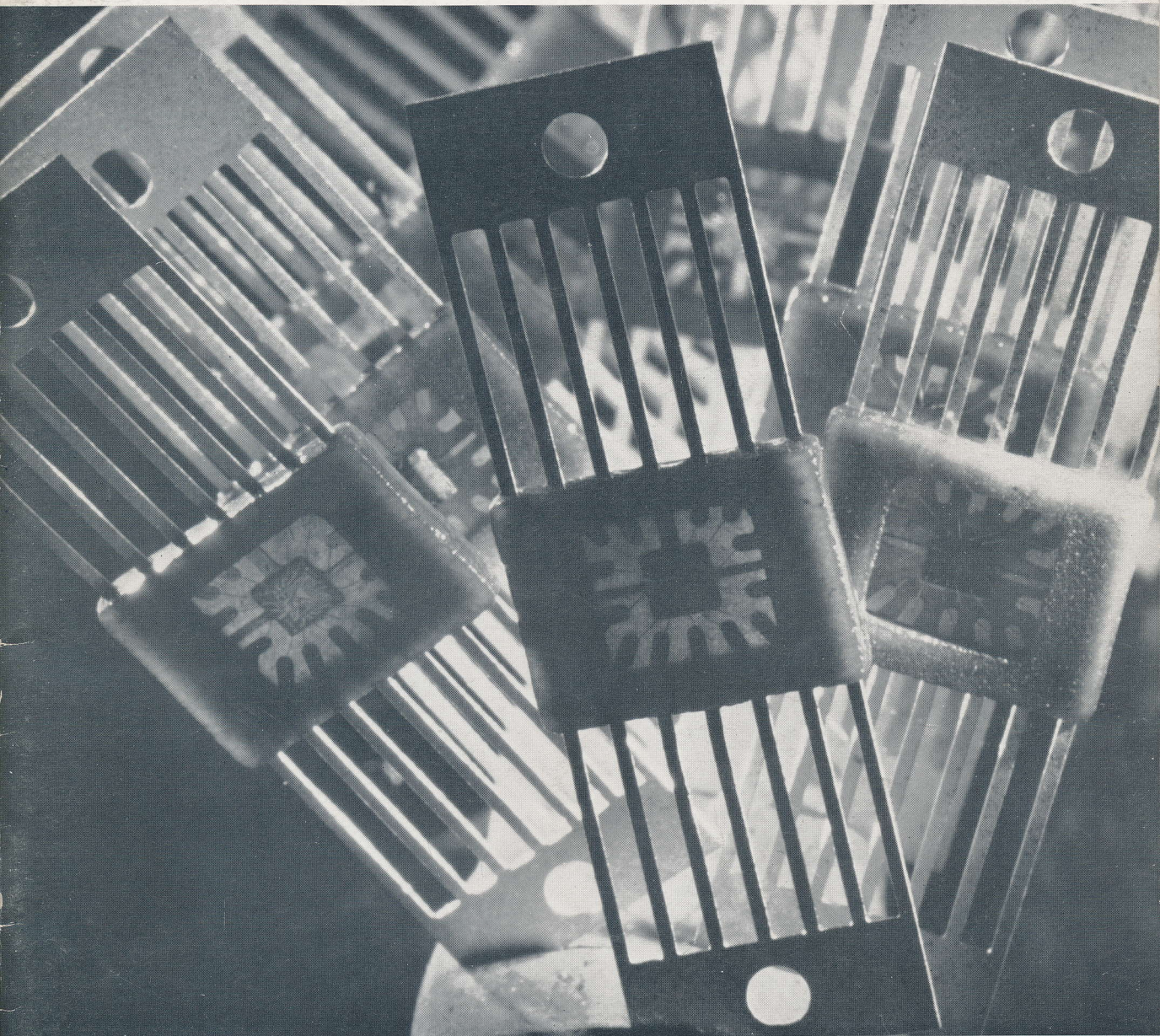
