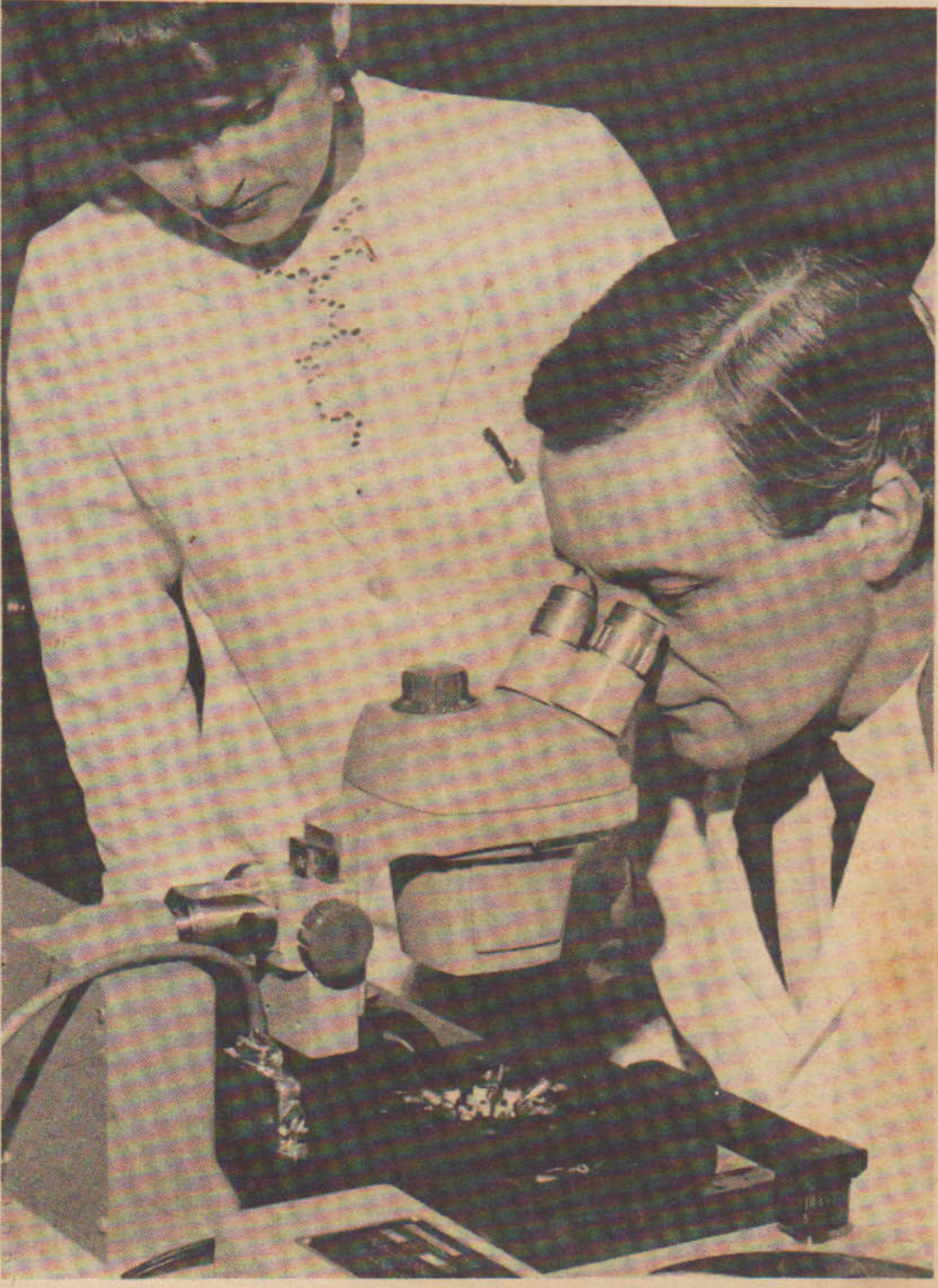


Marconi News



The Minister inspects equipment at Witham.

WITHAM OPENING HERALDS FORMATION OF MARCONI-ELLIOTT

T. Mayer heads Britain's largest Microelectronics Company

The formation of Britain's largest microelectronics company, Marconi-Elliott Microelectronics, was announced by English Electric on 5th July, the day that the Minister of Technology, the Rt. Hon. Anthony Wedgwood Benn, M.P., opened the microelectronics plant at Witham. The formation of this company is the final stage in the amalgamation of Elliott-Automation Microelectronics and the Microelectronics Division of Marconi, which have been working closely together since the acquisition of Elliott-Automation by English Electric last year.



T. Mayer, managing director of Marconi-Elliott Microelectronics, and the Rt. Hon. Anthony Wedgwood Benn, M.P., Minister of Technology, at the Witham opening.

Managing director and chief executive of the new company is T. Mayer, who retains his position as general manager, Components; I. G. Cressell becomes deputy managing director and K. Jones, marketing director. The company will operate as a subsidiary of Marconi, and will continue to expand its activities at Witham, Essex, and at Glenrothes, Fife.

Speaking to journalists at the Witham opening, Mr. Mayer said that Marconi prided itself on spending a higher proportion of its turnover on research and development than any other electronics company.

"For the last four years," said Mr. Mayer, "the Microelectronics Division has been growing steadily, continuing its research work into new processes, as well as working on the development of new devices. In the pre-fabricated buildings on the West Side of this Industrial Estate, pilot production

facilities were set up in 1964 and on these we have completely produced more than a million devices. The best known of these are the DAT 7, 10 and 13 hybrid circuits, for use in our own Myriad computers, and also the complete range of Micronor II circuits manufactured under licence from Ferranti...

"Our new plant and equipment," said Mr. Mayer, "is second to none anywhere in the world in the facilities it provides for the development and manufacture of integrated circuits... we have already obtained an order for one million circuits of the ECL type which, in view of the fast operation they provide, would be almost impossible to produce under less favourable conditions."

Pointing out that a good export business could only be built up on a strong home market, Mr. Mayer stated, "It is our immediate target to

become the largest manufacturer and supplier of integrated circuits to the United Kingdom electronics industry... There is no doubt that in the immediate future electronic equipment manufacturers who intend to use integrated circuits will choose those types which are readily available from the United States. Therefore we have concluded a new licence agreement with Fairchild of the United States, the current world leaders in DTL and TTL.

"The future for integrated circuits," said Mr. Mayer, "probably lies with those of the MOST type, rather than in bi-polar circuits. We have already produced some 54 different types of MOST devices... this activity will expand enormously and by this time next year we will have more than double this number of different devices."

Three-way Government help for Microelectronics Industry

Minister Praises Marconi

The Minister of Technology, the Rt. Hon. Anthony Wedgwood Benn, M.P., said in his speech at the Witham opening that the Government could help the industry in three ways: "By seeking to create the right climate, through use of public purchasing policy, and by making more direct financial support available."

"I said in 1967 that the Government was prepared to participate in the financing of worthwhile projects aimed at improving microelectronic production technology."

