# ELECTROSONIC WORLD

LIGHTING CONTROL, AUDIO, AUDIO VISUAL, VIDEO

No. 5


## INSIDE

Read about world-wide applications of lighting control, audio, audio visual and video displays.



# BIG INCREASE IN PUBLIC AV

**THE growth in the leisure business throughout the world is leading to wider use of audio visual techniques in public display.**

Museums, Visitors' Centres, Theme Parks and other Public Exhibitions all have an increasing need for reliable methods of continuous multi media presentation. Electrosonic is playing a significant part in meeting this need; both by virtue of its specialised range of products, and by the worldwide experience of engineering complete systems.

### ESTA

Our audio visual, video and lighting control products are suitable for both large and small installations. Products such as the ES5003 video disc controller, the ESTA range of tapeless audio products, and sophisticated multi media computer programs such as ANCOR and BSC are helping to re-write the book as to how continuous running AV systems should be engineered.

### Museums

In the last few years we have been privileged to work all over the world on major AV Systems; completing such prestigious projects as the control systems for the new Satellite Exhibition at the Kennedy Space Center; the Lenin Exhibition at the Gorki Leninskije State Historical Park; the Granada Studio Tour in Manchester, and the Museum of the Moving Image in London.

"Cinema goes to War" a multi image show at the Museum of the Moving Image, London's most popular new museum. See pages 9 & 13.

### Projects

With project engineering facilities now established in seven countries; and with strong representation in many other countries, we are in a good position to support end customers, designers and contractors in providing turnkey multi media systems.

## 25 YEARS

THIS issue of ELECTROSONIC WORLD marks our 25th anniversary.

From two full time and two part time employees at our founding we have grown to 350 people and a turnover of £20 million (US $35 million).

We now work on a worldwide basis, and look forward to the next 25 years of serving the lighting control and audio visual markets.

Electrosonic Hong Kong engineered and installed the DIGIDIM lighting control at the Ramada Hotel, Okinawa.

# LIGHTING CONTROL INTERNATIONAL

**MODERN public buildings demand the use of lighting control on the grounds of function, economy and aesthetics. Electrosonic have the experience and the products to engineer lighting control systems throughout the world.**

The ES1006 electronic dimmer was Electrosonic's first product back in 1964; it represented a pioneering use of thyristors for lighting control. The present DIGIDIM line of professional dimmers and control systems is the result of 25 years of lighting control expertise.

Today Electrosonic Lighting Control can be found all over the world. Floodlighting control at the Victoria and Albert Museum in London; lighting control for a new club in the Ritz Hotel in Paris; for the Zoo in Amsterdam; for the SAS Hotel in Oslo; for presentation rooms in Toronto and for theme parks in the USA are just a few examples.

Major lighting control systems need engineering support, and Electrosonic make sure the support is where it is needed. Specialist distributors such as IRC Pvt in Singapore and Helvar GmbH in Germany support some local markets; and our own companies support others. It is no surprise to find that Electrosonic Hong Kong has been installing lighting control systems in the People's Republic of China, Japan, Korea and Hong Kong itself.

This amazing pyramid shaped videowall was the centrepiece of Electrosonic's stand at both PHOTOKINA in Cologne and INFOCOMM in Dallas. Specially commissioned show by Tymn Lintell. See pages 6 & 7 for more news on PICBLOC.

# BUSINESS COMMUNICATIONS

**THE need for efficient communication in business, whether it be in the boardroom, at the sales meeting or for training, has never been greater.**

At Electrosonic we help make audio visual presentations effective. We manufacture a line of specialist products for multi image and for presentation room control; and we engineer complete presentation room systems, combining our own products with those of other manufacturers.

Our aim is to simplify the use of audio visual and video equipment; to introduce wherever possible "one button control". Our clients are as diverse as the Postbank in Holland, Xerox in Canada, Ruhrgas in Germany, Reuters in Hong Kong, McDonald's in Britain and Australia and Motorola in the USA.

A typical installation is that for the North American Life Assurance Company in Toronto. Here we equipped both the Executive Boardroom and the Conference Centre with simple-to-use AV and lighting control systems based on our infra red cordless controllers and SCENESET lighting control.

Slide projection, video and data projection were neatly integrated to properly support meetings, training and special presentations. Our Toronto based company Multivision Electrosonic Ltd, worked closely with the interior designers, Marshall Cummings and Associates, to ensure a most practical installation.

The Audio Visual Systems at the North American Life Assurance head office in Toronto were engineered and installed by Multivision Electrosonic Ltd.

# EDITORIAL

**OUR fifth issue of ELECTROSONIC WORLD marks our 25th anniversary. An occasion to say "thank you" to customers, suppliers, staff, ex-staff, shareholders and professional advisers who have helped us on our way to being a significant presence in the lighting control and audio visual markets.**

**When we started in 1964 it would have been difficult to predict either the scale of our present operations, or the electronic techniques we would now be using. While the thyristor was just arriving as a component for power control; the integrated circuit, still less the microprocessor, did not exist. Flat screen televisions were confidently predicted for the near future (they have yet to arrive in any size) but the idea of a 4 Mbit semiconductor memory or a lap top computer would have been laughed at.**

**But as long as we are aware of the latest technology and techniques, it does not actually matter what they are. If we had been in business in the 1880's we would have been experts in magic lanterns and gas controlled dissolvers; and would have been pioneers in the use of electricity. In the 1990's we shall be contending with new video projection techniques, new light sources and ever denser semiconductor memories.**

**Because, of course, what matters is the end result. We enjoy the magic of illusion and the sense of "the show must go on". We take pride in developing new methods of presentation, both in business and entertainment. We have built up a worldwide team of experts consisting of people who are both competent and ENJOY what they do.**

**As long as we continue to have this sense of involvement, then our position in the fields of LIGHT, SOUND and IMAGE will, we hope, be secure for the next 25 years!**

## ELECTROSONIC WORLDWIDE

ELECTROSONIC specialise in the manufacture of lighting control, audio, video and audio visual products and systems.

We are represented in many countries throughout the world. If you do not know the name of your Electrosonic Distributor, please contact any of the principal offices listed below.

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## LIGHTING NEWS

**LIGHTING Control Equipment based on Thyristor Dimmers and Microprocessor Programmers is an important part of Electrosonic's Product Range. We manufacture Unit Dimmers and Multiple Dimmer Systems for Commercial, Architectural, Leisure and Entertainment Applications. On the next three pages we report on just a few of our recent installations.**

# FIVE STAR
## With SCENESET

The 5 Star Ramada Renaissance in Brighton uses SCENESET lighting control in all public areas, including the atrium shown here.

**LIGHTING design is an important part of modern hotel design and management; and lighting control is needed to realise the design intentions. Electrosonic DIGIDIM plug in dimmers, DIGIRAK power distribution and SCENESET automatic programmed control are to be found in the very best hotels.**

Two examples from almost diametrically opposite parts of the globe are shown here.

### Australia

Tony Corbett and Associates were responsible for the lighting design at the exclusive Hayman Island Resort Hotel, in the Whitsunday Islands between the Great Barrier Reef and the mainland of Australia; and selected the Electrosonic range for lighting control in all the public areas, restaurants and reception foyer.

Following the success of the original installation further racks have been supplied as new facilities have come on stream. Many SYSTEM 12 compact lighting control systems have also been supplied for retail areas; and Electrosonic's associate in Australia, Lectrum Systems Pty Ltd is currently fitting out the conference facility on the island.

Designers YRM and Electrical Contractors Matthew Hall chose SCENESET and DIGIDIM for the five star Ramada Renaissance Hotel that recently opened in Brighton, on a prime seafront site adjacent to the famous Brighton Lanes.

This hotel has 204 bedrooms overlooking a five floor atrium. Lighting within the atrium is SCENESET controlled using both dimmers (for tungsten halogen sources) and contactors (for high intensity discharge sources).

View through to the Library at the de luxe Hayman Island Resort Hotel, lighting control by Electrosonic SCENESET and DIGIDIM.

# BREWERIES CALL TIME
## on inefficient lighting

**Here TERRY DENMAN reports on the widespread use of SYSTEM 12 in the new generation of British Pubs.**

Visitors to Britain are puzzled by the local tradition of shutting the pubs just when you want a drink; or alternatively calling "time" as you are enjoying an afternoon pint.

But, believe it or not, times are changing. A new generation of pub restaurants, and a change in the licensing laws, is introducing all day trading. The new pubs are carefully designed to be welcoming at all hours; and their lighting schemes make an important contribution to ensuring the right ambience.

Ansell's "Hare and Hounds" at Minworth is one of many of their Golden Oak Inns to use SYSTEM 12 lighting control.

Lighting schemes without some kind of control can be expensive to run; and give the wrong effect at the wrong time. However since the introduction of the compact and versatile SYSTEM 12 lighting controller into the UK market, many major breweries have realised that it can help them obtain the full benefit of their lighting schemes, and have used its facilities in place of old hard wired switching and dimmer systems.

### Easy installation

SYSTEM 12 is a compact distribution box with 12 dimmer channels and a "scene memory" unit. It provides completely flexible control of both dimmable and non-dim circuits; and with a built in MCB panel and generous connection terminals is easy for the Electrical Contractor to instal. All loads can be directly wired back to the cabinet without intermediate switches.

This is because control is carried out at low voltage using only a 3 core data highway, that is inexpensive to instal, and easy and safe to extend if necessary. This one cable can be looped round to any control panels required; these panels are known as "SCENESELECTORS" since each one can choose the required lighting scene, either for the whole building, or for just the area near to it.

A "Scene" is any combination of lighting levels. When a building is complete and furnished, the lighting designer, architect and owner can "program" a SYSTEM 12 on the spot, to produce just the effect they want. Each channel can be set to any level between zero and 100%; and the speed at which a scene is achieved can also be programmed. Up to 128 scenes can be programmed, but within any one area usually 3 or 4 scenes are sufficient.

### Setting the scene

For example lunch time scenes will be bright and cheerful; but in the evening a more subdued appearance will be more appropriate. "Cleaning" scenes select working lights as opposed to

# LIGHTING THE PALACE

**DIMMING control of lighting is normally associated with indoor lighting; but in two recent schemes Lighting Design Partnership of Edinburgh and London have demonstrated the value of SCENESET control on building exteriors.**

The amazing detail of the Palace Theatre in London has been restored to its former glory thanks to the patronage of Andrew Lloyd Webber's Really Useful Company and English Heritage. LDP's problem was to design in the light sources so they could not easily be seen from the ground; a task accomplished in conjunction with the theatre's architects Jacques Muir and Partners.

The Palace floodlighting scheme has 24 circuits of lighting under SCENESET control; with the actual floodlighting "scene" being set by a combination of time clock and photocell control.

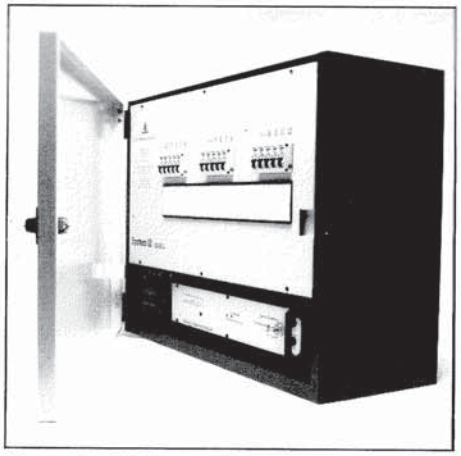
Another enlightened sponsor, this time Pirelli, have contributed to the new landscaping of the inner quadrangle of the Victoria and Albert Museum — now the Pirelli Garden.

Architects Cecil Denny Houghton & Partners called on LDP to provide a lighting scheme for the quadrangle and for special events within it. Technically the lighting control system is similar to that used on the Palace: but in this case there are more "scenes" in use because of the variety of events that can take place in the garden.

The restored Palace Theatre with floodlighting installation by Show Contracts (above) and the Pirelli Garden with installation by T.A. Boxall (below). Electrosonic SCENESET lighting control.

effect lighting, and so on. Scenes can be selected manually by the duty management, or automatically using the Electrosonic SCENE MANAGER 7 day multi event electronic time clock.

Economies arise in using SYSTEM 12 not only because of the ease of installation and use, but also because it is possible to ensure that at all times the lamps under control are slightly under-run. This can typically yield a doubling of lamp life, and with some lamps costing £8 each, this is significant. From a management point of view economy comes with another great benefit; SYSTEM 12 ensures that the pub or restaurant always looks as they intended it to.



Electrosonic's SYSTEM 12 compact 12 channel lighting control is ideal for pubs and restaurants.

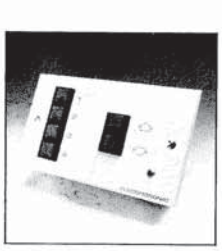
## Brewers benefit

Amongst the breweries currently benefitting from SYSTEM 12 are Ansells. At the time of writing they have refurbished 17 pub-restaurant sites in the West Midlands under the "Porterhouse Inn" chain, and these are proving popular with customers of all age groups.

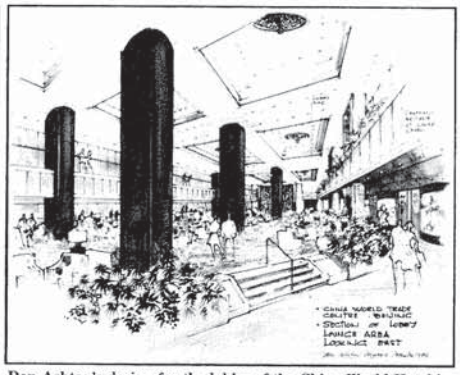
Similarly after much investigation of available equipment, and field trials by their research and development department, Whitbread Inns have standardised on SYSTEM 12 for their major retail outlets which include Henry's Cafe Bars, Hanrahans, Robinsons and the Beefeater chains. These cater for all day trading, and particularly require this type of automatic lighting control.

