Thomas Engineering concealed round the edge of the dome.

The light level was supplemented by narrow beam 150W metal halide floodlights from LDMS mounted below the perimeter of the dome, casting pools of light on the floor and creating shadow and contrast. On all three levels of the arena, low voltage 50W tungsten halogen downlights by Program Lighting were used, providing ambient light that is easily adjustable through dimming.

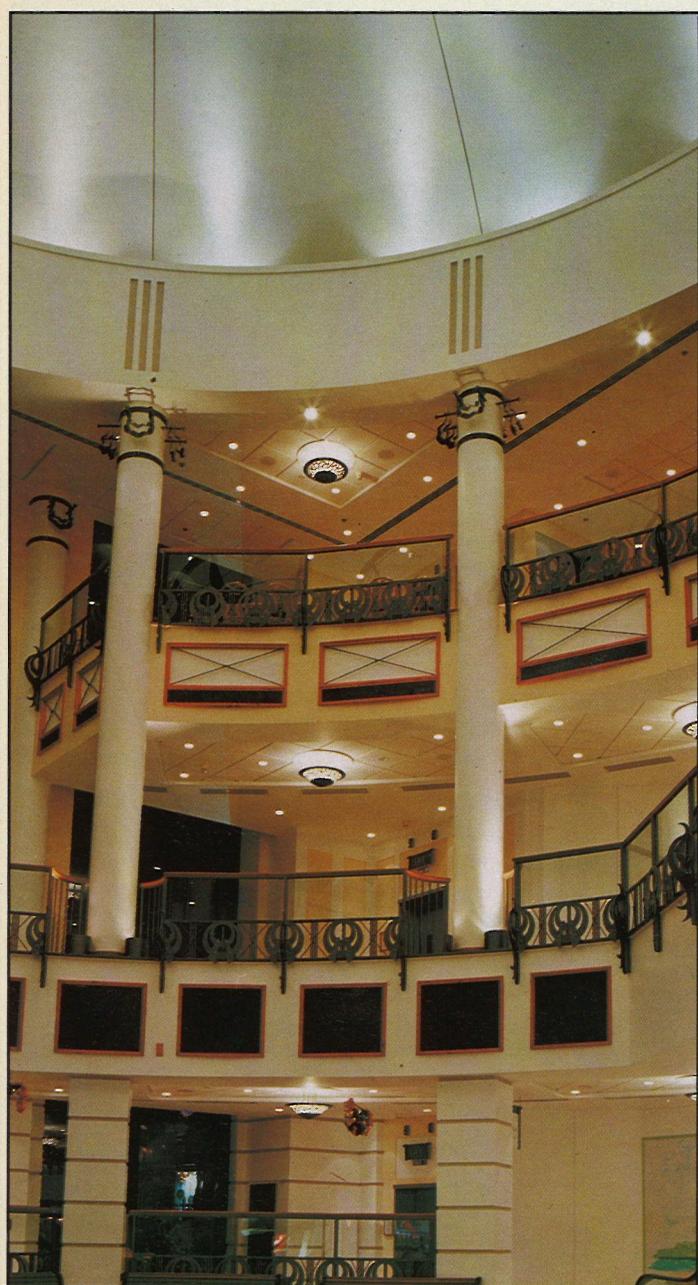
Lighting in the arena, as with the rest of the centre, is linked to a programmable lighting controller by Lutron, which changes the lighting according to both the season and time of day. It is never static, subtle shifts in brightness occur throughout the day.

It also allows a dramatic lighting effect to be set at night, when passers-by see a warm and welcoming scene reflected in the River Witham.



The dome, showing narrow beams of light around perimeter.

Lighting consultants for the project were One to One Lighting Design.



A view of the arena at Lincoln's Waterside shopping centre.  
(Photographs by Gerry Rushton.)

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20-24 JULY 1992  
NEC BIRMINGHAM

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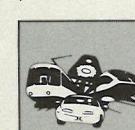
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# Hanover highlights

LEN looks at the trends and reviews some of the more interesting products at this year's World Light Show.

A quiet exhibition reflected the difficulties experienced in the lighting sector over the past year. The German lighting industry which had until the early months of 1992 been somewhat sheltered from the storms of recession in the rest of Europe by the huge task of reconstruction going on in the former GDR territories is now beginning to experience a slowdown in trade and to show a subsequent reluctance to invest in new products.

