

Marconi
Communication Systems



C A P A B I L I T Y



INTRODUCTION

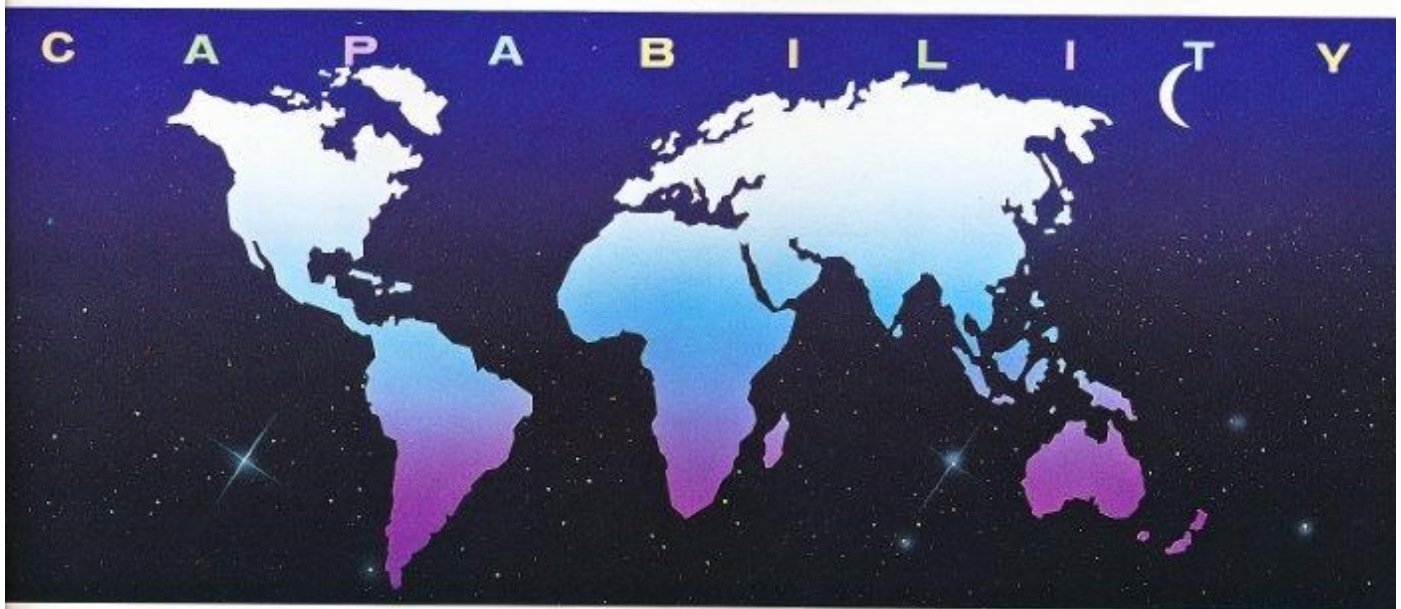
GEC-Marconi is a world leader in capital electronics offering a complete capability from satellites to warships and serving both the civil and defence markets. With a worldwide operation and an annual turnover of approximately £2 billion, a quarter of the business is in export.

The UK-based group, within The General Electric Company plc, consists of a number of management companies each a specialist in its particular product area.

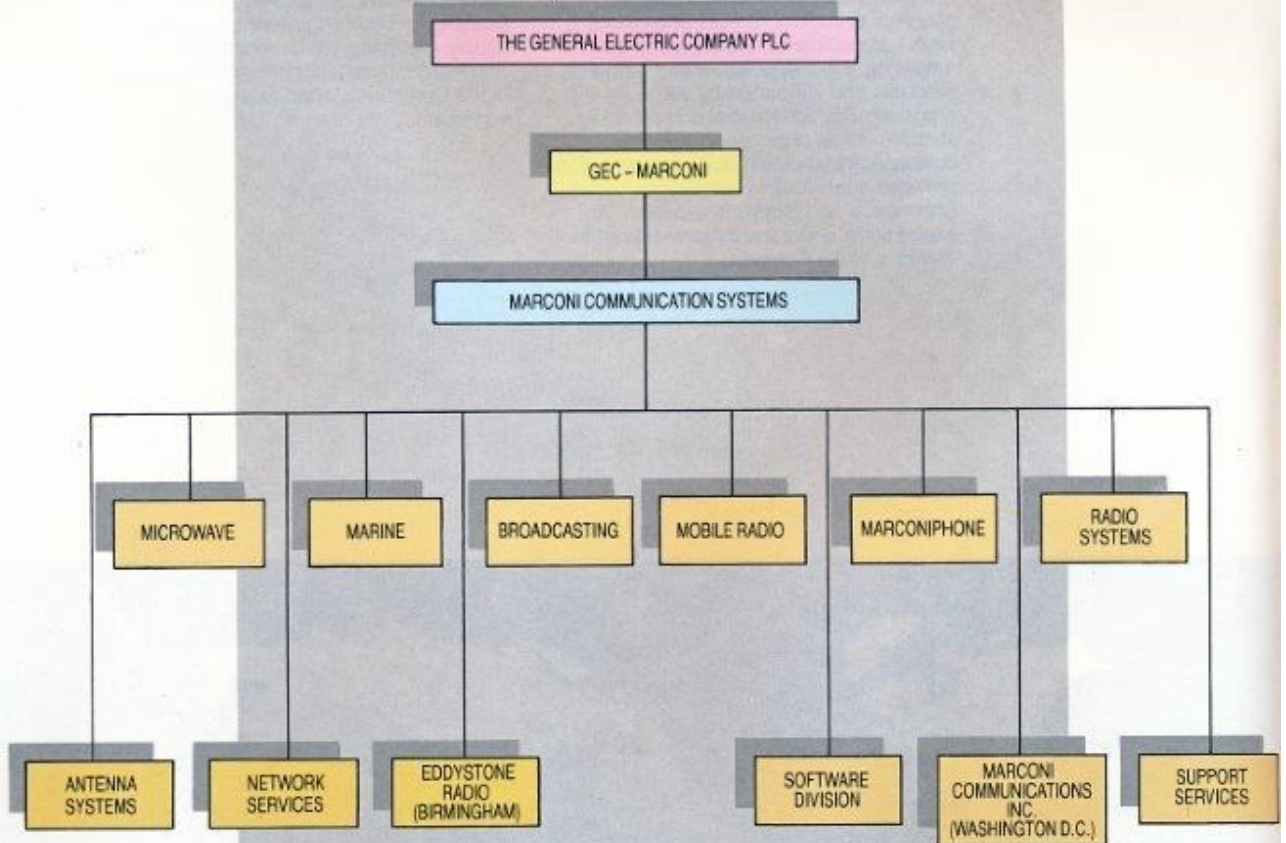
Marconi Communication Systems operates through a number of divisions each responsible for the development, marketing and manufacture of a range of products and supported by sales, programming, commercial and planning staff as well as engineering and development laboratories. A central service provides specialists in financial, commercial and technical expertise. An export sales department represents all the divisions of the Company.