Other SYSTEM 12 clients include the John Smith Tadcaster Brewery, Daniel Thwaites PLC, Boddington's Brewery PLC and Joshua Tetley & Son Ltd.

SYSTEM 12 is available off the shelf in the UK through our network of specialist dealers. Special mention should be made of Messrs Sound Ideas of Wye in Kent; and of TEC Sound and Light in Birmingham who have played a significant part in ensuring the success of SYSTEM 12 in the pub market. Cheers!



The ES7805 SCENE MASTER control panel can be used with SYSTEM 12. The four buttons 1-4 correspond to the lighting scenes (and the buttons would often be engraved to indicate "Lunch", "Early Evening", "Late" for example). The other two buttons allow the level of the entire selected scene to be raised and lowered.



Don Ashton's design for the lobby of the China World Hotel in Beijing.

# Digidim in Beijing

THE China World Trade Centre in Beijing is an international project. It is a joint venture between the Chinese Government and the Hong Kong based Kerry Industrial Company (who own and run the Shangri La group of hotels). The design and engineering team includes Nikken Sekkei from Japan as overall architect, SAE from France as main contractor, Indeco from Singapore as electrical contractor, and Don Ashton Design Consultants from Hong Kong and London as Interior and Lighting Designers for the five star China World Hotel.

Vic Warwick of Don Ashton Design is in charge of the lighting design. For all the public areas, including the Lobby Lounge, Reception, all food and beverage outlets, the Hotel's own Convention Hall, Banquet Hall and Meeting Room Complex he has specified a control system that is both easy to use; and functional. Each area must have the lighting appropriate to the time of day and its present use. His requirements are met by DIGIDIM rack mounted plug in dimmers and SCENESET control.

Electrosonic Ltd Hong Kong are supplying 23 DIGIDIM racks (in a mixture of 12, 18 and 24 sizes) to the China World Hotel; and are currently working on several other projects in the People's Republic of China.

Electrosonic dimmers do not control the sun: but they are installed at North Cape in Norway, the northernmost point of Europe. Photo: Husmo Foto.

# NORTHERN LIGHT CONTROL

**SWEDEN was our first export market for lighting control equipment; we started delivering our dimmers there in 1968. It is good to report that our distributors in Stockholm, Ljus & AV Teknik, are still finding interesting applications for our products.**

The Stockholm Globe Arena is the largest spherical building in the world; next to it is the Stockholm Globe Hotel, and here Ljus & AV Teknik have delivered both the conference AV systems and a complete 110 circuit DIGIDIM lighting control system for the public areas.

## SAS

SAS have recently moved to new headquarters at Frosundavik, on the road between the city and the airport. A series of buildings in a specially landscaped area are linked by a glass covered street that includes restaurants, shops and meeting facilities.

SAS chose Lighting Design Partnership, who have designed the lighting for several SAS hotels, to design a special lighting scheme, and this includes five DIGIDIM racks with SCENESET and photo electric control.

Restaurant "Brasseriet" at the SAS Scandinavia Hotel, Oslo.

## Norway

Over in Norway our distributors Audio Grafisk have also been working for SAS, this time at the SAS Scandinavia Hotel in Oslo where they supplied Electrosonic DIGIDIM equipment for the restaurants and function rooms.

Audio Grafisk also claim to have installed the most northerly dimmers in the world. The next stop north from North Cape in Norway is the North Pole, and at North Cape there is a visitors' centre "North Cape 1990".

The Stockholm Globe Hotel, next to the Stockholm Globe (above) and the SAS headquarters both use Electrosonic lighting control.

The centre, part of which is underground, includes an auditorium showing a multi-screen video programme, an exhibition area and a restaurant with a stunning view of the midnight sun. It also includes an information centre for the Norwegian Telecommunication Authorities.

Audio Grafisk have supplied many items to the centre, including ES7000 dimmer systems for all the public areas, and ES1320 digital sound stores for the exhibition and for public announcements.

LIGHTING NEWS

# The light bulb is OBSOLETE

**Here DAVID DANBY reviews the latest light sources.**

Although the lamp bulb, or, to be more correct, the GLS tungsten lamp, is still sold in millions for the home lighting market; it is true to say that its use in commercial applications is in rapid decline. This is particularly so in applications associated with lighting control dimming systems such as hotels, conferences and leisure centres, and entertainment venues.

The importance of lighting in these buildings is reflected by the emphasis on lighting design; and lighting designers are choosing a combination of new light sources with dimmer control.

New compact low voltage tungsten halogen lamps. The "Tru Aim" from Sylvania.

The standard mains voltage tungsten lamp is being superseded by a mixture of tungsten halogen, small wattage discharge and compact fluorescent lamps. The leader amongst these is at present the miniature tungsten halogen lamp, which produces a higher light output and has a longer life than the equivalent power conventional tungsten lamp.

A 20W two pin lamp is less than 30mm long, and can be used in small luminaires to produce a wide range of directional high intensity spotlights. These miniature lamps operate on a low voltage in the range 6-24V, and therefore require a transformer to operate from mains voltage.

## Electronic transformers

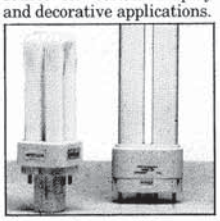
Electrosonic dimmers are all now suitable for controlling high quality conventional wire wound transformers. However new technology is invading the business of voltage conversion, and it is now possible to obtain lightweight "electronic transformers". Some of these are suitable for dimming and some are not. Those that are have some significant advantages over conventional transformers in terms of efficiency, weight, and their ability to withstand DC components in the supply waveform.

Another tungsten halogen lamp that is found in many display lighting applications is the mains voltage double ended linear lamp, available in ratings from 200W to over 1000W, which is used to produce a "wash" or flood of light on displays. 75W, 100W and 150W single ended tungsten halogen lamps are now available, and their compact size allows the use of efficient optical systems. All these tungsten halogen lamps are suitable for control by Electrosonic dimmers.

## Discharge lamps

Mercury vapour and sodium discharge lamps have traditionally been used for industrial and street lighting. However the development of low wattage discharge lamps and the enormously improved colour rendering of modern phosphors and gas mixtures has led to their introduction to interior applications.

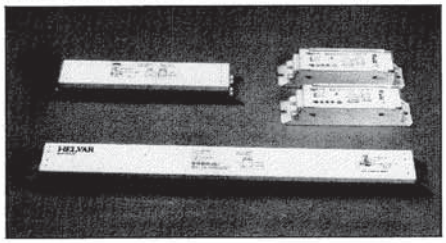
It is now possible to get a variation of the sodium lamp in near white colour rated at 35W. It is a most economical and high efficiency light source for certain display and decorative applications.



Compact fluorescent lamps replace tungsten. The 4 pin versions can be dimmed. Photo courtesy Wotan Lamps Ltd.

Electrosonic does not recommend attempting to dim discharge lamps. The nature of the discharge, requiring a stable gas temperature, makes dimming possible over a very limited (practically useless) range; beyond this dimming is unstable, has a bad effect on colour rendering and can be detrimental to lamp performance.

It is, however, quite feasible to include these sources in an overall lighting scheme, and to use programmable switching using the Electrosonic DIGISWITCH products to include or exclude any circuits in a given lighting scene.



Electronic fluorescent lighting ballasts from Helvar. They are particularly suitable for the slim T8 tube.

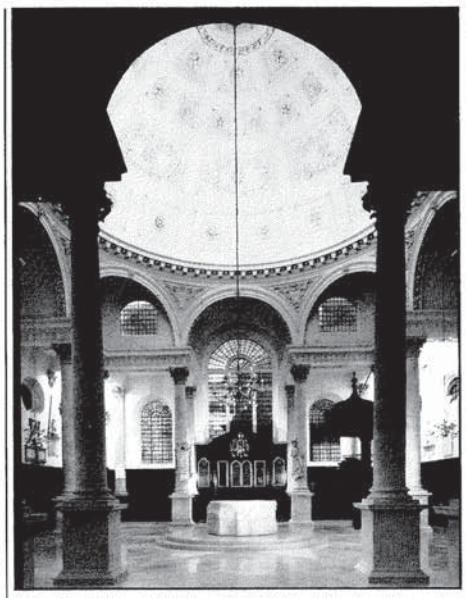
## Fluorescent lamps

On the other hand Electrosonic have been dimming fluorescent lamps for many years; we were one of the first companies to perfect a thyristor fluorescent dimmer nearly 25 years ago.

Once again technology is rapidly moving ahead in both the design of the fluorescent lamps and the associated control gear. The new slimmer T8 lamps are now replacing the earlier T12 because of their increased efficiency.

Fluorescent dimming has traditionally required the use of "dimming ballasts" with separate cathode heating wiring; but these are now finding competition from dimmable high frequency electronic ballasts. Indeed the T8 tube can really only be satisfactorily dimmed using electronic ballasts. Electrosonic DIGIDIM 7000 series dimmers are compatible with these new electronic products.

Electrosonic has a policy of investing in continuous product development. Close co-operation is maintained with lamp and fitting manufacturers to ensure that the company remains ahead of the field in the technology of lighting control.



St Stephen's Church, Walbrook in the City of London. The sculpture is by Henry Moore, the lighting control by SCENESET.

# St Stephen's

ST STEPHEN'S Church, Walbrook, in the City of London is one of the many fine churches built by Sir Christopher Wren; and is believed to be the model for St Paul's Cathedral.

Recently this church has been completely renovated, under the patronage of Peter Palumbo. George Sexton, of Washington DC, working with the electrical consultants Yates Associates, designed a lighting scheme both to reveal and enhance the architectural detail of the church.

An Electrosonic SCENESET lighting control system is installed; to provide different lighting scenes according to the outside lighting conditions and the service being conducted. Push button scene selection is available from both the vestry and the pulpit, and lighting scenes are changed during services (e.g. for the sermon).

Many beautiful churches and cathedrals are fitted with Electrosonic lighting control — including St Stephen's bigger neighbour, St Paul's.

# AIRPORT

**BUILDING Design Partnership's Manchester office received the commission to re-furbish the main concourse of Manchester Airport; and central to their work was the upgrading of the concourse lighting.**

Objectives of the lighting design (under lighting consultant Friedricht Wagner) were to help create a relaxing environment; to assist passenger flow by defining routes through the concourse; to be energy efficient; and to be pleasing to the eye.

The amazing chandeliers were inherited from the old design; but in the new layout were moved to be more of a feature. They were also relit. During the day they are lit by sunlight, via computer controlled mirrors that divert the sun's rays down the centre of the chandeliers onto multiple reflectors. If there is not enough sun, then 2KW metal halide projector lamps give extra light.

Main concourse lighting is by lines of fluorescent lamps that follow the main pedestrian routes; augmented by pencil beam 250W metal halide projector lamps. In principle the pedestrian routes are maintained at 700 lux, while the seating areas are at 250 lux.

The fluorescent lighting is all dimmer controlled using Electrosonic dimmers and high frequency electronic ballasts. All lighting is under SCENESET/SCENEMANAGER control; so that at night or during periods of low use, lighting levels are reduced.

The concourse of Manchester Airport. The chandeliers are illuminated by a combination of daylight and artificial light.

The Aquarium at Amsterdam Zoo is being re-lit. The lighting is controlled over a 24 hour cycle.

# ARTIS

ARTIS is the Amsterdam Zoo. Currently they are renovating some of the indoor areas, and included in this renovation are new lighting control systems that benefit both the visiting public and the creatures on display.

In particular the Aquarium and the Bird House are both being fitted with SYSTEM 12 lighting controls; under the control of SCENEMANAGER. The reason for using dimmers is particularly to avoid sudden changes of light level which would be distressing for the exhibits. But of course the lighting does have to change on a 24 hour cycle to simulate a natural environment.

Both areas are using fluorescent lamps fitted with Helvar dimmable electronic ballasts. In the Aquarium an interesting hybrid lighting system is used. During the day the lighting is by high pressure discharge lamps; but at about 4.00 pm fluorescent lamps are switched on, and the discharge lamps switched off.

The fluorescent lamps then fade down very slowly simulating sunset; and in the morning the process is reversed, with the fluorescents fading up to simulate sunrise; then to be replaced by the discharge lamps.

While Electrosonic Systems BV do the actual programming of the lighting, the requirements are laid down by the Artis zoologists. The electrical contractors at Artis are AEG.

## Then & Now

THESE days we assume that lighting dimming will be done electronically, using thyristors or triacs; however when Electrosonic introduced the ES1006 automatic dimmer 25 years ago, we were breaking new ground.

Electronic dimming itself was not new. In the 1930's Radio City Music Hall pioneered the use of thyratron tubes, but these had a finite life and were relatively inefficient. However they did provide the first means of dimming fluorescent lamps, and Thorn used them for this purpose at the Festival of Britain in 1951.

The thyristor (so called because it was the semiconductor equivalent of the thyratron) was invented in the late 50's; and became commercially available in the early 60's. It allowed efficient variable load remote controlled dimming with (for the time) incredibly compact equipment.

