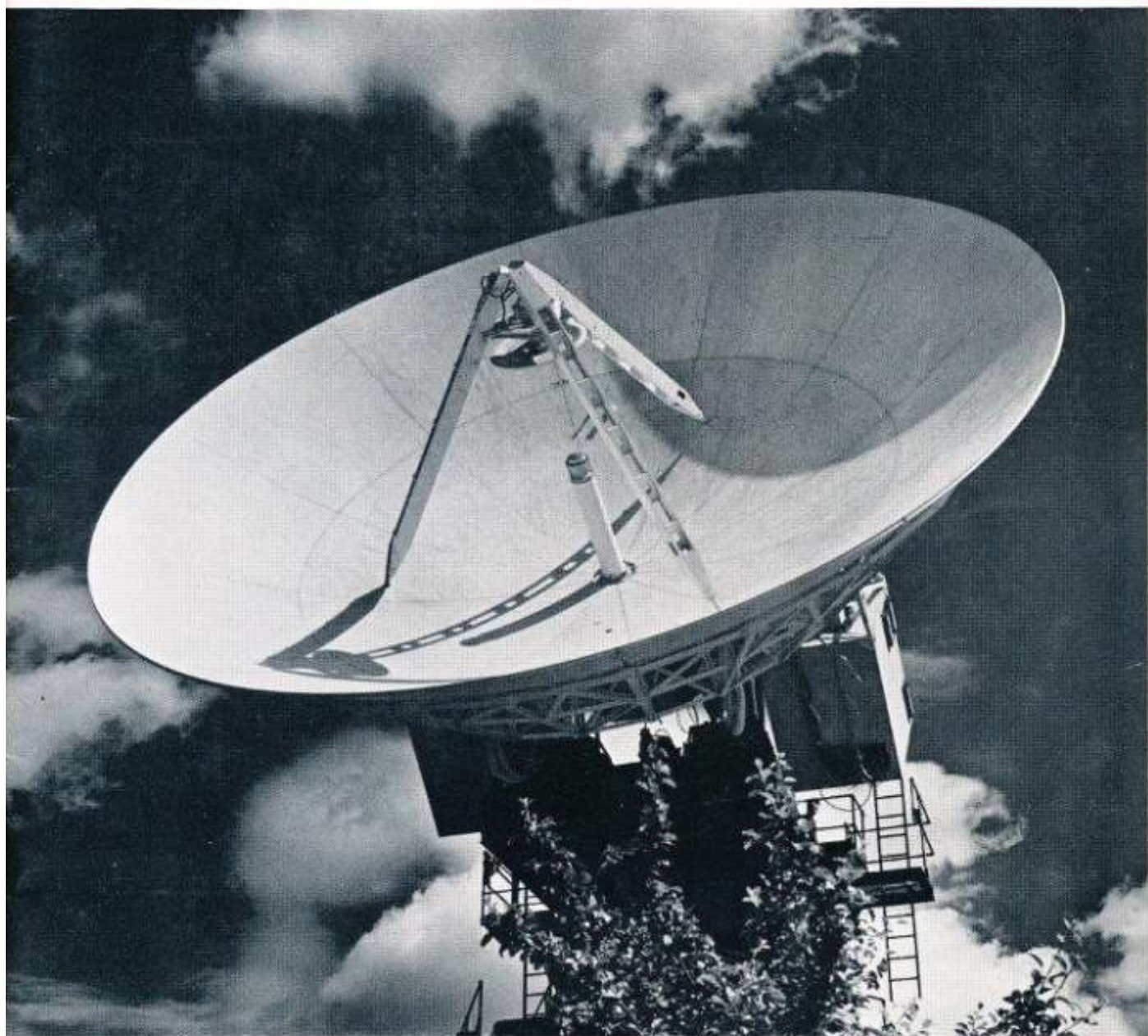


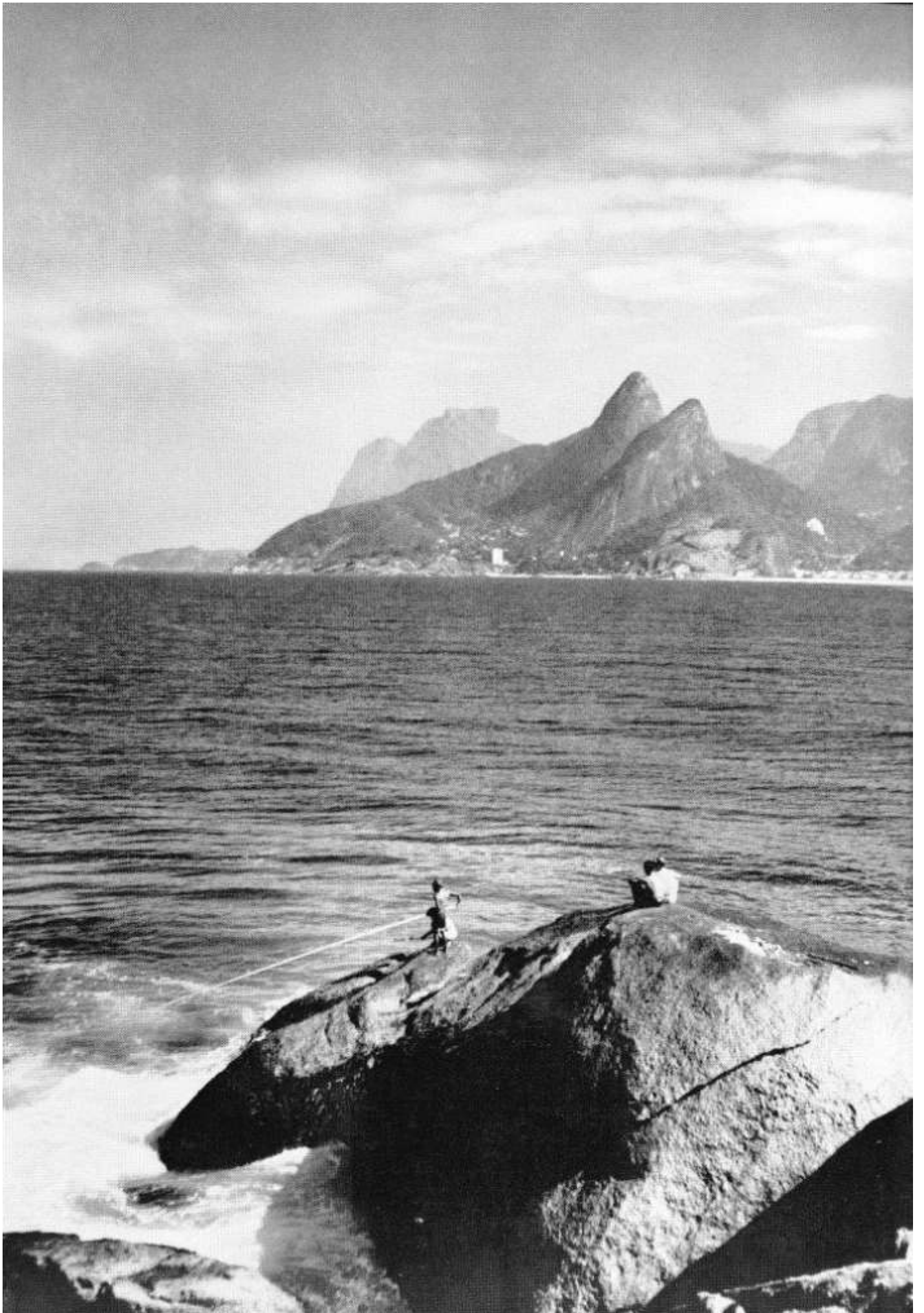
N.E. MARTIN

# Marconi

companies and their people



Volume 17 Number 4 November 1966 Sixpence



## Thumbs up!

Thumb through the pages of this issue and you will see that the features on work we are doing show that the Company is 'sticking its neck out' to get its share of international business, and to bring the work back home. They show, too, that we have tons of guts, and that we can turn out the right stuff on time. This is the only way to get business and to make the community secure—our community in which we all depend on each other.

Sir John Macpherson, Chairman of Cable & Wireless, sends his grateful thanks to all concerned with Apollo. We also thank him for the opportunity to do the job.

## Marconi Doppler Navigator selected for transatlantic air service

The Marconi doppler navigator has been selected by the Portuguese international airline, Transportes Aereos Portugueses, as the primary navigational aid for their new Boeing aircraft.

This order follows a period of three months of completely trouble-free evaluation of the equipment by TAP. Their aircraft are flying on routes down the west coast of Africa, and across the Atlantic to South America where ground-based aids to navigation are almost non-existent. Therefore, Marconi doppler equipment which provides accurate navigational information, without contact with ground aid, will be of vital importance.

Experience has shown that an aircraft using the doppler navigator will arrive within five miles of its destination after an Atlantic crossing.

These navigators have already been ordered by Air New Zealand, East African Airways, Ghana Airways, Qantas, and Iraqi Airways, as well as BOAC.

LEFT: Rio de Janeiro, the commercial hub of Brazil, and the most important terminus on TAP's South American route, has a rugged coast backed by mountains. At the harbour mouth the famous Sugar Loaf rises 1200 feet, and the jagged peak of Corcovado juts 2300 feet from the city

# Marconi

An 'English Electric' Company

## The Marconi Companies and Their People

Editor: L. W. B. Miller, M.A.I.E.

New Street, Chelmsford

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### Front cover

The aerial of the Marconi-built satellite communications station, now set up on Ascension Island in the South Atlantic in readiness for the Apollo project. See Reaching a milestone on time, Page 2

Marconi doppler navigators will be used on transatlantic routes by Transportes Aereos Portugueses. This is a TAP Boeing 707-320 over Rio de Janeiro





# REACHING A MILESTONE ON TIME



**T**HE task of designing, building and installing Britain's first overseas civil satellite communication station on Ascension Island in less than a year, presented a fascinating and unique challenge to show the world what Britain could do. That the project has been accomplished in the time prescribed is due, in no small measure, to the enthusiasm and whole-hearted co-operation between Marconi's and Cable & Wireless.

These words opened the leading article in *The Times Supplement* on the Ascension Island earth station when it became operational, and this is the station, built by Marconi's, which will provide the essential communications between the Apollo tracking station in Ascension and the central N.A.S.A. control in the United States. It is one of the links by which the astronauts in the Apollo spacecraft will speak to their controllers while travelling all the way to the moon and back.

The Marconi teams who built this station and set it up on schedule have scored high points for Britain. Their progress has been of great importance to us all.

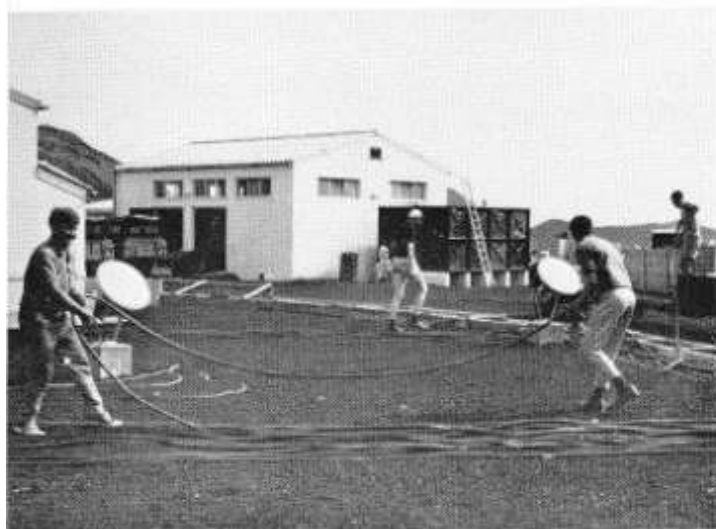
It was at Rivenhall that we saw the station assembled on test and then dismantled, crated by Transport and Packing and sent off to Felixstowe to be shipped by sea. It was met at Georgetown in Ascension by Ray Corduff, deputy site-engineer, and the aerial erection party, who with Cable & Wireless engineers organized the off-loading and transport to the site up in the clinker hills.

