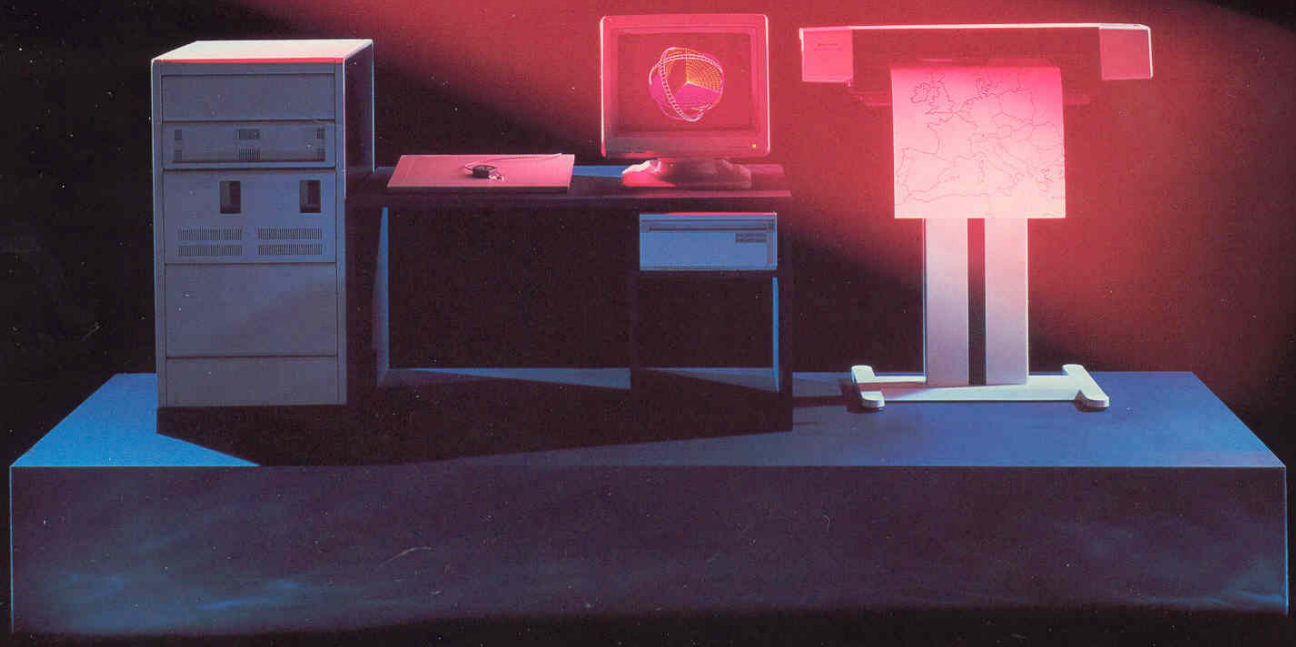
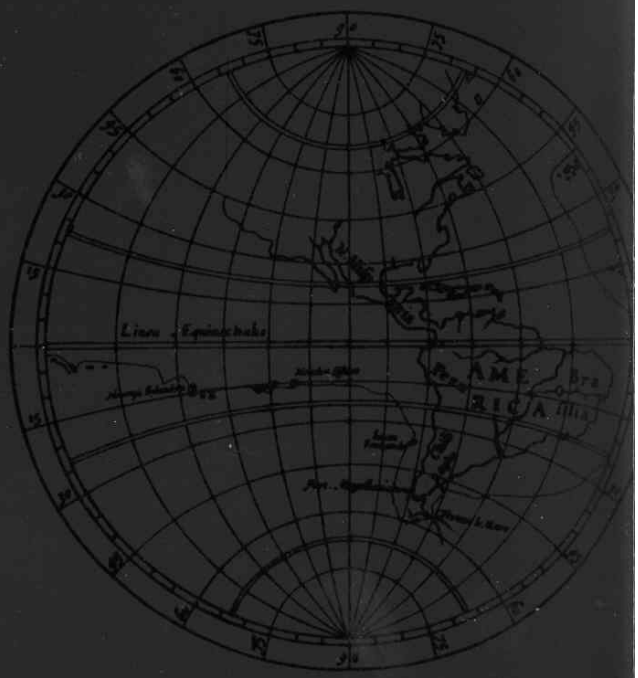
HITACHI EUROPE

1988-1989



HITACHI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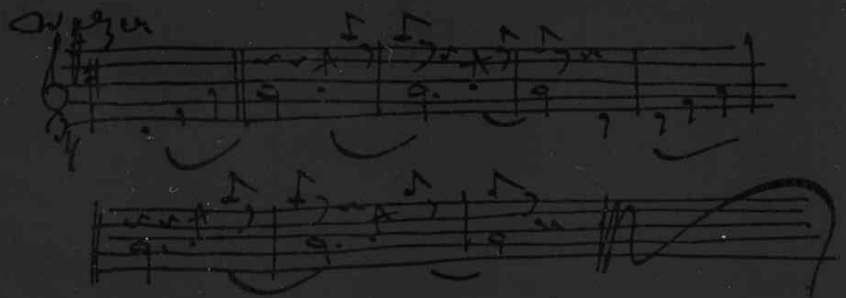
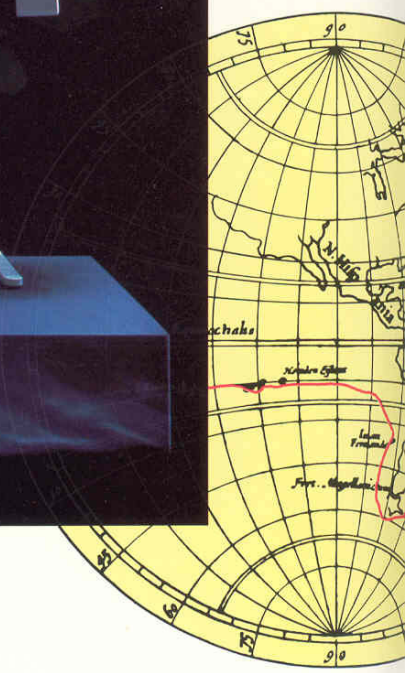


HITACHI EUROPE

1988 - 1989

Ferdinand Magellan (1478 - 1521) led the first round the world expedition in 1519. During his voyage he discovered the strait between South America and Tierra del Fuego and named the Pacific Ocean. Magellan died in the Philippines, but one of his ships went on to complete the epic journey.



