

## Satellite earth stations in London's dockland

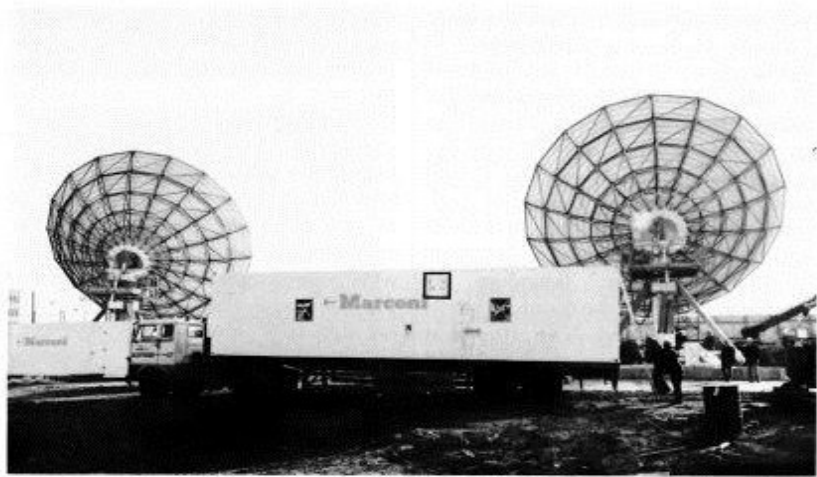
Engineers from Marconi Communication Systems are at present working on two different projects that will bring the space age to London's dockland.

On the Isle of Dogs, Marconi is supplying Mercury Communications Limited with two complete satellite earth stations to provide international links for leased-line and other switched services. One station will link to North America via the INTELSAT V satellite, using a 13m diameter dish antenna. The other station, with an 8m dish, will provide a service to Europe.

At Woolwich, Marconi is supplying British Telecom International with three terminals, each with a 13m antenna. Again the link will be via INTELSAT V and also the ECS satellite. By the substitution of a few components, any terminal in this project will be capable of assuming the role of one of the others.

Ground communication equipment will be fully duplicated in both these projects.

Both orders are now well in hand. At Woolwich the first antenna and the container with the ground communi-



*The second container seen on arrival at BTI's Woolwich site. The first can be seen in position at the left of the photograph with the first two of the three antennas in the background.*

cation equipment are in position, and work has started on the second antenna.

In addition to these two projects, Marconi has received an order from Mercury Communications for the supply of a complete earth station for the first terminal to be built at a site

near Kidlington in Oxfordshire.

On completion of these projects, Marconi will have been involved in the installation of over 22 separate earth stations in the UK. At Goonhilly and Madley, Marconi engineers are at present working on seven new systems as well as updating the existing terminals.

Communication and Broadcasting - March 1984

## Another Marconi satellite earth terminal completed on time

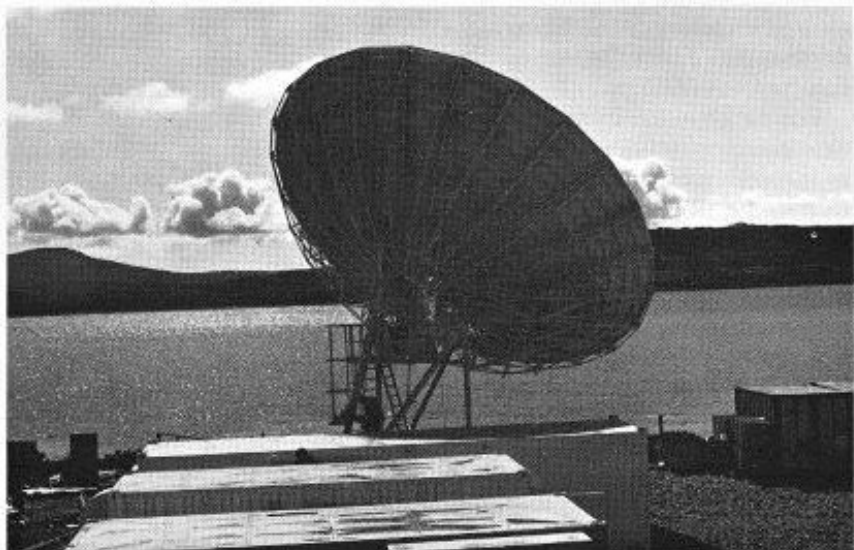
Marconi Communication Systems received an order from Cable and Wireless for the supply of a containerized satellite earth station for the Falkland Islands. This was to provide improved communications with the outside world in general and the UK in particular, and had to be operational in time for Christmas 1983.