'We had to unload off-shore', he said, 'and bring the gear in on lighters. It was too risky for the ship to go in alongside though the water is deep enough, but any sort of blow would have sent great ocean rollers booming in to create havoc. As it was we had good weather and we gained time on the operation. We brought in 80 tons of equipment in crates, and the heaviest single hoist on to a tossing lighter was 11 tons. It was lifted off with the mobile crane in the same way as the other crates, and was carried up to the site on the low-loader.'

The aerial-erection party had arrived earlier in a specially chartered plane, and had already put up the gantry and pivot mount, a duplicate of the one at Rivenhall, in readiness for the aerial assembly. This they had done in five days.

*LEFT: The dish aerial outlined against the clinker hills of Ascension. TOP RIGHT: The last petals going up to complete the dish. In the foreground are Don Reed, David Oliver, and Dick Muir. BOTTOM RIGHT: Steve Mullen, right, is making initial tests on the order-wire and tracking receiver racks. George Costley is completing the co-axial wiring.*





*Laying cables out along the run are John Bryant, left, Paul Foy and George Costley*

Don Reed and the main party of engineers arrived as the crates of equipment were being brought up to the site from the jetty; stripped to their shorts, and with chisels and nail extractors, they got down to unpacking, so that erection could be carried on with the advantage of time won.

Day by day the main units went up: the central hub with the horn feed, the back frame, the inner ring of reflector petals, the tripod, the sub-reflector, and the outer ring of petals. The test run at Rivenhall had been a useful exercise.

With the invaluable long-boom crane from the

American base the transmitter cabins were hoisted and fixed, the catwalks assembled, and the parametric amplifiers lifted and fitted in position. The superstructure was completed on 14 August, ten days after the arrival of the boat.

The going was good: almost too good. In parallel with the aerial, work was also progressing on other important aspects of the project: the equipping of the operations room, and the two transmitter power-supply cabins, the running of the cables from these points to the mounting and to the transmitters and receivers.

When the cabling was finished on the aerial structure, and the azimuth and elevation banding formed, the second phase of the operation was complete. The aerial turned for the first time under power on 23 August, and the paramps were pumped down to their operating temperature of 15° Kelvin, -258° Centigrade.

We were ahead of schedule at this time. Everyone had good reason to be pleased with progress. But the main tests were yet to come, tests which would have to be done in co-operation with the satellite Early Bird, and although we had tracked Early Bird at Rivenhall, tests with it now would not be the same, as Early Bird was orientated towards Europe.

Preparation for the commissioning and acceptance tests had also been going ahead during erection with the installation of a satellite-beacon simulator on Command Hill. This provided the means of working up the tracking and search systems to operational standard and led to the first overall

*LEFT: M.V. Flut anchored off Georgetown after a voyage of twelve days from Felixstowe. The equipment was brought in on lighters. CENTRE: Legs for another step to the moon. The aerial-erection party get 'cracking' on the gantry. RIGHT: Removing the crating from the transmitter cabin in preparation for hoisting it into position on the back of the dish. Left to right, Barry Gannon, Cliff Barham and John Brett*





*The aerial-erection team—engineers and riggers. Left to right: Johnnie Thompson; Doug Clements; Peter Bowkett; Frank Quinn; Monroe, the American crane-driver; Harry Wilson; Billy Ash; Brian Marjoram, and David Oliver*

*BELOW, LEFT: The transmitter cabin being hoisted into position. The cabins rotate in azimuth and elevation with the dish. CENTRE: Robin Steele of Central Division with surveying equipment. He came over from the B.B.C. station at English Bay, where another Marconi installation team is at work. The two teams were able to meet and play football—on the cinders. RIGHT: The station, 'ops' room, powerhouse, and quarters from the approach road.*







*Sunday climb over the hills to Letterbox. Brian Betts with Don Reed in rear. If nobody has received a letter from them, then no ship has called*

test, on 9 September, when Early Bird was tracked.

Not everything went as smoothly now as we would have liked. There were teething troubles. These, only to be expected in a new installation of this magnitude, began to drain reserves of time dangerously, and time, in this situation, is as precious as water in the desert—you cannot get home without it.

The site engineers, while working out their tests, were in constant touch by Telex—and speech if necessary—with Keith Bolwell, Project Manager, in his Baddow H.Q., through Cable & Wireless in London. It is interesting to see the file of messages, with test charts sent home and analyses and information sent out.

The home-based engineers could come up in a comparatively short while, sometimes in only a few minutes, with answers for their front-line men thousands of miles away down in the South Atlantic. Thus Don Reed and his team steadily

*Ray Corduff, Deputy Site-Engineer, took all these photographs. In the distance is the finished station*





worked their way out of trouble, brought their station up to operational tune, successfully accomplished the commissioning tests, amassing a log full of signatures to show for them, and were ready on 16 September, with two days to spare, for the final and active run on Early Bird.

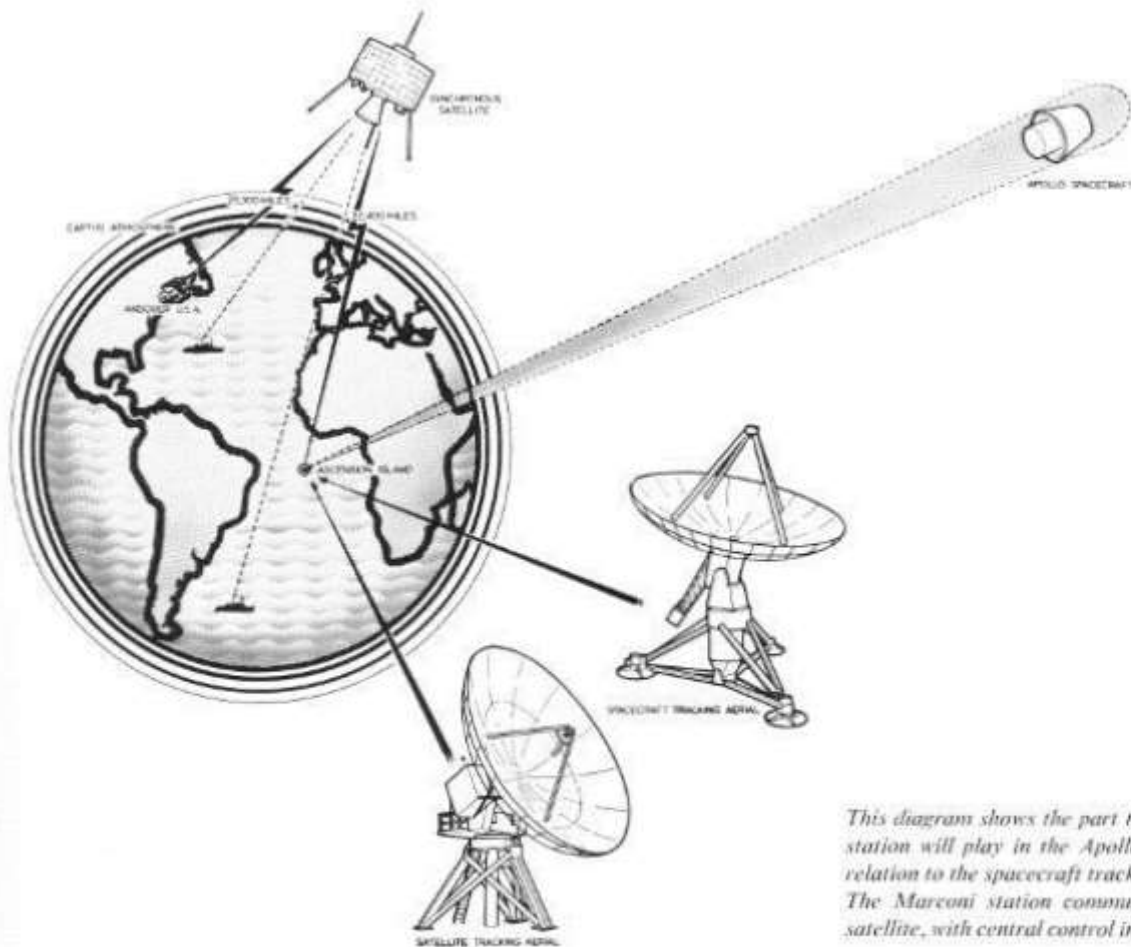
This went excellently for a full hour, between 8 and 9 a.m. on the 17th, and was witnessed by Cable & Wireless engineers. The reception of speech and teletype via the satellite was equally good. 'Speech,' said Ray, 'was crystal clear, no noise, no mush and free from interference. Far better than the phone from Baddow to New Street. 'The words', he said, 'came back within half-a-second of being uttered. That was the time they took to travel the 50,000 miles to the satellite and back'.

It was success indeed, for us and for the 'Saints' too, with the result that when the scientific work was over excitement broke through. St. Helenians (Saints), Chinese and various other nationalities working on the job were allowed to speak to the

satellite, and the words came back for all to hear in English, German, West Indian, Chinese, French, pidgin. . . .

The job was done; bang on time. Teleprinters began to click congratulatory messages; the first from Bill Quill, Manager, Space Communications Division.

On the evening of 19 September, the Chairman of Cable & Wireless, Sir John Macpherson, met our Managing Director, Mr. Telford, in Chelmsford. And afterwards Sir John wrote to Mr. Sutherland to say: 'I would like, on behalf of all of us in this Company, to put on record our very deep appreciation of all the effort which has gone into this by your people in reaching this milestone on time. It is indeed a magnificent achievement and I do know how much hard work and devotion to duty it has entailed. I should be grateful if you would kindly express our appreciation to everybody in your organization who has contributed towards this project.'



*This diagram shows the part the Marconi station will play in the Apollo project in relation to the spacecraft tracking station. The Marconi station communicates, via satellite, with central control in the U.S.A.*



LEFT: Mrs. Betty Mortlock making the colourful cableform which goes right round the voltmeter. She finds the special holder, made to contain the pre-cut wire, most useful. RIGHT: The power unit being assembled by Susanta Basu and the sub-assemblies being put together by Geoff Merrett, who also attaches the probes

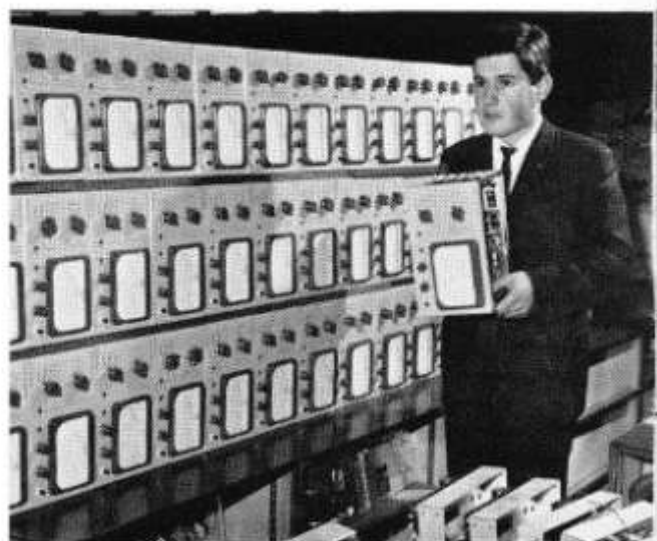
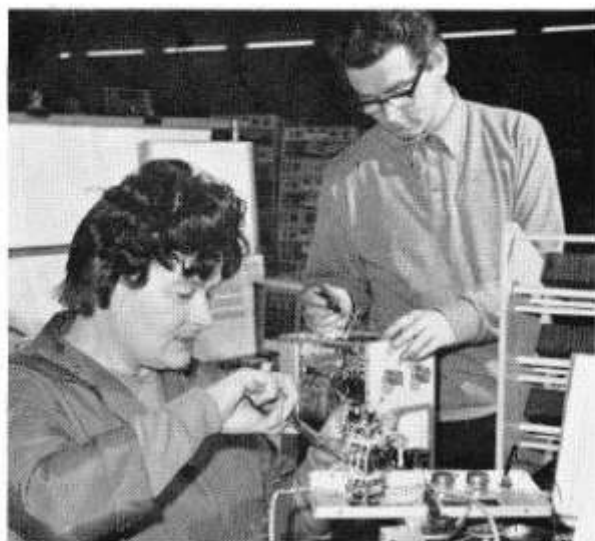
## Small voltmeter with a BIG potential

The first batch of the new electronic voltmeter TF 2604 has been made at M.I., and although many departments have been associated with its design, planning, manufacture and test, it was part of Group 831 which actually assembled it. So it was to them that we went with a camera.