CORPORATE OVERVIEW

Magellan was one of the many European explorers and navigators who discovered and mapped the world. The pioneering exploits of the European explorers brought about the discovery of new materials and products, the expansion of trade between nations and the interchange of cultural ideas.

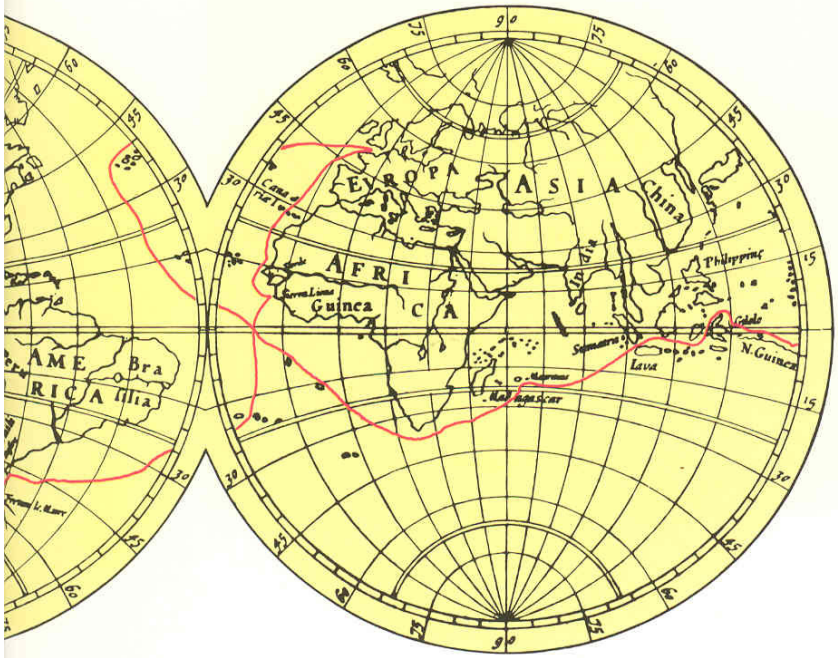
Hitachi was established in 1910 as an electrical repair shop for a mining company in Japan. Since then, the company has greatly expanded its operations and has grown to be one of the largest industrial corporations in the world.

From the beginning Hitachi has always been a technology-orientated company, placing great focus on R and D which has been a major source of corporate growth. Key to Hitachi's success is the philosophy of product reliability achieved through continued enhancement of product quality combined with stringent production and testing standards at manufacturing level.

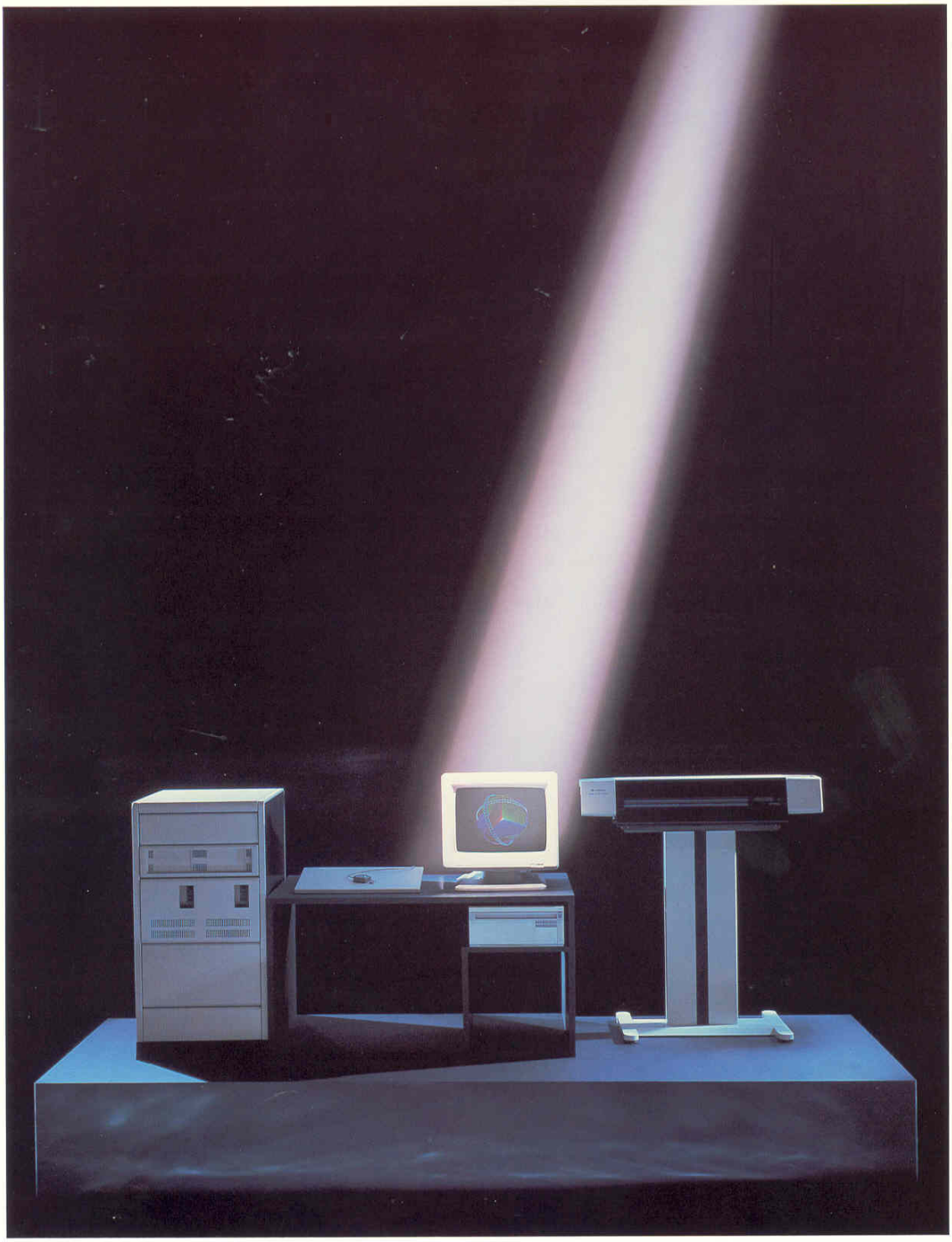
Hitachi is a multinational corporation with a network of offices, sales and service companies and manufacturing companies throughout the world. As a multinational corporation, Hitachi shares in global responsibilities. The company acquires quality supplies, from raw materials and components, to hi-tech equipment, from around the world.