Our first dimmers were used as auditorium dimmers in cinemas, where they replaced huge 20kW sunset motorised resistance dimmers that occupied a whole room. We are still equipping cinemas today, with many of the new multiscreen cinema complexes using our AUTODIM product.

COMPANY NEWS

# For WOOLWICH read DARTFORD

**ELECTROSONIC'S long association with Woolwich is coming to an end. In mid 1990 we move our UK head office to a green belt site at Hawley Mill, near Dartford.**

**25 years ago when Electrosonic was founded, the first office consisted of one room above a potato store in Greenwich Market. This rapidly expanded to two rooms in the market and a leaky lean-to shed behind a motor cycle shop. In the early days great efforts were made to prevent clients coming to see the "factory"!**

## The Pub

Late 1965 saw the establishment of the first "real" office at 173 Greenwich High Road. This was a disused pub; but it did give us 4000 sq ft, not to mention a barrel lift. By 1968 this was too small, and we moved to a proper factory, 47 Old Woolwich Road had been a textile factory making braids, but it became our home for nearly four years, when, in turn, its 10,000 sq ft became too small for us.

So in 1972 we came to 815 Woolwich Road, where we have been ever since (although with our expansion at Maidstone we have continued to use more space). This building was built as the canteen of the then Siemens Telephone Works (later AEI) in the early 1950's. Its foundation was a large air raid shelter built in 1939.

## Black Corridor

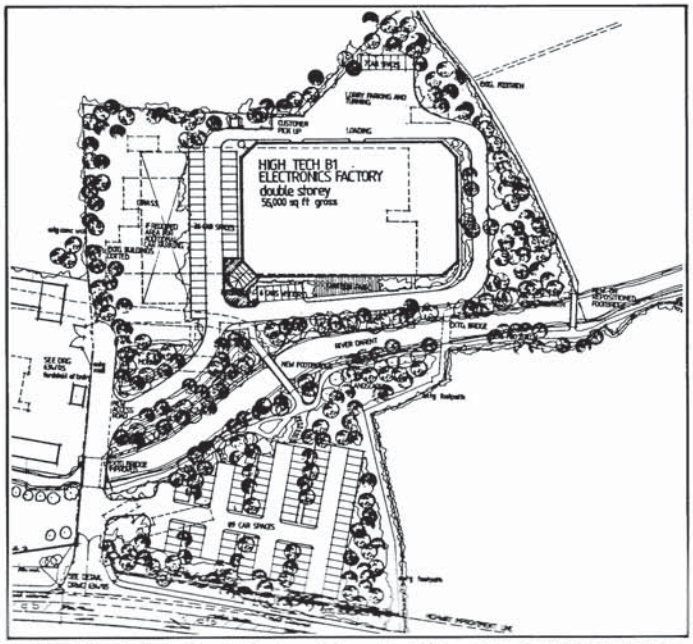
As visitors to Woolwich know, we use the air raid shelter to house our engineering department; its 200 sq ft long black corridor, illuminated with ultra violet light, either impresses or scares the hell out of customers and potential employees.

But soon we will no longer be asked "why the strange lighting?". Our leases at Woolwich run out in 1990; and our requirement is now for a different mixture of office, laboratory, factory and warehouse accommodation to match more satisfactorily our present range of work.

We have been fortunate to find a 5.5 acre (2.5 Ha) site at Hawley Mill, outside Dartford, right next to the A2/M25 interchange. We are demolishing an old 1930's factory, and building a prestige 55,000 sq ft (5,500 sq m) high tech office and factory building in landscaped grounds with parking for 170 cars. We are all very much looking forward to its completion.

While we will not have the black corridor any more, we will have the River Darenth flowing through our grounds (day fishing licences available for a consideration); we will be conveniently situated for the airports and motorway network, and will be 20 minutes away from the mid Kent rail station connecting to the Channel Tunnel.

We look forward to welcoming all our customers and trade colleagues to our new home.




Architect Clive Bewley's plans for Electrosonic's new Head Office at Hawley Mill. Top is the West Elevation, and bottom is the Ground Pland.

Farewell in 1990 to the long black corridor at Woolwich.

# GmbH

OUR West German subsidiary has now been established for over 17 years. For most of that time it was located in the centre of Düsseldorf, but recently it moved to purpose built premises in the pleasant town of Langenfeld.

Electrosonic GmbH, under managing director Johannes Brühl, specialises in boardroom systems, multi image equipment and videowall displays.

# LECTRUM

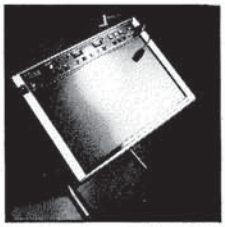
The LECTRUM is suitable for all conference rooms.

OUR distributors in Australia are now Lectrum Systems Pty Ltd; arising out of a joint takeover of the Lectrum Company by David Mason and Electrosonic Ltd.

Lectrum Systems are located both in Sydney where much of the project engineering and sale of standard product is done, and Melbourne, where a factory makes the world famous "Lectrum"; a particularly neat and well designed lectern, which is available in a variety of configurations.

These range from a simple lectern with minimum facilities, to a lectern equipped with full wireless room control.

We are pleased to welcome Lectrum Systems Pty Ltd to the Electrosonic Group. It is our first investment into the Southern Hemisphere.



The clean layout of the LECTRUM's control panel and working surface.

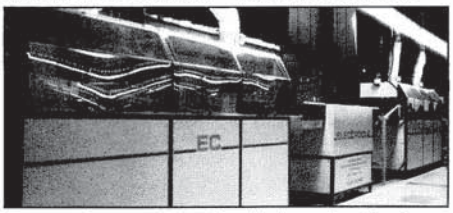
# INVESTMENT at MAIDSTONE

THE majority of our standard unit products are made at our wholly owned subsidiary company Electrocue Ltd of Maidstone. This company has three factories on the Parkwood Industrial Estate; and is approved to BS5750/2 and ISO 900/2. Besides doing the manufacturing for Electrosonic, it also does contract manufacture for several other major customers with requirements similar to our own.

Electrocue specialises in short to medium run batch production of electronic products; and the facilities include printed circuit assembly and precision sheet metalwork. The metalwork shop is equipped with the latest computer controlled machines, and just recently there has been major investment in the printed circuit assembly area.

One of the two automatic soldering lines has been completely replaced by a new installation from Grasmann. It is a "solder-cut-solder" system that transports fully loaded printed circuit cards through a first wave soldering operation, followed by cutting of all component wires, followed by final resoldering.

The new system has improved both quality and productivity at Electrocue.



The new Grasmann automatic soldering and cutting line at Electrocue Ltd.

# NEW HOMES

ELECTROSONIC WORLD No. 4 reported that our companies in Holland and the USA had relocated. Both companies are now well settled into their fine buildings, and it is a matter of some relief to the Electrosonic Management Team, and all those who work at Woolwich, that shortly Electrosonic Ltd will have premises up to the same standard!

Since our last issue Electrosonic GmbH have also moved, as reported on the left, and Electrosonic Hong Kong, previously in temporary accommodation in Admiralty Centre, have moved to more practical premises in a huge industrial building near Hong Kong Airport. The Jumbo jets go past the window!

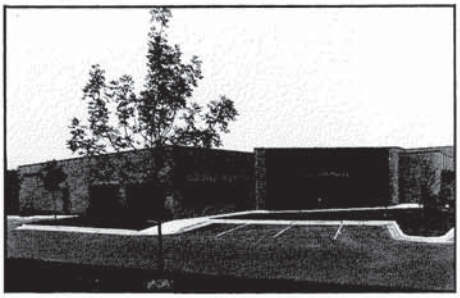
Meanwhile our Canadian company, Multivision Electrosonic Ltd are entering their 15th year of business in Toronto. Situated only minutes from the city centre, the CN Tower, and the new domed super stadium, MEL is housed in an historic building once owned by the Copp Clark Publishing Company.

The building is typical of factory/warehouse construction of the Great Lakes Region at the turn of the century, using cast iron beams. It is the last building of its kind in Toronto. Inside the building the MEL premises are very well fitted out, while retaining the building's fine architectural features.

Part of the Offices at Electrosonic Hong Kong.

Electrosonic Systems BV have a fine detached building near Schipol Airport, Amsterdam.

Douglas Elphick, President of MEL, in front of their Toronto HQ.



The well appointed offices and factory of Electrosonic Systems Inc in Minneapolis.

## THE VIDEOWALL

**THE Videowall is a powerful method of display and is finding many applications, some of which are described here. Electrosonic's PICBLOC videowall control system is a market leader.**

# THEME WALLS

VIDEOWALLS are being widely used in theme parks and other mass entertainment venues; especially for information and "pre show" purposes. The bright image, the special effects, the flexibility of format and the ease with which fully automatic show systems (usually, but not necessarily fed by videodisc) can be installed make it attractive to operators and patrons alike.

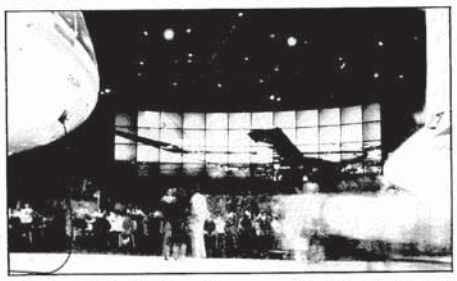
Current users include Alton Towers (UK), Sea World (USA) and the new Granada Studio Tour in Manchester. Here the "Granada Experience" uses a 6×4 wall to show highlights from 30 years of Granada Television, as well as giving information about the tour to come.

"The Granada Experience" is a tour "pre show" seen while visitors wait to depart on the Granada Studio Tour.

# Inter-active Videowall

THE "C-THROUGH" computer program that controls PICBLOC videowalls is extremely flexible; and even allows the computer to be externally controlled. This allows for the easy creation of interactive videowalls, that follow external program selection or branching instructions.

The picture shows a simple example. At the 1988 Frankfurt "Automechanika" Herberts Standox used a videowall to demonstrate their new computer program for the economic design of special paint finishes for cars. The display required the ability to select from several different routines — easily achieved by PICBLOC.

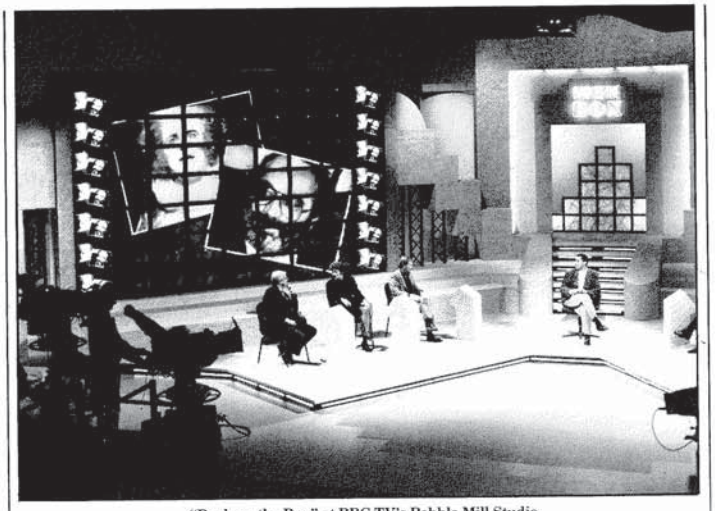


This show for South African Airways used 96 slide projectors and 16 PICBLOC controlled video projectors.

# Hybrid Wall

JOHANN Kruger of Multivisio in Johannesburg has made good use of Electrosonic Multi Media products for nearly 20 years — and has often pushed them to the limit! He is currently using PICBLOC videowall systems for conferences and product launches, usually with video projectors, not monitors.

The picture shows an interesting "hybrid" — a 48 screen "wall" where every screen is served by two slide projectors; but the centre 16 screens are also served by video projectors. For this show two computers were used in sync; one running the PICBLOC system under C-THROUGH and the other running the 96 projector multi image show under BSC; both synchronised precisely by SMPTE/EBU time code.



"Back on the Box" at BBC TV's Pebble Mill Studio.

# PICBLOC on the box

**THE Videowall is widely used in television set design since it gives a bright dynamic display that is easily integrated into programme production.**

From round the world we hear of many applications of PICBLOC Videowalls in TV Studio sets. It is clear that what makes PICBLOC a favourite for this application is the speed at which on site programming can be done using the C-THROUGH computer control program.

### USA Today

"USA Today: The Television Show" is a daily 30 minute news show that started in September 1988, and is transmitted by 150 television stations in the USA from a brand new studio.

The set, designed by Jeremy Conway, features state of the art technology that includes a 6×4, 24 monitor PICBLOC videowall that is slightly curved. It is used as a background for the presenters; sometimes with simple images, and sometimes with complex C-THROUGH programmed sequences.

### OZ

Down in the Southern Hemisphere the Australian Broadcasting Corporation is featuring a 4×4, 16 monitor PICBLOC videowall in its high rating TV quiz show "The Oz Game". The videowall is used as the main medium for presenting questions and fast action sequences on the show.

Richard Newton, managing director of Videowall Australia who rent the wall to ABC TV, reports that over 100 shows have been recorded; with five shows being recorded each session. One problem is that the set has to be stored between sessions; so the wall is mobile and is wheeled in and out as required.

The C-THROUGH computer operator sits alongside the producer and the vision mixer in the main control room. Extensive use of C-THROUGH sub routines allows an instant response to the producer's cues and the actual progress of the game.

### La vida sigue

Quiz shows and panel games probably represent the main use of videowalls on television. Spanish Television are another user of a 4×4 wall in their popular quiz show "La vida sigue."