Naturally, all the component parts of a communication system must be of the highest quality, but for a system to operate at its optimum capability, all the various units must be fully integrated. This is why at Marconi all the engineers, designers, analysts and managers, at all levels, are trained to use a systems philosophy.

To this end Marconi supplies the system together with installation, after-sales, maintenance and spares back-up. If required a complete turnkey package from building and civil engineering to power supply and fitting-out is undertaken. Training of customers' personnel is also one of the Company's world-recognised services.



ORGANISATION

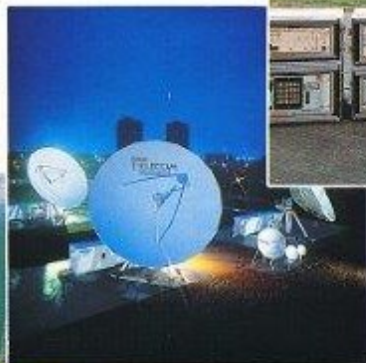


GROUND STATIONS

From the inception of INTELSAT in the early 1960s Marconi has been involved in satellite communications and has kept pace with the constantly changing pattern of this means of communication.

The experience built-up over many years means that whatever the size of the ground station Marconi has the expertise to engineer, design and build it as a turnkey project. The range extends from the large fixed stations, through 'C', 'Ka' and 'Ku' Band stations transmitting voice, television and data, to the small highly transportable systems for conferences and news gathering.

The company is also involved in domestic networks and is a supplier of terminals for ship-shore communications, up-links, TV receive-only and numerous similar applications.



GROUND COMMUNICATION EQUIPMENT (GCE) – DATA MODEMS

As satellite communications have developed so has the need for new types of ground stations for regional and domestic use.

This in turn has led to an increase in the requirement for more sophisticated GCE equipment for use in digital communication systems such as INTELSAT Business Services (IBS), INTELSAT Intermediate Data Rate (IDR), DOMSAT Data Services, EUTELSAT Satellite Multiservice (SMS) and for television. Marconi offers a range of modems, up and down converters, and a switching shelf for use in all these applications.

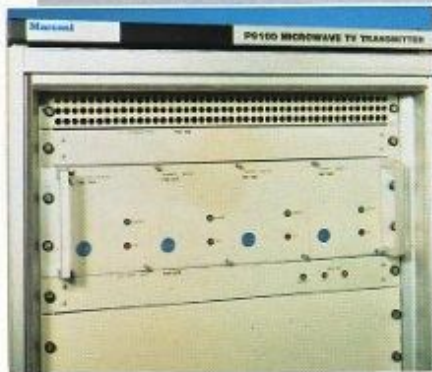
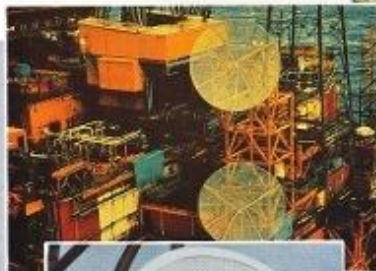
This latest range allows for more efficient use to be made of existing stations giving greater channel capacity with high reliability.

TROPOSPHERIC SCATTER

Tropospheric scatter communication systems have provided viable transmission links from the early 1950s. Since then Marconi has supplied some 300 terminals for more than 70 systems worldwide. These not only provide a continuous communication link with the production platforms in the North Sea oilfields, but are installed in Africa, the Caribbean, East Asia, the Middle East and Europe. If joined together these tropo links would link around the world.

An intensive research and development programme on digital tropo transmission began in the 1970s and from this came digital links enabling traffic to be bulk encrypted for greater security. The system provides a high degree of security and reliability, particularly where the use of cables, radio relay, or satellite would be undesirable or impossible.

Tactrop is a further advance in tropospheric communication providing mobile links which can be deployed in a very short time. Although primarily intended for military use they will also satisfy many civil requirements where fast re-route capability for long-distance trunk links are of vital importance.



LINE OF SIGHT – TV DISTRIBUTION

Where microwave links did not form part of the public telephone network they tended to be used as a 'tail' to some other system or were used as military fixed or mobile links.

Today, microwave links are being used for the transfer of data and for television. They are ideal for low-cost short-range point-to-point communications and can be supplied in a modular design for easy traffic change and are compliant with the relevant CCIR, CCIT and CEPT recommendations.

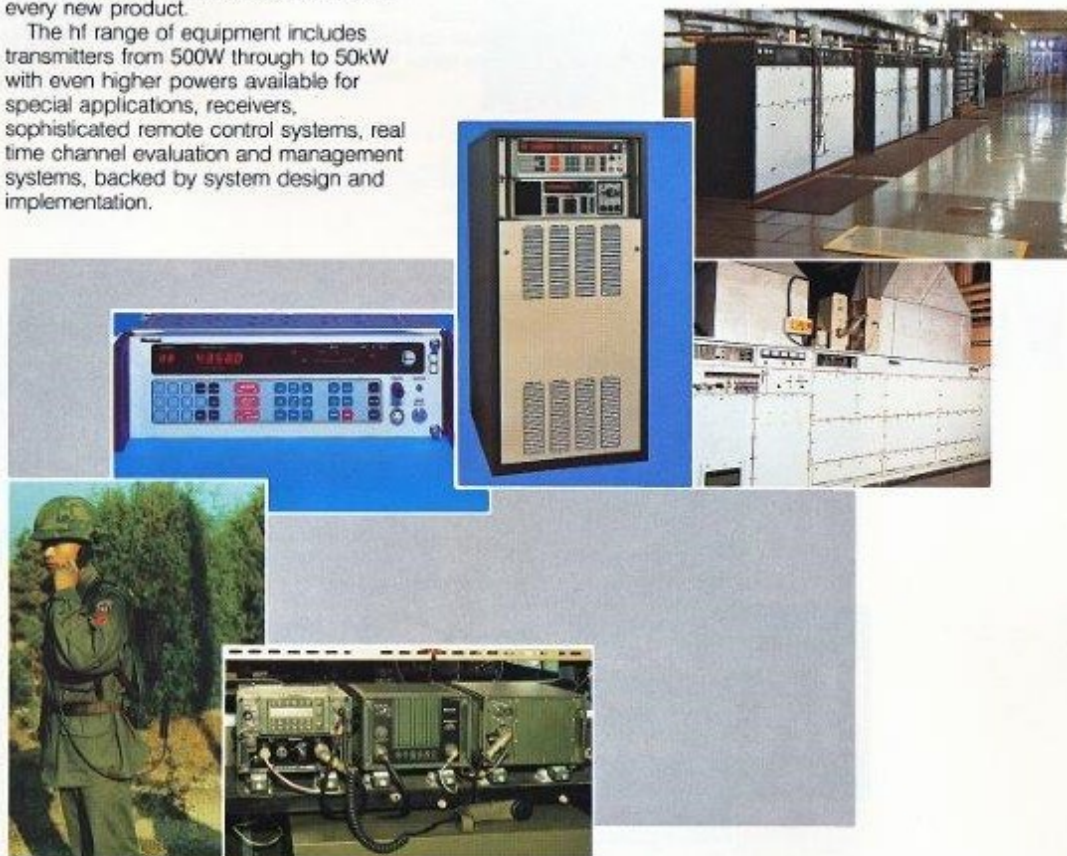
Multichannel Microwave Distribution Service, or MMDS as it is better known, is a method of using microwave technology for the distribution of television, fm stereo radio and data signals from a central transmitter to individual houses and blocks of apartments.