Hitachi's world wide production centres share in the task of creating wealth in their host nations. They invigorate regional economies and generate new jobs. They also encourage the transfer of ideas across boundaries, just as the travels of European explorers achieved, centuries ago.

Hitachi Europe Ltd, as part of the Hitachi International network, markets a range of Hitachi computer equipment and peripherals throughout Europe.



James Dalton (1776 - 1844) is best known as the founder of modern atomic theory and the formulator of Daltons Law. Dalton also investigated colour blindness, from which he suffered, and identified the hereditary basis for transfer of the condition.



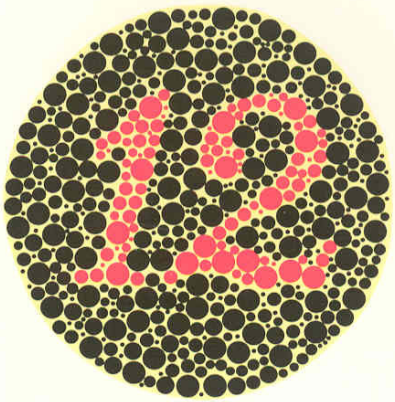
COLOUR MONITORS

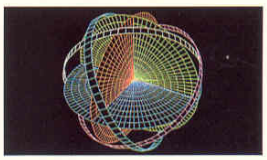
Prompted by Dalton's work, other scientists later discovered how the human eye interprets colour images. Different cone cells in the retina can detect red, blue and green light; this combination is capable of forming any colour. This is also the basic principle at the heart of colour television sets and monitors.

The increasing use of computer based design programs has created a demand for high resolution monitors - monitors which show accurately the fine details of complex and intricate designs.

Hitachi colour monitors are designed to meet the most demanding needs for high resolution screen images. Non-interlaced scanning ensures bright, flicker free display. Focus is enhanced by the Elliptical Aperture type lens and superior convergence is obtained through the exclusive HSA (Hitachi Slit-winding with Auxiliary Coil) and Hitachi's Digital Dynamic Convergence System.

The range of models available ensure that, whatever the application, Hitachi can provide the right monitor to meet any requirement, from CAD, CAM and CAE through to computer graphics. And because Hitachi colour monitors are compatible with most makes of computer equipment they are easily added to existing systems to provide a clearer, sharper, picture which is very much easier on the human eye.



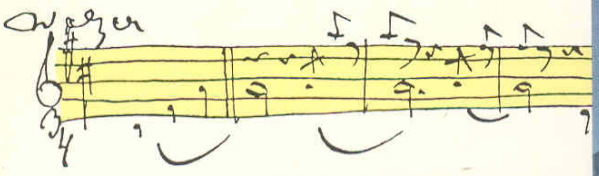


Hitachi high resolution colour monitors are ideally suited to the demands of graphic design systems.