This instrument, with its modern styling, excellent stability and high accuracy, is an improved version of the TF 1041 range.

The TF 1041 series of voltmeters was one of the most successful produced by the Company. Starting with the TF 1041 plain in 1954, and

LEFT: Another step towards the completion of a TF 2604 when Mrs. Gladys Pleitch wires the sub-panel switch. Eddie Higgs, inspector, with rubber stamp poised, checks the units and complete voltmeter. RIGHT: Geoff Merrett adds another TF 2604 electronic voltmeter to the others nearly ready to be sent to laboratories throughout the world



continuing up to the C version, introduced in 1960, approximately 7,000 were produced.

The current issue of *Marconi Instrumentation* contains a technical article by E. C. Crawford, M.I. Engineering, describing the TF2604, and we are confident that the new instrument, price £115, exclusive of optional accessories, will prove an even better seller than its predecessor.

## M.I. Fire Brigade

Normally we only see the M.I. Fire Brigade going about their duties of fire prevention. Fire-fighting duties are, however, practised every week. As a result of their achievements at the Regional Competition they took part recently in the National Finals Competition at the London Fire Brigade Headquarters.

The Industrial Fire Protection Association of Great Britain organized the competition, and the M.I. teams made the good times of 26 seconds in the Double Hydrant Drill and 90.8 seconds in the Hydrant Drill, Wet.

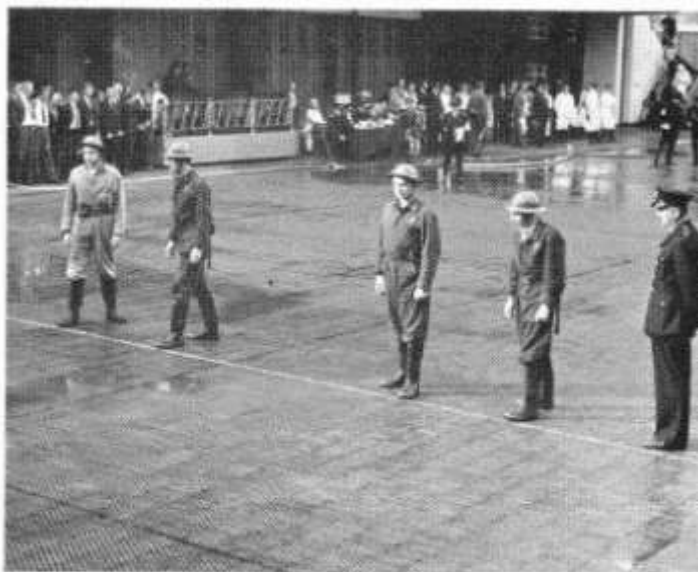
## Apprentices at M.I.

Because they have just finished their apprenticeships George Parnell, Alan Upson and John Fursman had to vacate their positions on the M.I. Apprentice Association Committee, and the apprentices thank them for their efforts.

At the first meeting of the new committee, members' positions had to be decided. Arthur Bartram proposed, seconded and democratically elected himself as chairman. Now he has to return the chairs after each meeting. The next position was that of social secretary. Geoff Harman was proposed, seconded, and after his anguished cries were stifled, was persuaded by a majority vote.

Because of his vast knowledge and experience it was agreed that John Arthur should be vice-chairman (also treasurer). The position of minutes secretary presented a problem but after stringent tests, and the fact that his handwriting could be read by other people, Derek Matthews won 'hands down'.

Richard Penn's suggestion that he should continue as tool-club secretary was agreed upon after it was realised that he was the best man for the job. Absent from the meeting was Richard Morris, and so to teach him to turn up at future meetings he was put in charge of the apprentice stores. As only



*At the London Fire Brigade Headquarters the M.I. team line up for the Hydrant Drill, Wet. Left to right: Leading-fireman R. Windmill, Firemen M. Shepherd and E. Higgs, Leading-fireman L. Windmill and Station Officer R. Cross.*

Paul Erasmus was left he was the obvious, if undesirable, choice for general secretary.

An apprentice dance has been arranged for Saturday, 19 November in the canteen. Two groups will be appearing and there will be a licensed bar for those who do not like to waste time on the dance floor.

G.H.

*All correct. Fred Tutt, inspector M.I. Printed Boards Section, checks the placing of the components on the pre- and main amplifier board of the TF 2603 R.F. electronic millivoltmeter*







*From Chile to Chelmsford to see MST equipment came Señor J. Feyto, right centre. Here he is with N. E. Davis, now retired, left centre, and H. Hall and E. H. Davies of Radio Communications Division. (Mr. E. H. Davies is on the right)*

## AULD ACQUAINTANCE NE'ER FORGOT

An engineer who started as a boy in the Spanish Marconi Company came to Chelmsford recently from Chile where he is General Manager of Transradio Chilena.

Señor José Feyto, whose company is a most successful operating company in Santiago, came specially to see our new MST equipment and spent several days with Radio Communications Division.

Not only did he make a thorough investigation of MST, but he had the opportunity of renewing friendships made forty years ago.

As a boy he had not wanted to go into his father's business, and father had said that he would give him one year's training; that was all. So José Feyto took the exam for the Marconi School, passed in fifth out of several hundred competing for the forty vacancies, and passed out top at the end of a year.

He joined the Spanish Marconi Company in 1914. His chief was S. R. Groser who, as a Marconi engineer, later operated the Posts and Telegraph Service in Peru. He was given the opportunity of going to sea as a wireless operator, which he thoroughly enjoyed, though he came ashore to take an appointment at the Aranjuez (Madrid) station. For a number of years he worked both there and at Barcelona.

With the advent of short-wave communications,

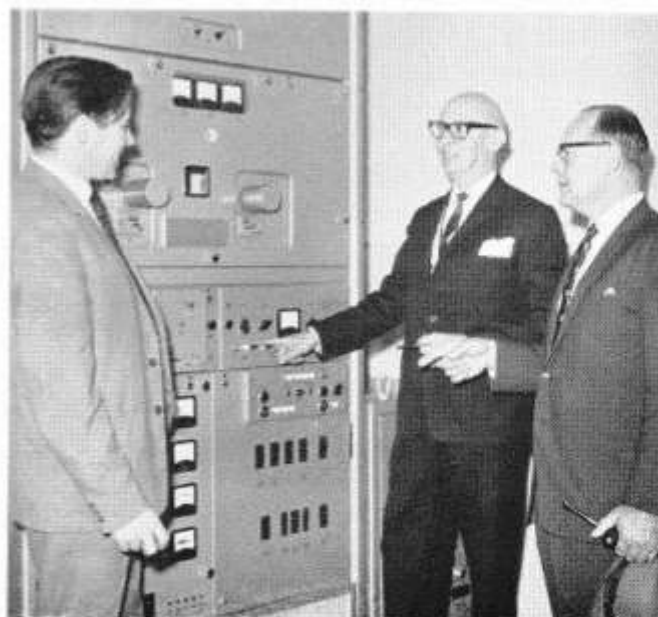
the Spanish Operating Company reorganized its systems to work on an international scale and modernized its equipment. New transmitters and receivers were ordered from the Marconi Company in Chelmsford, and N. E. Davis went to Spain in 1926 for two years to put in the equipment. It was during that time that Señor Feyto and he came to know each other very well. Not long after this job was complete Señor Feyto transferred to the Spanish Company's station in the Canary Islands where he was manager until 1936 when the Civil War exploded in Spain.

He came to England and to Marconi College, took a refresher course to bring himself up-to-date on communications equipment, and then he left for Chile to join Transradio Chilena.

Now thirty years later he has been back to Chelmsford again to bring himself up-to-date, not on a course at the College this time, but by seeing for himself the new MST communications equipment he has heard so much about.

Transradio Chilena is up against severe competition from other traffic companies, he said, and the only way to ensure a profitable business is to maintain the services at the peak of efficiency. His company has used Marconi equipment for years, relies on it, and expects our new equipment and

*Señor Feyto at the College where he came for a course thirty years ago. He was shown round by John Gorrie, left*





service to be of the same calibre. On the strength of this, Señor Feyto is placing an order for MST equipment to the value of £100,000.

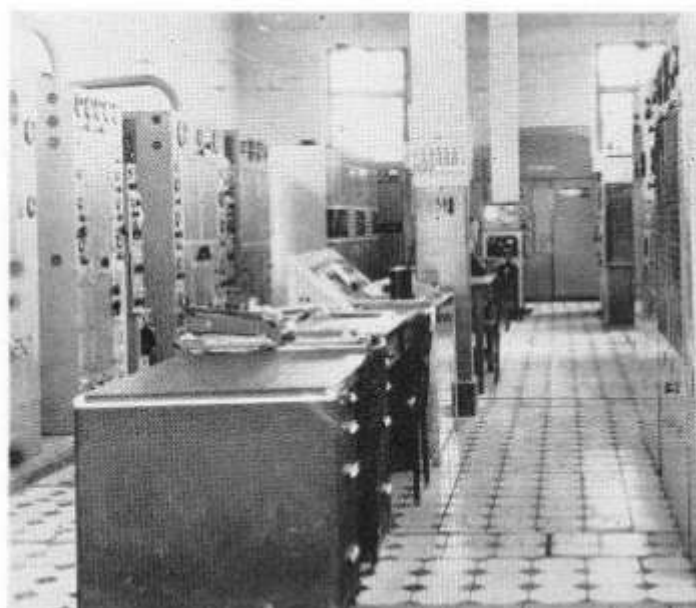
During his visit to Chelmsford we were able to gain an insight into the man who makes his business 'tick' by his genius and experience. Language was no barrier, he spoke English though he had not been to the country for thirty years and had never had tuition. 'I learn the words from the dictionary', he said, 'so that I read and write better than I can speak. But I had to listen very carefully to be able to speak.'

Señor Feyto explained that Transradio Chilena handles more traffic than any other operating company in Chile. The company operates telegraphic, Telex, and international telephone services, and also a radio-photo service. The largest proportion of this business is Telex as this system had been found to be as quick as the telephone but cheaper and more reliable.

Asked 'To what in particular do you attribute the success of your company?', he replied decisively: 'To a service of quality.'