"This support depends upon the initiative taken by the industry itself in putting forward specific proposals. In our view, the necessary economies of scale and concentration of technological resources can be achieved only if activity in microelectronics is concentrated into a few industrial groupings... The merger between your parent

company English Electric and Elliott-Automation... brought together the skills and experience of the Marconi and Elliott-Automation Microelectronics companies which last year accounted for nearly 20 per cent of the microelectronics U.K. market. Your aim is to become the largest single producer of integrated circuits in Britain. With this new factory here at Witham you have now provided yourselves with the physical resources to do just that. Efficient utilization of these facilities will demand vigorous marketing, at home and abroad, and the international marketing experience which both companies possess will no doubt be used to the full in exploiting the new situation."

Wider Support

Mr. Benn continued: "As you know we and NRDC, following proposals

put to us by you and others, are examining urgently the possibility of offering support on a broader basis. Our aim is to replace the production technology scheme by a wider support programme to be undertaken by the NRDC... I hope it will not be long before I can give you more definite news."

"Support will only be offered," said Mr. Wedgwood Benn, "to those firms which have, individually or jointly, the capability of playing their part in a strong British microelectronics industry, able to compete with foreign competitors on level terms."

Mr. Wedgwood Benn concluded his speech by saying: "I shall formally open this factory as a tribute to your achievements in the past and my confidence in your ability to meet the challenge of the future. May you all find in this factory the rewards and prosperity you seek."

New Marine Radar will Outlaw Sea Collisions

Important advance in Marine Equipment

The Marconi Predictor, a new and completely unique radar system developed by Mercantile Marine Division, under James Watt, provides for the first time fully automatic plotting of all radar targets, in either true or relative motion, together with a rapid and automatic prediction of the effect of a contemplated change in course or speed.

This radar provides essential, radar-derived navigational information at a glance, without the need for constant radar observations, laborious manual plotting or the complex computer techniques involved in automatic track following devices, which can only handle a limited number of targets. The Predictor combines the most rapid and complete evaluation of a radar situation that has yet been devised with the facilities of a conventional, high performance radar. It represents the most important advance in marine radar equipment since it was first introduced—one which will greatly increase the effectiveness of the radar on all types of shipping, both civil and military.

It will be sold in the civil field by the Marconi International Marine Company, and to the naval market by The Marconi Company itself.



LARGEST EVER APPRENTICE INTAKE

The apprentice intake this September will be the largest ever. Over 500 apprentices, consisting of a record number of graduates, students, technicians and craft, will be joining the Company. The intake includes the sons of soldiers in the BAOR at Rheindahlen in Germany, and students from County Wicklow, Eire, and the Isle of Skye.

One urgent requirement brought about by this large intake is the need for accommodation. There is an appeal for anyone who can help by providing a lodging for a boy of the 17-19 year age group. If you can help please contact Mrs. J. Cross, Welfare Department, New Street. Telephone internal 337, external 610.

929

WEMBLEY RESHAPES TO MEET INCREASING PRODUCTION

Wembley is reshaping its interior layout, which has involved laying new flooring, to meet requirements for rapidly increasing production of new equipment and the testing of equipment prototypes for Line Communications Division and Radio Communications Division.

In the new floor area the work volume is increasing rapidly on two ranges of equipment developed by Line Communications Division to meet the needs of modern business administration, which requires the fast and accurate transmission of large volumes of data.

These equipments are the versatile 6010/11, operating from 600 to 1200 bauds, and the 6020/21, a faster device operating at 1200 to 2400 bauds, and which can be interfaced either directly to a computer or to a peripheral such as a line printer or a magnetic tape deck.

Testing New Series

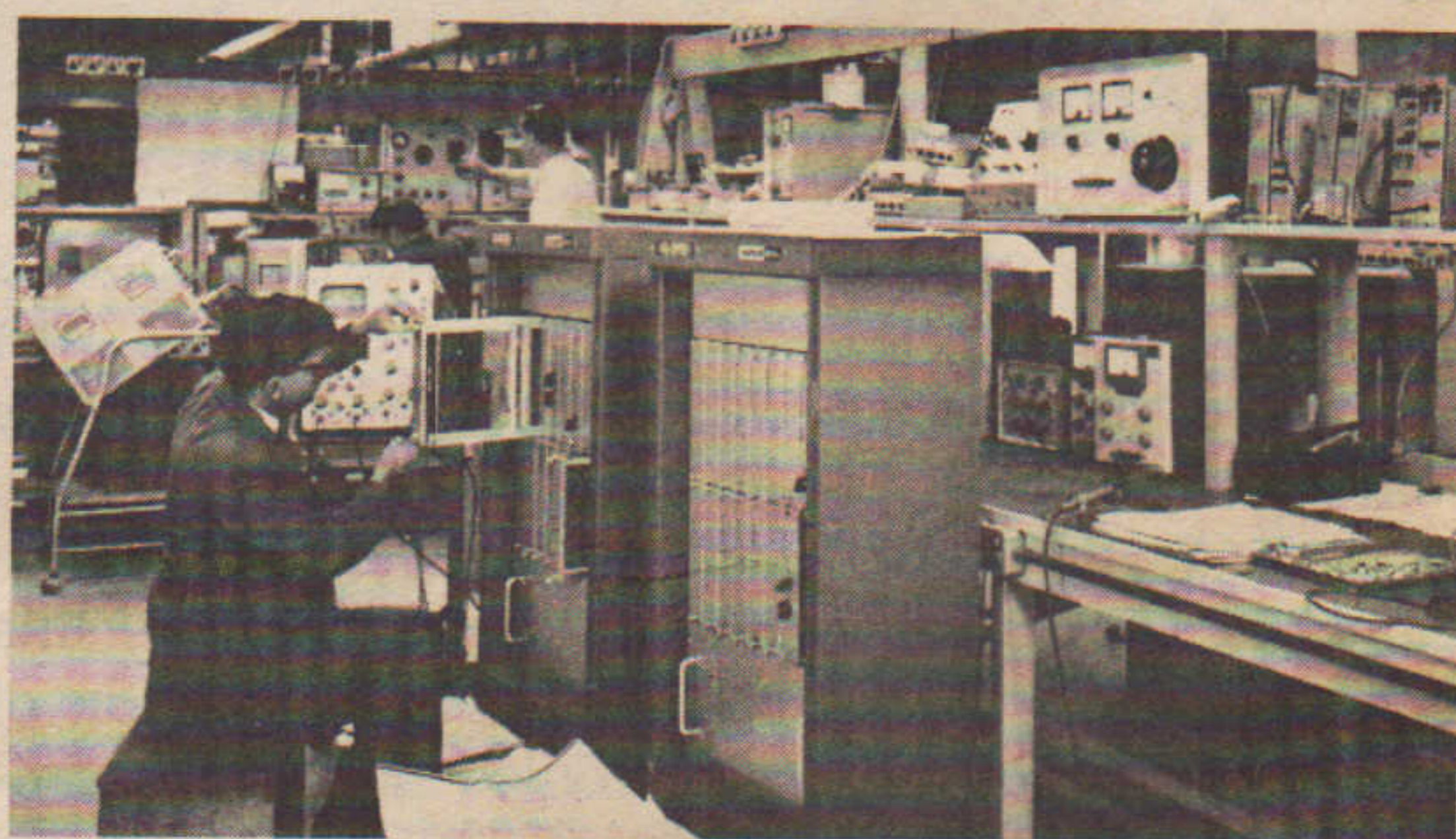
Increased capacity has also been arranged for testing Radio Communications Division's new series of 100 watt H.F. Power Amplifiers and Aerial Matching Units. These have been specifically designed to meet the rigorous requirements of shipborne equipment. They will provide completely up-to-date facilities, whilst being extremely simple to operate. The frequency range covers between 240 and 525 kHz in the m.f. band, and 1.5 to 27.5 MHz.