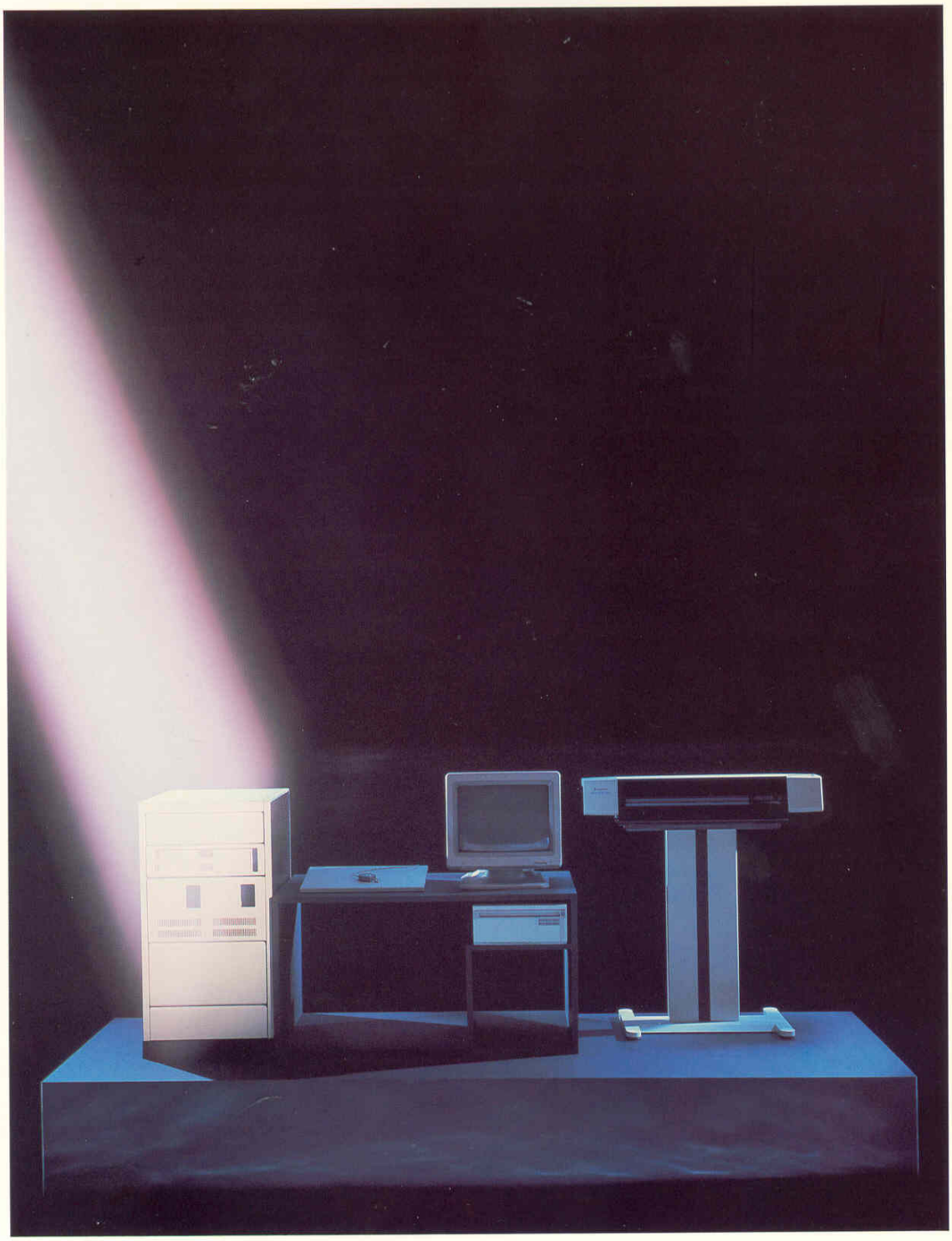
Colour Monitors

Model	Screen size	Resolution	Dot trio pitch *(mm)*	Horizontal scan frequency *(kHz)*
HM 4119	19"	1280 x 1024	0.31	48 - 65
HM 4219	19"	1280 x 1024	0.26 - 0.31	61 - 65
HM 5219	19"	1600 x 1280	0.26	78 - 90
HM 6219	19"	2048 x 2048	0.21 - 0.26	126
HM 4625	25"	1280 x 1024	0.37	61 - 65

Listed above are some of the models available in our range of colour monitors.



The name of Johan Strauss II (1825 - 1899) is synonymous with 'the waltz'. The Waltz was the dance craze of Vienna in the 1800's; its popularity grew, eventually throughout Europe, due to the now familiar compositions of the Strauss family. Johan's best known composition is The Blue Danube Waltz, first performed in 1867.



WINCHESTER DISK SYSTEMS

It may be surprising to learn that one of the best music recording systems is the Winchester disk. Channel 4 television in Great Britain and several Universities throughout Europe use Hitachi Winchester disk systems to store and record music and sound effects. Play back is CD quality and access to particular recordings as low as 15 milliseconds.

Hitachi Winchester disks provide the ideal data storage system. The range includes 5.25 inch disk drives (full height and half height) and 8.8 inch systems and offers a breadth of storage capacities currently ranging from 100 megabytes to more than one gigabyte.

Access to information is very fast - from 15 to 25 milliseconds - and transfer of information is quickly achieved at rates ranging from 625 kilobytes per second to more than 2 megabytes per second. Speedy transfer of data is achieved through the '*state of the art*' voice coil actuator incorporated in every Hitachi Winchester disk system.

Integrity of data, which is just as important as speed, is assured through the use of high coercivity coated oxide media, heads and LSI's. These items are produced in Hitachi plants under strict production, quality control and product testing conditions.

Hitachi Winchester disk systems store and reproduce information accurately and quickly every time. From company accounts, customer records and sales information all the way through to The Blue Danube.

Two 8.8 inch Winchester disks housed in a standard 19 inch rack unit provide combined data storage capacity of more than two gigabytes.

Winchester Disk Systems 5.25 inch

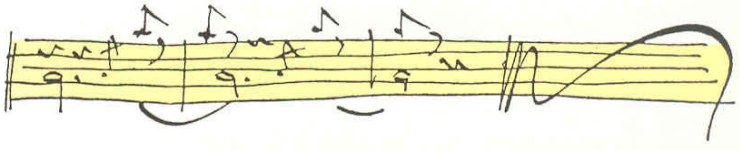
Model	Unformatted capacity *(MB)*	Average seek time *(ms)*	Data transfer rate (max) *(MB/sec)*	Interfaces	MTBF *(power on hours)*
DK 522	103	25	1.5	ESDI/SCSI	30000
DK 512	172	23	1.5	ESDI/SCSI/SMD	20000
DK 514	382	16	1.8	ESDI/SCSI/SMD	30000