Display lighting was this year represented by a range of new products although, as this sector has been badly affected by the recession the selection was nei-

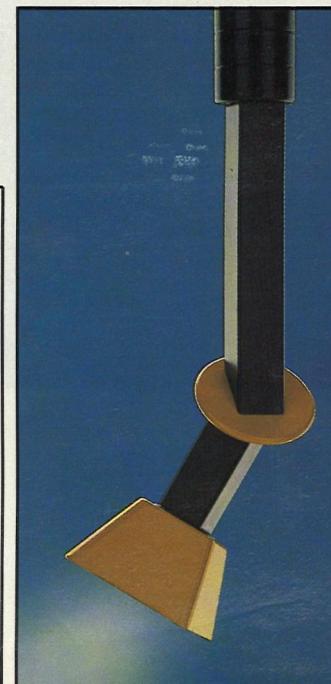
ther as varied or as numerous as in past fairs.

New from Staff is a range of spotlights called Dancer. Control gear and transformers are carried on a counterbalancing arm rather than being incorporated into the lamp housing – thus giving a slimmer, cleaner appearance to the fittings. This range will take a wide variety of energy efficient light sources ranging from low voltage tungsten halogen to HID lamps.

Dancer comes with a complete range of accessories including filters, lens hoods, and dark light honeycomb attachments. A specially developed zoom accessory enables the width of the beam of the lamp to be continuously

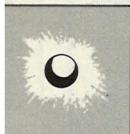
adjusted within a wide angle, for floods, for instance this gives a 30° to 60° beam option. Both lamps and accessories can be changed easily without tools. The range is available in white and in a cool, metallic grey shade called titanium.

Although primarily intended for use with a ceiling mounted mains voltage system, most of the fittings will also be available with a single point ceiling outlet.



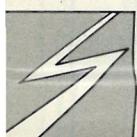
Staff Dancer wallwasher with 26w TC-D lamp giving direct/indirect lighting.

be highlighted. The display reflects the growing interest in this form of transport, and will include not only some of the latest vehicles, but also the propulsion technology.



## Lighting International

– designed for architects, interior designers, contractors and specifiers, this show reflects the success of the lighting section at previous Electrex shows.



## Energy

– the U.K. Government's Department of Energy display will be at the centre of this important part of ElectroTech, which encompasses sustainable energy, energy utilisation and conservation.

## CONFERENCES

As well as the new products and technical information exhibited by over 1,000 companies, there is a major three-day conference, running from Tuesday to Thursday, 'The New Era for Electricity', with a mixture of invited and submitted papers. Enquiries should be made to Jane Sparkes at Reed Business Publishing on 081 661 8483.

Speakers are drawn from such bodies as the European Commission, DFER (the Electricity Regulator), National Power, PowerGen, the Regional Electricity Companies and ERA Technology.

The Insulated Conductors Committee (ICC) of the Power Engineering Society, of the IEEE of the U.S.A., will also hold, for the first time outside North America, its international conference, with the theme 'Transnational Technologies', from 20-25 July.

## SKILL ELECTRIC FINALS

Apprentice electricians will be competing in the Skill Electric '92 Finals, sponsored by Legrand Electric and The Electrical Contractors' Association (ECA), in Hall 2. The winners of the two classes, Housing and Industrial Wiring, will represent the U.K. in the 1993 Youth Skill Olympics in Taiwan.

bottle green as standard.

Kotzolt launched Uni-Rail, a double rail system for low voltage lighting with a 105VA electronic transformer. A mains voltage electrical supply can be taken through the oval section of the rails, enabling the Uni-Rail to be used in conjunction with a mains voltage system such as Kotzolt's 50mm diameter Tube System 5000.

The new Master range of 1v display lighting from Philips is constructed in magnesium, a material which combines lightness and durability. Its key element is flexibility in use. Two types of connection – the Lita connector (for use with an electronic transformer), and a jack connector (for use with a remote transformer), enable the fittings to be used on a track system or as a point source on a base plate. Both dichroic and halogen capsule lamps may be used; and the range comes in charcoal grey or white as standard. A wide range of accessories is available for the Master series, including colour filters, barn doors and honeycomb louvres.

Lumiance has introduced the Quadrostar system of low voltage halogen spots with integral transformers for 20W, 35W and 50W halogen lamps including dichroic, capsule and metal reflector lamps. Each luminaire is available with a conventional transformer, and the Cool 50 is also available in a version with an electronic transformer. The exiting Quadro series for 40W and 60W reflector lamps has been redesigned to harmonise with the Quadrostar range, giving the choice of a filament lamp or a halogen lamp. Pico structo, a decorative reinforcing profile for the company's rail system Picorail 2, enables the rail to be used with heavier spotlights like the Quadrostars. The profile is avail-