The world market potential for this type of equipment is tremendous and increasing, and the Division plans to obtain a substantial part of this market.

Right: S. H. Qureshi, test engineer, tests Marconidata transmission equipment on the new floor area.



In the new Mini-Test Room: E. C. Pitt, test engineer, foreground, checks a matching unit; and C. Barnes, leading test engineer responsible for the running of the project in this new area, carries out an overall test on a 1050 transmitter with test engineer A. Gebicki.



Profile

G.T. Kelsey, O.B.E.

MANAGER OF LONDON OFFICE

"To find a talking point — that is the secret."

To the hundreds of overseas visitors who come to Marconi each year, George Kelsey is the urbane figure sporting a clove carnation who greets them on arrival at London Airport; the man who immediately makes them feel at home in a strange land.

His role as head of the London end of the Company's reception complex, which is what London Office is on a large scale, fits him to a tee, and it would be reasonable to assume that he had made this his career. In fact this job, which he has now done for two decades, is only one facet of his versatile life.

Designer, journalist, research engineer and wartime intelligence agent, George Kelsey has been all these things. There was no electrical engineering background in his family, but by the time he was 14 radio had become his absorbing interest, closely followed by journalism. He realised there was little more on these subjects that he could learn at school.

At that time the first popular wireless magazine "Modern Wireless" made its appearance; edited by the brilliant radio designer John Scott-Taggart, its contributors included such men as P. P. Eckersley and Captain H. J. Round.

"I felt that if I could spend the summer holidays working for Scott-Taggart, in any capacity, I would really be able to learn both journalism and radio," says George Kelsey, "and I persuaded my father to let me apply for a temporary job." All help was welcome in the early pioneering days of wireless journalism so he was made a "general dogsbody" in the "Modern Wireless" office. With his appetite whetted the thought of returning to school was intolerable. Fortunately George Kelsey's headmaster was farseeing and persuaded George's father to let him stay on in his job for a year. "If he wants to come back to school after that we will take him."

George Kelsey did not go back to school; by the time he was 16 he was



a "Modern Wireless" sub-editor—surely one of Fleet Street's youngest.

"The pioneering days of the wireless magazines were without parallel in journalism," says Mr. Kelsey. "The publications could only survive by running their own research laboratories and we spent as much time in the lab as at the editorial desk."

Research went hand in hand with journalism, so much so with George Kelsey that in 1931, while still in his 'teens, he designed the "Kelsey Adaptor," which introduced an entirely new phase in broadcast reception by enabling an ordinary broadcast receiver to tune into the short-wave stations of the world.

This was followed by the "Kelsey Rotalog," which made possible for the first time the transforming of short-waves into transmissions receivable by the uninitiated listener. Both the Adaptor and the Rotalog were entirely original developments, not variations of known principles. They were followed by a number of other new Kelsey designs.

By the end of the 'twenties Scott-Taggart's single journal had grown into an empire of popular wireless magazines. He sold out to Amalgamated Press and George Kelsey went to A.P. with the journals. "But now I was married and this was not compatible with the irregular hours of the journalistic life," he says. So in 1936 he left A.P. to become press manager of E.M.I.

At the start of the war he joined the R.A.F. working on both radar and intelligence, being twice mentioned in despatches. His most remarkable assignment came in 1942. British intelligence had received reports of strange radio signals from Paris: George Kelsey was detailed to find out what they were. He and

another R.A.F. officer set up a television reception site on the top of Beachy Head and, using two sets, tuned in on Paris. "After some struggling we got a picture, it was a static one of the Eiffel Tower, with the words "Fernsehsender—Paris" superimposed. It turned out to be the interval signal of a regular German TV newsreel programme of R.A.F. bomb damage in France, put out to whip up anti-British feeling amongst the Parisians." Any success the Germans may have had in this respect was far out-weighted by the newsreels' value to the R.A.F. during the next two years. Reconnaissance crews would have had to fly at zero feet to get such shots. For this achievement Wing Commander Kelsey, as he then was, received the O.B.E.

He ended the war training 2,000 strong courses of mobile radar crews for fighter interception control on the D-Day beaches and into Germany.

After the war he re-joined E.M.I. Then, in 1950, he was asked to join Marconi as London's representative and, after a preliminary period with the production divisions, "Kelsey of the clove carnation" started his mission for the Company.

"These last 18 years have certainly been as active and probably more enjoyable than any," he says. "I like people, not only that, I like them for what they are, and that is the key.

People, especially foreigners, tend to be susceptible to atmosphere. The secret of winning their confidence is to find a talking point and then be a good listener."

George Kelsey's department is small, carefully chosen and extremely hard working. Every year the number of overseas visitors to Marconi grows—last year over 450 passed through London Office. Behind the detailed arrangements of each visit lies the organisation of London Office. "We are essentially a team effort, and the department is dedicated to its work," says Mr. Kelsey. "For example, we always make a point of meeting all V.I.P.s on their arrival in Britain, and this is often in the small hours of the morning, but that first welcome means so much and it doesn't stop there; in the first six months of this year my two senior colleagues and I have worked over 18 weekends looking after our overseas guests."

To George Kelsey it is a pleasure meeting people and he looks forward to welcoming many more visitors in the time ahead.

THE OCEAN SPANNING KESTRELS

'English Electric' aid to ocean sailors

The combined use of four pieces of electronic equipment played a key role in the record-breaking win of Geoffrey Williams on his ketch Sir Thomas Lipton in the 1968 single-handed trans-atlantic yacht race.

On board the boat were a Marconi Marine "Kestrel" radiotelephone, and a Loran receiver loaned personally by the president of Thomas J. Lipton Inc. of America, Mr. W. Gardner Barker, who had flown it to England for the purpose. These were linked to two English Electric KDF9 computers—one in the Meteorological Office at Bracknell and the other in the Bureau Division of English Electric Computers in London.

It was the first time a yacht in an ocean event of this kind had had weather routing information supplied from the shore. Through the long range "Kestrel" Mr. Williams spoke daily to the "Daily Telegraph" and each morning sent his position, course and speed to English Electric, using the Loran receiver to check his position when visibility was poor. This information was fed daily into the English Electric KDF9 computer, which already held performance data for the ketch in a variety of wind

strengths, direction and weather conditions.

Combining this material with the latest 72-hour Atlantic weather forecast from the Met. Office, using the other KDF9, the English Electric computer simulated the progress of the Sir Thomas Lipton on more than 140 possible courses from that morning's position. From these is then selected the three courses promising the best progress and transmitted to Geoffrey Williams through the Baldock Post Office Station.