Winchester Disk Systems 8 inch

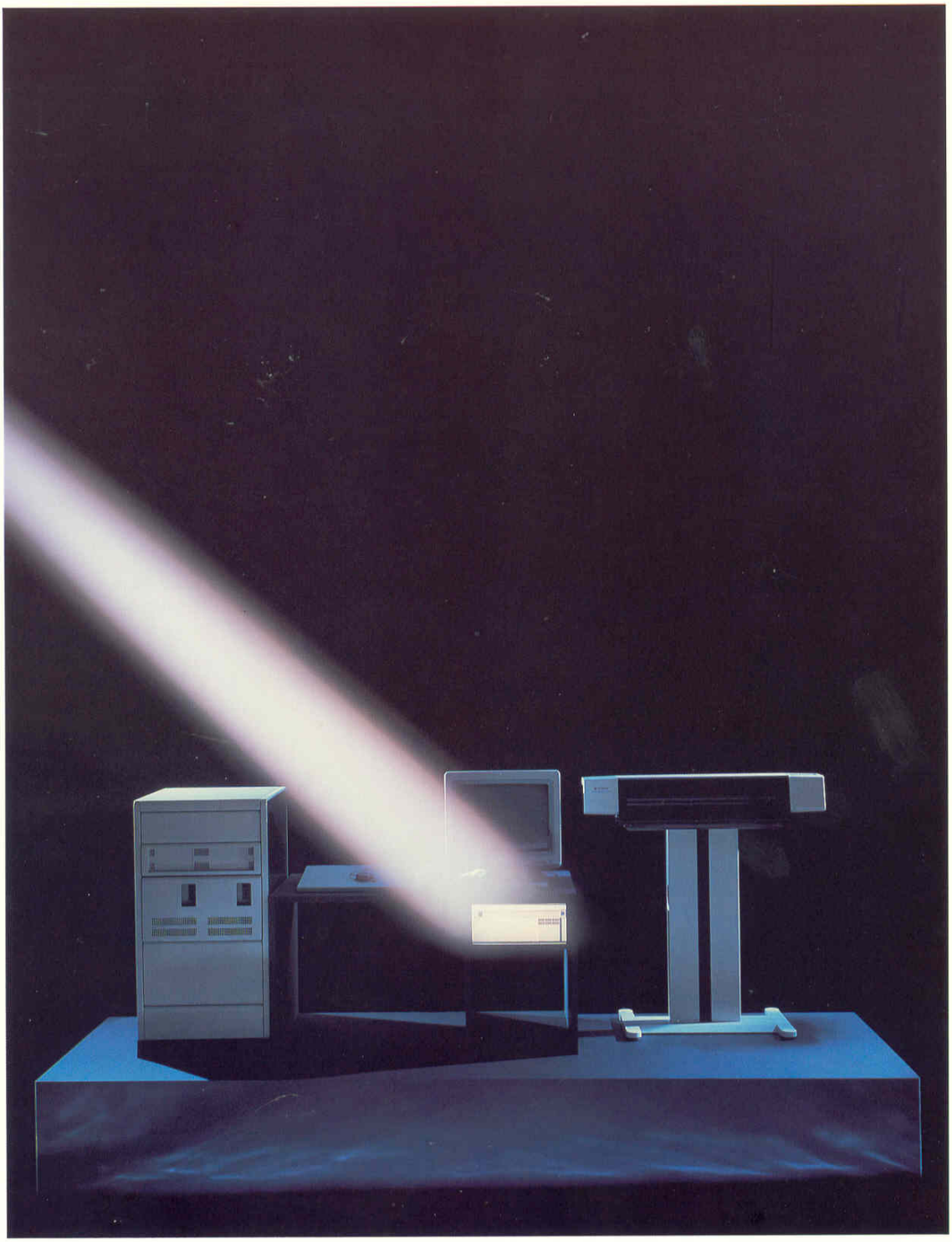
DK 711S-60	600	12	2.45	SMD	30000

Winchester Disk Systems 8.8 inch

DK 815-10	1050	15	2.42	SMD/IPI 2	30000



Marie Curie (1867 - 1934) discovered the radioactive elements Radium and Plutonium and produced the first man-made radio-isotope. Her discoveries, subsequently rewarded with a Nobel prize in 1911, led to the extensive use of radio-isotopes in the detection and treatment of human diseases, cancer in particular.



OPTICAL DISK SYSTEMS

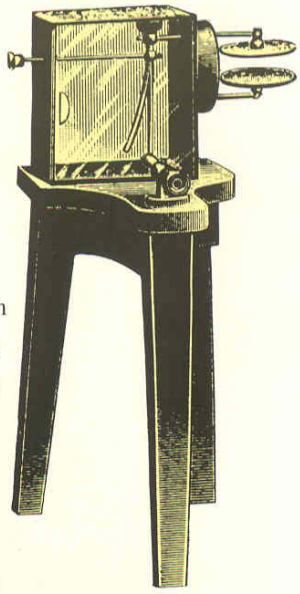
The advance of medical science is often aided by new technology which improves methods of detection and accelerates treatment procedures. For many hospitals in Europe employing scan technology, the technique has been further enhanced by Hitachi optical disk systems; scan details are recorded on disk to provide a comprehensive, accurate pictorial history of the patient at the press of a button.

Hitachi optical disk systems are the ultimate mass storage/retrieval medium. Data is transferred at a maximum rate of 690 kilobytes every second and Hitachi's advanced read after write recording system automatically checks each data bit, thus ensuring data accuracy.

Data is recorded on a proprietary Tellurium - Selenium photoelectric medium, air sandwiched in the sealed glass envelope of the optical disk. Each 5.25 inch disk stores up to 600 megabytes of data; with over 2.5 gigabytes of storage space on the 12 inch optical disk.

Compatibility with a wide range mainframes, of mini computers and PC's combined with the breadth of storage capacities, enable Hitachi optical disk systems to meet most data storage requirements. Multiple disk storage, handling and access is made easy with the optical disk Library Unit (popularly known as 'the Jukebox') which has a total capacity of thirty-two 12 inch optical disks which provides over 80 gigabytes of data storage.

Hitachi optical disk systems are already meeting data storage/reference needs in telephone exchanges (for telephone directory reference), in libraries and museums (for storage of rare documents) and hospitals.



Hitachi optical disk systems are not only totally reliable, but also easy to operate. Controls are kept to a minimum and clearly labelled to indicate their function.