HF COMMUNICATIONS

Marconi Communication Systems designs and manufactures a wide range of products for both military and civil hf communication users worldwide. Maximum use has been made of the latest advances in high technology electronics to improve reliability and availability of hf equipment and circuits. Built-in Test Equipment (BITE) is now standard in the majority of designs and maintainability is a key design feature in every new product.

The hf range of equipment includes transmitters from 500W through to 50kW with even higher powers available for special applications, receivers, sophisticated remote control systems, real time channel evaluation and management systems, backed by system design and implementation.

The uses of Marconi hf systems, covering all aspects of hf engineering include, amongst others, naval shore stations; air force ground communication systems; civil aviation aeronautical links; long range communication for police forces; national guard communication systems all making full use of the wide range of hf radio amplifiers, receivers and sub-systems.



SCIMITAR H

Pioneering of commercial high-frequency communication was carried out by Guglielmo Marconi in the early 1920s. Today the hf band carries a large bulk of the world's messages and, due to advances in technology, has proved to be an increasingly economic and reliable means of communication particularly in civil, military, diplomatic point-to-point, naval, maritime and aeronautical services.

Scimitar 'H' is the collective name given to a range of tactical hf ECCM radios which are designed to make the maximum use of common assemblies. The range includes 20W manpack and 20W vehicular versions, and 100W and 400W vehicle and base station systems.

Two levels of ECCM are available with Scimitar 'H'. An inbuilt frequency-hopping algorithm provides a rugged low hop-speed capability, whilst an optional COMSEC/ECCM unit is available that provides medium-speed frequency-hopping with a high grade encrypted Narrow Band Service Voice (NBSV) and data capability.

An additional optional feature is a real-time channel evaluation capability in a non-ECCM mode. This is typical of the many possibilities for future or custom-designed options that can be made available due to the modern software-controlled design of Scimitar 'H'.

NAVAL COMMUNICATIONS

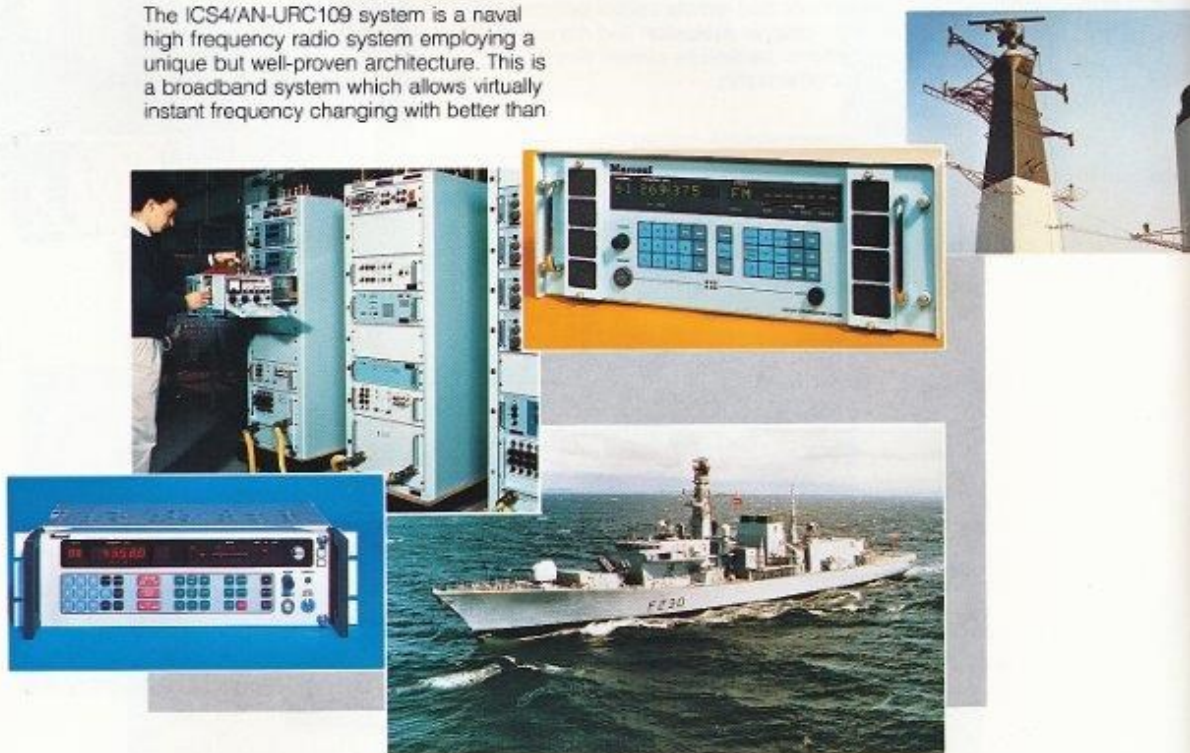
Today's modern navies require versatile and instantaneous communications for all vessels to enable fleets to operate with maximum effectiveness. At the same time great emphasis is placed on achieving commonality of equipment throughout a fleet to enable logistic support costs to be minimised.

Marconi Communication Systems can supply a wide range of external communication systems, built-up from common modules, to satisfy these demanding requirements.

The ICS4/AN-URC109 system is a naval high frequency radio system employing a unique but well-proven architecture. This is a broadband system which allows virtually instant frequency changing with better than

2.5% spacing between transmit and receive frequencies and essentially, unlimited spacing between transmit frequencies. An advanced bus control gives the ability to reconfigure rapidly in the event of battle damage.

The ICS4/AN-URC 109, and its predecessor ICS3, have found favour with those navies requiring a sound high-level of performance, particularly in the areas of Electronic Counter Counter Measures (ECCM) and Low Probability of Intercept (LPI). To date over sixty systems are at sea.



SKIPJACK/ SWORDFISH

'Skipjack' systems have been designed to meet the requirements to reduce both capital cost and manpower, whilst still retaining most of the operational features necessary to enhance communication effectiveness in today's demanding electronic environment.

Fully integrated systems are available in both narrowband and broadband architectures for vessels ranging from offshore patrol vessels and mine counter-measure vessels to submarines and frigates. Computer bus control and Built-in Test Equipment (BITE) ensures enhanced system management.