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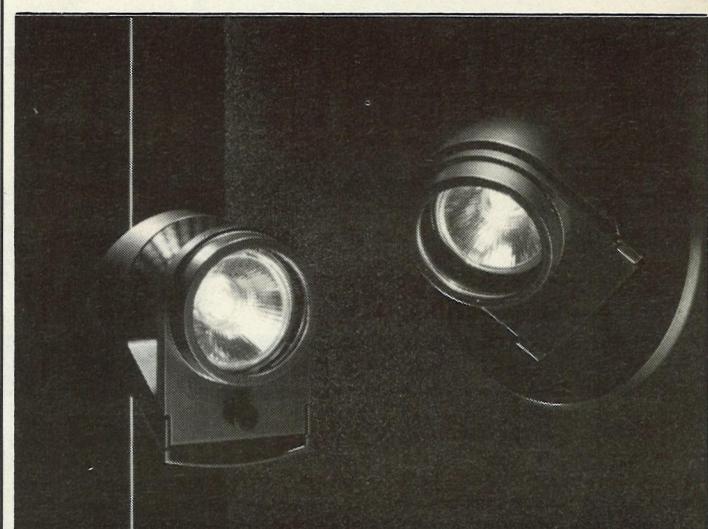
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Philips' Master range of 1v display lighting.

able in three lengths.

On the more decorative front, Waco has a plug-in spotlight Heads and Tails which is supplied in component form, allowing the specifier considerable freedom of





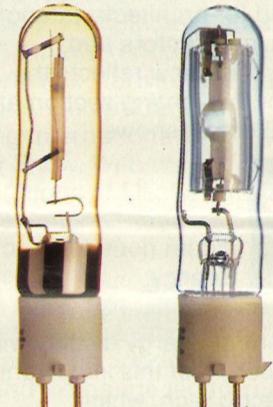
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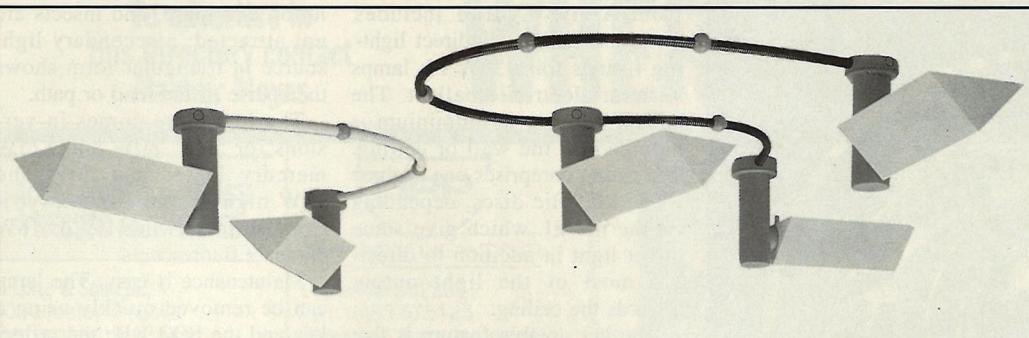
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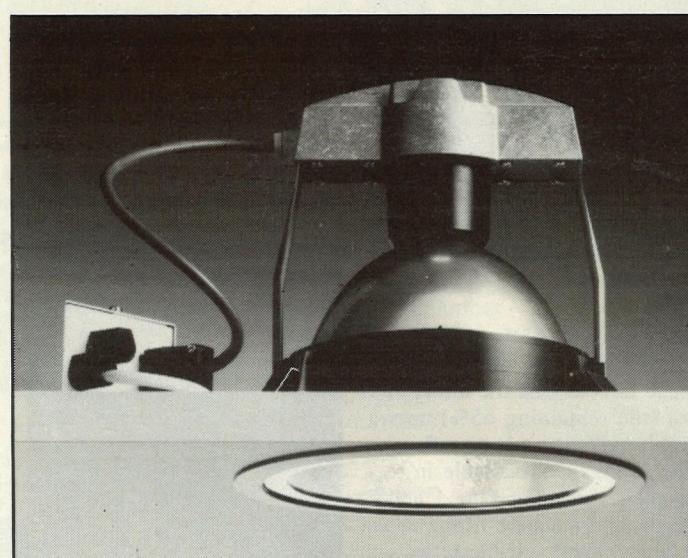


Regent Lighting shows compact fluorescents can be fun.

design. Allowing for variations in size, colour and shape, it is claimed that some 3000 options can be devised using standard components.

Compact fluorescents have been qualified as the energy saving lamp par excellence and new exhibitor **Regent** of Switzerland, has developed Please, an interesting lighting system using only this lamp type in 18W, 24W or 36W versions. An interesting feature of the range is the flexible cable connecting tube system. A selection of detachable fittings includes diffusers in solid or perforated metal sheet, a batwing mirror louvre and a low brightness mirror louvre for use in VDU areas. Luminaires come in white black or red can be ceiling or wall mounted.