*Chile is rich in minerals and is one of the leading producers of copper. This is a copper mine in the Andes near Rancagua south of the capital, Santiago*

*Marconi equipment has been used in Transradio Chilena's Santiago station for many years. Part of the installation*





## Tooling up to build new aerials

*Reorganization of Gateshead Works to meet the future*

New machine tools are being put in at Marconi's Gateshead Works with the express purpose of bringing the workshops up-to-date and of manufacturing aerial structures on an economic basis. This will help meet competition in sales of equipment overseas.

The reorganization will put Marconi's, Gateshead, on the map. This works is no longer known as Felling but as Gateshead, and the manufacturing organization there is now wholly aligned to the Marconi Company's products.

The Works Manager, R. Sherwin, told us that he is extremely pleased with the renewal and re-

equipping programme sanctioned by Central Management. Capital has been invested in machine tools such as bigger lathes in the machine shops, drills, presses, and quick action steel cutters and punches to give initial boost to the speed of the work in the new fabrication section.

Bigger tools were basically needed for end products of bigger physical size. The machine shop produces components for aerial gearboxes, and other parts such as pistons and rams for hydraulic aerial operating gear. The manufacture of hydraulic systems for our own products has always been a feature of Marconi-know-how, particularly of

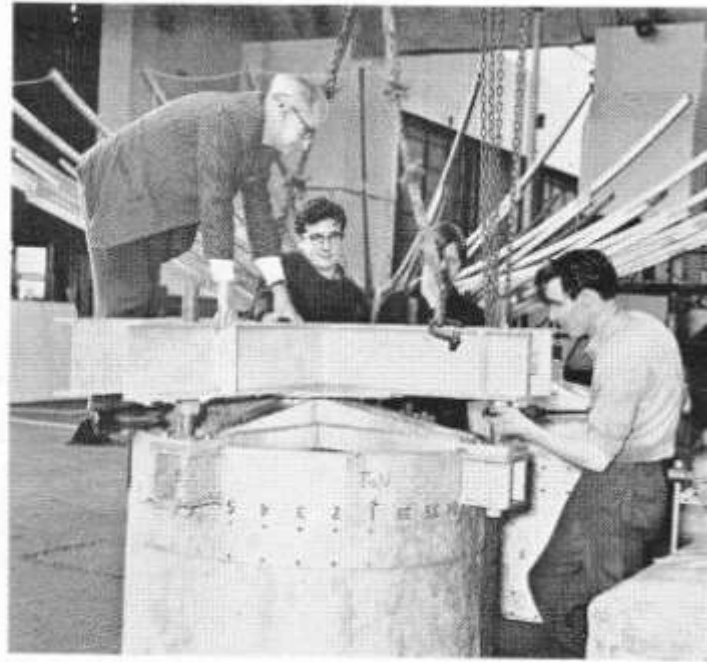


Gateshead Works, and will continue to be so. It should not be confused with the specialized hydraulic industrial products which were developed here but have now been moved to The 'English Electric' Hydraulic Equipment Division at Nether-ton, the chief of which is George Adler, who managed Mechanical Products Division at Felling.

The renewal of machine tooling at Gateshead is consistent with new policies and new products. It will be used, for a start, on the fifteen height finders of a new radar project. Work on 15-ft.-diameter transportable mesh dishes and 30-ft. steel-skin dishes for Radio Communications Division is already in progress, and it is likely that the next requirement will be for a 90-ft. steerable dish for satellite communications.

The designs for the small dishes have been produced by Aerial Department at Baddow, and the 90-ft. dish is on the drawing board in Space Communications Division.

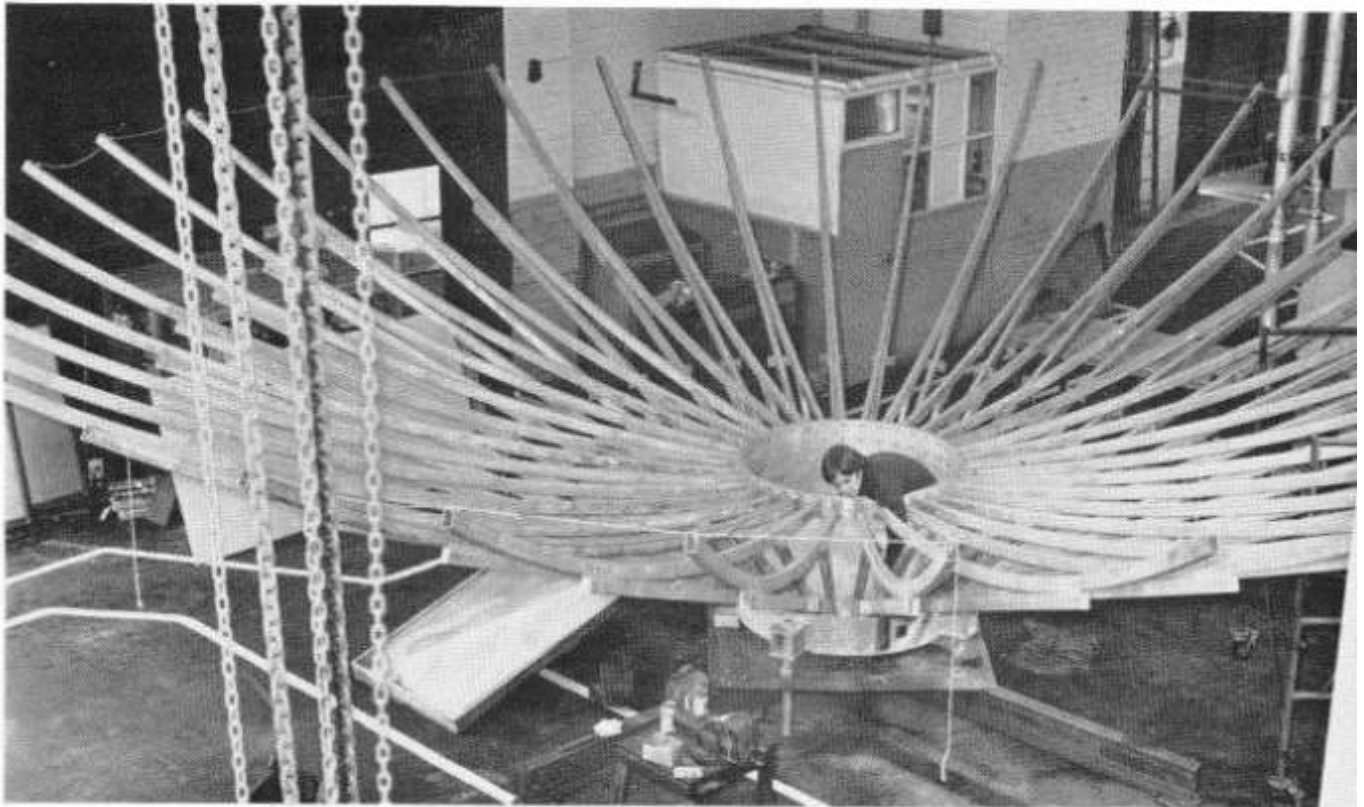
The key to handling this rapid production of the new aerials, with their complicated mounting structures, will be the new fabrication section at Gateshead, now located at one side of the main erection shop. Dick Amos, Works Engineer, pointed out the 10-ton overhead cranes here and the 250-ft. clear run of floor space. He said that with the new machines work can be done on heavy

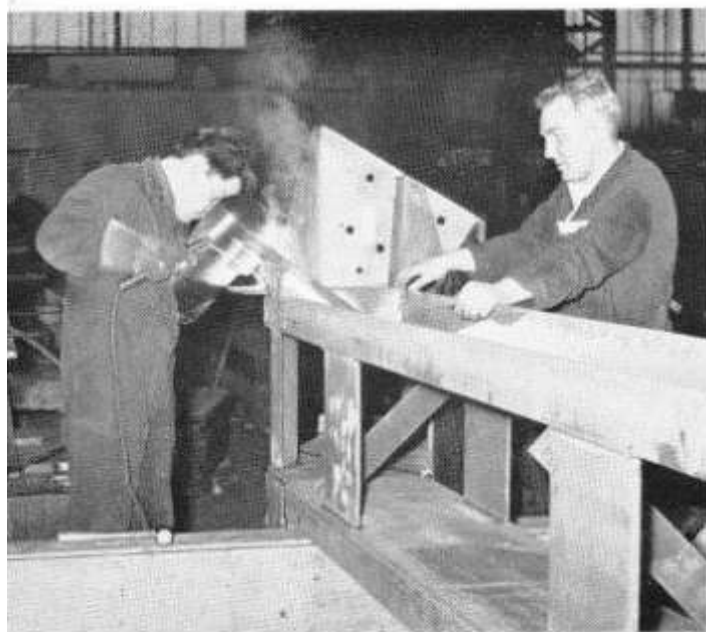


OPPOSITE: Building a 15 ft. thin line tropospheric dish aerial at Gateshead. Ron Donaldson is fitting the mesh panels

ABOVE: The panning frame being fitted to the centre hub of a 30 ft. thin line tropospheric aerial. Left to right, Tom Ritchie, Ratefixing; Bob Telford and Toby Henege, apprentices, and Kevin Perry of Section 10

BELOW: The radial tubes assembled on the centre hub, ready to receive the reflector skin, of which there are thirty-six sections





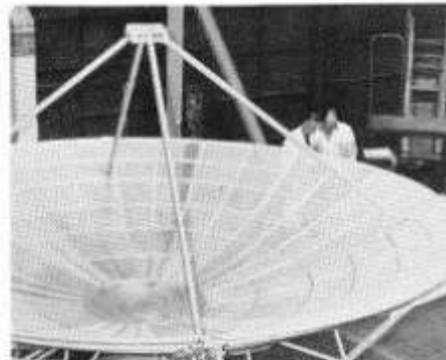
*Welding sections of a 25 ft. gantry leg for a height finder, one of a group going overseas. Working here are John Heenan, left, and Bill Show of Section 12*