Optical Disk Systems 5.25 inch

Model	Product	Formatted capacity *(MB)*	Average seek time *(ms)*	Data transfer rate (max) *(MB/sec)*	Interfaces
OD101-1	Optical Disk Drive	600	93		
OF101S-2	Formatter Controller			1.5	SCSI
OC101-2	Disk Cartridge	600			

Optical Disk Systems12 inch

OD301A-1	Disk Drive		200		
OF301S-2	Formatter Controller			1.5	SCSI
OC301-2	Disk Cartridge	2620			
OL301S-22	Library Unit	83900			

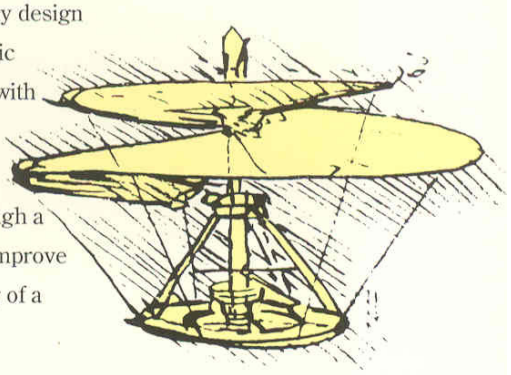
Leonardo da Vinci (1452 - 1519) was an outstanding painter and sculptor. His best known work is probably the most famous painting in the world - the Mona Lisa. In addition to artistic talents, da Vinci was also an engineer and designed several complicated machines including a helicopter.

TABLET DIGITIZERS

Producing a great work, whether a painting or revolutionary design, requires skill, imagination and hard work. Nowadays, the use of computers can speed up the process, producing accurate designs which are easily amended and updated. The need for accuracy and fine detail has led to the development of tablet digitisers which complement software design packages.

The sophistication of design and graphics systems combined with high resolution monitors have contributed greatly to computer based design capabilities. But as sophistication increases, the need arises for super-accurate devices which enable the designer to exert precise control over on-screen images and to co-ordinate the transfer of an existing drawing into a computer design system. These drawings can be modified on-screen and stored for future use.

Hitachi tablet digitizers are perfectly suited to the sophisticated demands of any design system. At the heart of the tablet digitizer is Hitachi's exclusive electromagnetic induction system controlled by a VLSI microprocessor board which, together with special software, ensures high output accuracy, efficiency and reliability.



Ease of handling and control are also important factors and are achieved through a combination of the ultra-thin tablet design and the cursors or stylus pens. To improve operating efficiency the tablet's effective area is recessed to facilitate the fixing of a menu sheet, and each tablet also includes a tilting function.

The advanced features, different operating modes and range of over fifteen different sizes make Hitachi tablet digitizers suitable for a wide variety of applications in different industries.

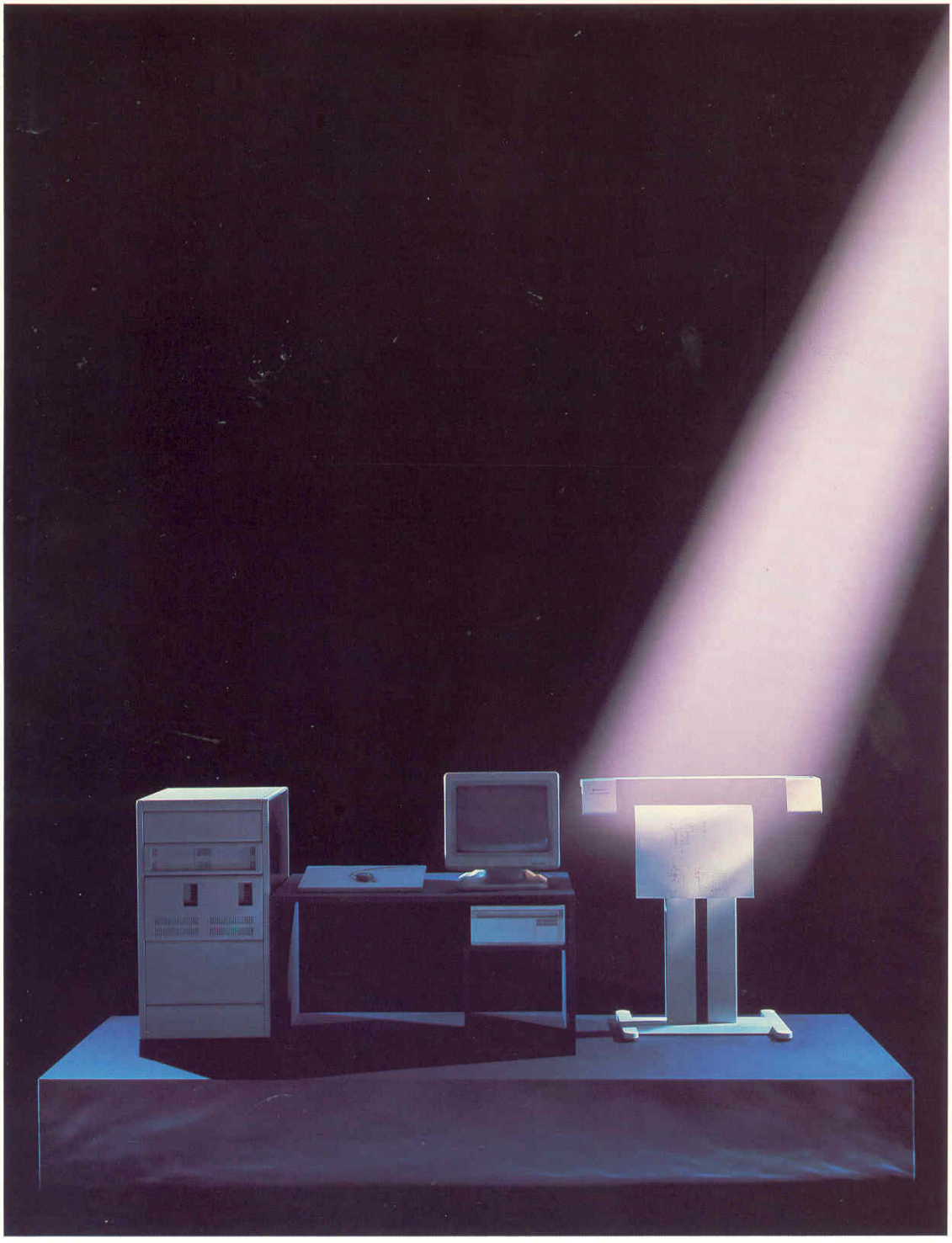
Compatible with most computer design systems, Hitachi tablet digitizers are equally useful for producing helicopter designs, or works of art.