Attention has also shifted to the use of downlights, and many manufacturers have been both developing new fittings using computer aided reflector technology and expanding their ranges to include the new light sources. For instance, a new series of downlights featuring circular segmented louvres was shown by **RZB**. These are designed to maximise output while controlling glare from high lumen light sources. Variations include two or three lamps 26W TC-D compact



Insaver 210 from Luminance.

**Luminance** has also introduced a new series, Insaver 210, designed to take energy-saving light sources including compact fluorescents and discharge lamps. The range also includes the Instar 210 using a 150W halogen lamp for applications where dimming is required or it is necessary to have an immediate start. Trim detail for this range matches the Instar recessed range for low-voltage halogen lamps, permitting the combined use of different fittings while maintaining continuity of design.

Downlight specialist, **Wila** has introduced a wide range of built-in downlights with different optics. These include prismatic lenses and rings, float glass front glasses and glass rings and acrylic cumulus lens (series 118, 124 and 718).

The new Turbo lights are conceived as multi-functional. They come within the 132 series of built in downlights and can combine TC-D compact fluorescent lamps with mains voltage halogen or metal halide.

The continuing introduction of VDU equipment into the office environment makes office lighting

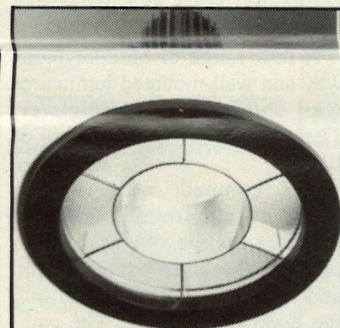
one of the few sectors of plain expansion in the lighting field. Among EC companies this trend has further been stimulated by the new directives on VDU areas and workplace lighting, so it is not surprising to see that all the major companies are producing new lighting systems for this sector.

**Sinova** is **Siemens'** new modular lighting system providing a combination of ambient and accent lighting with a dynamic control system permitting artificial light levels to be linked to the availability of natural daylight.

The basic element of this system is a shallow structural aluminium profile. Mirror louvres, a wide variety of light modules and diffuser panels provide scope for an extensive range of lighting solutions.

The profiles take single or double fluorescent lamp luminaires and can be used to house a wide range of different built-in modules including spotlights with a Universal adaptor, downlight units with low voltage halogen reflector lamps or dichroics, or a point outlet for a single spotlight.

All variations can be used as single fittings or as a continuous



Hoffmeister Series 2000 downlights.

fluorescent and up to 150W HID sources, including the new elliptical multi-vapour lamps.

**Hoffmeister** has introduced a new range of downlights, the 200 series, with a performance level intermediate between that of the 100 Series and the 400 Series, that has been developed primarily for use with compact fluorescent lamps and HID sources.

The basic element of the system is a standard ceiling mounting ring in die-cast aluminium, which can be installed in seconds before the ceiling is completely finished. Any version of the series can then be mounted without the need for tools, using the bayonet lock. The luminaires can be exchanged and lights removed from the ceiling for easy lamp replacement.

A darklight reflector in heat resistant thermoplastic has been developed for use with horizontal compact fluorescent lamps and non-axial lamp holders, and an anodised aluminium reflector for vertical 1v and HID lamps, incandescent lamps and axial lamp holders.

Ceiling trims are available in white, gold, silver or black as standard. A range of accessories includes decorative and safety glasses, and a louvre suitable for VDU areas.

In addition to expanding its existing ranges of downlights,



Wila's Turbo downlights.



The Sinova modular lighting system from Siemens.

linear lighting system and, using different louvres, for direct or indirect light or a combination of the two. Darklight louvres make the system suitable for use in VDU areas; and symmetrical, assymetrical and wall washer light outputs can all be supplied.

A specially designed connector enhances the flexibility of layout of the system, and permits up to six fittings to meet at a junction, with all the necessary electrical cabling, or to butt up against the wall.

The profile also provides a channel for both telephone and data services and houses electronic control gear, switches, dimmers and bus components as required.

The system offers a choice of mounting systems including ceiling fixing, and suspension by means of rods or suspension

wires. In addition, a vertical tube can be used to supply electrical services from the floor void.

Equally, the selected direct/indirect office lighting fittings introduced by **AEG** last year at Hanover under the name of **Ambilux** have now been supplemented by suspended fittings, task lamps and an uplight for mounting on screens and other elements of office furniture. This, for the first time gives a complete system.