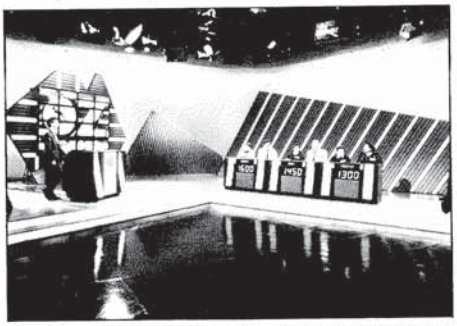
Audio Visual Hardware of Madrid supplied the 4 source PICBLOC wall that is used both to present the questions and to display the time to answer (not to mention the prize money). This is another application where the use of C-THROUGH sub routines allows a fast and precise response to the game's actual progress.

### 144 Monitors

This show, broadcast by ZDF of Munich, uses a monster 12×12, 144 monitor wall; in a game show with 144 participants.

Here the wall not only shows clips, but plays an active part in the game by displaying the participants, and by displaying the output of an on-line computer voting system.

The complete system engineering is by BKE Bildtechnik of Nörten Hardenberg (using Electrosonic PICBLOC technology). The show is usually now broadcast live, and while it mostly comes from Munich; it has also come from Vienna and other cities. BKE claim to be able to build the wall in 3 hours!



The "Oz Game" in the studios of the Australian Broadcasting Corporation.

### Back on the Box

The BBC studios at Pebble Mill and the team that present the "Telly Addicts" show on British Television piloted a new show in February 1989 called "Back on the Box". This uses clips from the very early days of British and American Television.

The first panellists were Tim Brooke-Taylor, Barbara Dixon and Barry Took who took on Spike Milligan, Barry Cryer and Anne Robinson in a battle to pick out the famous faces who made it at the start of their careers — walking on carrying a spear, or announcing "dinner is served".

The show used two giant 9×7, 63 monitor PICBLOC videowalls working in parallel; one set up behind each team. Even this splendid total of 126 monitors was less than that used in the German TV show "Tele AS".

## PICBLOC Developments

PICBLOC is a registered trade mark of Electrosonic Ltd, and is the subject of patent applications in Europe and the USA.

The last issue of ELECTROSONIC WORLD announced the introduction of PICBLOC, marking our entry into the manufacture of video products. Video products are expected soon to match in volume both our lighting and AV products. One third in each sector will make for us a well balanced product range.

1989 sees several new developments in the PICBLOC range, including high brightness projected videowalls, simplified real time controllers and new systems packages.

The "Brick Split" principle demonstrated by our pyramid display shown on Page 1 allows unconventional image formats, such as company logos, ovals, and interesting geometrical shapes to be used.

C-THROUGH is the computer program for videowall show production by which all others are judged; and we intend that it will retain its leading position in the years to come.

## WALLS and WINDOWS

WALLS and windows have always gone together. As a matter of fact it is hard to have one without the other. Such was the case when an Electrosonic PICBLOC 36/COM videowall became a part of Pozzi Wood Windows (a division of Bend Millwork Systems Inc) showcase booth at the National Association of Home Builders' trade show held in Atlanta GA.

The booth was 40ft × 60ft in area and 25ft high. It was designed by Darsel Cox, Pozzi's director of design communications, and largely built "in house" using Pozzi's own products. The result was an unusual and exciting display which, in the words of a director of the NAHB "would have won any award for overall excellence of display hands down".

The videowall was sited on the booth's second level, above the heads of attendees, and clearly visible both at a distance and close to. The show on the 6×6 wall showed the many styles of windows available, and their different architectural applications.


Pozzi Wood Windows neatly integrated a PICBLOC wall into their exhibition stand.


A promotional show for SWATCH, produced by Peter Claridge, toured retail outlets in Switzerland. PICBLOC system by AV Ganz.

# RETAIL VIDEO

**VIDEOWALLS are finding an increasing presence in retail display since they can give a large, bright dynamic image while occupying relatively little space.**

The applications vary from short term promotions to fixed installations carrying paid for advertising. The latter, while an obvious application, is actually the most difficult to implement, and at the time of writing has only been done successfully when special conditions apply.

These are either that the store using the videowall already has a sophisticated media management system; or that the videowall is run in conjunction with an advertising space selling organization.

Dayton Hudson in Minneapolis were one of the pioneers of the first approach in 1987 when they installed a 32 monitor PICBLOC wall in the Minneapolis Skywalk system. This has proved highly successful as both an advertising medium and for special promotions, but its success has definitely depended on the in-house production and media selling departments. The same applies to the system more recently installed by Sears Roebuck in their Mexico City store (see page 16).

In Hong Kong, Videowall (HK) Ltd has successfully installed a massive 72 monitor wall that is used for advertising in the new Tuen Mun shopping complex; and the same company has frequently installed 32 monitor walls in other complexes for special promotions.

## Promotions

The special promotion application is more common, and can be found in almost any country. For example in Barcelona El Corte Ingles has used 32 monitor walls for special fashion promotions; and in Paris Carrefour Euro-Marche used a 16 projector wall for Christmas promotions.

However it is not just the big store that can benefit from Videowall. The manufacturers of the Swatch in Switzerland used a "touring wall" that visited many sites on a 20 week tour; they reported significant extra Swatch sales resulting from the promotion.

Special events such as store openings and celebrity visits are good occasions for videowall use. Denmark's biggest Photo retailer, Japan Photo, used a PICBLOC wall at the opening of their Aarhus store; and are now using videowalls to promote their entry into the video market.

Lys and Lyd, Electrosonic's Danish Distributor, supplied the PICBLOC walls used by Japan Photo at the opening of their Aarhus store (above) and that installed by Magasin du Nord in their Alborg store (below).


Vauxhall Motors (GM) used a 50 monitor video wall to support their stand at the 1988 Motor Show.

# AUTOMOBILE WALLS

AUTOMOBILE manufacturers worldwide have found the videowall an ideal promotional medium, able to convey well the glamour and excitement of their products.

At Britain's 1988 Motor Show at the National Exhibition Centre there were no less than four PICBLOC videowalls. The biggest of these was to be found on the Vauxhall (GM) stand where a 5×10, 50 monitor wall was integrated into the stand.

It was used both to show a pre-recorded programme and to act as a dynamic backdrop to live presentations given on the stand. Programme production and direction was by Film Media of London. Mike Almond, Vauxhall's Merchandising Operations Manager, expressed himself well pleased with the impact of the Videowall.

Citroen used a 24 monitor videowall at the Motor Show (above) and then installed a 9 monitor wall in their London Showroom (below).

## Citroen

Over on the Citroen stand a 4×6, 24 monitor wall promoted their range with a show produced by Caribiner Inc and programmed by Savilles. The same tape went on to be used in a permanent videowall display in Citroen's Berkeley Square showroom, but reprogrammed for the smaller 9 monitor PICBLOC 36 wall.

## Renault

Other users of PICBLOC were Renault with an elegant 4×4 wall installed by PICBLOC dealers MetroVideo, and Mercantile Credit with a 3×5 wall installed and programmed by Interactive Television, (show produced by Leon Kingsbury Productions).

# CONFERENCES & EXHIBITIONS

**VIDEOWALLS are widely used in conferences and exhibitions; usually hired from a local rental/staging company. There is now a worldwide network of PICBLOC dealers able to hire out systems of any size.**

The requirement at conferences is usually that of image magnification. The videowall gives a big bright image and occupies very little space. When more space is available users can consider using projected videowalls which are becoming available at reasonable rental prices.

Conference users have been as varied as political parties and computer manufacturers. The Austrian Socialist Party used a videowall to help launch their 1988 campaign in Lower Austria; and Nokia used one at their Stockholm conference.

Silberberger AV, Electrosonic distributor in Austria, supplied the PICBLOC System for the Austrian Socialist Party meeting in Wiener Neustadt.

Tommy Korberg, star of "Chess", appeared at the Nokia conference. PICBLOC by Ljus & AV Teknik.

## Come on

At exhibitions the Videowall is used as a "come on" medium. Some users adapt existing video programmes to run on the wall, but the best results are always obtained when the wall is properly designed in to the exhibition stand, possibly using an unconventional format, and where shows are specially programmed for the particular exhibition.

Recent exhibition users of PICBLOC have been as varied as Sandvik in Singapore; Pozzi Wood Windows in Atlanta; Cibavision in Stockholm; and Herberts Standox (automobile paint manufacturers) in Frankfurt, making the interesting point that not only consumer products but also industrial and professional products can be promoted on videowalls.

Anitec of Belgium's "leaning wall" at Imprinta 88, Dusseldorf. Videowall by Electrosonic GmbH.


Cibavision's stand at the Stockholm Optics Exhibition was designed round a 16 monitor PICBLOC videowall installed by Electrosonic distributors Ljus & AV Teknik.

# ELECTRO WO


## USA Today

THE feature on page 6 "Picbloc on the Box" describes several applications of videowalls in television set design. This 24 monitor wall uses Electrosonic C-THROUGH computer programming and is seen daily by millions as the backdrop to "USA Today: the Television Show", produced by Grant Tinker/Gannett. Multi source videowall engineering by Electrosonic Systems Inc of Minneapolis.

## Nuclear

THE British Nuclear Fuels Reprocessing Plant at Sellafield receives hundreds of thousands of visitors a year; and their new Visitors' Centre, with exhibition design by Leslie Gooday Associates, makes full use of AV techniques.

Multivision AV of Manchester were the AV contractors for both hardware and software, and they subcontracted the complete system engineering to Electrosonic. The picture shows one of two multi-image theatres, this one for "The World of Energy".

## Taiwan Science

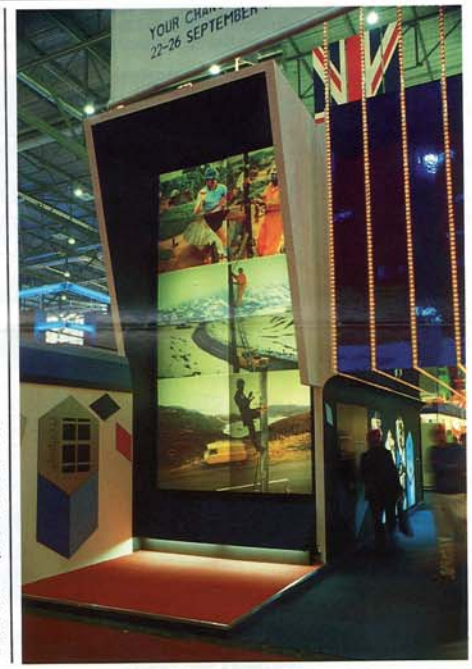
ON Page 12 there is a full description of our work at the National Museum of Natural Sciences at Taichung in Taiwan.

Phase II of the museum was designed by James Gardner. It includes a number of audio visual theatres, using video, multi image and a mixture of the two.

### Sounds in Nature

The largest theatre is that devoted to "Sounds in Nature". Here two multi image shows run sequentially; while images are from slide projectors, the high fidelity sound is from video disc. The shows are produced by Media Projects.

The theatre is shown in the top picture. The lower picture shows kaleidoscope projection being used in one of the evolution exhibits.




## Telecom Images

IN the day of the Videowall it might be thought that optical projection was being abandoned. Not at all. It is still the case that Multi Image technique completely out-performs video for the presentation of good photography.

At the huge Telecom 87 Exhibition in Geneva the British Overseas Trade Board used a 12 screen 24 projector display as a "come on" at the entrance to the main British participation at the show.

The use of short focal length perspective control lenses kept the space occupied by the display to a minimum, and the high screen format gave maximum visibility. The show was produced in-house by the Department of Trade and Industry; and the ES4000 multi image system was hired from Electrosonic in London.


## Airport Video

THE domestic arrivals hall at Johannesburg's Jan Smuts Airport boasts an impressive 6×12, 72 monitor videowall that has been installed by Videowall Pty Ltd in association with Multivisio.

The system uses locally made monitors fed by a computer controlled PICBLOC 256 videowall control system from Electrosonic.

The 15 minute "show" is designed to match the time spent waiting for baggage collection, and consists of a series of advertising spots. Shows are changed frequently; and with the C-Through computer control it is easy to reschedule individual programme segments.

## Danish Parliament

THE Information Room at the Danish Parliament in Copenhagen greets 77,000 visitors a year. It uses Elec trosonic PRC to co-ordinate the showing of multi image, video, movie, random access slides and computer data. Technical installation by Lys & Lyd.

# OSONIC RLD

## Disco

THE World Championship at the Disco Mix Convention is sponsored by National Technics. For the 1989 event in the Royal Albert Hall Electrosonic provided a 6×6 PICBLOC Videowall, that took feeds from the BBC cameras.

The aim seems to be to see how many different records could be played in the 3 minute slot allowed. The Electrosonic staff present confess to emerging from the 3 hour competition deafened, numbed and in a slight state of shock.

## Jean Michel

JEAN Michel Jarre and his colleagues are well known for lighting up cities. When they came to London the weather was not kind, and many difficulties were encountered. Nonetheless "Project Docklands" was enjoyed by all who saw and heard it, not least by the Electrosonic crew who provided BSC control for the big image projection.

## Spaceport USA

TW Recreational Services run the "Spaceport USA" Visitors' Center at the Kennedy Space Center, and they have recently completed a new exhibit titled "Satellites and You". This is a fully automated walk through exhibit working on the "pulsed flow" principle.