Completing the naval range is the Swordfish transceiver. This multi-mode vhf/uhf transceiver provides vessels and shore stations with a 30-400MHz capability in one compact equipment. It covers the aeronautical and maritime vhf bands as well as the aeronautical and maritime uhf bands and, with the addition of one module, covers the military band from 30-88MHz. It is microprocessor controlled with Built-in Test Equipment (BITE) and is capable of being remotely operated.

SOUND TRANSMITTERS

In 1921 The Marconi Company founded the service which was later to develop into the British Broadcasting Corporation, the world's first public broadcasting system. Today Marconi Communication Systems remains a major supplier to the BBC and the Independent Broadcasting Authority and to many customers in over 150 countries throughout the world.

This experience enables Marconi to offer equipment to suit all applications from local vhf/fm high quality stereo radio to large shortwave transmitters which are still the most effective method of reaching listeners worldwide.

Modern designs make full use of the latest technology to simplify operation, reduce maintenance and to provide exceptional efficiency and reliability. Most of the transmitters are designed for unattended operation with provision for full remote control, and latest solid-state devices are incorporated wherever these show advantages over earlier techniques.



TELEVISION TRANSMITTERS

Since supplying equipment to the BBC in 1936 for the world's first high definition public television service, Marconi has been providing broadcasters throughout the world with a complete range of television transmitters.

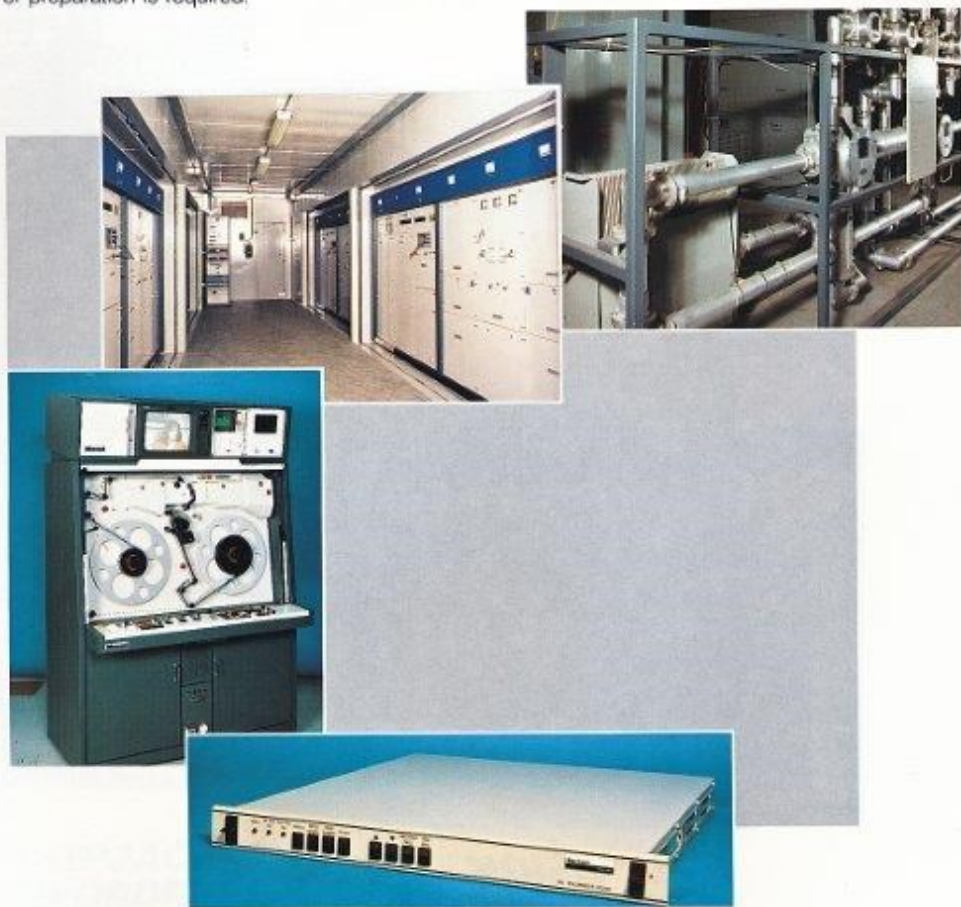
Today the range covers both the vhf Band III (H-band) and the uhf bands to meet most international standards. Designed for high efficiency, ease of operation and commonality of equipment the transmitters can be provided in parallel or main and standby configurations to provide higher powers and no-break working.

Marconi Communication Systems has designed and developed a generation of transmitters which takes full advantage of modern electronic technology to simplify operation, reduce maintenance and provide exceptional efficiency and reliability.

CONTAINERS, LOADS AND TRANSMISSION LINES

Current transmitter technology has resulted in a significant reduction in the physical size of the modern broadcasting transmitter. A major benefit is that the range can now be supplied in conventionally-transported containers providing equipment that is fully system tested prior to despatch. Container fitted broadcasting transmission equipment is used in emergency, for national security, or for gap-filling at sites where the minimum of preparation is required.

It is now common practice for a transmitter station to house a number of transmitters on different frequencies and programmes with the line output of each transmitter combined into a common feeder and antenna. Marconi manufactures multi-channel combining units, interconnecting rf feeder and switches, transmission line equipment, filters and artificial loads to meet most applications.



STUDIO

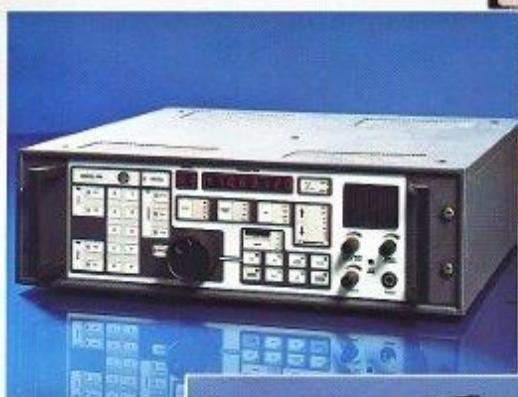
Telecine equipment from Marconi has been available for many years and the latest equipment combines full digital processing with microprocessor control. Charge Coupled Device sensors in a 100% solid-state equipment provide for exceptional picture quality, shorter set-up times and rapid changes of television standards providing long-life with minimum maintenance. Synchronisers are also designed and manufactured.

HIGH CLASS RECEIVERS

With over sixty years of experience in radio communication Eddystone Radio has earned an enviable reputation as a supplier of high quality radio receivers to professional users worldwide.

Eddystone Radio's high quality receivers make full use of microprocessor techniques and are in use by coast stations, news agencies, embassies, government offices, shipping companies and commercial users, with packages available for monitoring and surveillance, unattended operation and general point-to-point application.

All the equipment is built to a very high standard to meet rigorous defence specifications, and a continuous design and development programme has resulted in many advanced features.



TRANSMITTERS

The most important requirement of any broadcaster is to remain on-air. To achieve this high reliability Eddystone Radio employs a modular design concept in equipment manufacturing techniques.