Hitachi tablet digitizers operate with cursors or stylus pens to produce highly accurate designs. Applications include tracing of existing designs as well as the creation of new images.

Digitisers

Tiger Series *(Tablet area)*	Puma - D Series *(Tablet area)*	Puma - S Series *(Tablet area)*
8 inch x 12 inch	12 inch x 12 inch	22 inch x 22 inch
11 inch x 11 inch	15 inch x 15 inch	24 inch x 36 inch
12 inch x 17 inch	17 inch x 17 inch	36 inch x 48 inch
		44 inch x 60 inch

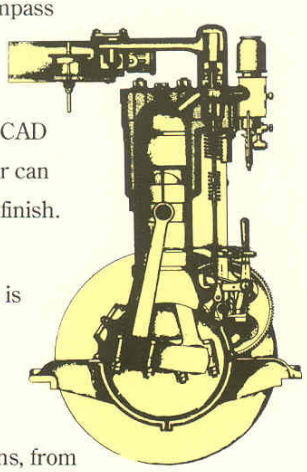
In 1885 Gottlieb Daimler (1834 - 1900) produced one of the first practical cars powered by an internal combustion petrol engine. Coincidentally, Karl Benz matched Daimler's achievement in the same year, although both were working independently.



PLOTTERS

Although the basis of the 4 stroke internal combustion engine remains unchanged, many refinements have been made to increase efficiency and reliability. Much of the detailed work required to produce engineering drawings is now carried out using computers and the output of designs has been automated with the introduction of fast, accurate plotters.

As more and more design work is carried out on computers, the demand for high quality, fast, accurate output devices is also increasing. And demand is not restricted to CAD/CAM users working with mainframe or mini computers. The power and popularity of present day PC's has generated a demand for output devices which can encompass tasks ranging from personal CAD/CAM to graph production for presentations.



The Hitachi range of plotters meets all of these needs from A1 size professional CAD output through personal CAD functions to the production of graphs. Each plotter can utilise a variety of pen types and output to various media to produce the desired finish.

Features like automatic pencapping and softlanding ensure that the end product is perfect.

Industry standard interfaces ensure compatibility with most makes of computer systems. Versatile Hitachi plotters are capable of outputting a full range of designs, from engineering details of a new car through to the overhead projector transparencies used at the launch.

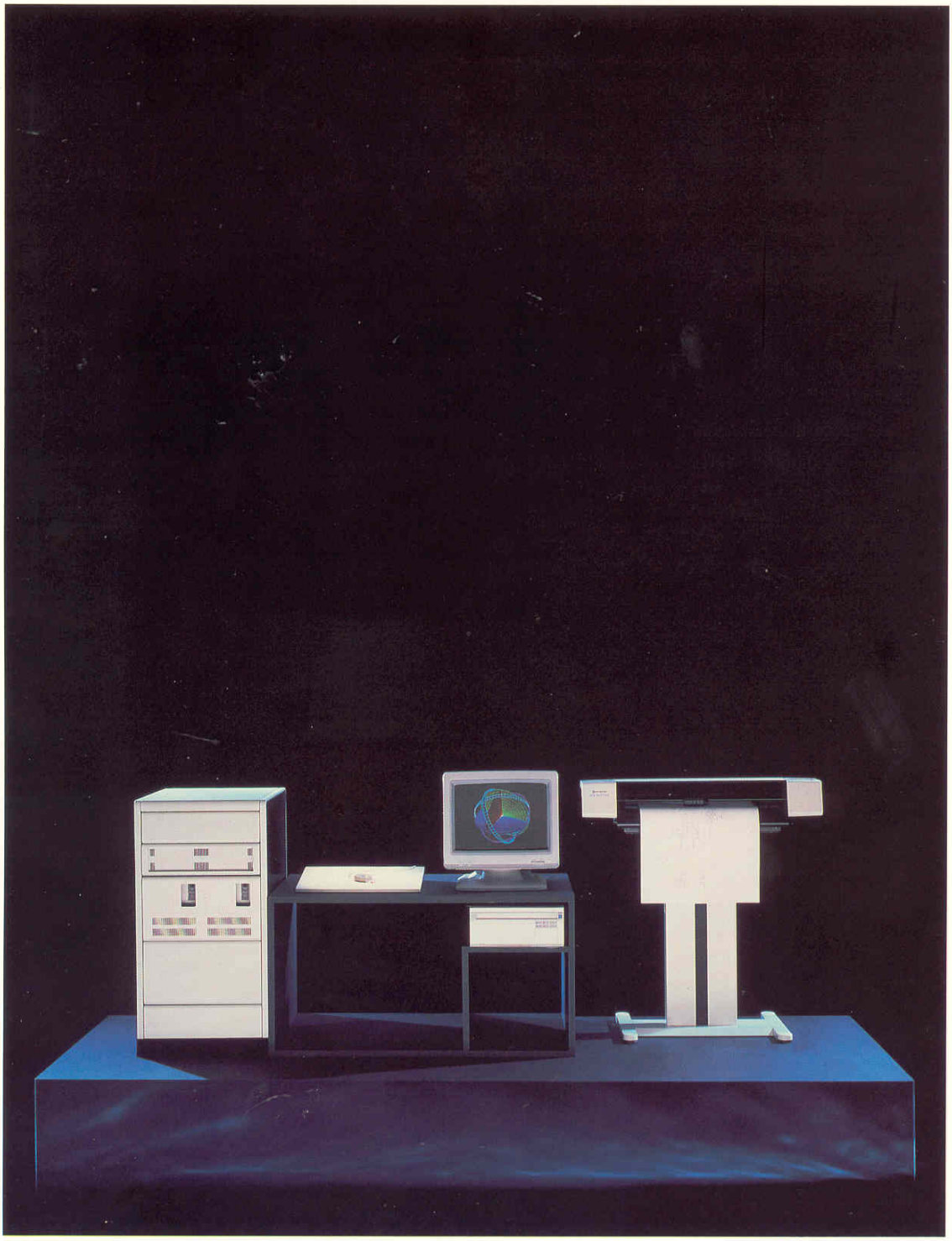
Detailed and accurate output of sophisticated designs is easily accomplished with Hitachi plotters. Their versatility is enhanced by the variety of pen types and output media available.