This was yet another Marconi Marine "Kestrel" contribution to ocean racing history. It was first used by Sir Francis Chichester on Gipsy Moth III in his 1962 attempt to beat his record trans-atlantic crossing, and then in David Lewis' Rehu Moana for the Jan Mayen Island expedition. Four yachts were "Kestrel" fitted for the 1964 trans-atlantic race and in 1966 Gipsy Moth IV was thus equipped for Sir Francis Chichester's round-the-world voyage.

Five other yachts in this year's race used "Kestrels" and one is now aboard Robin Knox-Johnson's Suhaili as he makes his non-stop round-the-world attempt.

The Accommodation Problem

A statement from the Accommodation Advisory Committee

Parts of the Company have been going through a difficult period in respect of accommodation. This is realised and as much as possible has been done to alleviate conditions in specific areas.

The acquisition of the Crompton Parkinson premises will now give us an opportunity to develop logically and provide space where it is most needed.

Inevitably people are wondering how their own department will be affected and if they themselves will be asked to change their place of work.

The Accommodation Advisory Committee has made preliminary recommendations, but before any decisions can be made considerable investigations have to take place. What may seem logical can be impracticable technically or financially.

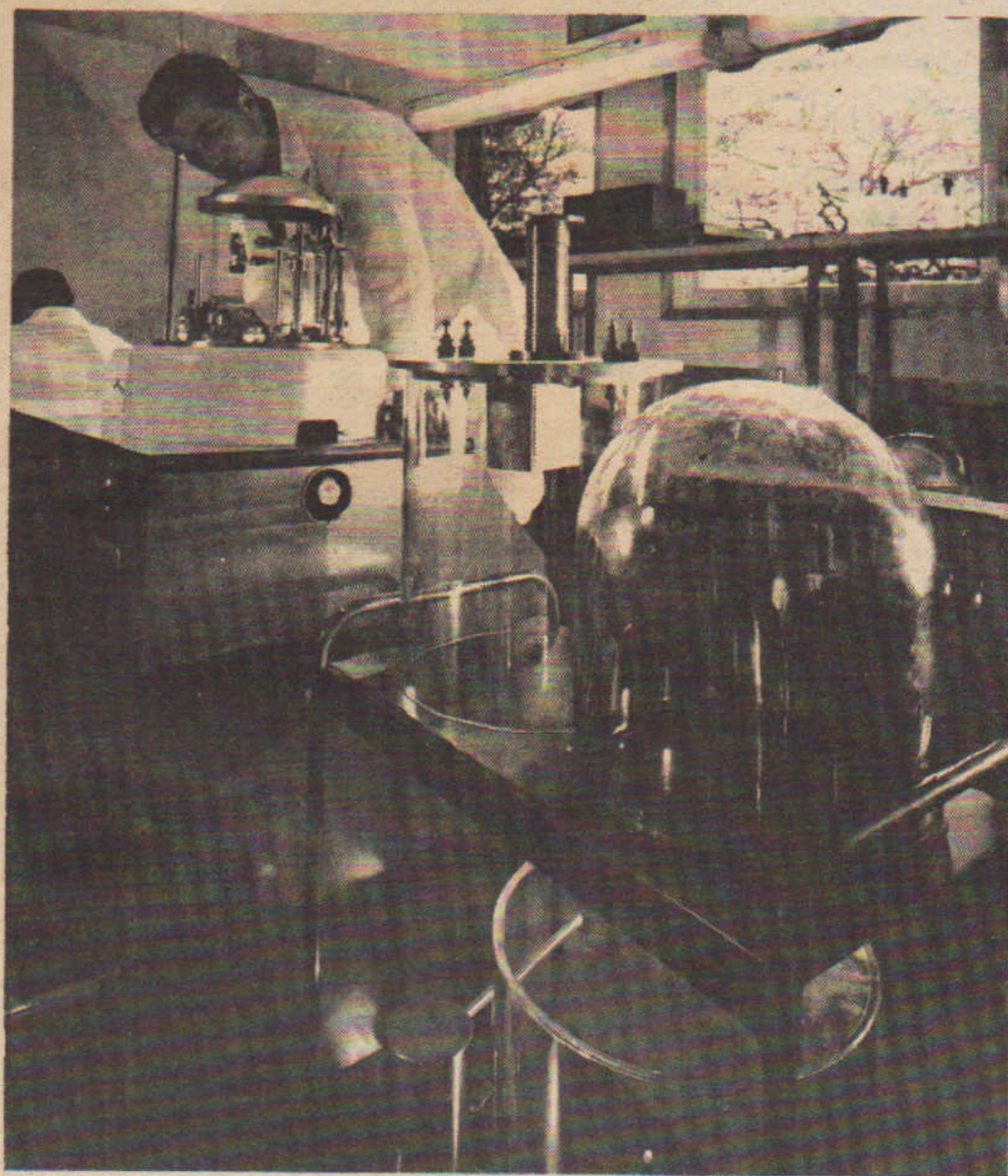
This means that at the present time

we are asking many questions, measuring areas and discussing requirements with the people concerned. Rumours often follow and while this is unfortunate we believe that most people realise that before decisions are made facts must be found and interested parties consulted.

The first move will affect Standardization Division. For some time they have been split between Kensal House and temporary accommodation in the New Street canteen. The reorganisation of the Division has already been announced by the director of engineering in his notice No. 2/68. They should move to the Crompton Works site about September/October.

As other decisions are made they will be formally announced and it is hoped to supplement them by further information in Marconi News.