The station was on the air and operational seven days before Christmas, one of the first telephone calls being back to the Marconi project office in Chelmsford, UK.

In order to be set up during the Falklands summer the container left the Marconi works in July 1983. Meeting this very short delivery time meant 24 hours-a-day working in Chelmsford

and also involved Marconi engineers in the long journey out to the Islands to

ensure the telephone links being open in time.



*The earth station at Port Stanley*

## Marconi communication equipment for Operation Raleigh

Marconi Communication Systems Ltd. of Chelmsford, UK is to provide communication equipment from its latest range for the participants of Operation Raleigh.

Some 4000 youngsters on the four-year long, around-the-world series of land and sea expeditions will be the first people outside the defence and commercial world to take advantage of these very latest high-technology radios.

The equipment was shown to the Prime Minister of the UK, the Rt. Hon. Margaret Thatcher, MP, by Mr. K. Paul Robinson, Managing Director of the company, when she attended an Operation Raleigh lunch in London on 25 January.

Ship-to-shore communications will be provided by the Marconi Makaira tactical marine radio system which, since its international launch last October, has met with considerable and growing interest on the part of both operators and shipbuilders.



## Marconi wins significant ICAO contract

Marconi Communication Systems has won what it considers to be a significant contract with the International Civil Aviation Organization (ICAO) for the very latest message switching equipment.

The order, which comes after intensive international tendering, is for Marconi Marshal, a store-and-forward message switching system for use in the Aeronautical Fixed Telecommunication Network (AFTN).

The AFTN is a unique world-wide data communication network which, as it carries communications relating to the safe movement of air traffic, must have a highly reliable and trustworthy message handling system.

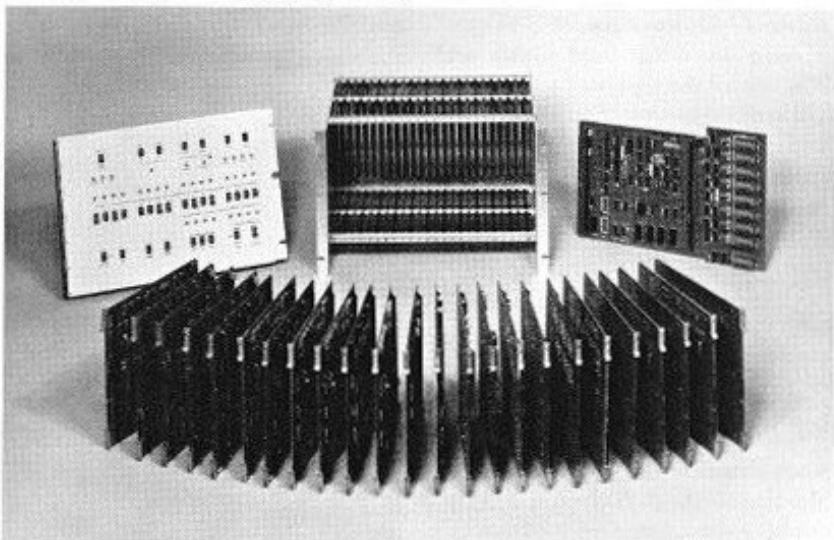
Located at Rangoon, Burma, the system will comprise a single processor with dual disc storage which can accommodate 16 telegraph subscribers in the initial configuration, with a capability of future expansion to a maximum of 112 subscribers.