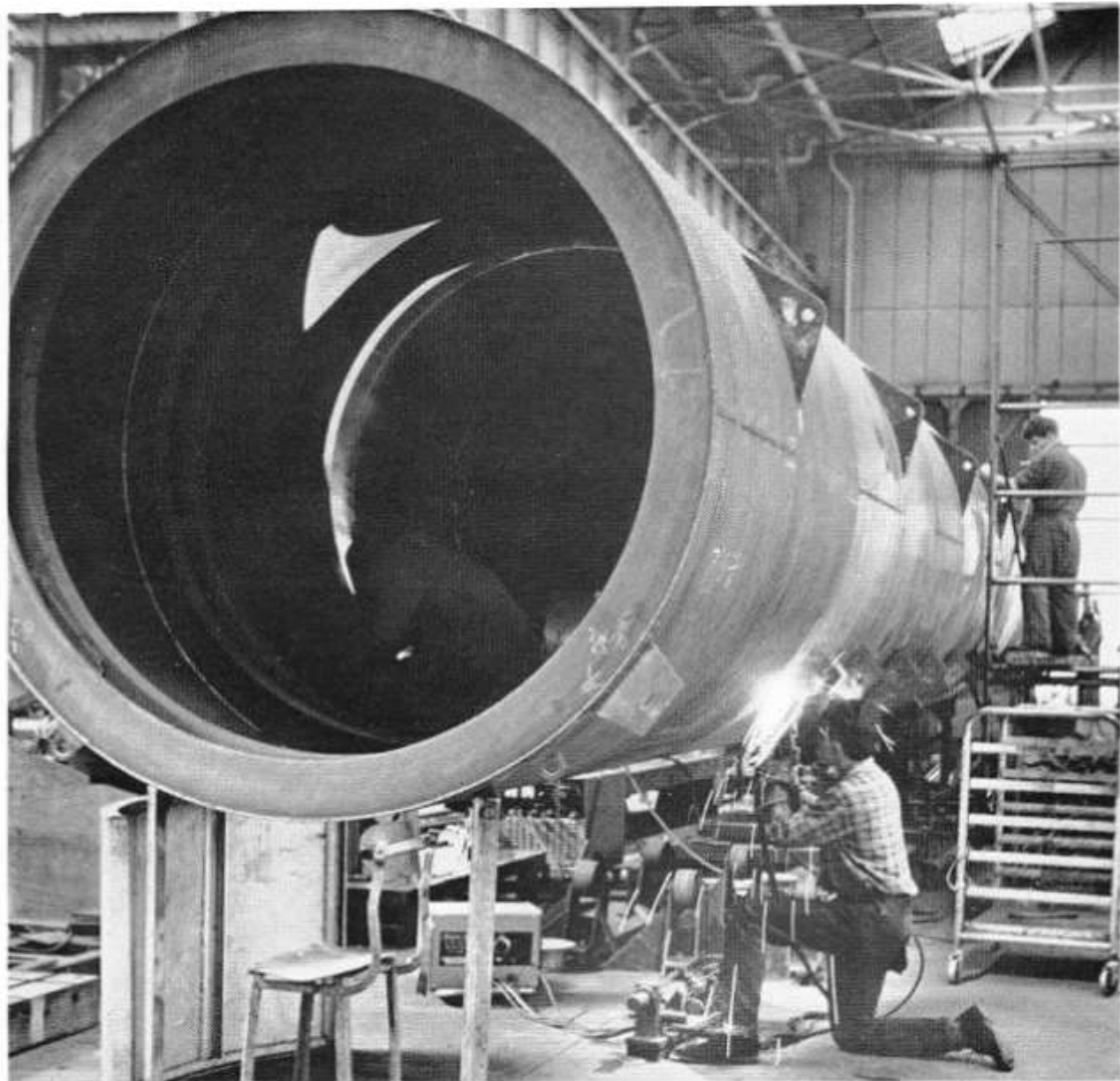
steel as fast as the material can be handled. The sheer physical weight of it was now the limiting factor. Cutting the sections and drilling the bolt-holes in them was no problem. The new guillotine will cut, in one stroke,  $5'' \times 5'' \times \frac{1}{2}''$ -thick mild steel angle section or  $4'' \times 4'' \times \frac{1}{2}''$ -thick T section, and on the opposite side will punch holes of up to  $1 \frac{1}{16}''$  diameter in  $\frac{3}{4}''$ -thick steel plate; so that two operations can be carried out at the same time on one machine. This is for fast working. If there is any fancywork to do then the new burners are capable of cutting plate up to five inches thick as neatly as a cheese wire.

The whole system is geared to machines of this type. The material is run in by conveyor from the stockyard at the end of the building to the cutting area; and is passed on to the drills and presses. It is marked off on its way to the drills with the aid of templates, so that without time-lag between jobs the drills descend on new work directly it arrives within the compass of their radial arms.

Marking-off is one of the most important factors of the constructional cycle. Any inefficiency in this work will lead to trouble during assembly and this could happen in some remote spot right off the map.

*TOP ROW, LEFT: Loading the radial tubes of a 30 ft. dish aerial for despatch are Mat Conder, Section 12, and Joe Irving, Section 10. CENTRE: Philip Metcalf of Tool Room checking up a ballistic mauling fixture for the petals of a 30 ft. dish. RIGHT: Clive Gray, Section 10, cutting and fitting mesh panels. BOTTOM ROW, LEFT: Riveting the mesh-reflecting surface to an aerial frame is Mark Stephenson, Section 10. CENTRE: Checking the accuracy of surface curvature, and construction of a 15 ft. aerial is Hugh Arnell of Quality Control, and right is Jack Stokes, Foreman, Section 10. RIGHT: A 15 ft. transportable, thin line, tropospheric, dish aerial, complete*





Correct marking-off ensures that sectional groups of boltholes are in line with their opposite numbers. Templates are the key to this, and a loft for drawing them out and making them to full scale is now in use. In this case it is not a loft but a workshop floor, for in Gateshead the term loft represents an area of this kind; as it was in the shed lofts of the shipbuilding yards that ships' plates were drawn out to actual size.

All these new moves in the production shops are stages in the plan to turn Gateshead into Marconi's heavier engineering centre and to make constructional work an economic proposition for the Company's product divisions. The Works Manager is convinced that these schemes, when in full operation, will make it possible for us to build our own aerials and other equipment of this type, as cheaply and as quickly as any sub-contractor. This will enable us to keep the work within the Company to ensure full control from design to delivery.

*ABOVE: This enormous 60 ft. tube is being built of steel sections welded together. It will form the backbone of a radar surveillance aerial going overseas. BELOW: The Chief of Production Group B, Fabrications, Frank Symm, right, talking over new plant with Dick Amos, Works Engineer, centre, and Geoff Peel, Assistant Works Engineer*







## New mobile laboratory for Sanders division



*The new laboratory. Admiralty section is headed by G. Wardsworth who has been associated with Sanders for many years*

A small but interesting section of the Sanders Division of Marconi Instruments, the Admiralty section, is devoted to the design, installation and repair of voltage and frequency regulators and other ancillary equipment used by the Admiralty. Many surface warships, and all submarines from the Porpoise Class to the latest ballistic missile nuclear submarines, are equipped with Sanders regulators. In addition, a variety of other vessels, notably oil tankers, use these regulators.

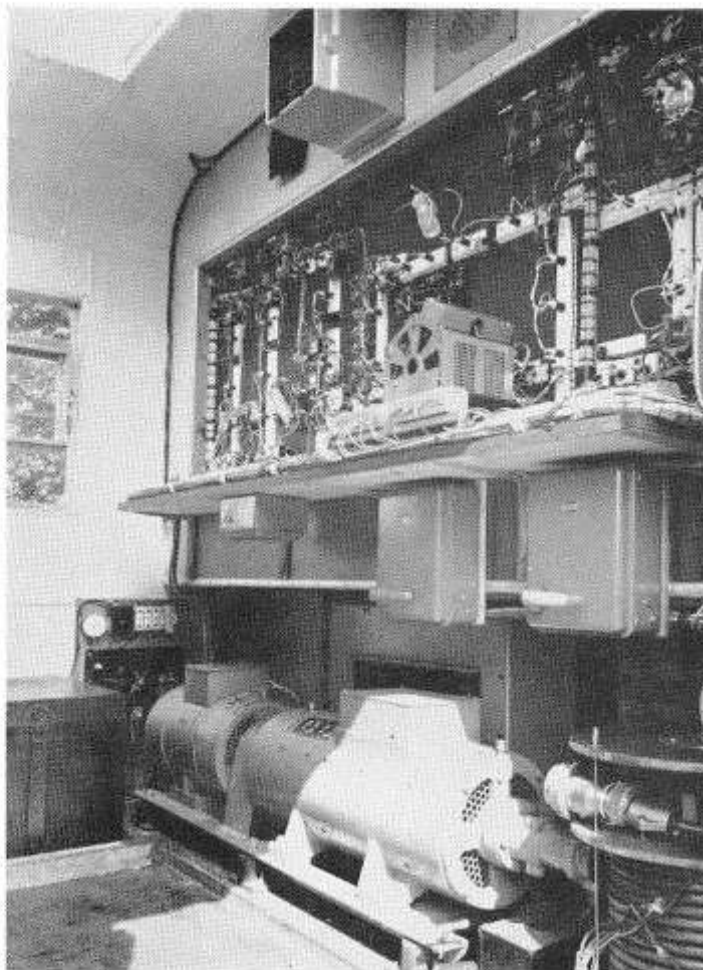
The main part of the work is for the U.K.-based submarine service at Gosport, near Portsmouth, and Faslane near Glasgow. Submarines refitting can be found in the more obscure corners of H.M. Dockyards at Portsmouth, Devonport, Chatham and at Rosyth. Cammell Laird's at Birkenhead, Vickers at Barrow, and Scotts' at Greenock build the submarines, whilst way up on the north coast of Scotland, near Thurso, is found the operational

training and experimental establishments for the nuclear versions.

To make for more efficient service it was decided, about five years ago, to use a vehicle to enable the engineers to visit the various spots where the submarines anchor. A 13-cwt. Austin van was chosen in which it was possible to modify, repair, tune and otherwise service the regulators. The van carried its own 400- and 1600-cycle supply and had the means of charging the 24 V supply battery from the shore mains. In five years this van travelled over 150,000 miles and became a very familiar sight at those spots where submarines foregather.

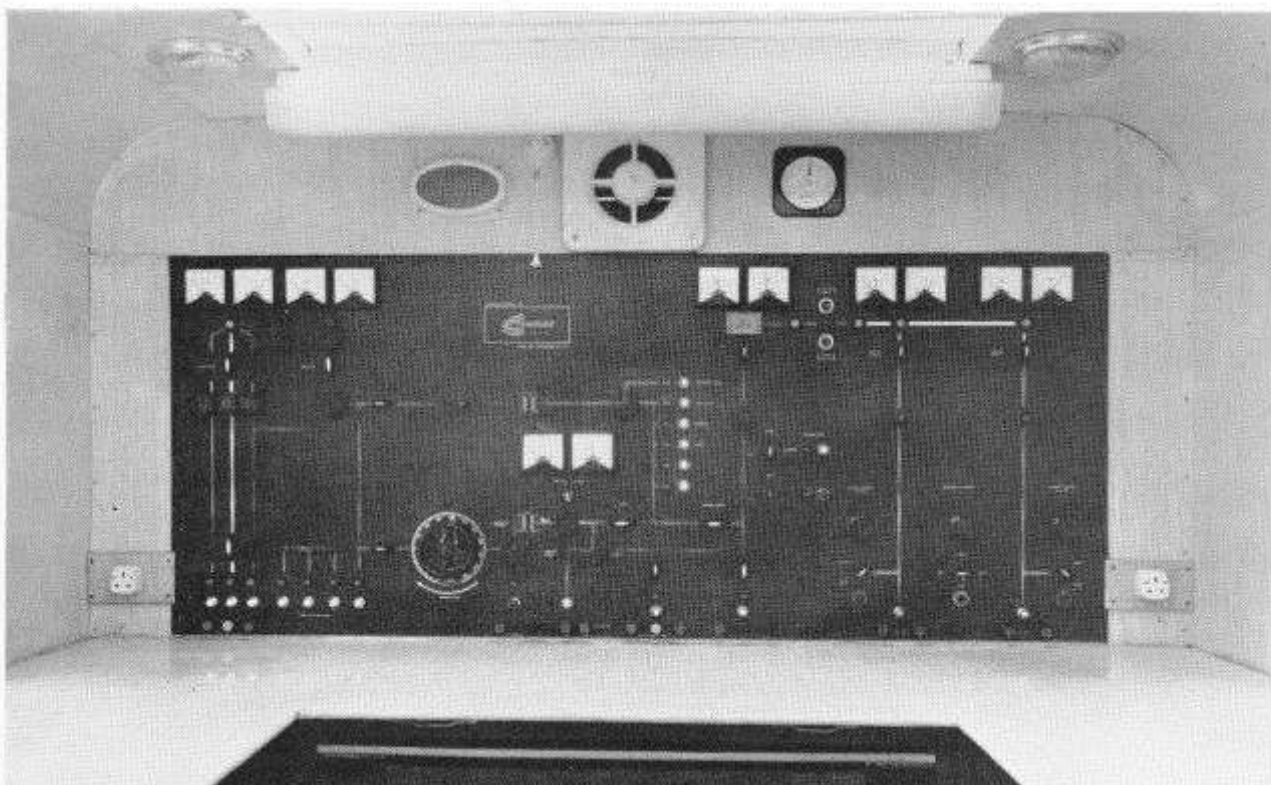
Recently the Admiralty section of Sanders Division invested in a new 5-ton Bedford, which is a much more suitable vehicle. It has, naturally, a larger laboratory area and there is space for machinery just behind the cab. One of the features is an illuminated mimic control panel, which incorporates all the necessary supplies, associated fuses and switching required by the laboratory. The coachwork was made by Norwich Coachworks Ltd., and a local Stevenage firm was responsible for the vehicle's electrics. The rest of the fitting-out was done entirely by people at Sanders, and is a good example of teamwork.