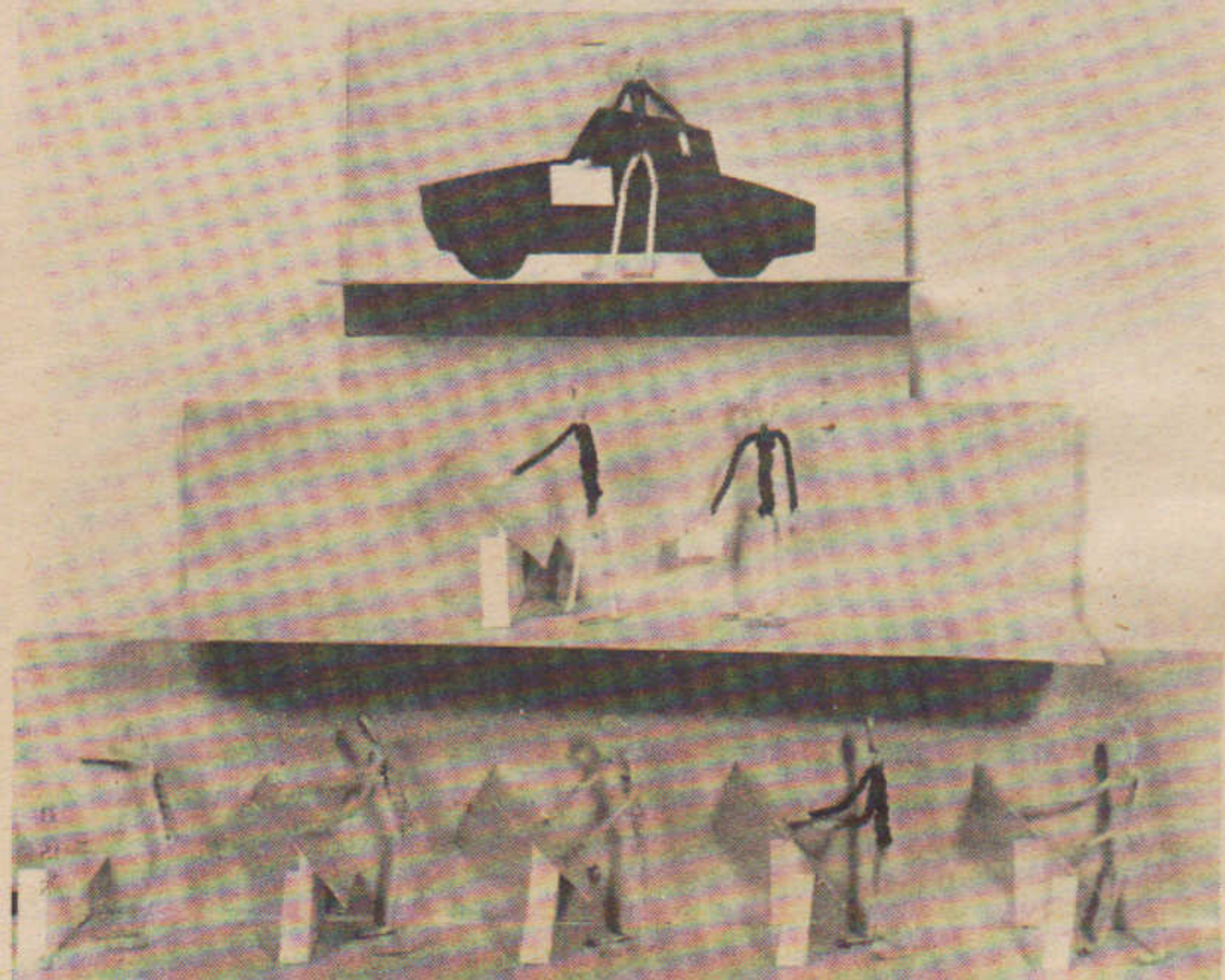
EXPERIMENTAL SPUTTERING



An experimental sputtering plant in the vacuum area of the Thin Film Department, Microcircuit Assembly Techniques Laboratory, Great Baddow. The plant is currently being used to improve uniformity of deposition of copper, gold and platinum. By achieving uniformity greater throughput of substrates is made possible.

HUMATCH DESIGN

Part II of a talk by H. J. H. Wassell, director of engineering, at a management seminar this June organized jointly by the British National Export Council and the Council of Industrial Design.



More of Dave Laxton's visual aids to Mr. Wassell's talk

In our July issue Mr. Wassell introduced Humatch Design to our readers and explained the meaning of the word HUMATCH. This month he explains further the need for and value of this design requirement:

Humatch designing must be an integral part of the total design task and must be one of the responsibilities of the product designer.

This implies three things: that the human needs must be directly or indirectly inserted into engineering specifications. That the product designer must know something about Humatch designing. He must have a sympathy for the art. And that he will need expert help in Humatch designing as in many other things. As a task of designing becomes more comprehensive the ability to call on specialists will become ever more necessary.

For these three things to happen the firm's management has a responsibility to make sure that the designer is familiar with the people and the environment with which his design is going to be concerned. One cannot really appreciate people by watching television or reading books, any more than one can get an accurate impression of physical environment by going into a test chamber.

In practical terms this means either establishing a continuity of contact and communication between designers and the people in their market by discussions on new requirements and by involvement in the commissioning of equipment, or by staging special familiarization exercises when either or both the market and the designers are new.

It also implies that specifications should more positively include, implicitly or explicitly human factor clauses as shown below.

HUMAN SPECIFICATION FACTORS

Factors affecting individuals

PHYSICAL

(assuming that the individual is clothed suitably and is working in the usage environment)

Size, Weight, Vision, Hearing, Strength, Endurance.

COMPETENCE

(in relation to product usage)

Education, Experience, Manipulating or Visual Skills.

EFFECTIVENESS

Likely activity levels. Practical or theoretical approach.

Factors affecting groups

Aesthetic or technical fashions and foibles, colour, shape or nomenclature taboos, practices, standards, bye-laws and laws, group activity and productivity, norms, responsibility and task sharing patterns.

The management should make sure that the designer has an opportunity to become familiar with the importance and purpose of Industrial or Humatch designing, and it should provide the designer with the specialized Humatch designing help he needs.

In a largish firm at least these latter two objectives can be best achieved by a three-tiered structure.

At the top there is the consultant designer, who needs to see the wood for the trees, to bring in a wider market experience and to be a prophet from another country.

In the middle is the Company industrial designer who must be available at the drop of a hat, able to create a unifying Humatch influence across the Company's products, and to help variety reduction at the cheapest cost.

At the working level operate the fair sprinkling of designers trained in Humatch designing who need to spread the Gospel and practise it on the minor items.

We, ourselves, in Marconi practise this particular organization philosophy and the award winning Mark VII Camera, of which 50 per cent have been sold overseas, was produced under its influence.

NATIONAL AUDIO VISUAL AIDS EXHIBITION

The new and extremely portable television unit developed by Electro-Optical Systems Division at Basildon was exhibited for the first time last month at the National Audio Visual Aids Exhibition. The unit enables television training programmes to be recorded on the spot anywhere in a factory or educational establishment by using equipment mounted in two wheeled units, each no bigger than a tea trolley.

Low in cost for the many facilities and for the quality of reproduction available, the system provides a completely new approach to the problem of producing training programmes which are both effective and economic. It reduces long term training costs, increases the effectiveness of a training programme, and enables relatively large groups to be shown processes which are otherwise inconvenient, expensive, or impossible to demonstrate.

FROM LITTLE ACORNS...

An enquiry received earlier this year from Plessey by Crystal Section of the Spares Department, Central Division, has resulted in a pilot order for 2,400 crystals, followed by a further order for 14,400.

Initially the enquiry appeared to hold little hope in the way of an order, since it covered a type of filter crystal not previously manufactured by Hackbridge Works. It transpired that Marconi was one of five companies approached and the submission of a tentative offer resulted in C. F. Hayter, section chief, and G. Lindsley, works manager of Hackbridge, being invited to attend discussions in Nottingham.

The orders for the 16,800 crystals resulted from these discussions.

It is understood that a miniaturized computer by Elliott-Automation has been selected to drive the inertial guidance system of the Anglo-French Jaguar aircraft.

Marconi-Elliott Microcircuits for U.S.A.

Marconi-Elliott Microelectronics has won a major order for integrated circuits to be made to some of the highest standards of reliability and performance asked from a British manufacturer. The circuits will be used in advanced electronic equipment being exported to the U.S.A. by Elliott-Automation.

Production and testing of the devices, which are made wholly at the Elliott Microelectronics plant at Glenrothes, Scotland, will be such that the likelihood of breakdown is less than one in 10,000, even in temperatures comparable to those found in the Sahara Desert. Every device is test operated before delivery for nearly a week at 125 deg. C, well

above the boiling point of water. Further tests check hermetic sealing of the microcircuit package and spinning in a centrifuge exerts mechanical stress on each device well in excess of that likely to be experienced in service.