The latest vhf/m transmitting equipment has, as the basis of its design, solid-state modules which are common throughout the range, thus providing greater logistic flexibility and allowing for the ease of upgrading. In addition, by including duplication modules in all the transmitters an extremely high standard of performance is maintained. Mono or stereo transmitters are included in the range with single or dual drives with remote control facilities.

Eddystone Radio also manufactures solid-state medium-wave transmitting systems using the same high level of reliability and has a proven track record with broadcasters worldwide.

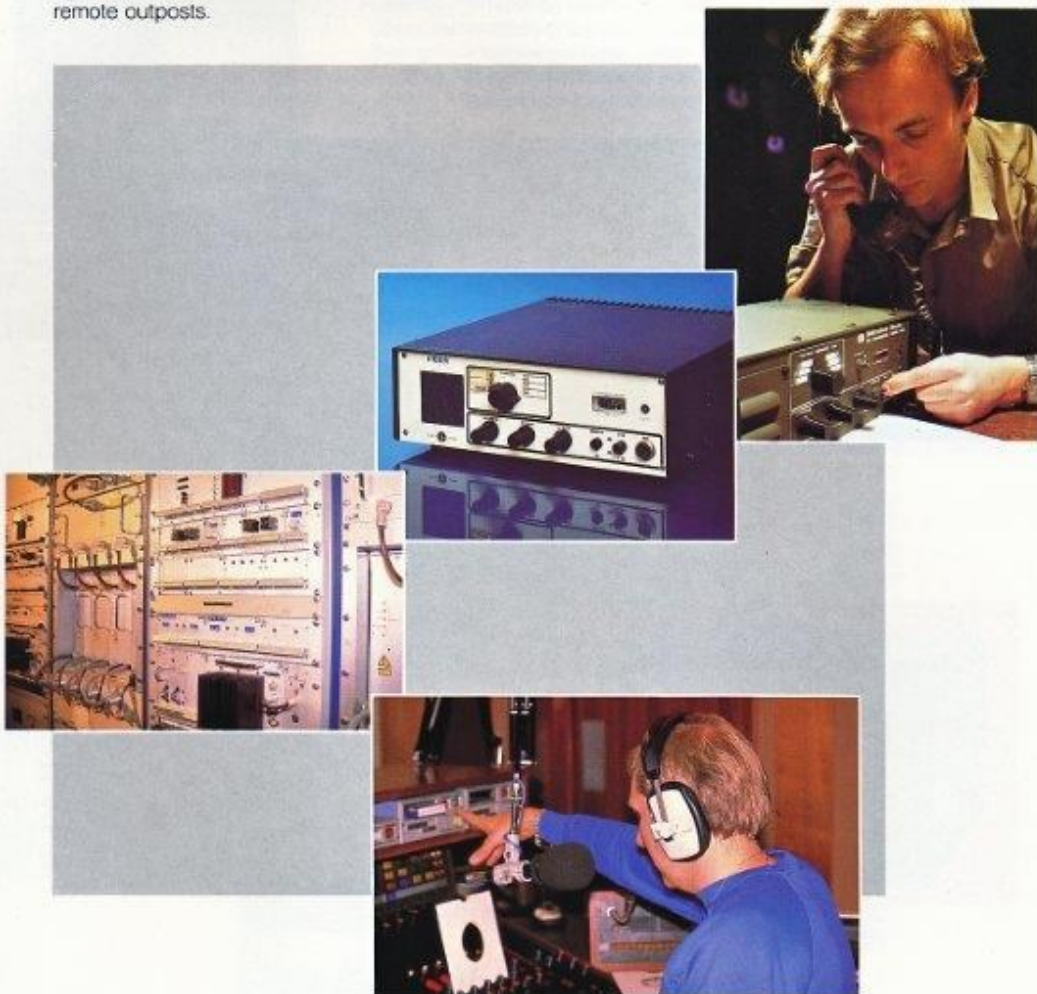
TRANSCEIVERS

The 'Orion' from Eddystone Radio is a single sideband hf transceiver which is fulfilling an ever-increasing demand for reliable, high performance, medium to long-range communications.

It has been found to be extremely suitable for any organisation requiring a reliable and readily transportable communication link such as oil companies, survey teams, agricultural authorities, medical teams and remote outposts.

A comprehensive range of accessories including microphones, antennas, masts and installation kits is available to make the 'Orion' a complete communication package.

The equipment is also available in a ruggedised form to meet the exacting demands of the para-military and law enforcement user.



SYSTEM CAPABILITY

Eddystone Radio provides a total system capability offering advice and planning for any radio station, including supplying remotely controlled radio links between studio and transmitting sites.

A Radio Data System (RDS) is offered providing the listener with extra digital information to accompany programmes within an 'out-of-band' slot on the fm programme channel. N + I systems, that achieve automatic switching to a hot standby transmitter, can also be supplied.

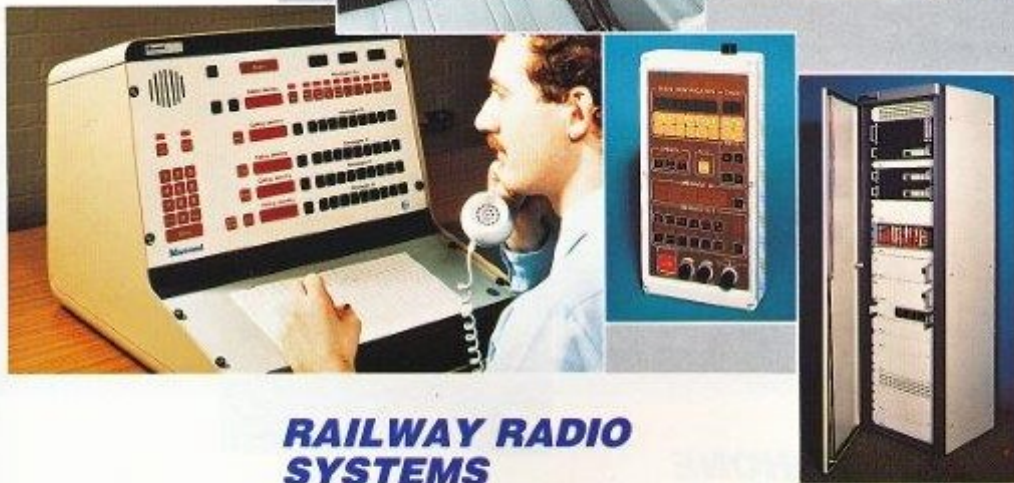
Eddystone can also provide monitoring receiving systems covering the long, medium or short wavebands and vhf/fm Band III frequencies. Transmitter Input Equipment (TIE) and Programme Input Equipment (PIE) can be engineered to customers' requirements.

MOBILE COMMUNICATIONS

Marconi mobile communications began in 1901 when Guglielmo Marconi conducted his first experiments into wireless telegraphy from a mobile base. However it was much later that the value of mobile communications became apparent mainly for the emergency services, particularly for the police, whose demands for ever-improving communication services have led research and development to the present day.