Plotters

Model	Product	Plotting area *(mm)*	Number of pens	Pen types	Plotting speed *(mm/sec)*
672-XD	Graph Plotter	380 x 270	4	fibre-tip, ceramic, technical ink	200 axial 280 at 45°
673-BM *	Plotter	404 x 277	4	fibre tip, ballpoint, ceramic, technical ink	400 axial 565 at 45°
675	Plotter	584 x 810	8	fibre tip, ballpoint, ceramic, pencil	500 all directions
674	Plotter	1500 x 615	4	ceramic, ballpoint, technical ink	400 axial

* *option for auto-sheet feeder*

Anton van Leeuwenhoek (1632 - 1723) developed the single lens microscope in 1680. Using his invention he identified and drew red blood corpuscles and single cell life forms including bacteria and protozoa.



SERVICE AND SUPPORT

Since van Leeuwenhoek's invention more powerful microscopes have been developed which allow most materials to be examined in minute detail. Such inspection, particularly of silicon chips which carry millions of circuits, is vital to ensure that computers and computer controlled equipment function correctly.

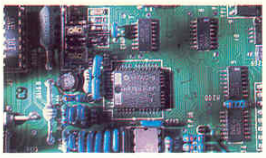
The strict standards employed in the manufacture and quality testing of Hitachi products have resulted in a high standard of reliability. This outstanding reliability is further enhanced by the service support in Europe provided by Hitachi's Monitor Service facility, located in Dusseldorf, and by Applied Peripherals Technology. APT, a wholly-owned subsidiary of Applied Magnetics Corporation, are renowned worldwide for providing high quality services and support to the data storage industry.

At their European manufacturing facility, located in Belgium, APT carry out servicing and warranty repair of all Hitachi Winchester disk systems. Repair and reconditioning processes, approved by Hitachi, are designed and documented for each drive family and the work is effected in APT's class 100 Cleanroom Area.

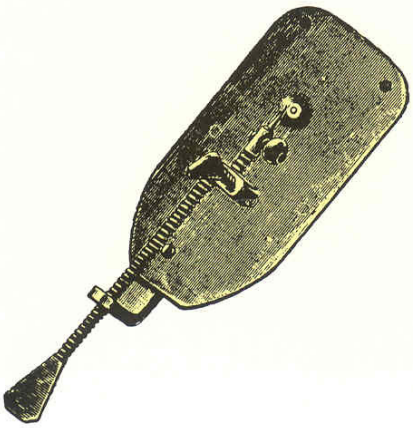
In addition to the use of special test equipment unique to Hitachi products, the customised service and repair programmes are rigorously controlled to ensure that repaired equipment meets the criteria for 'like new' condition.

In many cases, localised technical support provides immediate solutions to equipment queries, thus removing the need to take advantage of Hitachi central service facilities.

Although technology has advanced immeasurably since the time of van Leeuwenhoek, many companies today are still applying his basic principles of microscopic attention to detail to provide their customers with a better product or service.



Key to Hitachi's success is the philosophy of product reliability achieved through continued enhancement of product quality combined with stringent production and testing standards at manufacturing level. Service support ensures that Hitachi products continue to perform to the high standards laid down in the original specification.



ACKNOWLEDGEMENTS

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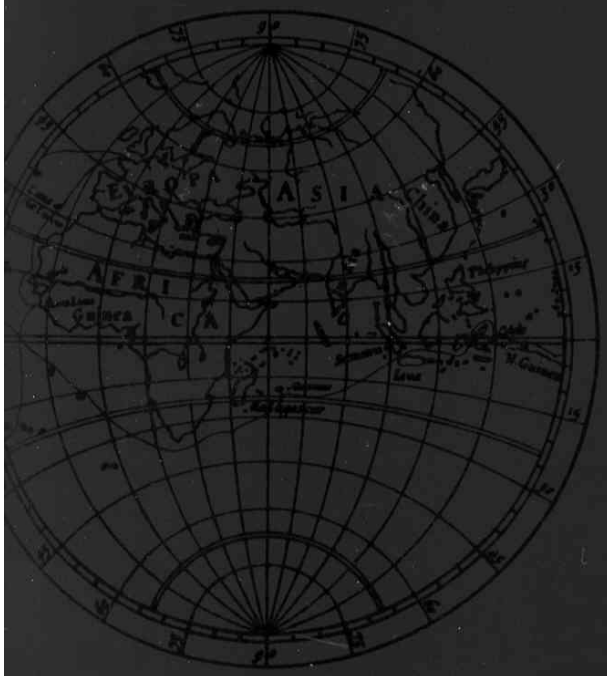
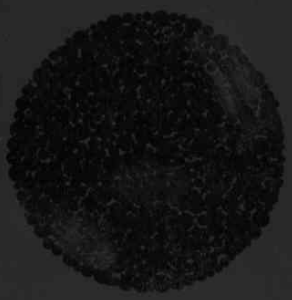
BBC HULTON PICTURE LIBRARY
MANSELL COLLECTION
MONTAGU MOTOR MUSEUM
VIVIEN FIFIELD


ASIA
China
AFRICA



Hitachi Europe Ltd, Trafalgar House, 2 Chalkhill Road, Hammersmith, London W6 8DW.
Telephone: 01 748 2001.

Hitachi Europe GmbH, Schwannstrasse 3, 4000 Dusseldorf 30, West Germany.
Telephone: 0211 49610.

Hitachi Europe GmbH, Bureau de Liaison, 24 Rue de Traversiere, 75012 Paris, France.
Telephone: 0143 443329.