

Industry

Cyclocontrol lights up London

The City of London has become the first local authority in the UK to install a new electricity control system that could provide significant savings in both costs and energy. The system was launched by the Lord Mayor, Cmdr. Sir Robin Gillet, at the Guildhall on the 20th January.

Initially, the system, known as Cyclocontrol, has been installed on about 500 street lamps and signs in co-operation with the Fleet District of the London Electricity Board. If successful, it is intended to extend the system to cover all the 6000 outdoor points in the City of London square mile.

Cyclocontrol has been developed and manufactured by GEC Measurements from original inventions by the LEB. It uses a relatively small transmitter to inject a coded message into the mains supply and activate a special receiver which then operates lighting, heating or other electrical equipment.

An entire 11 kV/415 V distribution system with a fault level of up to 300 A can be controlled from one transmitter. The Cyclocontrol extracts power from the distribution system in such a way as to modify the waveform of selected cycles of the mains supply.

The signalling system is virtually maintenance-free and solves the costly problem of resetting and energy waste that arises with time clocks following a power failure.



Cyclocontrol receiver installed in lamp standard

Additionally, the system can be used to spread electricity loads evenly during the day.

A future development could include an 'answer-back' facility from the receiver, thus creating a 2-way communication system that could be adapted to allow remote reading of gas and electricity meters.

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Degree days

A new free service to industry and commerce aimed at improving the efficiency with which space heating systems are used and so saving energy has been launched by the UK Department of Energy. To enable firms to monitor the operation of their heating systems and correct faults or inefficiencies, the Department is issuing each month statistics known as 'degree-day data'.

Degree-day data are a well established technique for providing a climatic correction in determining the efficiency with which heating systems are used. In essence, the more degree days that are recorded in a month, the more heating is required to maintain buildings at a normal temperature. The data thus enable a comparison to be made between the amount of energy actually used for space heating in a given period and the amount of energy which should have been used, taking into account the level of the outside temperature during that period.

By studying the figures, the managers responsible for energy consumption in firms are able to keep a running monthly check on the efficiency with which their heating systems are working and so minimise the waste of energy. Degree days can also be used to measure the effect of energy-saving measures.

Monthly degree-day figures compiled by the Meteorological Office for 17 regions are available from the Library, Department of Energy, Thames House South, Millbank, London SW1P 4QJ, as is a booklet, in the Department's fuel-efficiency series, which explains degree days and their application in detail (Fuel Efficiency Booklet 7).

Data entry

MSD Data Processing Ltd. has launched two data-entry systems, the 21/20 and 21/40. Basic configuration of both systems consist of an operator station with a 190-character cathode-ray tube and keyboard. The processor is built around an Intel 8080 microprocessor with one diskette drive, each drive capable of holding 243 000 bytes of information. System 21/20 is preprogrammed for data entry and validation under control of user-supplied formats, and is expandable to four operator stations, like system 21/40.

System 21/40 is fully programmable by the user via Mobol, (Mohawk business oriented language), a modified version of Cobol, and can be adapted to perform extended data validation and full transaction processing.

Other optional features of both systems include either SDLC or BSC communication protocols, operating at data rates up to 9600 bit/s; a 45 or 150 character/s printer; and a 2.5 Mbytes disc drive. Future models will be fitted with larger discs, magnetic-tape drives, line printers and additional communication protocols.

MDS Data Processing Ltd. is owned by Mohawk Data Sciences, a New York Stock Exchange Co. founded in 1964. Today, MDS claims to be the tenth largest manufacturing firm in the computer industry. For the fiscal six months ended on the 31st October 1976, MDS had a net income of \$2.2 million on revenues of \$74 million. Initial deliveries of series 21 will begin in May 1977.

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Electric-vehicle enthusiasm

Considerable interest is being shown in the forthcoming electric vehicle development conference to be held at the Royal Institute of British Architects, London W1, on the 31st May-1st June 1977. The meeting will be concerned with the development of all forms of battery-powered road vehicles in Great Britain, acknowledging, of course, the considerable body of international work being carried out in this field to develop cars, buses, passenger and delivery vehicles, as well as vehicles for the disabled driver.

The conference is organised by the Electric Vehicle Development Group and has a number of supporting bodies including the Design Council, Electrical Research Association and *Electronics & Power*. The conference is divided into five main sections as follows:

- battery power and economics
- operational systems and supply networks
- engineering design and the power source
- test programmes — fleet and individual vehicles
- international activities.

Participants in the conference will come from several overseas countries as well as including experts from the main interested British bodies.

Several of the papers to be presented will consider widespread aspects of the use of electric vehicles, including energy and resource

implications. This will be the theme of a paper by Glyn Charlesworth, a research fellow at the Energy Research Group, Open University. Another more general paper, by Dr.-Ing. H.-G. Muller of West Germany, considers definitions of hybrid vehicles — a mixture of electric and other propulsion systems for vehicles. He comes up with several solutions, including mixed propulsion energy, mixed energy stores and mixed systems of energy supply, and will recount experiments with hybrid vehicles.

Other more detailed papers will include recent developments in power sources, with special emphasis on alkaline batteries, by Dr. H. G. Plust from West Germany, a paper by P. Campbell of Cambridge University on a novel electric-wheel motor unit applied to two-wheeled vehicles, and a paper by D. Bayliss of the Great London Council, who will consider how the increased use of both passenger and goods electric vehicles might effect planning and other problems in large cities in Britain, particularly in London.

Further details of the conference, including the full programme, may be obtained from Electric Vehicle Development Group, 50 Colebrooke Row, London N1 8AS (telephone 01-259 7352). The Road Transport Industry Training Board has approved this conference for the purpose of training grants.

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