The Company has been continuously involved since the early days and more recently was awarded a contract for 20,000 radios and 600 base stations by the Home Office for re-equipping the police and fire services in England and Wales.

The suppliers of gas, water and electricity are now entering a new era of mobile communications. To overcome the problems of congestion, poor reception and interference the introduction of today's trunked systems adds a new dimension with the prospect of sending data and messages to vehicles equipped with the latest Marconi mobile equipment.



RAILWAY RADIO SYSTEMS

Fast, reliable two-way radio communications between train controllers, drivers and guards provides added safety and efficiency to a railway network.

Marconi has developed a range of equipment for this application which includes mobile communications based on the recommendation of the UIC (Union Internationale Chemin de Fer). The equipment is internationally compatible and includes digital message facilities. Central Train Control can locate and speak with drivers of trains and stations in the railway network using multi-frequency working and waystations.

Also available is the well-tried token-block system in which drivers' tokens are exchanged to confirm that the track ahead is clear. This method has been maintained in principle but now the tokens are electronic. Trackside beacons, controlled from a central computer, pass electronic tokens to and from the locomotives ensuring clear passage for the train.

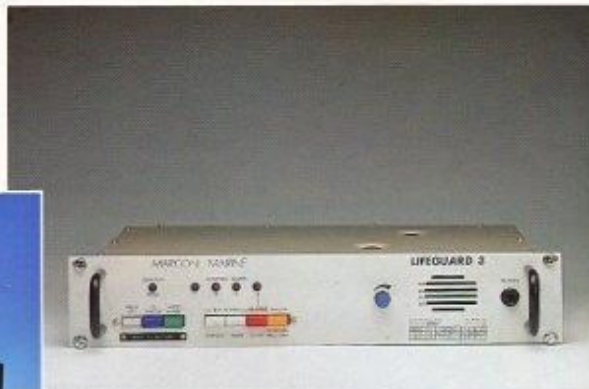
Less sophisticated systems are available engineered to meet the needs of individual railway companies. They can be simplex or duplex in operation, with central and local control or even simple driver-to-guard communications.

NAVIGATIONAL AIDS

Vital event data related to a ship at sea is of prime importance to the master of a vessel whatever its size. It may be a weather forecast, navigation or hazard warning, positional information, search and rescue alert, or in some instances the position of a fish shoal.

The Marconi Marine range of navigational aids conforms to IMO standards. These include Loran C and Navetex equipment providing continuous high precision positional information for coastal and deep-sea navigation, and international weather hazard and coastal navigational information.

Automatic direction finding is provided by Lodestar which also covers the international distress frequency conforming to EPIRB regulations.



LAND EQUIPMENT

INMARSAT is the international satellite organisation which operates a system of satellites worldwide to provide an instant high-quality communication service for ships and certain offshore installations.

Satpax, manufactured by Marconi Marine, is a compact, easily transportable satellite terminal for use on the INMARSAT system. It can be used for telephony, telex, data, vhf/uhf patching and slow-scan television, and is a lightweight system that can be carried by one man. Satpax is already being used for the co-ordination of rescue operations, searches, expeditions, news gathering and reporting.

An equipment that has proved to be successful on shore as well as at sea is the Oceanlink transceiver system. This highly adaptable system is now being used for providing shore-to-ship communications from coast stations and in point-to-point communication links.

COMPUTER SYSTEMS

Marconi experience in providing a total computer system and software packages goes back over twenty-five years. This has embraced a broad range of systems within the sphere of real-time communications ranging from small embedded systems to the full specification, design, development, installation and commissioning of complete turnkey projects.

Total system development is carried out from the initial concept throughout the planning and development phase to post-design and maintenance following handover. Multi-discipline integrated communication projects are undertaken and the company has the full backing of GEC, one of the largest electronic groups in Europe, making it a formidable force within the computer systems field.

To ensure the continued efficient operation of the system customers' engineers are able to benefit from comprehensive training programmes tailored to meet their particular needs. These can be from basic principles to an advanced course, on-the-job training or working with company engineers in the system development team.



MAESTRO — NETWORK MANAGEMENT

Marconi 'Maestro' network management systems can be tailored to meet many advanced applications with a wide range of features. They are designed to suit many users such as Telecommunications authorities, armed forces, paramilitary organisations, utility services, local authorities and corporations.

'Maestro' can be provided as a completely new system or can be integrated with existing networks. Software and computers are provided to obtain the highest degree of efficiency, with maximum economy. A user friendly colour graphics Man Machine Interface (MMI) is coupled to a highly efficient Relational Database

Management System.

Major items of equipment are divided into convenient elements at the design stage, the modular packages enabling upgrading to be incorporated with minimum disruption. Similarly, the modular hardware design enables repair by module replacement and a comprehensive set of spare modules can be provided for logistic support.

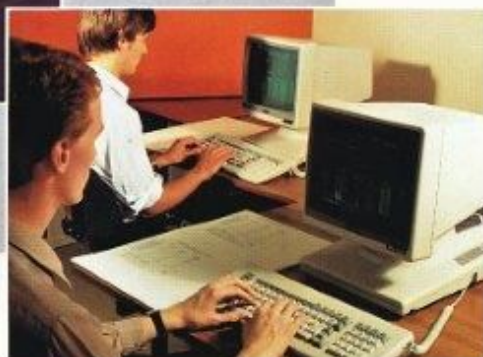
Handbooks are provided for all the systems from both operation and technical standpoints. Customer training on site or in the factory is available, attendees being provided with full documentation of their complete system.

MARSHAL MESSAGE SWITCHING SYSTEMS

Marconi 'Marshal' Message Switching systems have been supplied to civil and military customers in Europe, the Middle East and Far East to provide comprehensive handling for telegraph and telex messages working at a wide range of speeds and codes under distribution or centralised computer control.

'Marshal' Aeronautical Fixed Telecommunication Network (AFTN) systems comply with ICAO standards, and relay messages subject to a predetermined routing responsibility. Messages are checked for validation, filed and logged for either short or long term filing, and are automatically routed to their required destination by use of a powerful centralised dual-mode computer system.

In the basic system five main supervisory positions are standard and these may be concentrated into as many fixed positions as the operator may require. Optional features include a training position, the incorporation of CIDIN, and meteorological data. Standard application packages or a complete software design to customers' requirements are available.



'MAGISTER' — CONTROL AND MANAGEMENT

Providing a fully centralised facility for the control and management of remote sites, or the co-ordination of a number of sites, is possible with a 'Magister' system. Information can be provided as to the state of equipment at a remote site or allow for the switching of services from a central point.

Typically, 'Magister' has been used for full remote/local control of unmanned hf transmitter and receiver sites throughout the UK, Africa, the Middle East and in Europe for both civil and military authorities. Similarly the control and reporting of television and broadcasting equipment, the switching of services and ensuring that programmes are maintained, has been provided to broadcasting authorities in various parts of the world.