The Admiralty section, now equipped with this laboratory on wheels, feel that the new van, following the wheel tracks of the old Austin to the remote haunts of the submarine, will provide an improved service that will justify all the work put into the project.



OPPOSITE: H.M.S. Sealion (Crown Copyright)

ABOVE AND BELOW: The mimic panel in the Sanders division new mobile laboratory used for the maintenance of equipment in naval vessels





*A smart new training centre for M.I. where instruction in wiring, cableforming and operating the Lazy Susan is given to people who have just joined the Company*

## **SUPER SUPERVISORS**

A one-year course for supervisors is being held at the St. Albans College of Further Education, and except for two members all those taking the course are M.I. men.

Among the subjects being studied are the elements of supervision—theory and practice, in-

dustrial history, communication, estimating and costing. During the year a practical project will be carried out, and one oral and two written examinations will qualify students for the Certificate of the National Examinations Board in Supervisory Studies.

C. Lane, M.I. Personnel Officer, is a member of the Examinations Board but he thinks it highly unlikely that he will be asked to examine his colleagues.

### **Good design**

Three M.I. equipments have been selected by the Council of Industrial Design for an exhibition of well-designed scientific instruments, to mark the fiftieth anniversary of SIMA. They are the MF/HF Signal Generator TF 2002, the 30 MHz Oscilloscope TF 2201 and the 'Marionette' x-ray image intensifier. The exhibition, being held in the Design Centre, Haymarket, London, opened on 5 October and will close on 19 November.



*M.I. instructors outside the recently erected building, part of which is now the training centre. Left to right, John Read, Works Training Officer, Janet Chilvers, instructor, Jack How, inspector, and Mrs. Kathleen Weaver, supervising instructor*



## From the sales ledger

M.I. have received an order from the Government of Malaysia to the value of approximately £24,000 for a wide variety of instruments, including signal generators, voltmeters, bridges and deviation meters.

Brazilian Railways have ordered some £5,000 worth of equipment—signal generators, voltmeters and deviation meters. This is regarded as a rewarding break-through after considerable spade-work by our agents, Emile Staub S.A.

## Stork talk

Congratulations to Colin Woodley, M.I. Publicity Manager, and his wife who have started a family with a 7 lb. 4 oz. boy.

## ROUND AND ABOUT AT WRITTLE

Congratulations all round to four Writtle-ites who have reached their majority, Yvonne Dixon and Pamela Heald, and twins Lynne and Julia Galley. Congratulations to D. Philpott, Senior Divisional Accountant, Telecommunications Group, and his wife on the arrival of a third son, Roger Patrick; to three gentlemen who have taken the plunge and joined the marrieds, Alastair Torrance, Data Group, Line Communications, and Dave Simms and Victor Lloyd, both of the Workshop; to Keith Harper of the Workshop and his wife Valerie on the arrival of a 7 lb. 15 oz. son, and to Michael and Sylvia Rita, whose baby son has been christened Adrian Simon.

### Goodbye to composer Trevor

Assistant organist at Little Baddow Congregational Church, and also a member of the Workshop, Trevor Orme has moved to London. Trevor, who has been interested in music since he was five, composed his first work when only twelve. Before he left the Chelmsford area, seventeen-years-old Trevor gave two organ recitals at Writtle Church; at the first he played four of his own compositions.

### Goodbye England, hello Australia

Emigrating to Australia to work for Amalgamated Wireless (Australasia) Ltd., Don Frost of Data Development Group, was given a Ronson lighter and pewter tankard from his friends to remind



*M.I. Horticultural Hut is open for business. The society has been saving for a long time to buy a hut which the Company has kindly allowed them to erect by the oil store (close by the fire station). Here Mrs. L. Creasy, committee member, and Harry Botwright, chairman of the society, prepare to sell bulbs. But watch the notice board for other items which will be offered.*

him of his days in the old country. Manager of the Line Communications Division, P. R. Keller, did the honours at the presentation.

### Football team re-formed

After a lapse of many years Writtle has re-formed its football team. In the first leg of the inter-departmental league the team beat Research and Development Workshops, New Street, 2-0. Good luck for the rest of the season.

## OBITUARIES

We heard with much regret that seventeen-years-old apprentice John Hogg, of Writtle Workshop, had met with a fatal accident on his motor-cycle combination. He was returning from work and was involved with a bus only a few hundred yards from his home in Roxwell. We offer our deepest sympathy to his family and friends.

We are also sorry to hear of the death of Mr. F. W. A. Cherry, labourer at Baddow, and our sincere sympathy is extended to his relatives and friends.



*A cheque for £11 7s. 8d., money raised at the Machine Shop's bring and buy stall, being presented to Staff-nurse Soul of Billericay Hospital by J. Holcroft. In the background are R. Morrison and M. Mockler [N. Miller]*

## BASILDON BRING AND BUY

To raise money for the Billericay nurses recreation room, a bring and buy sale was arranged by members of the Basildon Machine Shop, committee J. Holcroft, R. Morrison, M. Mockler, N. Miller.

Flowers and garden produce were on sale in the canteen during the lunch break and after work, and though response was good there were not enough flowers to meet the demand.

The Matron of Billericay Hospital sent Staff-nurse Soul to the Works where she was presented with a bouquet of flowers and a cheque for £11 7s. 8d.

## Julian Bream guitar recital

A small group of Basildon people enjoyed a recital of classical music given by Julian Bream at the Wigmore Hall, London. Booking arrangements were well organized by Eddie Ryan of the Tool Drawing Office.

People interested in forming a non-beat guitar club should contact Barbara Brigden in Personnel. And a guitar instructor is needed, Spanish finger style and plectrum style.

## Baddow eggheads

The egg marketing board would be advised to take a look round the Baddow Workshop where Dick De Vigne and Peter Ling are sporting the latest in hair cuts—short back and sides all over. Bets taken prior to this big event amounted to well over £5. Colin Porter was in charge of arrangements and both would-be Yul Brynner's had the operations free of charge.

## Wedding Bells

Congratulations to Simon D'Attellis, Sheet Metal Shop, on his marriage. Simon, who hails from Italy, received a coffee percolator, coffee set and kitchen scales from his friends.

## Early retirement?

A certain Foreman, who shall remain anonymous, is applying for an early retirement. His super-annuation this month was printed out as £20,000 and he wants to be sure of time to spend it all.



*LEFT: A well-known Committee member of the Sailing Club, Geoff White of Broadcasting Design Office married Heather Rudkin at All Saints Church, Springfield, Chelmsford. Heather worked in Standards Division, Kensal House. CENTRE: This bride and groom are Barry and Helena Hopkins who were married at St. Martin's Church, Basildon. Barry had been presented with a cheque and scroll from his friends by D. Simms, Estimating Controller, Basildon. [G. Hoare]. RIGHT: Signing the register is Jenny White, of Cableform Section at Rivenhall, after her marriage, when she became Mrs. Jim Elsmore. Gifts, including a coffee table, and coffee and water sets, had already been presented to her by C. Cranfield, Foreman*



Many Company people send good wishes to Reg Thirkettle, centre, who has retired. With him here are H. W. Gilmour, right (retired), and F. W. J. Sainsbury, Manager, Spares Department, Central Division. Reg was chairman of the Staff Committee for eight years

## The little things matter

'It's not always what appears in black and white which matters most. The hundreds of little things done for people are just as important,' Reg Thirkettle said this when speaking of the work of the Staff Committee; and he said that it is a very necessary institution, for it serves as a system of communications, and irons out a number of problems with staff which could not be dealt with in any other way: its achievements are considerable.

Reg gave a great deal of time to the Staff Committee. He was elected in 1951, and was Chairman, after Bert Cotton, for eight years from 1957.

He retired from the Company last month after serving for 'twenty-five very happy years'. He started with A. T. Cadman, in Purchasing, went on to Stores with J. E. Bates, and in 1955 moved to Central Division to join H. W. Gilmour, and became chief of stock control and pricing. He will miss his numerous friends, as he is going to live in Debenham, Suffolk, but says that he is very much looking forward to exploring Norwich—a wonderful old city.

*Farewell from their Gateshead friends to Alan Wilkinson, left, and Alan Kelters from E. Curran, then Chief Estimator of Gateshead, right. Both Alans have transferred to Chelmsford Estimating Department [J. Wales]*

## Two Alans move from Gateshead to Chelmsford

Two young men who have recently joined the Chelmsford Estimating Department from Gateshead are Alan Kelters and Alan Wilkinson. Both were apprentices with the Company: Alan Kelters joined in 1955, completed his training in 1960 and for four years worked as a ratefixer. Since January 1965 he has been on the Estimating staff. Alan Wilkinson joined the Company in 1959, completed his training in 1963 and has been in Estimating since then.

Both are held in high regard at Gateshead and their friends are interested in their future careers.







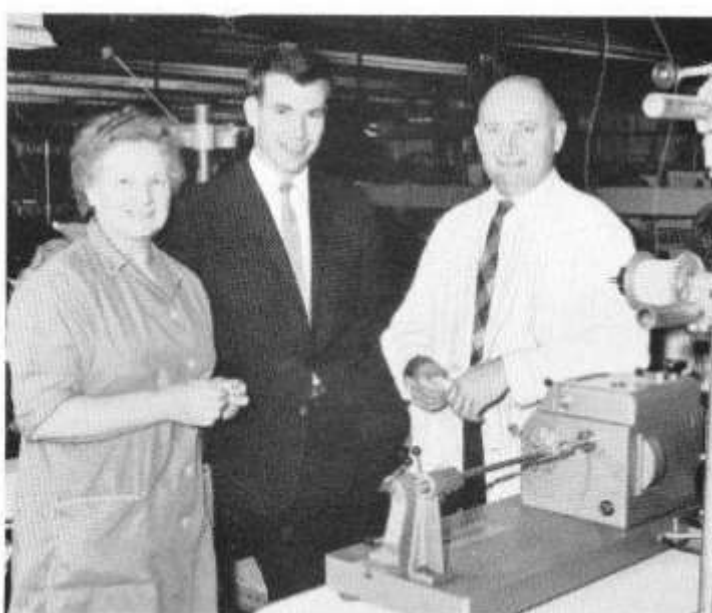
*These pictures show the new layout of the benches and supply racks. ABOVE: Circuits being assembled for H2000 MST communications receivers, which are being sold all over the world, some to NATO. The girls position the components by the numbers on the plan and tack them in with solder. Left to right, Mrs. Doxie James, from Jamaica, Gwen Cox and Mrs. Ruby Freeman. BELOW, LEFT: Mrs. Hazel Bailey, centre, who also operates the flow-soldering machine which completes the joints. To the left, behind, is Mrs. VI Rees, and right, Mrs. Irene Blake. BELOW, RIGHT: Mrs. Cora Porteous at work on H2000 circuits*



# NEW PRINTED BOARDS SECTION AT WEMBLEY

Wembley are very proud of the new layout of their Printed Boards section. The benches have been re-planned so that the supply trays come to hand more readily and the girls work comfortably. The result is that the work is done easily and quickly. The boards are supplied from Chelmsford or Basildon with the tracks (circuits) on them, and at Wembley are prepared for assembly. The solder pads are drilled, the boards cut to size, and the working guide is printed on the ledger side. There are sixteen girls in the assembly unit who, between them, produce all the printed circuits for equipment built at Wembley.