This automatic AFTN system is one of the new Marshal range of store-and-

forward equipments which are also available in a duplicated configuration with automatic changeover facilities.

Included in the range is a distributed system whereby a number of Relay Nodes can be geographically

separated and linked together using a wide variety of standard data bearers to form a fully adaptive distributed store-and-forward message switching network.



*The Marconi U7000 microprocessor system which is incorporated in the Marshal AFTN Message Switching System.*

## Military digital communications for the Falklands

Engineers at Marconi Communication Systems Limited, Chelmsford, are at present working on a major order from the Ministry of Defence (MOD) which will provide a fully digital line-of-sight, high-traffic-capacity communication link around the Falkland Islands.

It is believed that this is the first military system designed for digital transmission from the outset.

Marconi, as the System Installation and Design Authority, will be providing an all embracing system of communication cabins, fully containerized power generating units with monitor and engineering being supervised via a comprehensive system control cabin. Complete spare installations are included as part of the supplied system.

The first cabins are to be shipped in March 1984 and installed before the Falklands winter sets in, allowing the release of Army personnel who are at present operating on remote sites. The final shipment is scheduled to leave Marconi's Chelmsford base by the end of September 1984.

The communication cabins house the digital microwave radio, multiplex, and microprocessor-based supervisory equipment, together with fire suppressors, batteries, and transmission items. In many instances, the antenna towers are attached to the cabins to minimize on-site civil engineering – a very important factor in the Falklands. The system is designed to work virtually unmanned in the harsh South Atlantic environment. All supervisory and fault

alarm information from the sites will be linked back to the System Control Cabin based near Port Stanley, enabling control of the whole system to be carried out by a two-man team. The System Control Cabin also provides the interface of the network to the Marconi-supplied satellite ground station.

The rapid manufacturing turnaround at Chelmsford was assisted not only by the co-operation of British Telecom, who released some of the digital equipment items required for the project, but also by British industry

which provided the necessary subcontract items and by the MOD's progressive attitude to Project Management.

The present system of communications in the Falklands is based on the highly successful military Triffid system, already supplied by Marconi to the MOD. The new system will significantly reduce the number of men required on the Islands, and relieve the few that are left of much of the cold and boredom associated with manning exposed remote sites.



*Interior view of the equipment container.*

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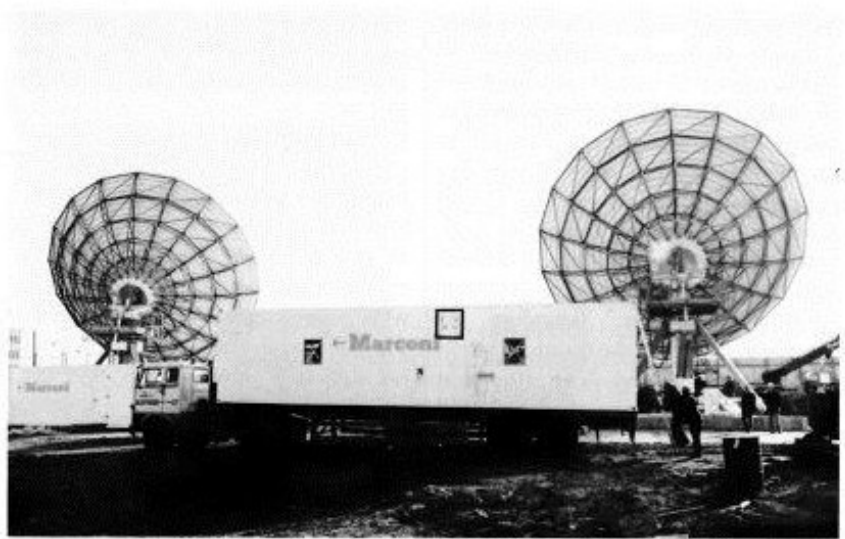
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