### Videodisc

All audio and video material is carried on videodisc. Each of the 9 exhibit areas operates as a fully automatic show, and they are all necessarily synchronised.

Electrosonic Systems Inc was the contractor for all lighting control, audio, video and overall systems control. Creative Animations of Chicago made the animated astronaut figures under sub contract (the picture is the right way up, the astronauts are "weightless"). The exhibit designers were Robert Kirchgessner Associates of Orlando.

## Seaworld

SEAWORLD in both Orlando and San Antonio has homes for hundreds of Antarctic penguins in the "Penguin Encounter". The associated learning halls include a 3 screen projected multi image video presentation; a 27 monitor PICBLOC videowall and several interactive video displays. AV design was by Robert Kirchgessner; all AV systems engineered and installed by Electrosonic Systems Inc.

## Royal Britain

A NEW public exhibition has opened in the City of London. "Royal Britain" traces the history of Britain's Royalty from the days of King Canute and earlier. Designed by Imagination Ltd. it makes full use of programmed sound and light techniques. Electrosonic audio, video, multi image and control systems include the synchronisation of compact disc to BSC.

## Jaeger

JAEGER has always stood for quality. Its refurbished store in London's Regent Street emphasises the quality image, and lighting is used in support. Electrosonic SCENESET controls the store and window lighting, with automatic selection of lighting scenes according to the trading times each day.

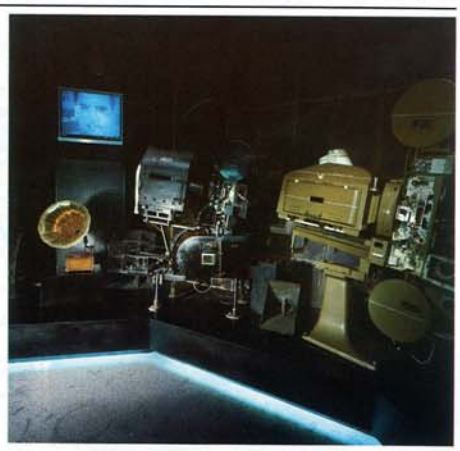
## MOMI

THE Museum of the Moving Image in London was the brainchild of Leslie Hardcastle, David Francis and Anthony Smith. It has become an immediate success with the public. Neal Potter was the designer, and he cleverly integrated the AV systems into the exhibit fabric.

Here you see the "Youth Culture" exhibit, based on a random access video disc system, and the "Sound in the Cinema" exhibit, a sound and light show run from videodisc.

The multi image show illustrated on Page 1 was made by Triangle Two, and most of the video programmes were produced or edited by Original Video (see also page 13).

All audio, video, multi image, lighting control and programmed control at MOMI were engineered by Electrosonic.



## THE PRESENTATION ROOM

**WE specialise in meeting the technical needs of Presentation, Meeting and Training Rooms. We can supply individual components or fully integrated systems. Our expertise covers Lighting Control, Audio, Video, Optical Projection, Data Display and Special Control Systems.**

# POST, PERFUME and PHILISHAVE

**PRESENTATION Rooms take many forms. At one extreme they may be a simple training facility, similar to a school classroom; at the other they can be the venue for all singing all dancing automatic shows (see, for example, "The Magic of Electricity" on Page 15).**

**In between they can be in the form of boardrooms or theatres. Whatever their form, their purpose is *communication*; they will fail in their task if the environment is not right, or if the audio visual and visual aids elements are not properly integrated.**

Our company in Holland, Electrosonic Systems BV, has specialised in the needs of Presentation Rooms for over 15 years; and some recent examples of their work illustrate the variety of requirements.

The Postbank Boardroom in Amsterdam uses multiple microphones for large board meetings. Twin screen rear projection allows comparisons.

### Postbank

The headquarters of the Postbank in Amsterdam required a boardroom for a large board of directors. Working with the architects, van Andel Leijsen, ES Systems designed and installed a sophisticated, yet unobtrusive, AV system based on the use of Electrosonic PRC.

PRC (Presentation Room Controller) reduces operation to "one button", and properly integrates the various room elements. For example at the Postbank the room is large enough to need a multi microphone system with automatic gain contol; this must close down when an AV show is being run on the twin screen.

Lighting control, blackout blinds, and a moving wall to the neighbouring dining room are linked into the PRC, which also controls a twin screen slide projection system, and a video/data display that includes connection to the Bank's main frame computer. Back projection is used, both because of the low ceiling, and to ensure that projection can be used in relatively high ambient light conditions.

### 18-seater Hexagonal table

Much material is either in video or printed image form. In order to ensure that all participants see the same image from the same distance, Lancome have a hexagonal table, seating 18, fitted with 6 video monitors. These are fed both by tape and disc sources, and by a high quality video camera fitted in the ceiling, set to scan documents etc at one of the seating positions. This is one of the most effective "video overhead" installations we have encountered.

Of course the room is also fitted with integrated control of lighting and blinds.

Lancome use an interesting training room layout with everyone seeing a good picture.

### Lancome

At their facility in the city of Weesp, Lancome, the international cosmetics company, had a totally different requirement for their training room. Here training, product development and marketing meetings take place on a "round table" basis. It is a crucial requirement that all participants receive the same "input", and that they do so to a high visual standard.


Philishave celebrate their 50th Anniversary with a permanently installed multi image show at their factory.

### Philishave

1989 marks the 50th Anniversary of Philishave; and the company are using the occasion to mount a major sales promotion. One component is a new multi image show, produced for Philishave by Rüdiger Herrmann of Vok Dams (W. Germany) that reviews the 50 years and looks forward to the future.

But there is no point in having a show unless you have the place and occasion to show it. So at the factory in Drachten they have a special room where visitors can see the show properly (and staff can see it too). The show is also permanently installed at the Groningen office of Philishave; and will be used at sales meetings etc worldwide.

Electrosonic Systems BV supplied the automatic show systems using Electrosonic ES4000 Multi Image equipment.


The conference room at Hambros Bank in London. Notice the bright projected image. Electrosonic PRC makes the room easy to use.

# NORWEST, HAMBROS and REUTERS

**FINANCIAL Services Companies have led the way in the use of formal presentation and meeting environments; and this is true throughout the world.**

The 57 floor headquarters of Norwest Corporation includes an Electrosonic boardroom system.

Here are just three recent examples out of many that Electrosonic have worked on.

At their new Tower Hill headquarters Hambros Bank Ltd in London needed a conference facility that would be suitable for quite large meetings (up to 90 people) and yet would be intimate enough for small meetings, and also appropriate for board meetings needing visual support.

Their flexible room is fitted out to the highest standards. It includes full PRC control of the room facilities; which include MULTISCENE push button lighting control, random access and dissolve slide projection, video and data projection. Of special note is the use of a SCANSCREEN VIDEOSCREEN. This 100 inch fresnel lens rear projection screen gives exceptionally bright and uniformly illuminated images, with a wide viewing angle.

### Reuters

The last issue of ELECTROSONIC WORLD included a photograph of a complex presentation room installation for Reuters in London. Shortly after this appeared Electrosonic Hong Kong worked with AJM Consultants to incorporate full audio visual facilities into the new Reuters Hong Kong Boardroom in Exchange Square.

The room boasts a fine harbour view, which has to be blacked out when the normally hidden rear projection screens are in use. Again PRC simplifies the room operation.

### Norwest

Norwest Corporation is an internationally diversified financial services company with $22 billion in assets. They have recently celebrated the opening of Norwest Center, their world headquarters and home of their largest bank.

For this project Electrosonic Systems Inc supplied and installed the audio, video, AV and control system for the corporate boardroom. Located on the Executive Floor, the room is designed to accommodate the full Board Meetings, as well as other events.

The Electrosonic PRC system is a prime element of the room's capabilities; and the Norwest system is one of the largest PRC systems installed to date. There are three wired control points (lectern, Board Secretary's desk and projection booth) and two roving "wireless" infra red controllers.

The system offers instant control of lighting, sound, video and slide projectors; and also teleconferencing display. Jamieson & Associates Inc., of Minneapolis, were the AV consultants and designers of the boardroom. Electrosonic supplied the system through Parsons Electric.

Reuters' Hong Kong Boardroom has two projection screens and full PRC control.

## Sea Containers

THE London HQ of Sea Containers PLC has an "expanding" boardroom, with partitions to allow for meetings of various sizes. It is fully equipped for video, data and slide projection and is under PRC control.

The picture shows clearly how, by using a high gain SCANSCREEN rear projection screen, it is possible to have good lighting on the lectern, and still see the picture on the screen.

# BEAUTIFUL BOARDROOMS IN NORWAY

**THE range of work being carried out by our Norwegian Distributors, Audio Grafisk A/S, is typical of that being worked on by many of our distributors, and by our own group companies.**

Because we all work together we can share our experience, and while it is emphatically not true that all markets need the same products and design approach, it is true that we can learn a lot from each other. It is also the case that many of our clients are multi national, and tend to "export" presentation and management ideas from one country to another.

The Bergesen D.Y. Group is the world's largest independent owner of LPG tonnage and has a shipping fleet totalling 5.5 million dwt. They have recently rebuilt their splendid boardroom in Oslo. While they wanted the room to be fully equipped for AV Presentations, they did not want the equipment to be obtrusive.

Audio Grafisk installed very fast and very quiet window blinds and similarly fast and quiet video projector lift and screen. The room converts to AV use in seconds using the Infra Red hand controller. All main equipment is neatly concealed into the oak panelling.

### Telecom

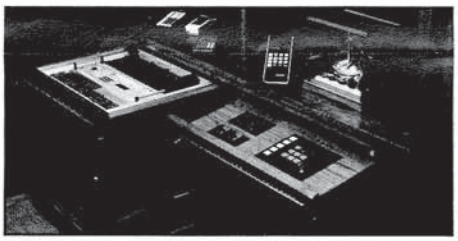
The Norwegian Telecommunication Authorities have recently built a new information centre in Oslo that includes an exhibition area, an international conference room, an auditorium and a TV studio. All lighting control and audio visual equipment (including an 18 projector multi image system) was delivered by Audio Grafisk. Of particular interest is the use of "video overhead" technique, where Audio Grafisk have developed a neat camera system; confirming in the process that the concept only works when high quality video cameras are used.

### BI

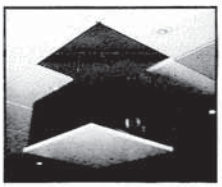
The same video overhead system has been installed at the Norwegian School of Management (Bedriftsokonomisk Institutt or BI for short) in Sandvika, just outside Oslo. BI is a private foundation, but it is the second largest university in Norway. The educational centre has many classrooms and ten large auditoria; all of which have ES7000 lighting control and AV equipment delivered by Audio Grafisk. The three largest auditoria include custom made furniture to include twin conventional OHP, video overhead projection and PC computer station.

All the AV facilities are under "one button" control to simplify operation. The technical facilities are all impressive; but more so is the care that has been taken to neatly integrate them into a presentation and lecture environment.

The splendid boardroom of Bergesen D.Y. A/S. The audio visual facilities are neatly concealed.



Video and audio equipment housed in oak furniture in the Bergesen boardroom.



An increasingly common requirement in prestige presentation rooms is the video projector lift; as installed in the Bergesen boardroom.

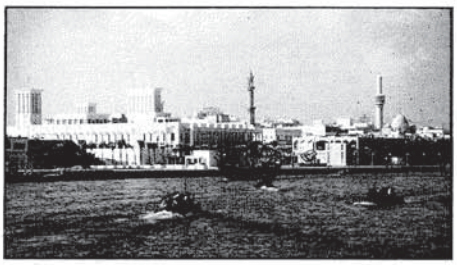
One of the main lecture theatres at the Norwegian School of Management. The equipment is neatly integrated into the furniture.

The auditorium at Norwegian Telecommunications Directorate.

# Dubai Diwan

WHILE the emphasis on this page is towards the presentation room and lecture theatre, it must not be forgotten that Electrosonic can and does equip large conference facilities.

A new and impressive Emiri Diwan, or Seat of Government, has recently been constructed in Dubai. It is sited on Dubai's famous and picturesque creek. The principal conference centre of the Majilis (parliament) has been equipped with the most up-to-date audio visual systems, all engineered by Electrosonic. Installation, contract supervision and commissioning support were provided by our representative for the UAE, Business Communications UAE (Pvt) Ltd.



The Emiri Diwan in Dubai is equipped with an Electrosonic conference and AV system.

This listed building, overlooking Trafalgar Square, houses the Regus Business Centre.

# REGUS CENTRE

**THE idea of the "Presentation Room for Hire" has received a major boost with the opening of the Regus Business Centre in London.**

Reinhold Gustaffson's RG Group are the creators of the Regus Centre, which includes 110 fully serviced offices, 21 conference rooms, a communications centre and a restaurant.

The conference rooms, with interior design by Wolff Olins, vary in size, and are suitable for meetings of from two or three people up to 100. Three of the rooms are permanently equipped with full PRC control and all standard video, data, slide and overhead projection facilities. The other rooms are served by mobile AV consoles that can be moved into different areas as required.

While the "backstage" equipment is quite complex, the aim has been to make the actual operation of the equipment as simple as possible. Robert Caulfield, the Conference Centre Manager, says "During the course of installation by Electrosonic it has been interesting to see how all the various equipment works; from the normal slide projector to the video and computer generated graphics, which at first looks complicated, but once you have had time to acclimatise it all seems very easy".