RIGHT: Circuits assembled on printed boards come up to three inspectors. This is Mrs. Marie Waid in front of her large magnifier with, centre, Rodney D'Praser, Leading-hand, and right, Bert Lloyd, Foreman, Components Group. BELOW: Mrs. Olive Pither who has been Shop Marshall for two and a half years. Her job is to supply all the bench trays with the necessary components. BELOW, RIGHT: Mrs. Lydia Berryman, Leading-hand, Coilwinding, with Chris Evans, assistant to J. Dickson, Works Superintendent, and Fred Garner, Leading-hand, Coilwinding and Assembly.





*An electric pop-up toaster from his friends in Hackbridge Filter Section for Tony Knight when he married. L. Hurd, Chief of Test, made the presentation*

## HACKBRIDGE SPOTLIGHT

### Crowning success

The standard at the Wallington, Carshalton and Beddington Horticultural Society's autumn show was so high that many of the entrants, who had been preparing their show exhibits for months, had to content themselves with second place, reported the local newspapers.

At this show Mrs. M. Fairweather was awarded the Schaefer trophy, the floral trophy and the Edith Nightingale memorial trophy. She had successes in the following classes: three vases, five dahlias; five blooms, miniature decorative or miniature cactus dahlias; three blooms any other class; three kinds of outdoor flowers; and one vase of outdoor flowers, a remarkable achievement. She also received the cup for gaining the highest points in the Societies' summer and autumn shows. Mrs. Fairweather must have the greenest fingers in Hackbridge and everyone congratulates her.

### A Ramble in the Surrey Hills

A walk in the Black Forest had nothing on the ramble in the Surrey hills organized by Michael Eddolls and Audrey Morrison of the social club committee. Blessed with a fine day the party met at Clandon station, made their way to East Clandon, crossed the A.246, climbed over the Clandon Downs and lunched at Albury at the local inn. With feet rested, hunger satisfied, and thirst slaked, the walkers climbed again and visited the fourteenth-century church of St. Martha, where the view of the surrounding countryside is magnificent. They

reached Newlands Corner, and after a welcome 'cuppa' walked on through more rolling countryside to their cars at Clandon station. And wasn't it lovely to rest their tired feet!

### Congratulations

Congratulations and best wishes to Tony Knight of Filter Section, B. Building, on his marriage to Miss Beryl Duckett of Ramsgate. Tony and his bride have a house at Chatham. Best man at the wedding was Ian Markey of the same section and among the guests were Mr. and Mrs. John Netley.

Tony's friends gave him an electric pop-up toaster, presented on their behalf by L. Hurd, Chief of Test.

### Cricket

A return cricket match to avenge the five-wickets defeat by Philips Electrical was organized by John Blackwell for mid-September. The match was limited to 40 overs per innings. Marconi's won the toss and put Philips in to bat with the result that S. Kleyn took 6 wickets for 3 runs, and N. A. Greenwich took 3 for 12 to help dismiss the opposition for 32 in 22 overs. Marconi's replied with 33 for 3 wickets in 16 overs. As there was time to spare and the weather was fine, a 'beer' match of 15 overs per innings in reversed batting order was played. This light-hearted game reached a climax when, with Philips needing two runs to win in three overs, their last man skied the ball to wicket-keeper H. Dave who held it safe to make Marconi's the winners by one run.

Captain and organizer, John Blackwell tells us he is well pleased with the performance of his team in these friendlies.

### Football Fixtures

The newly-formed Football Club, having played three pre-season friendlies—winning one, losing two—started the season in the Croydon League by playing away to Rail View F.C. at Lloyd Park.

After a gallant start, Rail View went into a strong attack which produced two goals, but having settled to the game, Hackbridge forwards came into the picture and Chris Brennan netted two goals to even the score at half-time.

In the second half Rail View went ahead again but Chris Brennan found the net to complete his hat-trick and make the final result a 3-3 draw.

Comment from club leader Ray Hazel: 'A good start and a fair result—but what about some supporters Hackbridge!'



# WITH BEST WISHES...



LEFT: Driving for the Company for most of his twenty-five years' service, including the black-out during the war, Jimmie Redgrave has left transport and packing behind for the more leisurely pace of retirement. Before doing so he received the best wishes of his friends and also a cheque presented by S. R. Allerton, Superintendent, Packing and Despatch Group. RIGHT: Retiring from Packing and Transport Department after seventeen years' service, a presentation was made to Tom Nunn by S. R. Allerton, Superintendent, Packing and Despatch Group. Tom received a cheque from his friends, and most people will remember him as the driver, in earlier days, of the Company's only Mini-van



LEFT AND CENTRE: A marriage was arranged between two members of Radar Division, but before it took place two presentations were made. John Parry was given an electric kettle, wash boiler and autographed card from his friends at New Street by R. J. Day, Business Manager, and Wendy Weaver was given a dinner service, sandwich set and autographed horseshoe from her friends at Church Green, by H. J. Lawrence, Manager, Field Services. RIGHT: After working together for three and a half years in Aeronautical Drawing Office, draughtsman Peter Ratcliffe married tracer Sue Vandersteen. Friends gave them an electric food mixer, presented on their behalf by G. Payne, Design Office Manager, Basildon [G. Hoare]



LEFT: A twenty-first-birthday cheque for Peter Darby, M.I. apprentice, from his colleagues was presented by W. A. Goode, Senior Quality Engineer (Engineering). CENTRE: Before his recent marriage, a steam iron, bed linen and cutlery were presented to Dave Simms by Workshop Superintendent J. Satton from friends at Writtle. RIGHT: Raw Stores has said farewell to its oldest and longest-serving member, booking clerk Jimmy Cottee, who has left the Company after fourteen years. Before starting his retirement he was given a transistor radio by A. L. Webb, Stores Controller, on behalf of his friends



LEFT: Before Amrita Carroll, M.I. Goods Inwards, married Phil Roberts, Special Products, her friends gave her a canteen of cutlery and kitchen equipment which were presented by J. Southam, Material Quality Controller. CENTRE: Best wishes and an electric heater wedding gift from his colleagues for Phil Roberts, chief of M.I. Modification Section. The presentation was by J. Cooper, Manager of Special Products. RIGHT: A presentation was made by Basildon Canteen Controller, H. Furness to his assistant Jill Smith before she left the Company after eleven years, when her friends gave her gifts which included a transistor radio and a coffee perculator [G. Hoare]



LEFT: Receiving wedding gifts for the kitchen from friends at Basildon is Brian Coles. The presentation was made by Project Controller M. James [G. Hoare] CENTRE: Coffee set and cheque—twenty-first-birthday presents from his friends—for John Fursman, then an M.I. apprentice. The presentation was by D. Whitelock, Assembly/Test Assistant Production Manager. RIGHT: When Mrs. Sylvia Jackson left the Company to join her husband in Bermuda, she was presented with a suitcase and cardigan from her friends by W. B. Bateman, Foreman, Wiring Assembly Department, Wembley [N. Butterworth]



LEFT: A pewter mug, Toby jug and atlas of London were the parting gifts to Charlie Leslie, third from left, of Progress Department, Wembley [N. Butterworth] CENTRE: Wedding bells and a canteen of cutlery for Michael Carroon, M.I. Special Products. J. Cooper, Manager, Special Products made the presentation on behalf of his colleagues. RIGHT: Wedding gifts of a lampshade and tray for Graham Taylor, M.I. Despatch Supervisor, were presented on behalf of his friends by E. A. Roycroft, chief of Despatch and Transport.



LEFT: Before her marriage in Ireland Mary Henry of Printed Boards Section, Wembley, received various household gifts, including a clock and tableware, from her friends presented on their behalf by A. Lloyd, Foreman [A. Povey] CENTRE: Leaving Wembley to return to her native Trinidad, Mrs. Isling Mendez received a canteen of cutlery presented by Senior Chargehand R. Andrews, Wiring Assembly Department, on behalf of her friends [N. Butterworth] RIGHT: Receiving a dinner service and other gifts from her many friends before her wedding in Lesley Hall, Central Division, Basildon, who types the camera copy for the technical manuals. The presentation was made by J. Newby, Project Leader, T.I.D. [G. Hoare]



LEFT: A wedding in the Machine Shop—and friends of Michael Ashby marked the occasion by giving him a coffee set, presented on their behalf by H. E. Gardener, Chargehand. CENTRE: Before his marriage Jim Lepley received the best wishes of his friends and a cheque presented on their behalf by G. Longley, Supervisor, Basildon Machine Shop. [N. Miller] RIGHT: The forthcoming marriage of Brian Thompson, Ferrite Production Group, was celebrated at Billericay with the customary presentation when M. Cenkal, Chargehand, left, gave him bed linen and other gifts from his friends



LEFT: Off to India was Merrick Elderton, M.I. Export, so J. Buying, Export Regional Manager, presented him with a canteen of cutlery on behalf of his friends. CENTRE AND LEFT: Two bridegrooms in Research and Development Workshops who were wished well by their colleagues, Bob Suckling, left, and Harry Ellis, right, each received gifts in stainless steel, and both presentations were made by F. Watts, Senior Foreman





LEFT: Best wishes from his friends were given to Michael Neil before his marriage and also a cheque for a coffee table which was presented on their behalf by A. P. Hazell, Machine Shop Foreman. CENTRE: A wedding in Bonded Stores, and Dianne Kopriya was presented with a wall clock and barometer from her friends at Basildon by R. Corby, Planning Controller [G. V. Raymond] RIGHT: Household goods were given to Grace Jaggard from her friends at Basildon before her marriage and were presented to her by J. Lofthouse, Superintendent, Printed Boards Section [G. Hoare]



LEFT: Before Tom Clendon (centre) M.I. Education and Training Officer, transferred to 'English Electric' a projector and screen were presented by J. J. Bliss (left), Personnel and Training Manager, on behalf of his colleagues. Afterwards a lighter was presented to him, on behalf of the apprentices, by J. Copeland (right), Apprentice Training Officer. CENTRE: Twenty-one today was Stephen Creasey, M.I. Test Equipment, so a cheque was presented to him by R. Titchmarsh, Senior Test Engineer, on behalf of his colleagues. RIGHT: A pram-set and shawl were given to records clerk Mrs. Michelle O'Hara, a former nurse with the R.A.F., when she left the stores at Wembley [N. Butterworth]



LEFT: Various items of kitchen ware were given to Apprentice Ray Hollands from friends at Basildon, which were presented to him by M. James, Project Controller. [G. Hoare] CENTRE: Leaving Test Engineering Development Group after 10 years with the Company to enter teacher training college and embark on a new career in physical education, A. J. (Tony) Wright was presented with a brief-case and writing materials—perhaps a hint here that his friends expect a letter—by R. Kitchen, Chief of the Department. RIGHT: Before her wedding Teresa Harvey of Production Control was presented with blankets from her friends at Basildon by L. Thorington, Leading Loader. [G. Hoare]



## CHELMSFORD

### Sailing Club

Why is the wind so light at week-ends? Most of this year's open meetings and also the closed events started with boats fighting the tide and scarcely any wind to help.

The Enterprise Triple K Cup, donated by the owners of Kool Kat and Kiara, was no exception and was won by J. Bovis of Maylandsea Bay Yacht Club.