This rigorous quality control programme ensures that the systems manufacturer can build one of these microcircuits into his equipment confident that it meets its specification and that these key parts will perform reliably from then on.

The integrated circuits being supplied to Elliott-Automation are DTL (Diode Transistor Logic) types. A complete range is available from Marconi and Elliott at Witham and Glenrothes.



M.I.-Marconi Liaison Officer Appointed

R. S. Titchmarsh, C.Eng., M.I.E.R.E., A.M.I.E.E., has been appointed Marconi Instruments' liaison officer to Marconi. Based at the Chelmsford offices, this post covers the technical and commercial aspects of representing M.I. products to Marconi, and the fostering of effective engineering liaison between the companies. The terms of reference for the post were formulated in consultation with H. J. H. Wassell, director of engineering.

Following service with the Fleet Air Arm, Roy Titchmarsh worked for the U.K. A.E.A., where he was responsible for the design of instrumentation for use in nuclear physics research. He joined M.I. in 1963 as senior test engineer. In this post he gained a wide experience of the applications of M.I. products, being responsible for the specification, design, provisioning and maintenance of the Test Engineering activities. Recently he has been associated with the Automatic Test Group of M.I.'s Engineering Department.

Mr. Titchmarsh may be contacted or messages left for him at: New Street, External 42, Internal 425; Baddow: External 118, Internal 414; Basildon: Internal 272.

GOVERNMENT SERVICING TURNOVER DOUBLED

4,000 Instruments in first year

Marconi Instruments' Government servicing turnover has been doubled by a substantial contract from the Ministry of Technology. It covers the establishment of a "Holding Unit" for the repair, calibration and exchange of the many thousands of electronic measuring instruments supplied by English Electric companies, including M.I., to the R.A.F.

The large amount of work involved will be handled at Luton. It is anticipated that approximately 4,000 instruments will be handled in the first year, comprising more than a hundred

different types of equipment and this load is likely to increase considerably.

In addition to repairing all instruments which require servicing, the "Holding Unit" will re-calibrate on a rotational basis all instruments in service or in stock. It will also hold all the serviceable stock which the Forces are not actually using, maintain records of the locations of all instruments, provide modification kits, and carry out the modifications. Transportation of the instruments to and from the Forces' units is included in the agreement.

Complete Fleet Fit for R.S.A.F.

The entire Swedish service fleet of Agusta-Bell Jetranger helicopters is to be equipped with Marconi AD370 Automatic Direction Finders.

This substantial order from the Royal Swedish Air Force is the first sale of the AD370 in Sweden, and delivery is now in progress to the Agusta works in Italy, where the first systems are being installed in the aircraft.

The Agusta-Bell Jetranger has been widely acclaimed as one of the most beautiful helicopters ever built and has rapidly gained popularity for its equally good efficiency. The helicopter is powered by one 270 s.h.p. Allison 250-C18 free-shaft turbine, has five seater accommodation and a maximum cruising speed of 140 m.p.h. at 5,000 feet. Its hover ceiling is 20,000 feet.

The AD370, cited in the 1967 Queen's Award to Industry, is now in service with airforces and airlines throughout the world.

Elliott-Automation has introduced what is claimed as the first range of HUD (head-up display) equipment specifically designed for civil airliners.

SALESMAN FOR SOUTH AFRICA

A drive to promote the products and activities of Automation Division throughout South Africa was begun last month by J. F. van Hoogstraten of Operational Services Group.

After a six weeks' tour of the country, visiting medical and educational institutions and other organizations, to get the "feel" of the market, Mr. van Hoogstraten, who is based on the Johannesburg office of Marconi (S.A.), will begin an intensive sales campaign. He joined Marconi in 1956 as a special trainee, and worked in many departments of the Company before joining Operational Services Group under T. Barritt, in 1961. With the Group he has travelled extensively covering exhibitions, demonstrations and installations, and underwent an extensive four month training course in all



aspects of the Division's activities prior to his departure for South Africa.

Pea Pods disrupt demonstration

All salesmen know that demonstrations of new equipment, however carefully planned, run the risk of failure through technical teething troubles.

What must surely be the most unusual cause of disruption to a demonstration occurred at Rivenhall last month when the local farmer deposited 60 tons of pea pods on the range. Prompt action by Aerial Department stopped the dumping of a further thousand tons of peas, which would certainly have rendered the range useless for a very long time.

* * *

A £4.9 million order for 100 electric locomotive equipments for South African Railways, has been placed with AEI Traction Limited and English Electric, following a tender submitted by their associates in South Africa. The builders and main contractors for these locomotives will be the Union Carriage and Wagon Company (Pty) Ltd., of Nigel, Transvaal.

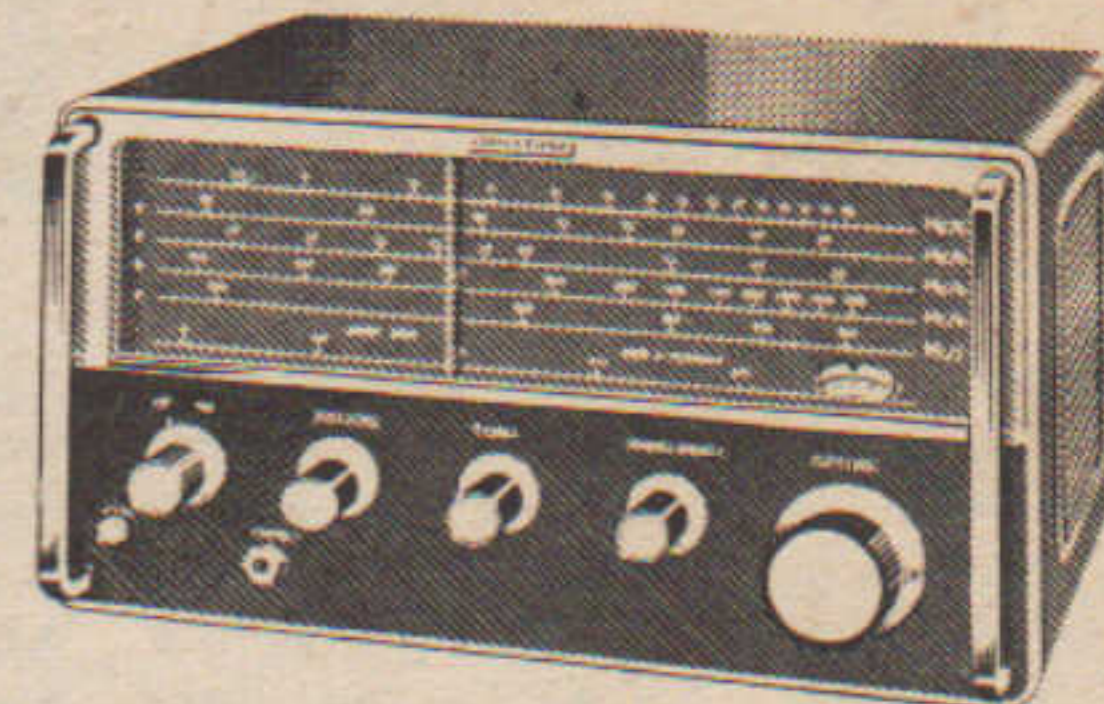
* * *

A two-day seminar on computer controlled processes will be held at the Dorchester Hotel on 20-21 August.