Wall lights are available in 70W and 150W HQI-TS versions which also incorporate 70W, 100W or 150W tungsten halogen lamps to give an instant light source while the discharge lamp is running up.

Fluorescent wall fittings include short luminaires incorporating 40W or 55W Dulux L lamps and long luminaires using conventional fluorescent lamps of

36W and 58W. Louvre inserts available for the centre of the luminaire enable a certain amount of downlight to be provided to improve ambient lighting or provide direct task lighting to a work desk. Suspended lighting fittings follow the same pattern. However, a range of alternative lamps and light sources including spotlights can be incorporated instead of louvres.

A flexible link permits the system to be formed into squares, triangles, hexagons and similar geometric figures, allowing as many as six luminaires to meet together at one point.

Offset external aluminium reflectors characterise the **Astron** office lighting system from **Trilux**. An effort to produce a balanced transition between the central dark light louvre and the ceiling area above the luminaire led to perforations being incorporated into the external reflectors and these increase in size as they approach the axis of the luminaire.

The indirect lighting so produced gives a soft illumination of the ceiling, while dark light louvres give a 60° cut off for direct lighting. The luminaire can be supplied with an electronic ballast to enhance the quality of the light and improve efficiency.

Design and colour are also seen as important. The basic element in the **Milar** system from **Regiolux** is a highly modelled fluorescent luminaire for suspension or surface mounting, which avoids the boxy shape typical of this form of luminaire. An inset triangle along the short side of the luminaire comes in a variety of different colours to suit the decor. The luminaires come in 1 or 2 lamp versions for 36W or 58W fluorescent tubes. Six different louvre types give flexibility to

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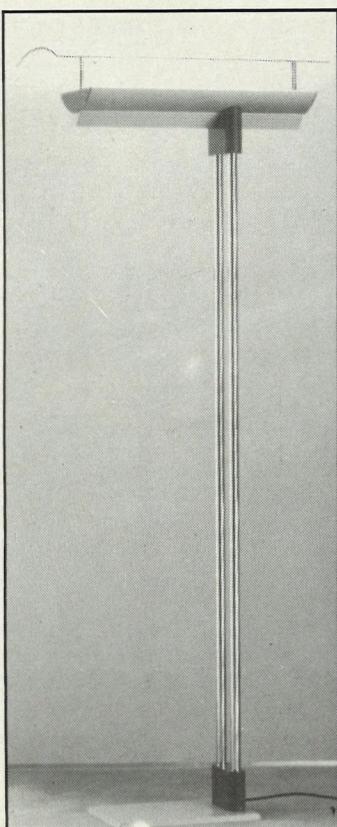
this system and matching uplights, floor standing luminaires and wall mounted fittings using a variety of light sources complete the range.

**Thorn** has introduced the Cosmolight range of work place lighting fittings. These include suspended and wall mounted fittings and a floor standing luminaire. All models are designed to produce excellent glare control and high contrast rendering factors.

A parabolic glass over the top of the fitting directs light onto the working plane by reflection and also by uplighting directed at the ceiling. The lamp housing in pressed aluminium incorporates a specular reflector and takes 36W TC-L compact fluorescent lamps which are operated by electronic control gear.

From **Thorn** also, the Modulight PS luminaire gives 360° glare control for offices with variable furniture layouts. A new louvre design and secondary reflector means that less than 200 cd/sq m of the light output is above 60°. The use of highly specular pure aluminium in the fitting gives very high light output ratios. The luminaire comes in the following versions: rectangular, with one 36W or 58W T26 lamp; square fitting taking one 40W TC-L lamp; circular version taking two 26W TC-D lamps or one 38W TC-DD lamp.

The new Toplite system from **Kinkeldy-Leuchten** has been



Elegant floor-standing luminaire from **Thorn** in the Cosmolight range.

specially developed for low ceilinged cellular offices of 2.5 m height and upwards. It comprises two components: Orbix, a circular ceiling fitting providing indirect light and Ibis, an individually controlled table lamp using two 9W compact fluorescents. The



Thorn's PS Modulight gives 360° glare control.

suspended fitting hangs about 300mm below ceiling level. All light is reflected off the ceiling and so is glare free, making this fitting particularly suited to offices where VDUs are used. Orbix is designed to be environmentally friendly: it uses energy saving 40W fluorescent lamps, and has a recyclable metal lamp housing.

From **Schaer Luederitz** comes the new series SL 200, a pendant lighting range for rod or wire suspension giving both direct and indirect light. The indirect ele-

ment (around 35% of the light output) is directed through a prismatic diffuser and the direct output (the remaining 65%) uses a highly polished mirror reflector. The fittings are available in rectangular versions taking 1 and 2 lamps; and a square fitting takes 3 lamps. With suitable reflectors these fittings can have a light cut-off angle of 60°, making them suitable for use in VDU areas.