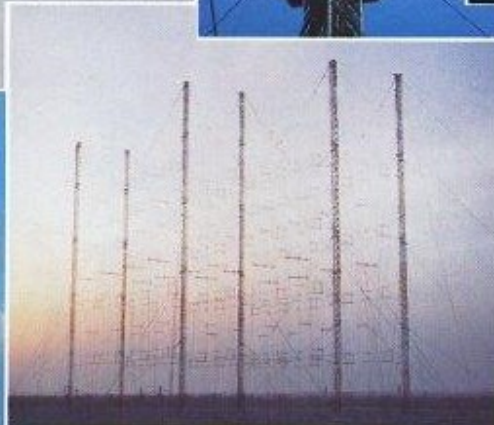
Another use that is well proven is the comprehensive control and supervision, switching and maintenance of telecommunication equipment. This is a service that has been provided in the UK, Europe, the Far East and Australia.

BROADCASTING ANTENNAS

Since the dawn of broadcasting Marconi has been in the forefront of antenna design. The current range, from the high-power medium-wave Yagi, with its highly directional radiation pattern, to the 50kW medium wave umbrella design, is unrivalled by any other company in the world today.

In addition to the basic antenna a comprehensive range of associated equipment is available including transmission lines, matrices, multi-channel combiners and support structures.

With any broadcast system the antenna is a critical element and the Marconi high-power, wide-band, wide-slew curtain array has been the first choice for many broadcasting authorities.



COMMUNICATION ANTENNAS

Cost-effective high-performance antennas, covering frequencies from lf to uhf, are provided for a wide variety of applications for both permanent and fast deployable strategic roles.

A comprehensive range of hf antennas is available for point-to-point communications over short, medium or long distances, the latest additions being the compact high-performance designs capable of front-line military roles. At the high end of the frequency range tropospheric scatter antenna designs are available capable of

operation in harsh environments as encountered on an oil-rig installation or in extremes of temperatures. For tactical military operation the Tactrop antenna forms part of a complete systems package. Cleverly constructed as a compact trailer it is capable of being transported in a C130 type aircraft, and can be deployed in less than thirty minutes.

SYSTEM PLANNING

Marconi offers a complete capability in antenna systems planning covering all aspects from propagation analysis, site survey and selection of structural analysis, equipment designs, manufacture, installation and commissioning through to maintenance services. This total capability ensures that the customer has the correct antenna system to achieve his individual service area requirements.

The key factor of any antenna's performance is an accurate prediction and analysis of the dominant modes of propagation. An extensive suite of propagation computer programs has been developed and refined over the years to provide accurate predictions.

Computer-aided design and manufacturing techniques are used to determine the electrical and mechanical parameters for the production of antennas. Structural analysis programs are used to compute the loading and deflection characteristics of the antenna and associated structures under actual environmental conditions.



MAINTENANCE AND REFURBISHMENT

Many early Marconi medium-wave broadcasting antennas built in the 1930s and many hf systems built in the late 1940s and early 1950s are still fully operational because of the maintenance services offered by the company.

This is a service in addition to regular maintenance duties carried out by station staff, thus ensuring that the antennas continue to operate at maximum efficiency with minimum cost of ownership.

In the last few years Company engineers have been involved in a number of

programmes such as replacing components; repainting steelwork of antennas often in salt-laden atmospheres; refurbishing broadcast hf antenna farms and incorporating the latest improvements to the impedance matching; fitting new remote-control systems; and replacing old uhf television transmission antennas whilst accurately reproducing the original radiation patterns.

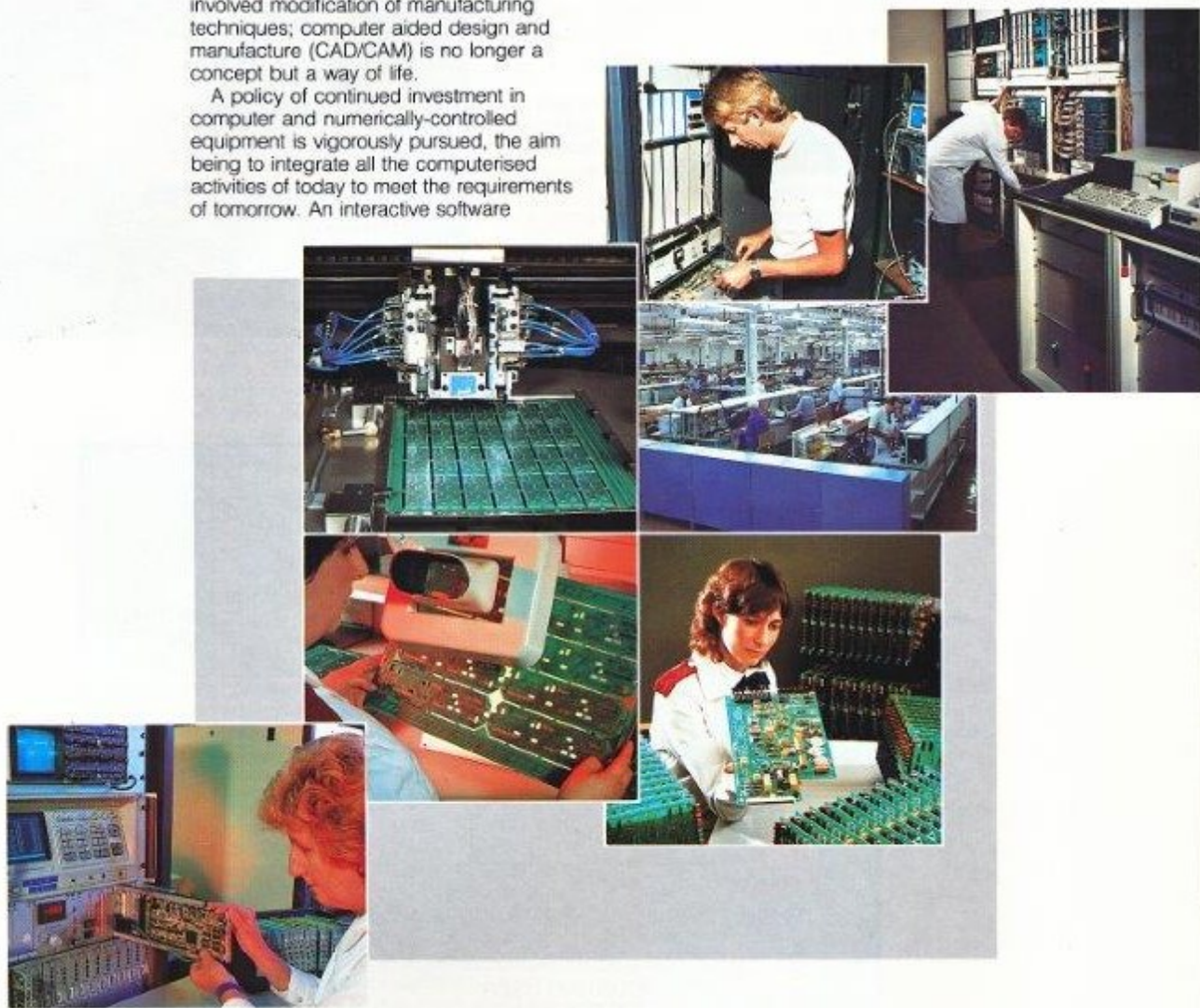
MANUFACTURING

As the printed circuit board has taken over from the metal chassis so production requirements have changed. Miniature components, microchips and integrated circuits are now being mounted by computer controlled machines on multilayer boards.