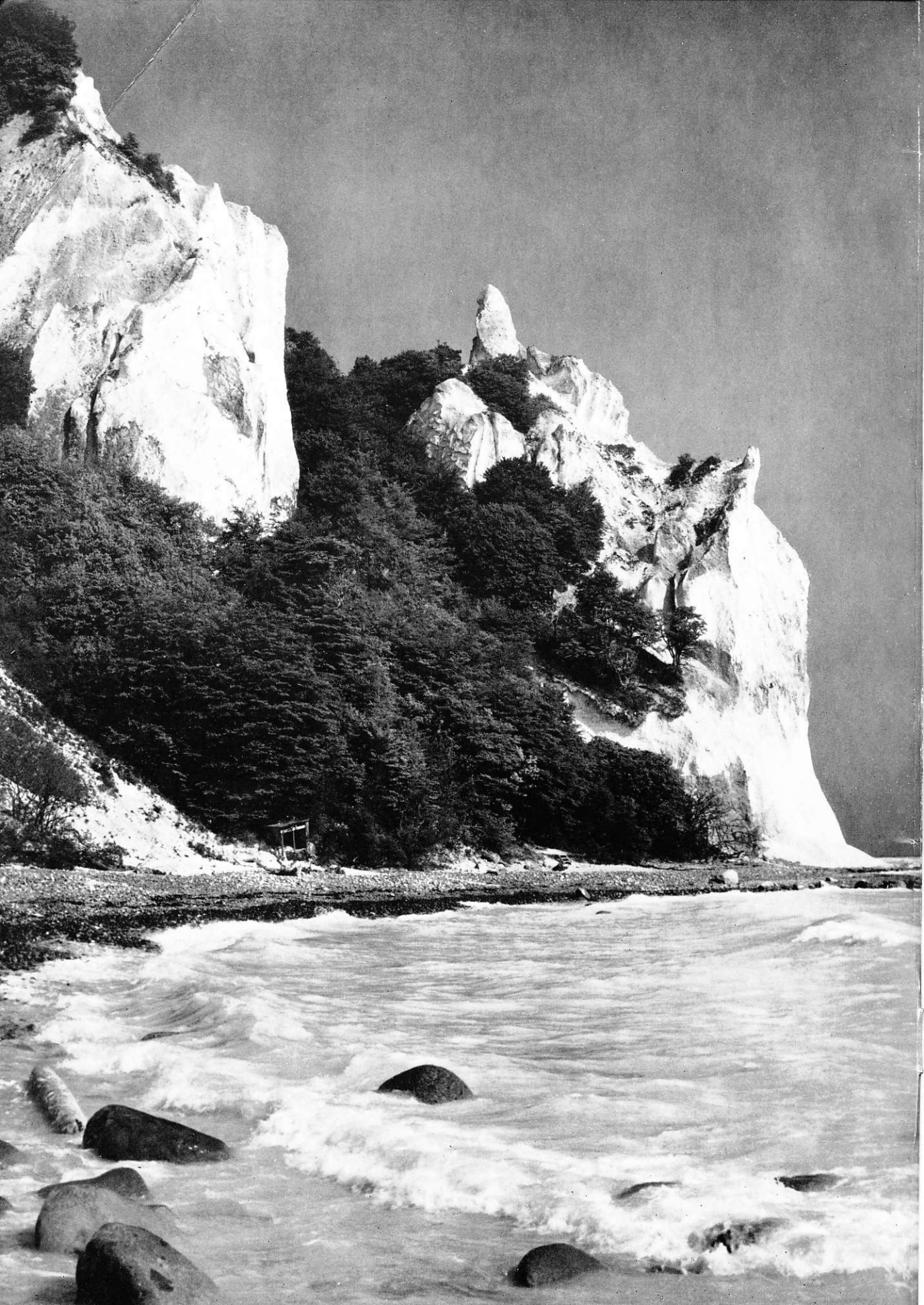