# WORLD TRADE

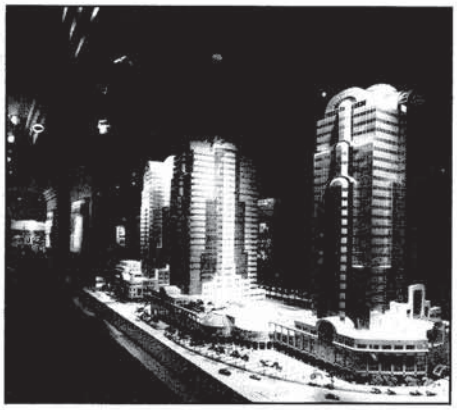
PRESENTATION Room Techniques are not confined to formal rooms; often the dividing line between a presentation room and an exhibition is a fine one, especially in the increasingly popular concept of the Marketing Centre.

The ever changing Toronto skyline is about to include the new World Trade Centre, pictured below in model form in its spectacular Presentation Centre.

Working closely with the Design firm of Cecconi, Eppstadt, Simone Inc; Michael McLean and the team at Multivision Electrosonic Ltd were responsible for audio visual and lighting control systems in five areas of the Presentation Centre.

These were a reception area with a city model, the Boardroom, an AV (Multi Image) Presentation Room, a display area, and the Model Room.

All rooms use Electrosonic SCENESET lighting control. The Model Room is particularly helped by this system. The Presenter is able to use a wireless hand control to darken the room and highlight various areas of the model and display room. 21 different options of lighting are available.

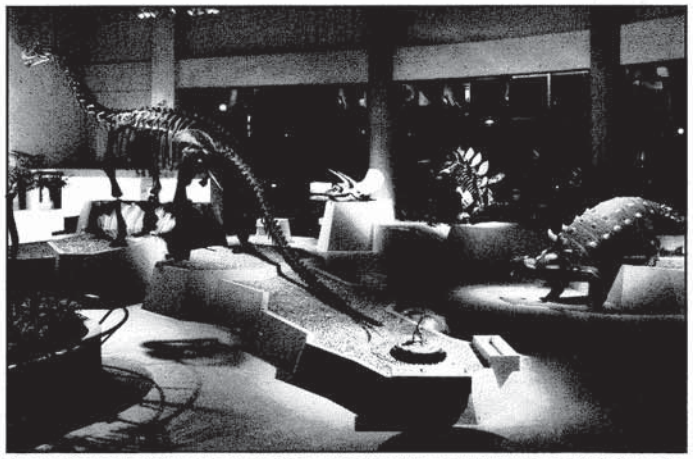


The Model Room at the Marketing and Presentation Centre for Toronto's World Trade Centre.

## MUSEUMS

**ELECTROSONIC manufacture several products that have application in museums and visitor centres. Our engineering division can also provide a complete audio visual systems engineering service. These pages describe some typical projects.**

# AUDIO VISUAL SYSTEMS at the Taiwan Science Museum



General view of the Taiwan Museum's Dinosaur Gallery. The central feature is a 50ft skeleton of a Camarasaurus, arranged so that visitors walk underneath the skeleton. Lighting control in this gallery by SCENESET.

**THE National Museum of Natural Sciences in Taichung, Taiwan, R.O.C., is a major cultural development project, unusual for the speed of its creation and the range of subjects that it covers.**

It is being built in four phases, and Phase II has recently been completed. This part of the museum, which itself is the size of a large museum with its fifteen different galleries, is devoted to the biological sciences. The achievement in completing it can be compared to creating a complete Natural History Museum in two years!

### James Gardner

James Gardner was the Designer for the entire project. He has brought to it his usual flair, enthusiasm and humour; and those who have been privileged to work with him over many years are agreed that it represents possibly his finest work.

The detailed design of the galleries, with something like 2000 individual exhibits, could not all be handled by the relatively small James Gardner Studio. The MET Studio under Alex McCuaig became both project managers and responsible for several of the galleries. Individual galleries were also detailed by Ralph Appelbaum Associates of New York, John Hart Design, and Brennen and Whalley, both of London.

The main exhibition construction contract was awarded to Beck and Pollitzer Contracts (now Carlton Beck) with Barry Morgan being the director in charge. Apart from building most of the displays, Becks had the problem of controlling an army of subcontractors. Just about everyone in the specialist exhibition construction business in the United Kingdom seems to have been involved; and model makers, special effects wizards, taxidermists, dinosaur constructors and film makers were employed from all over the world.

### Audio Visual

Electrosonic have worked with James Gardner for all of their 25 years in business, on projects as diverse as the British Pavilion at EXPO 67, the Museum of the Diaspora in Tel Aviv, the Pilkington Glass Museum and the Evoluon in Eindhoven. They were therefore delighted to be appointed the specialist sub contractor for the majority of the audio visual systems installed in this part of the Museum.

A giant Sea Scorpion suspended above a series of glass panels engraved with images showing the development of sea organisms.

The work encompassed the provision of either audio visual or special control for about 120 exhibits; ranging from large multi image theatres to individual interactive "biological games". Being in at the beginning of the project allowed Electrosonic to set certain common standards.

The most important decision was that there would be NO TAPE; either for video or audio presentations. Past experience was that the maintenance of exhibits using magnetic tape was the most difficult to control. The thought of having to organise re-dubbings of individual programme segments in Mandarin Chinese at a distance of 8000 miles was too much, and present day technology can ensure that this decision need not affect the overall system cost.

Thus at the NMNS all video is on video disc. Video disc is also used as the AUDIO source for those multi media exhibits not needing video, but needing high fidelity sound. All audio for small exhibits requiring audio only, or audio linked to lighting etc, is carried in EPROM based digital sound stores.

Apart from the need to keep discs and disc players clean, NO routine maintenance or consumables are needed (such as head cleaning, head replacement, tape dubbings etc) for the programme sources. In order to help with the maintenance that is needed, the great majority of the 90 video disc players installed at the NMNS are sited in a central air conditioned control room.

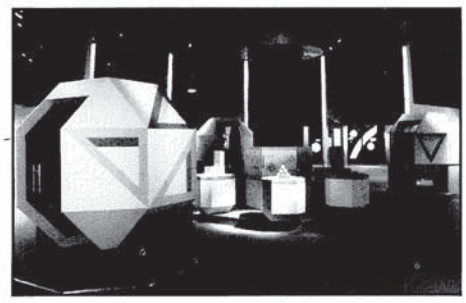
### Videodisc control

The disc players are either controlled by standard Electrosonic Video Disc Controllers, or by computers. The former are used for all simple applications of video, such as continuous play, push button start shows and simple random access. Computers are used for both multi media and multi image shows, and for interactive video exhibits.

The multi media computers are all IBM(TM) PC compatibles running the Electrosonic BSC program. The same computers are used for many of the exhibits that are entirely video disc based. Here various producers (including The Visual Connection, Prater Audio Visual and Appelbaum Associates) prepared all the visual elements and the game flowchart; and Electrosonic did the computer programming using their VIC interactive video computer program.

A number of the interactive video exhibits also required computer graphics (usually in addition to the video disc); and these programs were created to the Designer's brief by Donal Lyons of Dublin. In this case Commodore Amiga computers were used because of their excellent graphics.

The majority of the audio visual is integrated into the general display; however there are a number of "AV Theatres" that run short shows on specific subjects. Some of these are multi image, some video and some a mixture of the two. The most elaborate is the "Sounds in Nature" theatre that runs two shows alternately, both produced by Media Projects; the most amusing is the "Compulsive Communicators" show produced by Integrated Circles (which won several awards at the 1988 Images Festival).



These geometric structures house the interactive computer games featured in the Numbers and Forms Gallery. Pictures on this page are courtesy of the James Gardner Studio.

### Disc production

One of the biggest problems (taken on by Eve Harrison of James Gardner Studio and Nadia Milligan of MET) was the organisation of the material for the videodiscs. Some producers, such as Prater, Media Projects and Appelbaum, were able to provide all their material in a form ready for disc mastering; but this still left something like 50 segments needing pre-mastering.

This material had come in from all over the world as slides, films and videotapes. It needed editing (often only a small excerpt was to be shown, to demonstrate a particular point) and laying down on tape in accordance with the planned "disc geography" (or disc "real estate" if you are an American). The editing task was mainly supervised by Maurice Kenerack.

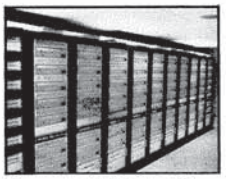
The majority of the disc master tapes were prepared in London, so were prepared in PAL; however the complete installed system is NTSC (since this is the standard used in Taiwan). Standards conversion and disc manufacture (by 3M) were supervised by Electrosonic Systems Inc in Minneapolis. There are eight different discs with a total of 80 programme segments and nearly four hours of running time.

### Project Management

Electrosonic's project manager for this job was Martin Piper. His task was to organize the manufacture of the complete system in London, and its installation and commissioning on site. Jim Bowie was Martin's Number Two, and Des Moriarty was the principal installation engineer.

The installation took place over a period of five months, and at times Electrosonic had up to seven people on site. That Electrosonic works internationally was borne out by the fact that their crew at various times included a Finn, two Chinese, a New Zealander, an American, two Scots and Harold Smart from Coventry.

A characteristic of AV installations is that they are the last part of an exhibit to be completed, and during the installation phase there is only hard work with nothing to see (especially if all the software is stuck in Taiwanese customs). A week or so before the opening it might have seemed to the Designers that some sort of miracle was needed to get everything going; but in fact on opening day all bar a supersonic bat (trouble in the belfry) and one disc player (blown up by the interesting practice of the local electrical contractor of applying 120 Volts to the "earthed" conduit) were working.



The central AV Control Room contains most of the 90 videodisc players.

The NMNS have a team of people in charge of maintaining the exhibits; and they took over the running of the audio visual system at the time the museum opened. While Electrosonic personnel are visiting the site at intervals to provide support and advice, there have been no major problems; and the system design ideas have been vindicated.

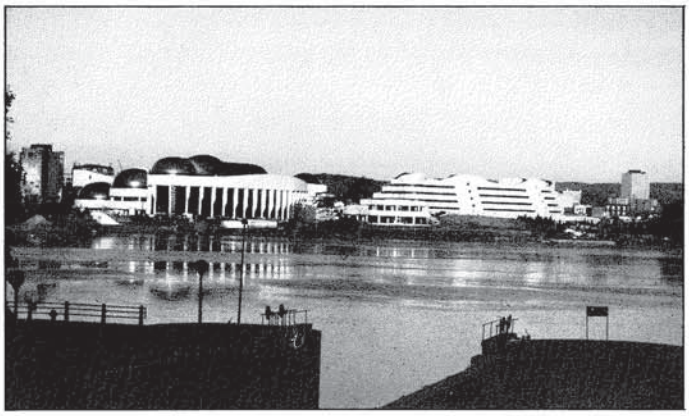
A close up of the "Dinosaurs' Breakfast". When visitors approach this exhibit the herbivores and carnivores "come alive" and discuss their chances of survival. All sound on ES 1320 sound store.

Some galleries also required automatic lighting control, and these use Electrosonic DIGIDIM dimming systems. The lighting design for these areas was by Lighting Design Partnership.

The new museum is now drawing crowds at the incredible rate of 15,000 per day. Very heartening for Professor Han, the Director of the Museum, but it must make it a little difficult for the individual visitor to appreciate the detail of the exhibits. However, if you happen to be passing through Taiwan at any time, a visit is certainly recommended.

### NMNS Taiwan AV facts & Figures

| | |
|---|---|
| **120** | exhibits with AV or control by Electrosonic. |
| **90** | Videodisc players installed (Sony LDP 1500). |
| **8** | video disc sides mastered. |
| **90** | Colour video monitors. |
| **3** | Video projectors. |
| **30** | kilometres of video and control cable. |
| **90** | Kodak Carousel SAV slide projectors (ES4050A). |
| **23** | ES4003 multi image controllers. |
| **14** | ES460 Dissolve units. |
| **30** | ES1320 Digital sound stores. |
| **20** | ES10 Automatic dimmers. |
| **42** | ES7000 Series dimmers |
| **16** | Computers running Electrosonic BSC or VIC. |
| **16** | Amiga computers. |



The Canadian Museum of Civilisation on the Ottawa River.

# CIVILISATION comes to M.E.L.

**THE magnificent Canadian Museum of Civilisation is located on a 24 acre site in Hull, across the Ottawa river from Canada's Parliament Hill. Designed by the renowned architect Douglas Cardinal, it houses dramatic exhibitions of Canada's history and heritage and the world's first combined Omnimax/Imax theatre.**

Construction started in 1983, with opening in June 1989. But the museum will continue to be developed over many years, with all the Exhibit Design being done by an in-house team of specialist designers.

Multivision Electrosonic Ltd of Toronto (MEL) were awarded the contract to design and supply the audio visual systems for the principal exhibit areas. Electrosonic's international experience in Museum AV Systems, and its wide range of off-the-shelf specialist equipment played a big part in securing this interesting project.

## Totem poles

The Exhibit areas include the Grand Hall, which features 112m × 15m wall of glass, six Pacific Coast Indian houses and a famous collection of totem poles; the History Hall that, in an area bigger than a football field, traces one thousand years of Canadian History; the Arts and Tradition Hall and the Native People's Hall and Art Gallery.