The points series for the Costain Cup was sailed the following week. In a very light wind Norman Palmer and Peter Jennings were the only two who finished on Saturday. The remainder were becalmed and were towed home by the Rescue Boat! In gradually increasing wind on Sunday the first two races were won by Brian Partridge and Nick Tovey, so with one more to go the result was very open. Jane Cottam in a G.P. 14 won the final race. Thus, Norman Palmer with a first and two seconds for his best three races became Helmsman of the Year. Nick Tovey was second overall with a first, second and a third. There were fourteen entrants.

The Marconi Enterprise team beat Osea Sailing Club by a quarter of a point in their return match but Osea's supremacy in the first match gave them the Boothby Cup by two and a half points.

### Tennis

The Finals have been played and all members were pleased to welcome Mrs. Shipstone who presented the trophies. She gave the Section a cup in memory of her daughter. This will be known as The Majorie Shipstone Trophy and will be presented each year to the winners of the Ladies Doubles. Majorie was a keen tennis player and a most popular member of the MASC.

The weather on this occasion was perfect and tea and biscuits were served to members and friends during the afternoon.

The results were as follows: Ladies Singles, Pauline Trathan with Pia Trathan runner-up; Men's Singles, Eric Turner with Philip Helps runner-up; Ladies Doubles, Susan Whitaker and Pauline Trathan with Joyce Wood and Pia Trathan runners-up; Men's Doubles, Brian Piercy and Eric Turner with Alan Thorogood and Philip Helps runners-up; Mixed Doubles (Open), Pauline Trathan and Alan Thorogood with Joyce Wood and Peter Ager runners-up. Mixed Doubles (Draw), Pauline Trathan and Dave Jobbling with Pia Trathan and Edgar D'Sa runners-up.



Here are the players who were in the Competition at Basildon for Aeronautical D.O., including the winning team. Back: left to right, T. Carvey, C. Seels, B. Potter, K. Davies, D. Altria. Front: J. Grottick, K. Murton, B. Merrett [N. Miller]



## BASILDON

### Football

The semi-finals of the six-a-side football competition were fought out between Test 20 and Development Workshop, and Aeronautical D.O. and Apprentices. Test 20 won their game 4-0 and Aeronautical D.O. theirs 2-1 after extra time.

The final produced a very hard, keen game from two evenly-balanced sides. Aeronautical D.O. were first to score through Barry Merrett. Test gradually

Presenting the trophy to K. Davies, Captain of Aeronautical D.O.'s winning team in the six-a-side competition, is F. Langnead, Chairman of the Football Section and Manager of the second team [N. Miller]



Tennis Finalists with Mrs. Shipstone, who presented the trophies, left to right, back row, Joyce Wood, Brian Piercy, Edgar D'Sa, Dave Jobbling, Philip Helps, Alan Thorogood. Front row, Peter Ager, Pia Trathan, Eric Turner, Mrs. Shipstone, Pauline Trathan, Susan Whitaker





TOP: Out of nineteen entries, Printed Boards became one of the finalists in the Basildon Inter-departmental Competition and here is their winning team [*Basildon Standard*]



ABOVE: The Basildon Cricket Section's new venture—Single Wicket Competition—was won by L. Stibbs (centre) seen here with runner-up C. King (left centre) and other players [*G. Raymond*]

improved and deserved the equalizer scored by Derek Steed, who nearly settled the game when another effort struck the upright. But full marks to Aeronautical D.O. defence, ably controlled by Ken Murton, who never panicked under this pressure and, with only forty-five seconds to go, produced the winner. A very good game.

The presentation was made by F. Langmead, Chairman of the Football Section and Manager of the second team. Many thanks are due to P. Simmonds for ably controlling the games.

#### Cricket

The 1966 season had some very close games. We defeated Halford by one wicket, lost to Basildon by six runs, Rainham defeated us by one wicket at home and the return match was tied, lost away to Old Cooperians by twelve runs, with only ten men, and by a similar score away to Basildon.

There were nine new clubs in the fixture list, and possibly the strongest side the Club played were the Essex County Police who completed the double over us. Rain washed out play altogether in two matches and caused four others to be drawn. In addition five games were won, nine lost and one tied.

The Inter-departmental Competition attracted nineteen entries, and Printed Boards won the trophy by convincingly defeating Progress. The awards were presented by Mrs. M. Norton, wife of the B.M.C. General Secretary.

A new venture was the first Club Single Wicket Competition but, unfortunately, there were only twelve entries. The weather was kind and the time-table went to plan. The finalists

were L. Stibbs and C. King. King started well but in the second over, with his score at seven, was brilliantly caught by Stibbs. He could have won when Stibbs scored only three but failed to hold a simple return catch. The new trophy was presented to its first winner by R. Gelder, Chairman of the B.M.C. as were the season's averages presentation to L. Stibbs, batting, and L. Norton bowling.

Mrs. Norton and Mrs. Whitehead were each presented with a small gift in appreciation of their help in making teas and keeping scores.



ABOVE: Aiming for the gold is Geoff Hankinson of Baddow. Practices are at Beehive Lane on Tuesdays and Sundays.



LEFT: An unusual shot of members of the Archery Section, during a session at Beehive Lane, seen here through Reg Bowen's bow. Left to right, Arthur Ricketts, Mervyn Hart, Norman Rogers, Derek Cast, Geoff Hankinson, Bernie Cast, John Bohannon. ABOVE: Reg Bowen joins Mervyn Hart and Arthur Ricketts and the others





*The walking party of Longacres Mountaineering club take a rest by Llyn Ogwen before the ascent of Tryfan.*



## ST. ALBANS

### Mountaineering

The Longacres Mountaineering Club from M.I. met in North Wales, as planned, after travelling from St. Albans on the Friday evening. The party, of about a dozen, camped for the Friday and Saturday nights on a farm near Capel Curig in Snowdonia. All tastes were catered for, from the novice to the old hand, and plenty of sunshine was enjoyed although some haze was present.

On the Saturday, Tryfan was climbed by walkers and climbers alike, the climbers after ascending the Northern Rib route on Tryfan East Face, a V. Diff. climb. On the Sunday Y Garn was climbed and an unsuccessful assault made on Snowdon. The climbers successfully ascended two climbs on Carreg Wasted in the Llanberis Pass, Skylon and Trylon.

Both these climbs are V. Severe

standard. Skylon due to a very large stride which must be made on a vertical face using poor hand-and-foot holds, and Trylon due to the difficulty of entering (by means of a peg) and leaving a small niche on the climb.

Several guests and novices were present and they all wish to go again. Enquiries are welcome from anyone else who would like to join us. A phone call to Ted Tapson, int. 453 or St. Albans 59292 ext. 312 will bring details. T. T.



"Yes?"

### Fishermen of M.I.

The M.I. Angling Club, under the secretaryship of Peter Ward, has started up the new season with great enthusiasm. As they have no fishing water of their own the club has become a member of the London Angler's Association which entitles the members to fish in a great many waters in South-eastern England.

A fishing expedition will be arranged every two weeks, and one recent typical trip was to Portholme Meadows, Hunts, a large expanse of water well stocked with coarse fish. They left the M.I. Works at the quiet of 5 a.m., finished their sleep, and, from their early arrival until dusk, spent the day fishing.

Nothing of any consequence has yet been caught, but a cup has been offered for the best pike caught between 1 October and 31 March, and another cup for the best weight of fish (except pike) caught between 15 June and 31 December.

The club has over thirty members but Peter Ward, Group 827, will be pleased to hear of any others who would like to join.

## Hockey

The second game this season will be long remembered by the men's hockey team, for in a home game they beat Tring III 6-1, one of their best wins in two years.

The team this year has several new players, one of the most promising being centre-forward Dave Campbell who scored a hat-trick in the Tring game. M.I. were very much on top in the first half and forced several corners, two of which resulted in goals. The M.I. goalkeeper had a very easy time.

Soon after the start of the second half Tring broke away, and their centre-forward scored a well-taken goal making the score 2-1. Soon after this the M.I. centre-half Naseer Thantrey made the score 3-1. The play then went more and more in our favour though many chances were missed.

On one occasion M.I. had a short corner to their favour and our goalkeeper, Harry Barrett, went up to Tring's 'D' and scored a goal from the corner. A few minutes later Dave Campbell got



Half-time and orange time for the M.I. Team. Dave Campbell (second from left) scored a hat-trick in the Tring game

his third goal and M.I.'s fifth. John Bolding got the sixth goal in the closing minutes.

C. W. Lane did an admirable job of umpiring in the absence of a second umpire and controlled the game well. Although Tring were well beaten they took the defeat in the true spirit of the game. J.D.H.

## Football

M.I. Football Club performances to date indicate that they could be strong challengers for the Herts County League Championship. They have already won a 'double' over the strong Leggatts Way O.B. beating them 4-1 and 3-2 at home. But silly points were dropped when the club lost at home to Sun Sports 2-1. Our one failing at the moment is the number of goal-scoring chances which are not being turned into goals.

The reserves this season are showing much improved displays, with E. McShane in goal, plus five members of last year's Aubrey Cup team, and names like L. Mileham, A. Corroon and A. Jarvis, we should be amongst the honours this season.

The last act of the light evenings was the painting of the goal posts and posts round the ground by the committee under the guidance of Jack Sears.

The pontoon run by the club has now over 800 members, the highest in nearly four years.

The clubs' big night of the year is 17 December, when its Christmas dinner and dance is held. Tickets are 16/6 each which are available now from any committee member. G.W.

## Netball

Last season the M.I. Netball team were reasonably happy about finishing half way up the first division of the St. Albans and District Netball Association, but

this year several new and strong teams have come into the division, and it will be an interesting fight for the M.I. girls to maintain their position.

Mrs. Shirley Roffey, who organizes the team, says there is a full programme of twenty games to play on Saturday afternoons. She would appreciate a call on int. 269 from anyone who would like to play netball.

Perhaps before joining, ladies might like to watch the team in action. Our netball girls seldom seem to have any supporters, except perhaps when there is a football match being held at the sports ground at the same time. Then some of the spectators often come over to watch netball instead.

Before the season officially started the M.I. team took part in a tournament at Hatfield Grammar School. They drew one and lost two games but there was a marvellous spirit and it was a thoroughly enjoyable occasion.

## Diary dates

The children's party for the 4- to 9-year-olds, will be held on 26 November.

We have managed to obtain 85 tickets for the Cliff Richards pantomime 'Cinderella' for Friday, 10 February. Tickets, 12/6 and 15/- plus 5/6 coach, from Judy Avern, Personnel, or Reg Beck, Printed Circuits.



The M.I. team preparing to take the field against I.C.T. Letchworth at home. We won 2-0

M.I.'s Ken Wilson (left) has a go, but the ball, believe it or not, was stopped by the goalkeeper of I.C.T. Letchworth



## Mits Presents a Comedy

### WATCH IT SAILOR!

10th, 11th, 12th November

Marconi Hall, St. Albans

7.45 p.m. 5s. and 3s. 6d.



## Pictures of the month

*Postbridge, one of the most perfect specimens of old clapper bridges, has spanned the East Dart river for many centuries and is still safe for pedestrians. The three great slabs of granite, each measuring approximately 15 ft. by 6 ft. are supported by four piers. In the background is the bridge in current use. This photograph was taken by R. G. Mitchell, Assistant Works Accountant, Chelmsford*

*A familiar sight on the Bombay waterfront is the snake charmer, here luring his cobra from its basket. This photograph was taken by E. R. Burroughes, Deputy Manager, International Division, while on a business trip to India*

## Can you beat it?

HANDKERCHIEF—The original drip-drier.

HANSARD—Parliament's daily gas account

*The Sunday Post*

## Outside back cover

*Circuits assembled at Wembley on printed boards ready for inspection. The printed guides for the placing of components can be clearly seen*