Decorative lighting has suffered more from the recession than the professional end of the market and this was reflected in a smaller range of new products on display than last year. However, many of the new products in this sector were characterised by high quality, this being the end of the consumer market that has best weathered the storm.

German company **Brilliant**, for instance, introduced a number of stylish new decorative floor standing and desk lights including Hydra, a 50W low voltage desk lamp, 380 mm in height and continuously adjustable.

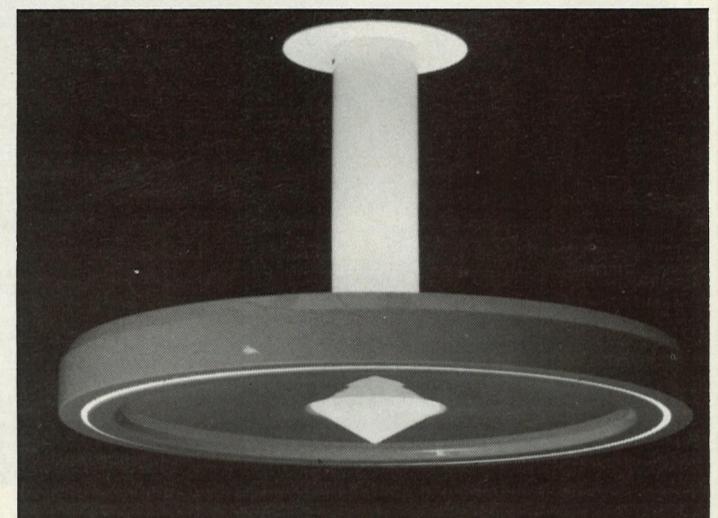
Similarly, the stylish Belgian decorative lighting company **Light** produced a new wall-mounted diamond shaped luminaire with satin glass sides, only 50 mm deep to take a double ended metal halide lamp up to 300W. The fitting comes in black, white brass or nickel finishes. A matching fitting only 56 mm deep is designed to take two 55W Dulux DL lamps, giving an output of 9600 lumens, but is available only in white.

Designer decorative lighting

from **Atelje Lyktan** includes Phenix, a range of indirect lighting fittings for a 36W PL lamps with an electronic ballast. The ballast housing in aluminium is mounted on the wall or ceiling. The fitting comprises one or three frosted acrylic discs, depending on the model, which give some direct light in addition to directing most of the light output towards the ceiling.

Maintenance is easy. The lamp can be removed quickly using a key and the head with the reflector and all the electrical equipment can be taken away to be repaired in the workshop or maintenance depot.

From **Siemens** comes a new external light fitting for use with Dulux L energy saving compact fluorescents. It is available in versions for two 18W or two 24W fluorescent lamps, giving



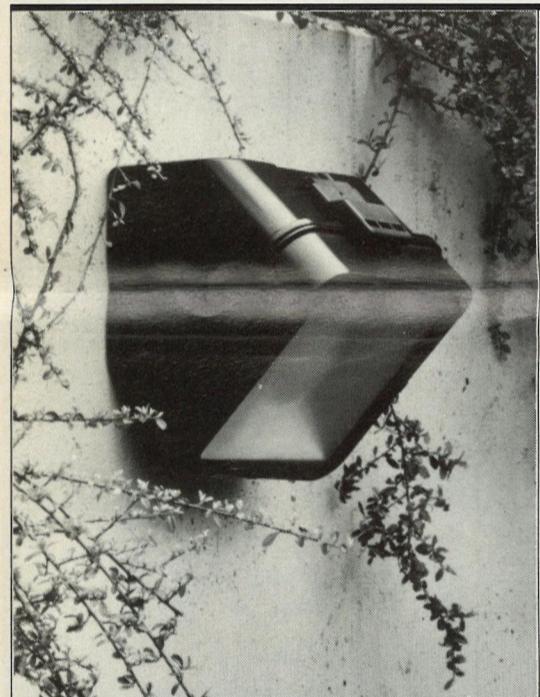
Orbix, from Kinkeldy-Lyktan, is designed for cellular offices.

the same light output as 200W and 300W incandescents respectively. The fitting is characterised by its own specially developed reflector and futuristic design. It is designed to be used at heights of between 2.5 m and 5 m, making it particularly suitable for residential areas and pedestrian zones.

A new range of outdoor pathway and wall-mounted luminaires was shown by **Hoffmeister**. These have a protection rating of IP43.