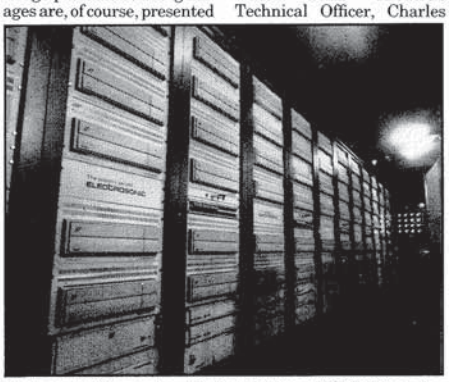
The Audio Visual systems are designed for maximum flexibility, since in some areas the exhibits will be changed at intervals; and for minimum maintenance. For example the History Hall has 33 sets showing how Canada developed. It uses many sound tracks to give the right "soundscape" to each set and these are played from ESTA solid state sound stores.

All video and many soundtracks are played from videodiscs. 60 videodisc players are under the control of ES5003 video disc controllers.

A special exhibit "Beyond the Golden Mountain; Chinese Cultural Traditions in Canada" uses PICBLOC videowall control equipment in an unconventional way to support a walk through exhibition.

# MOMI takes to the disc

THE Museum of the Moving Image in London has 50 exhibit areas, most of which need some form of moving image presentation. Big images are, of course, presented by 35mm movie using endless loop film handlers. The movie installation was directly supervised by the National Film Theatre's Technical Officer, Charles Beddow.



Just a part of the massive video installation at MOMI. It is on view to the public.

All "small" moving images are presented by video; and the source for these is videodisc. 72 videodisc players are installed (Philips VP405) and these are all under the control of ES5003 video disc controllers. Some show continuous images, some show programmes on demand, or by random access selection, some are the source for multi media exhibits, and some are used in complex visitor participation exhibits.

The complete video and audio visual system engineering for MOMI was done by Electrosonic Ltd in London. Ian Harris was the project engineer and Mike Ray devised the special control programs.

More about MOMI on Pages 1 and 9.

# Lighthouses—Lenzburg and Michigan

**WHILE we are proud of the "big systems" that we have delivered to museums such as MOMI, we are just as pleased to have delivered hundreds of "mini systems" to smaller exhibitions and museums. It is often the case that the audio visual or light and sound aspect of such museums is crucial to their success.**

## Lenzburg Castle

Lenzburg Castle is located on a rocky outcrop high above the small city of Lenzburg in Switzerland. In the top of the main tower the Museum of History presents a complete collection of weapons associated with the Canton of Argau, from the early middle ages to modern times.

The exhibits are presented as "living tableaux" (designed by Ian Ashdown, with figures by Gerry Embleton) and are brought to life by sound and light. For example the oldest display is accompanied by the clatter of horses hooves and the whizz of arrows; the 16th century cannon is fired with a flash and a bang, accompanied by smoke from a fog generator; an 18th century corporal issues complicated orders for loading, aiming and firing the muzzle loaded rifles.

A diorama at the Michigan Historical Museum. Sound effects are carried on digital sound stores.

All the lighting control and programming equipment is by Electrosonic; and the complete audio visual engineering was done by our Swiss Distributors AV Ganz of Zurich.

## Lighthouses

Over in Brittany, in France, the Museum of Lighthouses and Buoys has a 20 minute multi image show as its main presentation. The show is presented in a circular auditorium (like a lighthouse) on a 270° screen using 12 projectors, and was produced by Serge Fouillet.

The fully automatic ES4000 multi image system was installed by our French Distributors, Electrosonic Multi Images SA of Paris.

## Michigan

After 110 years of makeshift homes, the Michigan Historical Museum moved into permanent accommodation within the new Michigan Library and Historical Center in early 1989. The first part of the "new" museum to open to the public traces the history of the state from its geological beginnings to the 19th century.

One of the Tableaux at the Lenzburg Castle Museum of History, brought to life with sound and light.

Jean Jacques André of BC, Canada produced the design concept for the 12 galleries, and final design was completed by Design Craftsmen Inc of Midland, Michigan. The museum construction was by Design & Production Inc of Lorton, Virginia, and they sub-contracted the audio visual engineering elements to Electrosonic Systems Inc.

The audio visual contribution included an automatic 3 projector multi image show in the "Iron Mine Theater", a 6 projector show in the "Lumber Baron's Mansion Theater", a 4 monitor videowall, and a number of solid state digital sound stores for both foreground and background sound.

## Tapeless Audio

The ES1320 EPROM based Digital Sound store has been widely installed since its introduction in 1985. The reduction in the price of EPROM has made the use of sound stores really attractive for museum installations. At Photokina 1988 Electrosonic introduced their new range of ESTA (ElectroSonic Tapeless Audio) products.

ESTA products are available as both single units and rack mounted multiple units. They include sophisticated synchronisation and multi message facilities, and can offer a range of frequency responses depending on application. The new DES digital sound editing system allows customers with an AT computer to record sound and BSC programming information direct to hard disc, and then to "blow" EPROMs as they require.

The ESTA range of tapeless audio products is opening up new possibilities for museums.

# LENIN MUSEUM

Recently Kevin Murphy of our London staff gave a seminar on Museum AV techniques in Moscow. Here he pays a visit to the new Gorki Leninskije museum.

THE impressive new Lenin Museum at Gorki Leninskije, near Moscow, opened in late 1987. The main exhibition hall uses sound and light techniques in a most interesting way.

Five separate displays review aspects of Lenin's life and thoughts. Each is housed in a dark glass "cube", the inside of which can only be seen when illuminated. Elaborate moving displays and panels; multi scene Pepper's Ghosts; Multi image (both slide and video); and lots of special lighting effects, including the laser writing of Lenin's signature and a simulated waterfall, make for a fascinating and evocative display.

The museum is under the direction of V.I. Zdesenko, and the design was by V.L. Rivin of the Institute of Decorative, Theatre and Life Arts of Leningrad. The stage machinery and all the "scenery" was built to a very high standard in the USSR. Lighting, sound, special effects, projection and overall control was by Electrosonic.

There was excellent co-operation between the Electrosonic team and the Soviet designers and display builders during the 5 week installation period. The control system supplied is based on Electrosonic standard products, but there was a significant amount of special effects engineering. Control is by the ESCLAMP multi media program; and reel to reel tape is used for sound replay to simplify on site show production and updating.

Electrosonic supplied the equipment under sub-contract to Beech Compix Ltd who provided all liaison services through their Moscow office. Technointorg of Moscow were the FTO acting on behalf of the Museum. Bob Stinton, Ian James and Maris Ensing were the leaders of the "Electrosonic Team".

Audio, Video and Control racks at the Lenin Museum (top) and technical supervisor Vladimir in front of the DIGI-DIM lighting racks (below).

## MULTI IMAGE AND MULTI MEDIA

**THE programming of Lighting and Audio Visual devices in synchronisation with a sound track is an important part of Electrosonic's work. The applications are as varied as they are interesting. Multi-image technique has been part of our business for 25 years.**

# NEW PROGRAMS

**ELECTROSONIC have been synchronising sound to light for 25 years. Many of the show ideas we meet now are the same as they were then; the difference now is that it is much easier to program shows and, as it has become easier, so have show producers' demands increased.**

The arrival of the personal computer has allowed undreamt of flexibility in the way that shows are put together. As computers have become as common as pocket calculators, we have been able to introduce more and more sophisticated programs. These are optimised for particular applications, and some multi media shows (for example shows using a mixture of multi image and videowall technique) can be best served by running two computers in time code sync.

### Programs

All our main programs work on the assumption that the computer is used to mastermind the programming process, and that the actual controlled devices are controlled through suitable interfaces. Where synchronisation is involved we standardise on SMPTE/EBU time codes. The programs we offer at the moment, which all run under MS-DOS, are:

Using the BSC multi media computer program.

1) BSC. This program is optimised for multi image and multi media applications. It is available in various versions, the biggest of which can control 192 slide projectors, 256 analogue devices and 1536 switched devices.

2) C-THROUGH. This program is optimised for videowall and video disc control. It can program 256 PICBLOC screens, 12 video disc or tape sources and 96 switched functions.

3) ANCOR. This program is optimised for those applications where "real time" programming is required. It is especially suitable for animated figures, fountains, programmable spotlights etc. It can control 64 analogue and 96 switched outputs.

Kodak sponsored this multi image show "From Limelight to Satellite" produced by Multivision AV of Manchester and installed at the Granada Studio Tour. It uses a standard Electrosonic ES4003 control system.

4) DES. This is a facilities program that allows BSC and ANCOR to be downloaded into EPROM, allowing the use of low cost playback systems with no moving parts. The same program is used to record audio to hard disc in the computer, allowing the blowing of EPROMS for the ESTA range of tapeless audio products.

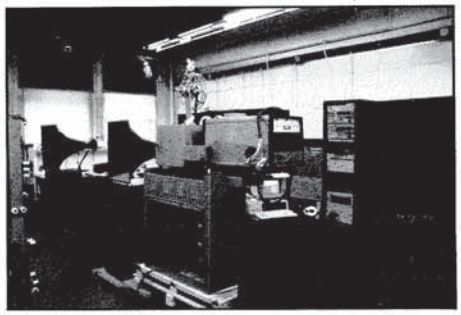
### Synchronisation

We have a lot of standard product packages that allow for many of the "standard" applications of multi image and multi media; but are finding all the time that the "rules" are changing, so that for individual systems we often have to devise new solutions. Some of the trends we are noticing are:

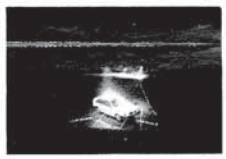
—The need to synchronise to video disc. Here there is not always a spare track available for linear time code. With the ES5003 disc controller we can synchronise the computer to video sync pulses only.

—The need to synchronise to Compact Disc (CD). In principle methods similar to those for video disc can be used.

—The need to synchronise to movie. Here there are various options, the favourite being to run a multi track tape in time code lock to the movie, and use the same time code to sync the computer. If only stereo sound is required, it is possible to derive the time code information from the film without the need for a separate sound deck.



Big systems are always factory tested at Electrosonic. Here a 14kW sound system, automatic 35mm movie projector with synchronised multi track tape, and an ANCOR programming system are being checked out.



The Volvo 440 Press Launch.

## VOLVO 440

ELECTROSONIC Systems BV supported Audio Visual Consultants of Eindhoven by providing ES4000 Multi Image programming equipment and projectors for the Volvo 440 press launch. This multi media event took place in two locations in Holland (where the 440 is made). The same 21 projector shows, using ES equipment, were also used at the dealer introduction in Sweden.

Show producer Kurt Polke in front of his 84 projector multi image show for the Siemens Museum.

# IMAGES of SIEMENS

THE Siemens Museum in Munich has a splendid multi image show that shows all the aspects of Siemens' activities round the world. The multi image medium was chosen to allow the best use of magnificent photography; to allow for updating, and because it is probably the best medium for conveying the spirit of an undertaking.

Kurt Polke of Vienna was the show's producer, and he is renowned for the care and the time he lavishes on individual shows. He chose a show format that would make the most of the huge amount of material, and would allow him the greatest flexibility in its presentation.

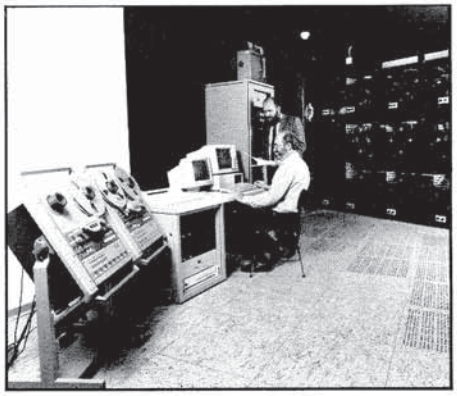
A single screen 6m × 3m (20ft × 10ft) is served by no less than 84 projectors! The Kodak Carousel SAV 2050 projectors with Electrosonic automatic lamp changers are arranged in 21 groups of 4; and project overlapping images with soft edge masks, allowing seamless images of any size up to the whole screen size.

Meridian 60mm "Offset" lenses (extreme perspective control) are used to eliminate keystone distortion; and the relatively small individual image areas mean that the overall image brightness is extremely impressive.

The show is run from a Tascam 8 track tape deck, and uses 4 channel sound with language options. One track of the tape carries EBU time code and this is fed to a computer running Electrosonic's BSC Multi Media Program.

BSC is available in various "sizes" and at Siemens the "96 projector" version is in use — BSC 96. Most shows get along happily with BSC 24 (for 24 projectors); although there is a 192 projector version available for the real enthusiast. When controlling slide projectors BSC uses the ES4003 Multi Image Controller (one for every 3 projectors) but there are other interfaces for lighting dimmers, hydraulics, video and audio discs and much else for "mixed media" shows.

The Siemens multi image system was installed by Electrosonic's specialist dealer Mietzner & Mattis of Munich.



Kurt Polke reviews the show programming with Aloysius Mattis.

# Holland Calling

PEOPLE in the staging business are used to taking multi image shows "on tour"; usually for a concentrated few weeks corresponding to a product launch. But to take a show on tour for two and a half years; surely that's a bit excessive!

Ton Stoelinga of Electrosonic Systems BV surveys the "Holland Calling" equipment.

Yet that is exactly what KLM did with "Holland Calling" between 1986 and 1988. Designed to "sell more of two things; KLM and KLM's Holland", this show toured the world and was seen by more than 40,000 travel agents.

The presentation was based on a spectacular 14 projector wide screen multi image show, with digital stereo sound. The show designers, writers and photographers were Hans Samsom and his wife Laura Samsom-Rous, with sound track mixed by Dik de Graaf and programming by Jan van Stokkom. The show was prepared in 6 languages; and was very popular with its audiences. More important, KLM feel that the show has resulted in both well disposed travel agents and more business.