Your own live language laboratory

It's no good trying to do it all by the book—the only way to learn to speak the language really well is to hear it being spoken every day, by those who use it every day. Only then can you perfect all the nuances of pronunciation, and all the colloquialisms which are the vital difference between a fluent speaker and an obvious foreigner. From all over the world Eddystone shortwave receivers will give crystal-clear reception and you will have acquired a valuable aid to mastering that language, be it Spanish or Serbo-Croat.

The Eddystone EB36 Multiband transistorized receiver uses new circuit techniques giving high selectivity, sensitivity and stability. Precise tuning with a simple logging scale to record the setting of stations for future reception. Rugged and transportable, outlet for tape recorder, powered by U2 batteries or optional a.c. mains unit.



Comprehensive information from your Eddystone distributor or Eddystone Radio Limited, Eddystone Works, Alvechurch Road, Birmingham 31 Telephone: 021-475 2231 Telex: 33708

LTD/ED501



SAFETY POINT

FLAMES AT NEW STREET



Lessons to be learnt

The Marconi Fire Brigade were on the spot in minutes on the morning of Wednesday, July 10, when a 750 kilowatt transmitter on test in building 46 at New Street caught fire.

Summoned from their workplaces by the alarm, the Brigade reached the fire with their equipment within three minutes, and by the time that four fire engines from the County Fire Brigade arrived, only two minutes later, the fire was under control, though dense smoke filled the road outside.

The fire was caused by a short circuit in a load resistor mounted in a fibreglass air duct on the giant transmitter. The damage was slight and no one was hurt.

But, as with any such incident, there were lessons to be learnt. In this case it showed that where there is even the smallest reason to suspect an outbreak of fire, the alarm must be given, and given immediately the signs of fire are seen. It also made

clear that the greatest possible care should always be taken to select the right fire extinguisher for the job, as there are many varied types of extinguisher and the use of the wrong one could make things much worse.

Both of these points can be covered by people familiarising themselves with the general fire instructions which are posted throughout the works, and by studying the instructions which are printed on fire extinguishers.

'Open ship' at Leningrad

The Hull trawler Cassio selected as a representative British fishing vessel to be on "open ship" display at the Inrybrom International Exhibition at Leningrad in August, has a comprehensive Marconi Marine installation of communications equipment and aids to navigation and fishing.

WAR ON WASTE

(4)

Stationery

Expenditure on stationery—£126,000 in 1966 and £135,000 in 1967—is expected to reach the colossal figure of £150,000 in the current year. Whilst some of this increase is caused by rising prices and some by sheer expansion of the Company, the fact that over a million envelopes were used for external and internal correspondence last year and the size of the total sum involved makes it absolutely imperative to cut out waste.

All departments should set themselves a target figure for saving and all clerical staff must tackle this problem with urgency.

Five ways in which immediate savings can be made are as follows:—

Do not use envelopes that are unnecessarily large for their contents.

Do not use 'external' stick-down envelopes for internal correspondence.

Do not throw away old envelopes. Use them for internal correspondence.

Do not use large paper for short letters or memos.

Do not distribute copies of letters or memos to people who will have no use for the information they contain.

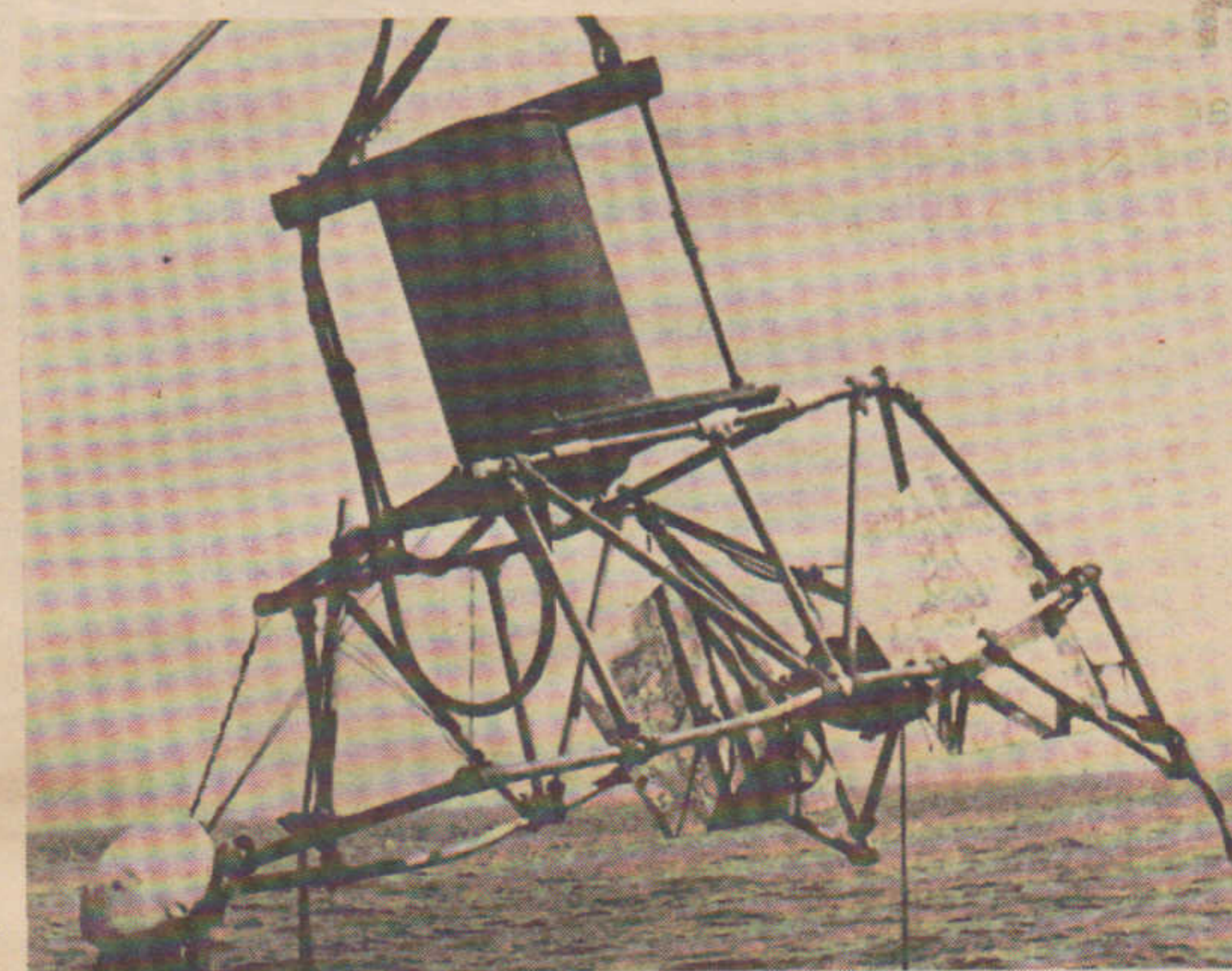
More M.I. Test Gear for Australian Army

The Australian Army has placed a further order with Marconi Instruments for electronic measuring instruments worth £43,000 for forty-five A.M. signal generators and A.F. monitored attenuators, which follows last year's A.A. order for thirty of each of these equipments.