The compact wall fittings, made of aluminium, come in black and white. An opal cover protects the lamp compartment, and the ballast is integrated into the luminaire housing. The pathway luminaires mount one or two wall fittings on a 1.25 m rectangular section tube.

The fittings have been designed for 13W TC-D light sources and produce a luminous flux of 900 lumens – equal to that of a 75W gls lamp.



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Atelje Lyktan's Phenix fitting uses direct/indirect light from PL lamps.

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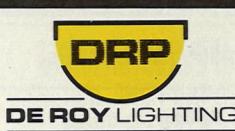
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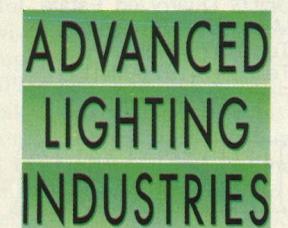
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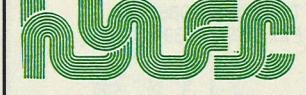


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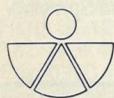
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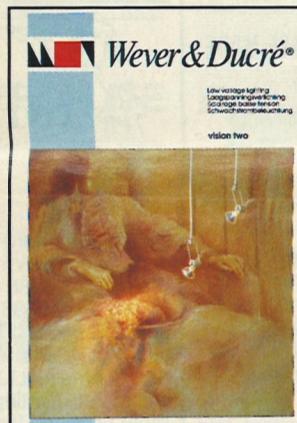
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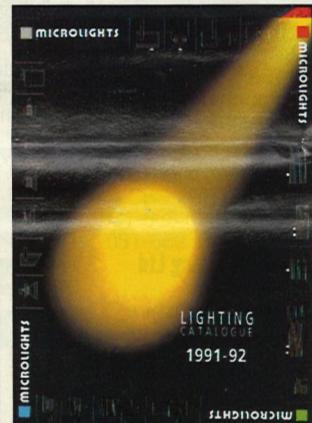
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modular wiring system which is  
easy to install, reposition and  
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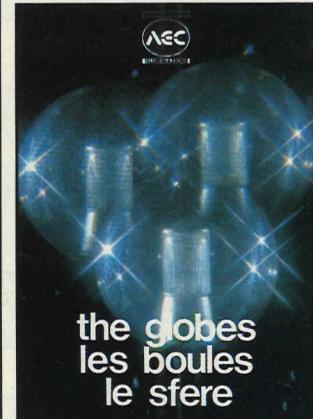
Spotlights-Surface mounted and  
recessed Downlights-Floodlights-  
Metal Halide-Track-Specials-  
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Transformers - Accessories. They  
are all in the Microlights, no  
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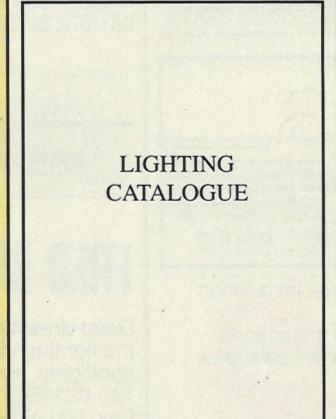
Apology to Wever and Ducré  
LEN would like to point out that  
Wever & Ducré have been  
manufacturing specialist lighting  
for over 8 years and not 3 years  
as previously stated. Furthermore  
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## NEWS



## Luminaire for hard to light spaces

When designer Paul Atkinson was approached by Concord to design a new fitting he looked to his experience of developing lighting schemes for Liverpool Street and Bishopsgate stations for British Rail. Here, much of the lighting was indirect and dependant on projecting lighting onto geometrically controlled reflectors to allow even and glare free illumination at ground, staircase and escalator levels.

From this, and discussions with Concord executives developed the idea of 'lights with their own ceilings'. What finally emerged was Hazel Duct, a freestanding indirect lighting 'totem' 2.75 m high, with one fixture providing adequate indirect illumination for two work stations. There are two versions of this luminaire - the Rational and the Organic. The latter has twiglike supports to the 1.2 m reflector.

## 1992 Young Lighters

Finalists in the 1992 CIBSE Young Lighters of the Year award are: Carol Hammond of Three Valleys Water Company with a paper on daylight and energy management systems; Campbell

McKellar of Thorn EMI Research Laboratories who presented a paper on lighting visualisation systems; Dominic Meyrick of Marlin Lighting who looked at the perception other professions had of the lighting industry; and James White, also of Marlin, who tackled the problem of estimating daylight in buildings with irregularly shaped windows.

## £50K + P.A.

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Interested? Then write with salary and career details,

indicating which location you are interested in, to:

Kate Wiseman, Personnel Officer, Crompton Lighting,

Wheatley, Doncaster, South Yorkshire DN2 4NB.