In recent years this change has also involved modification of manufacturing techniques; computer aided design and manufacture (CAD/CAM) is no longer a concept but a way of life.

A policy of continued investment in computer and numerically-controlled equipment is vigorously pursued, the aim being to integrate all the computerised activities of today to meet the requirements of tomorrow. An interactive software

package for manufacturing control provides a reduced stockholding, shorter lead times and increased productivity. The result is the manufacture of a competitive high-quality product – the sort of product that is associated with the name Marconi.



QUALITY

Stringent measures are taken by the company to control the quality of its products. Indeed quality and reliability are engineered into equipment from the start of any product or project by the close co-operation between the production and design teams.

Test and inspection facilities form an integral part of the production process from the receipt of raw materials to final despatch, with quality control being exercised at many stages.

The company has been assessed by the Ministry of Defence to AQAP1 and AQAP13. It also carries, amongst others, approval to BS9000 and second party approval to BS5750.

GEC MARCONI RESEARCH CENTRE

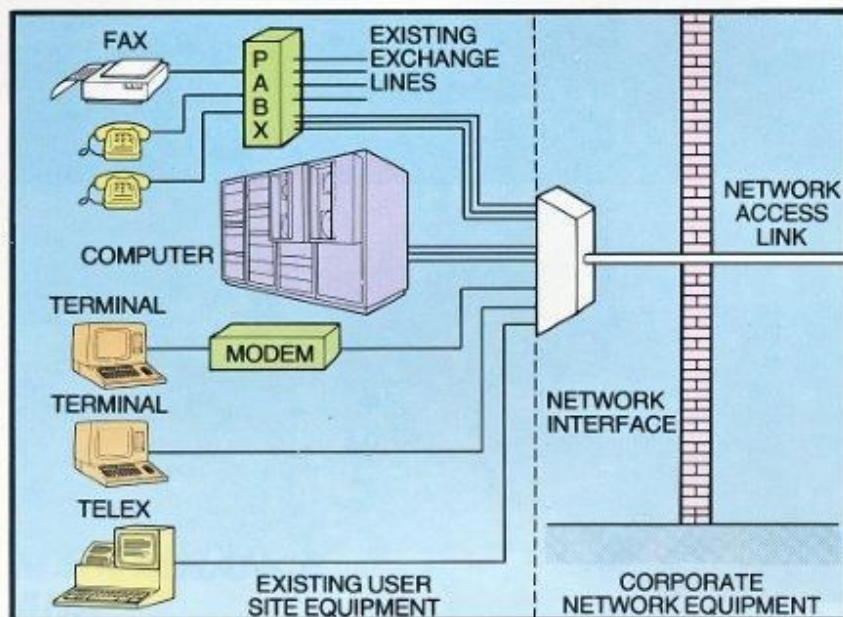
A centralised facility, one of Europe's largest industrial research organisations, is maintained by GEC-Marconi. Here, specific research programmes, sponsored by companies within the group, are carried out. Its specialist laboratories have a staff of highly qualified people, 70% or more holding engineering or scientific qualifications.

Within the centre the Communication Research Laboratory is devoted exclusively to research on communications and this is sponsored and managed by Marconi Communication Systems. Other laboratories specialise in such subjects as antenna design, propagation, mechanical engineering, microwaves, applied physics, material application, industrial automation, software research and microcircuit techniques and assemblies.

All these facilities are relevant to the interests of Marconi Communication Systems and the company is able to draw readily on these combined resources.



G-NET



TYPICAL G-NET CONNECTIONS

GEC comprises about 130 companies and establishments located at over 160 large sites throughout the UK. Between them they use 48,000 telephones, 10,000 data terminals and nearly 200 private telephone exchanges of various types.

G-Net is the corporate network that has been established to meet the communication needs of GEC. Provided, operated and managed by Marconi Communication Systems, it is a digital service handling voice, data and facsimile services between the major GEC sites in the UK.

Within Marconi Communication Systems a central department ensures that there is a clean interface between G-Net and the various departments and divisions of company. This department controls all the local interfaces, such as computers, telex and telephones, and provides advice on the use of computers.

SUPPORT SERVICES

All projects, large or small, require some form of support and it is to meet this need that Marconi Communication Systems has a number of departments to provide the back-up to equipment sales. Each has its own expertise with the added advantage of being able to call other areas, within the company, to supplement services when applicable.

The departments cover:

- Spares
- Customer services
- Technical information
- Post design service
- Installation design
- Installation and maintenance

SPARES

The primary objective is to ensure that a fast and accurate supply of spares is available for equipment manufactured or supplied by the Company for an agreed period, and to identify parts and find substitutes for those no longer in production. The Department will also provide technical recommendations for the stocking of spares for maintenance purposes.

CUSTOMER SERVICE

With today's high technology equipment and systems it has become essential that a very close liaison is maintained with the end user. This link is supplied by the Customer Service Department whose personnel will carry out all contractual commitments during a warranty period and offer advice and assistance at any time. The latter particularly applies when a customer has been operating obsolescent equipment for many years.

POST DESIGN

Continuity of design and development is an essential part of product support. Post design contracts undertaken by Marconi Communication Systems for both government and commercial organisations encompass regular advice on equipment modification, post-design developments and the issue of documentation for the continual update of customers' equipment.

TECHNICAL DOCUMENTATION

Handbooks and maintenance manuals enable the customer to operate and maintain systems and equipment successfully. These are produced by technical authors, working in close collaboration with design and development engineers, and backed by a specialised drawing office which provides comprehensive handbooks to meet a customer's requirements.

INSTALLATION DESIGN

A comprehensive set of information on the installation of an equipment or system is in many instances not just a requirement but a necessity. It can be extremely difficult to install a major communication system for the first time, even more so when many miles from the nearest civilization.

Working in close collaboration with the customer, and his architect on the building design, a set of working drawings will be prepared covering equipment layout, system cabling, power requirements, air conditioning, water supply/cooling, waveguide and feeder systems, and schedules of installation material. This information can be as comprehensive as required depending upon the work to be undertaken.

INSTALLATION AND MAINTENANCE

Specialist engineers and technicians are employed to provide a complete installation and maintenance service to customers. This service can also include the installation and integration of non-Marconi equipment.

Engineers carry the work through to full commissioning and will undertake a programme of maintenance and training.

Marconi

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From time to time changes may be made in the products or in the conditions of supply.



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