The instruments will be incorporated in a complete Field Test Set, which will be used for field maintenance of the many communications systems currently in use. This maintenance will eventually cover the PRC-F1, a new light-weight, military radio-communication set for which Amalgamated Wireless has received a £1,340,158 order.

The TF2002 Signal Generator uses solid state active elements and completely revolutionary mechanical and electrical arrangements.

WHAT HAVE WE HERE?



Nearest to the correct answer among the many replies to our July Puzzle Picture was that of F. C. Chamberlaine. His description was a very full one. He said that the picture was a scanning drum used in early experiments in television in the early 30's. He thought that the equipment worked on 60 lines.

The picture actually showed a Marconi low-definition television of the early 30's, being a lens drum scanner for transmitting 100-line pictures.

P. B. Helsdon's answer was of interest. He said that the picture showed part of a 50-line mirror drum television equipment used in 1933/34, and that with this the first live television pictures were sent to Australia. His recollection is probably of another piece of equipment used at the same period. The equipment may have been used at a later date, and this is probably the subject of J. E. H. Pallemarts' letter in which he said that the photograph showed a NIPKOW Photo-mechanical Television Scanner.

We now invite your answers to this month's Puzzle Picture shown above.

Please address your correspondence to:—

The Editor, "Marconi News," St. Mary's House, Victoria Road, Chelmsford.

ERRATA

Due to a printers' error in the July issue of Marconi News, the article on the recent satellite seminar at the Lancaster Hotel omitted to mention that the 130 delegates came from sixty countries.

Preparing Components For Heat

In the caption to the photograph in our July issue, showing research assistant Miss Monica Ridley preparing components for heat treatment under vacuum, we incorrectly stated that this work was being done at Great Baddow. It is, of course, carried out at the Magnetic Materials Group of the Research Division at Billericay.

Appointments

ENGLISH ELECTRIC DIESEL GROUP Directorate of Finance

K. Brookes, a former chief accountant of Marconi, has relinquished his appointment with English Electric Computers and joins English Electric Diesels as director of finance from August 10th, 1968. He will be administratively responsible to the managing director, English Electric Diesels, and will be located in Acton.

and Contracts Services Groups will become responsible to the contracts manager.

Product and Systems Planning

J. M. Brown, the product planning manager will now also take responsibility for the Systems Group. His new title is product and systems planning manager.

Marketing

H. W. H. Fisher has been appointed sales manager and the former sales activity is now vested in two separate groups operating on a regional basis. C. Crix is appointed chief of Sales Group 'A'. D. G. Gray is appointed chief of Sales Group 'B'. W. G. Shepherd will continue to operate as chief of Marketing Services, all Groups being directly responsible to the sales manager.

SPACE COMMUNICATIONS DIVISION Contracts

A. H. Stewart, formerly of Radar Division, has been appointed contracts manager having responsibility for Project Co-ordination activity and Installation Planning. D. M. N. Driver is appointed chief of After-Sales Services Group. R. Hayward continues as chief of Contracts Services. Both After-Sales

CORRESPONDENCE COLUMN

WAR ON WASTE

Sir,
My suggestion is for better adhesive on all types of envelopes supplied, as these often have to be reinforced with sellotape to avoid loss of documents in transit.

JANICE HORNE, C.A.S.D.,
Baddow.

* * *

Sir,
Reading Mr. Wassell's article on "Humatch Design" in Issue No. 10 of your paper reminded me of a mnemonic we were given during the war when I was one of a party of very raw RAF recruits being taught to wire a unit. Five-core cable was being used and the colours had to be in the order Red, Yellow, Blue, White, Green. The corporal in charge, knowing we were all 'dim,' told us to think of the following phrase:—

Rub
Your
Belly
With
Grease

S. C. VESSEY, Building 46.

* * *

A college course to provide Britain with a pool of purpose-trained export salesmen is being launched at Stoke-on-Trent. School leavers will take a two-year course in export marketing and languages before going into industry.

The British aircraft industry is likely to make a substantial contribution to the new European designed combat aircraft, currently being discussed by the six partners in the project.

VISITORS FROM SAUDI ARABIA



Visitors from Saudi Arabia came recently to New Street to examine Radio Communications Division's testing facilities and to meet members of the team working on equipment for the communications complex which the Company is supplying as part of an £8m radar and radio equipment deal for the Saudi Arabian defence system. Leader of the team from Saudi Arabia was Col. Nabulsi, director of material, Royal Saudi Arabian Air Force, who expressed his complete satisfaction with what he saw.

Left to right in the picture are: W/C H. E. Bennett, GEC/AEI; E. Buckmaster, Radar Division; W/C Anwar, Pakistan Air Force; Capt. Zawaidy, Royal Saudi Air Force; Col. Nabulsi, director of material Royal Saudi Air Force; D. Crossley, GEC/AEI; G. Wheeler, Radar Division; A. W. Clark, H. Division.

SITUATIONS VACANT

ORGANIZATION AND METHODS

Vacancies exist within the Systems Analysis Group of the O & M Department for trainee systems analysts to be engaged in the planning, specifying and implementation of computer based systems within the Company.

The present fields of application of computer techniques cover cost, production and material control, accounting, purchasing, certain aspects of D.O. practice, commercial procedures, product division procedures, and related management projects being currently developed.

People with proven successful experience in any of these or related fields, and with an aptitude and ability for this sort of work, are invited to apply.

All successful candidates will be given adequate training to meet the requirements of this interesting and important work which is bound up closely with the future development of the Company.

Applications should be made in writing before Monday, 19 August, to H. W. Cooke, Central Personnel Services, New Street.

BROADCASTING DIVISION Contracts Engineers

There is a need for contracts engineers who will turn a sales engineer's definition of the facilities required by the customer into a fully engineered system so the hardware can be procured. Contracts engineers are also the major point of contact between the customer and the Company and provide engineering liaison within the Company so as to ensure that a satisfactory system is delivered to the customer.

Applicants should be qualified to about H.N.C. standard and have a good knowledge of either radio or television studio or transmitter station engineering practice.

Applications giving a summary of experience to date, age, qualifications and quoting the reference BC.1 and your internal telephone number should be addressed to D. H. Steele, senior personnel officer, Central Personnel Services, New Street.

COMMERCIAL SYSTEMS

Opportunities exist for men and women to undertake a range of clerical duties, including checking of computer produced reports, within the Commercial Systems Group of our Organisation and Methods Department at St. Mary's House, Victoria Road, Chelmsford.

These duties will be carried out on an overtime basis following completion of the normal day's work and those concerned will be paid at their appropriate overtime rates.

Work will be available on an irregular basis and, therefore, interested applicants must be prepared to be available at short notice. Availability must also, obviously, depend on the applicant's overtime commitments in relation to their own Department and it is emphasised that the latter must at all times be given first priority.

Those interested must obtain the permission of their Heads of Department before making application.

Please write in the first instance to H. Cooke, Room 86, Central Personnel Services, New Street, quoting brief career details to date.