## Intelligent – and European

The Intelligent Building Group has changed its name to the European Intelligent Building Group. The new title reflects the need to play a more active part in the European development of intelligent buildings and agreed standards, and recognises the fact that the group has gained more associate members from European manufacturing interests.

The European Intelligent Building Group is an independent and self-funded interest group. There are three levels of membership. Full members are drawn from independent organisations such as leading consultancies and specifiers and users. Associate members represent the suppliers including manufacturers and property developers. Affiliate members are drawn from areas such as academic

research groups, representative institutions, or associations with an interest in intelligent buildings.

The EIBG aims to:

- provide a forum to exchange and gain information about all matters concerning intelligent buildings;
- sponsor research;
- be a prominent and representative authority on all issues and standards;
- increase the market's awareness of the features and benefits of intelligent buildings.

Activities include regular technical presentations of topical issues and developments, conferences and seminars, publications including a newsletter as well as site project studies. The group was established in 1985.

## New CP for mains signalling systems

The BEAMA Interactive and Mains Systems Association (BIMSA) has prepared a new code of practice for the design, installation and servicing of mains signalling systems, setting out recommendations for the provision of mains signalling in buildings and on the supply network.

The Code is intended as a reference for independent evaluation and certification and to ensure the

satisfactory operation of such services. It aims to improve the understanding of mains signalling and to assist those responsible for specifying, supplying, producing, manufacturing, installing and maintaining mains signalling equipment to achieve the desired performance, ensure interference with other equipment is avoided and the statutory requirements are met.

Copies of the Code of Practice are available from the Technology Division BEAMA, 8 Leicester Street, London WC2H 7BN, price £22.00 (to non members).

## Trade mission for ElectroTech

An inward mission of 31 executives from 21 countries is to visit ElectroTech '92. The inward mission of buyers is being organised by BEAMA, the manufacturers' trade federation and the DTI.

The countries represented are: Australia, Burma, Dubai, Ghana,

Hong Kong, India, Indonesia, Iran, Kenya, Lesotho, Malaysia, Nigeria, Oman, Philippines, Poland, Qatar, Saudi Arabia, Thailand, The Netherlands, Turkey and Vietnam.

Members of the mission will spend several days at the exhibition visiting stands and having discussions with exhibitors.

## Oil lamps



## SELLING CARS IN A NEW LIGHT

# DeLight



The new DeLight series of interior light fittings from Glamox now makes life so much easier for all those in the lighting business. If you are planning lighting for the motor trade or applications in the retail environment, consider DeLight fluorescent lighting. When coupled with Glamox's Enerba Spot and Downlights, an excellent balance of lighting effects can be achieved to accentuate any sales display area.

The DeLight family, 85 versions can be

combined with 10 different types of louvre, is what our customers said they wanted. With its intrinsic quality and many new and meticulously researched features, DeLight offers an exceptionally versatile lighting system.

There is no interior lighting application where DeLight concedes anything to the competition. We're sure of that!

Ask for a catalogue. It will prove that Glamox DeLight gives better value all the way.

**GLAMOX** DeLight

Glamox Electric Ltd.: Anderson House, 29 Coast Road, Wallsend, Tyne & Wear NE28 8DA. Tel.: 091 262 7126. Fax: 091 262 4118.  
Glamox House, California Lane, Bushey Heath, Hertfordshire WD2 1EZ. Tel.: 081 950 0046. Fax: 081 950 0346.

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## Secured – by light

Holophane Europe is backing a police crime prevention campaign to reduce the escalating rate of crimes in car parks.

As a sponsor of 'Secured Car Parks', Holophane has assisted with funding for the campaign and is providing technical advice on lighting improvements. Lighting – together with poor design and lack of supervision – contributes markedly to the fear of crime, especially among women.

Police across the country are attempting to improve design standards in existing and new car parks. The police initiative will provide advice on: lighting; vehicle

access and exit; natural surveillance features; signs; lifts; pedestrian routes; electronic security; internal design features; and staffing.

Under the scheme, car park operators wishing to be considered for official recognition as a 'Secured Car Park' will approach their local police force which will send round a crime prevention officer to inspect the premises, checking against the criteria.

Those reaching the approved standard will receive either a 'gold' or 'silver' award, depending on the level achieved. Those failing, will receive free police advice on security.

## IN YOUR NEXT ISSUE

In July, *Lighting Equipment News* will be presenting a preview of new lighting and components on display at ElectroTech '92, the important biennial exhibition to be held at the NEC in Birmingham.

Sounding a more international note, we hope to take a look at some of the major lighting installations which have recently been completed in mainland Europe.