KLM transported 1300kg of AV equipment and staging kit to 66 countries, where the show was presented 180 times in 147 different venues. KLM staff did the show staging themselves.

The complete engineering of the show, based on an ES4000 multi image system, was undertaken by Electrosonic Systems BV of Amsterdam.

# MAGIC OF ELECTRICITY

**MEMBERS of AMI (The Association for Multi Image) of the USA may be wondering where Duffie White has gone. Previously a frequent AMI award winner, he seems to have disappeared off the USA scene. But they can be assured he is still very much in the business, now working with Multivision of Manchester, and creating some spectacular shows.**

Typical is EMTEC, the North West Electricity Board's Marketing Centre. When they originally planned a marketing centre, NORWEB might have had the "usual" AV show and exhibit; but Duffie developed a concept that caught their imagination. The story of electricity through the computer control of a wide range of visual, audio and sensory effects — all produced through electricity.

As the audience enters the theatre they are mildly impressed by the projection rig over the seating and the three floor to ceiling screens. Once the show begins a wizard (Sir Michael Horden) flashes lightning effects across the screens, yet the contrasting narrator (Tom Baker) says the NORWEB story is even more impressive.


The entrance to the EMTEC Centre (top); the multi media theatre, showing most of the 70ft wide panorama screen (centre) and multiple images from Multivision (below).

### 70ft Screen

At this point the wall on the left moves to reveal four more screens for a panoramic 70ft wide image, and the sound expands to six channels to surround the audience. To add to this the Wizard revolves the audience whose seating is on a turntable. Throughout the show the audience is moved to follow the action within the 180° of screens.

To dramatise electrical applications the show triggers special effects such as 16,000 watts of radiant heat, blasts of chilled air, and powerful water cooled lasers that create highlights within the 18 projector multi image production.

Towards the end of the show the Wizard asks the audience to take the spectacles from a pocket under their seat and put them on to look into the future. They then see three dimensional graphics and photography in "Vectovision" format, spanning the 70ft screen.

### BSC

At a peak in the music they see a projected three dimensional display which cuts to black for an instant. A piercing laser beam blasts light onto the same "real" display which has magically appeared by turning the screens. The audience then tours the exhibition; and afterwards returns to the theatre for a finale which combines all the show elements, now including four programmed fog machines.

The entire show is under the control of a single computer running Electrosonic's BSC multi media program. Multivision chose Electrosonic as their systems sub contractor for two reasons. First Electrosonic and Multivision had already worked well together as a team on the BNFL Visitors' Centre (see page 8) and Multivision knew that Electrosonic had the resources to project engineer large and complex systems; and second because the BSC computer program and the associated Electrosonic products, represented the ideal way of programming a complex multi media show as a whole, and not as isolated elements.

### Reactions

NORWEB are sure that the EMTEC Centre is meeting their objectives. David Metcalfe, Manager of the Centre reports "most visitors to the EMTEC Centre say they have never seen such an impressive presentation; the others say they can only compare it to the futuristic exhibits in EPCOT at Walt Disney World".

Brian Kelly, NORWEB's Energy Marketing Manager says: "My strategy was to build the power base of NORWEB by showing customers how electricity could improve their productivity, efficiency, and, ultimately, profit. To meet this goal it was my objective to establish the best marketing facility in Britain.

We looked at a number of production companies, but Duffie White at Multivision had the most innovative concept. He led the Multivision production team to successfully achieve my goals — and to blow the socks off my audience."

The audience waits for "Race America" to start in the Hall of Fame at the National Museum of Racing.

# RACE AMERICA

**THE National Museum of Racing in Saratoga Springs, NY, has been completely redesigned and refurbished by Cleveland Design and Tempus Design.**

They in turn commissioned David Collison of Theatre Projects Consultants to supervise automatic light and sound sequences within the displays, and to produce a major movie presentation called "Race America".

### Widescreen

The movie is shown once an hour in the Hall of Fame. Both architectural considerations and the nature of the subject led to the choice of an ultra wide screen format with an aspect ratio of 4:1 (actual screen size is 40ft × 10ft). Sidney Samuelson advised David Collison that using the full width of the 35mm film (including the area normally reserved for the sound track) would yield the required result.

He was right. The film, directed by Kenneth Cheetham, is a brilliant survey of the American Racing Scene. The show makes great use of the wide screen possibilities, and also features a lot of multi image opticals, with up to six moving images on the screen simultaneously. It is accompanied by an "Ambisonic" sound track.

### Interlock

Electrosonic Systems Inc of Minneapolis engineered the automatic projection system which includes an electronically interlocked 8 track tape deck. The system is similar to that installed by ESI in several other permanent and EXPO venues (like the New Zealand project referred to below).

Electrosonic also supplied lighting control, dissolve slide projection and sound replay equipment to the exhibition. All exhibit sound is on ES1320 tapeless sound stores to eliminate maintenance.

Designer Ivor Heal also asked David Collison to source a 20ft wide working model of the Parimutuel (Tote) Board. This time Electrosonic Ltd in London, came to the rescue. Mike Ray designed the control circuitry and wrote the necessary microprocessor programs.

The movie system.

The audio racks.

Exhibit commentaries.

The Parimutuel Board.

### 5,000 lamps

The display includes over 5000 lamps and 110 microprocessors. It "simulates" two race sequences, and is accompanied by an explanatory commentary. It is an excellent example of how our project engineering resources can engineer and build complex computer controlled displays.


The Planetarium at Pleumeur Bodou uses Electrosonic Multi Media Programming.

# PLANETARIUM

ELECTROSONIC'S BSC and ESCLAMP multi media computer programs are used in several leading planetaria. Recent news is that both the McLaughlin Planetarium in Toronto and the Singapore Omni Planetarium have switched from our earlier MSC product to BSC; and that the London Planetarium have successfully introduced video disc control on BSC using ES5003 video disc controllers.

### Cost effective

But it is not only big planetaria that can benefit from our cost effective multi media equipment. Pleumeur Bodou is a small village on the Cotes du Nord in Brittany. In June 1988 a Planetarium opened there and received 60,000 visitors in its first six months.

### Multi Image

Besides the Zeiss Jena planetarium projector there is a 24 projector multi image system controlled by an Apple IIGS computer running ESCLAMP and ES4003 multi image controllers. The same program is used to control the individual amplifiers on the 12 channel sound system, using the ES4044/16 auxiliary interface.

The multi media system was supplied and installed by our distributors in France, Electrosonic Multi Images (formerly Technitone) of Paris.

# NEW ZEALAND

THE New Zealand Pavilion was deservedly the most popular at EXPO 88 in Brisbane. Logan Brewer and his team created an entertaining and instructive "experience" which included two theatres and an area with a moving walkway. In addition the outside of the pavilion had a 64 projector multi image show that came on after dark.

The first theatre used two 35mm movie projectors interlocked with an 8 track tape deck; together with computer control of lighting and special effects. The intermediate area used 12 video presentations, and the second theatre used a wide screen movie, this time with a computer controlled hydraulically operated floor.

Where possible all technical equipment was sourced in New Zealand. However the movie, interlock, computer control and video disc equipment had to be sourced elsewhere. Electrosonic Systems Inc supplied the movie and interlock system using the BSC computer program for control. Electrosonic Ltd supplied the multi image control system (also BSC) and the video disc replay equipment.

It was essential that the three main show areas of the Pavilion stayed precisely synchronised, since otherwise groups of 200 people would have "collided". BSC is an ideal program for this kind of work.

All Electrosonic equipment was supplied through our New Zealand Distributor, Reynolds Photographic of Auckland.

The outside of the New Zealand Pavilion at night had four big screens with a total of 64 projectors.

# SEARS MEXICO go Videowall

**WHEN Sears Roebuck de Mexico decided to add 60,000 sq ft of basement retail space to their remodelled store at the prestigious Perisur Shopping Center in Mexico City, it was important that they find a means of attracting mall traffic into the new facility. The solution: a spectacular 4×8 PICBLOC 256 videowall placed for high visibility from the mall.**


**The Sears Roebuck 32 Monitor PICBLOC Videowall at the Perisur Shopping Center in Mexico City (top), and the unusual videowall at the entrance to their "Electronica" store (below).**

Shoppers attracted to the display can enter the new basement retail area by an escalator below the main videowall; where they are greeted by a "split" 4×4 PICBLOC display inviting them into the "Electronica" area. Two additional 1×5 PICBLOC column displays within the department "pitch" specific product items and specials.

A large glass encased Control Center in the midst of the Electronica area fascinates shoppers with its "high tech" appearance, and racks of flashing equipment lights. Equipped with a storewide audio/video distribution system, including 24 VHS players, and manned by a full time operator, the Center has access to 58 PICBLOC screens and over 50 other in-store monitors.

### C-Through

The main 4×8 display is sourced by four U-Matic players, controlled by ES5003 units, and has C-THROUGH control of the wall itself and of audio and video switching.

The "split" 4×4 display and the two 1×5 columns work as a separate four source system, also under C-THROUGH control.

This beautifully remodelled Sears store, that makes full use of video technology for retail marketing, has attracted worldwide attention. Results in terms of added sales have surpassed expectations; and Sears predict that the equipment and operating costs of the display systems will be covered by selling advertising time to their suppliers.

### Mundo

Electrosonic Systems Inc worked closely with Sears management and technical personnel in the design, supply and installation of the videowall displays, and the audio/video switching and distribution systems.

Maintenance and service for the Sears installation is provided by Grupo Mundo Communicacion Integral; Electrosonic's PICBLOC dealer in Mexico City. Mundo have received full technical and programming training in the PICBLOC system; and have a large inventory of videowall equipment for rental.

# Ruhrgas

RUHRGAS of Essen is one of those industrial giants that few people know about. It is one of the biggest wholesale gas suppliers in the world, selling gas to gas companies all over Germany and drawing its supplies from as far away as Norway and Siberia.

Their Visitors' Centre receives visitors that can range from a head of state to a school group. Most VIP visitors see a presentation in the intensively used Presentation-Room. This room shows programmes on movie film, multi image and video.

Significantly movie film and multi image are preferred for their image quality, and used wherever possible. Indeed even though a video projector is installed, some video programmes are shown on twin monitors to avoid the invidious comparison that might otherwise be made.

Electrosonic GmbH have kept the Ruhrgas Presentation Facilities up to date for many years. The latest installation includes ES4000 Multi Image Equipment and PRC control to allow "one button" selection of the wide range of programme material.

Control is either from an ES8015 infra red cordless hand control, or from a compact wired control panel. Wherever possible shows run on an "autopresent" basis, with full automatic rewind and room reset.

**The Ruhrgas Presentation Room uses Multi Image and Film for its prestige visitor programmes.**

**The room facilities at Ruhrgas are controlled by a simple hand controller. All main shows are fully automatic.**

**The Council Chamber at Mississauga Civic Centre, near Toronto. Lighting Control, Audio and Audio Visual by MEL.**

# CIVIC PRIDE IN CANADA

ELECTROSONIC SCENESET lighting control plays an unobtrusive but important role at Mississauga's Civic Centre; a multi purpose building for both government and community use located just west of Metropolitan Toronto.

The Council Chamber is spectacular, with its 100ft (30m) diameter domed ceiling and extremely high standard of finish. The lighting within the chamber can be push button controlled to several different "scenes", matching different circumstances.

### TV Lighting

For example, important council meetings are televised by two different cable networks; so full television lighting is then required. The normal environmental lighting used on other occasions makes the most of the architectural features of the chamber.

### AV Facilities

Although it is difficult to see in the photograph, the chamber is fitted with full AV facilities; including slide, 16mm and video projection, and high power xenon overhead projection. Three carefully concealed motorised screens are installed; and the AV system's operation is integrated into the SCENESET control.

An ES1370 programmable audio mixer routes programme sound, from VHS, Beta or U-Matic automatically according to the format selected.

### Audibility

The chamber is equipped with a comprehensive audio system, using multiple low level loudspeakers and full automatic noise gate control to ensure that all participants and members of the public can clearly hear the proceedings. Many hours were spent equalising and balancing the system to ensure comfortable listening with unobtrusive speech reinforcement.

The complete audio, audio visual and lighting control system was engineered and installed by Multivision Electrosonic Ltd of Toronto.

# Hamburger University

THE McDonald's image is successfully maintained throughout the world, and possibly the reason for this is the emphasis that McDonald's place on management staff training. The vehicle they use for this is the "Hamburger University", which combines intensive group training with the correct environment in which to carry it out.

The UK branch of the "University" is at their headquarters in East Finchley, near London. Here there are two classrooms, a marketing meeting room, and two fully equipped lecture theatres. Electrosonic were commissioned to instal the integrated presentation facilities.

Each of the rooms are controlled by Electrosonic PRC (Presentation Room Controller). This allows the widest range of audio visual media, combined with the simplest possible operation. The classrooms use rear projection, and the raked lecture theatres use front projection.

The lecture theatres include fully integrated screen systems that include two electrically operated counter balanced dry wipe boards (each 4m long) which glide up from behind the decorative fascia to cover the main projection screen. The screen format allows two side by side slide images for comparisons; however the screen system includes both motorised screen masking and motorised curtains for when other formats are required, such as video or data projection.

Electrosonic also equipped the training facilities at McDonald's Regional training centre in Birmingham.

**One of the lecture theatres at McDonald's UK headquarters. All room control and complete AV installation by Electrosonic.**