Marconi

companies and their people



Volume 16 Number 11 June 1966 Sixpence



Congratulations on the Queen's Award

The Managing Director, R. Telford, has received this letter from the Chairman of 'English Electric', Lord Nelson of Stafford:

Dear Mr. Telford,

I am writing to congratulate you and all your staff on obtaining the distinction of being selected for the Queen's Award in the field of export achievement.

This reflects the greatest possible credit on the Company and I do extend to you my warmest congratulations and appreciation of what you have achieved.

Yours very sincerely,

Nelson of Stafford (signed)

A similar letter has also been received by R. E. Burnett, Managing Director of M.I.

Flat pack circuits

Packaged circuits, which you see on the front cover, are one of several forms of integrated circuits offered by the Marconi Microelectronics Division. This summer work will begin on the construction of the new 90,000 sq. ft. Witham factory which is due to come into operation by the autumn of 1967.

Many of the activities of the division, with the exception of those using the heaviest plant, have been transferred from Baddow. Production of integrated circuits is expanding rapidly, and at Witham we already have one of the finest assembly areas for microelectronics in Western Europe.

The products of the division are used not only by the Company—notably in the Marconi range of computers, airborne equipment and television cameras—but also by other electronics firms throughout the world, to whom it offers a confidential consultancy, design and manufacturing service.

Radar hand-over

Marconi's have designed, manufactured, and installed a major radar station at Meshed in N.E. Iran. In spite of a tough building programme in wild country it was completed on time. Here is the final handing over ceremony with officers signing on behalf of the British and Iranian Governments. Left to right; standing: Wing Commander G. R. Adams, Officer Commanding Royal Air Force detachment, Iran; Graham Wing, Marconi's site engineer; Major-General M. H. Esfandiari, Commander, Air Defence Command, Imperial Iranian Air Force; John D. Crispin, Radar Division, Marconi's senior representative. Sitting: Wing Commander V. G. Piercey, Ministry of Defence, U.K.; Colonel M. Rassouljian, Iranian Air Defence Council; and Major H. Filsus, Base Commander, Meshed

Marconi

An 'English Electric' Company

The Marconi Companies and Their People

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THE QUEEN'S AWARD
TO INDUSTRY 1966

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Opposite

The White Cliffs of Denmark

They lie to the south of Zealand, overlooking the Baltic. At Aalborg, in Jutland, lies one of Denmark's major airports, which is to have a dual Marconi 50 cm radar system with day-light displays. These will give controllers an all-weather picture of their area [J. Allan Cash]





Marconi for colour television

WITH colour television monopolizing more than 80% of peak viewing time in America, the annual convention of the National Association of Broadcasters in Chicago proved a timely occasion to launch the Company's new Mark VII colour camera on to the United States market.

This premier broadcasting event attracted 8,000 visitors, specialists from all fields of television production and engineering, and as the main exhibit on the Marconi stand the cameras attracted tremendous interest. Company personnel are no newcomers to this convention, having attended annually since 1960, and the successful sales of television and

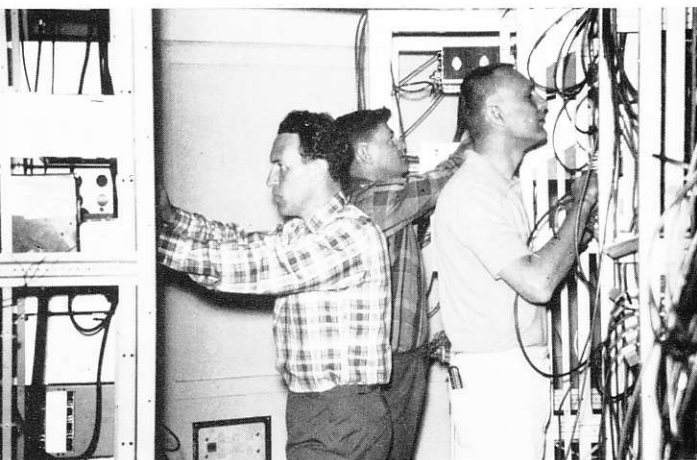
broadcasting wares in this most difficult market is due to their efforts.

The four tube camera represents a significant step forward in the quality of colour pictures and together with the inherent built-in stability, provides a hands-off mode of operation previously only available with the high-grade black and white cameras. Broadcasting Division's other exhibits, on nearly a quarter of the stand space booked by our agents The Ampex Corporation, included the Mark V camera, the Mark V Picture and Waveform Monitor, SAMS colour special effects equipment, test equipment and 12-channel audio mixer also aroused plenty of interest. CCTV gave working demonstrations of their 321 and 322V cameras.

Among the Company's customers in the U.S.A. is Chicago's latest television station WFLD, housed in a futuristic structure at the base of the 60-storey Marina City Building. This is a completely new look television complex which Marconi's have played a major part in equipping.

WFLD has chosen two new Marconi 25 kW u.h.f. transmitters to work in parallel and these will eventually be remotely controlled from the studio building. Also included in the original order are six Mark V 4½-in. image orthicon cameras. The equipment for the station, which has been called the 'station of tomorrow', will be highly automated, 98% solid state and flexible in operation.

Led by their manager, Tom Mayer, Broadcasting Division had their strongest ever representation at the Chicago convention, with Norman Parker-Smith, Studio Engineering Manager, Cyril Teed, John Leeson and Archie McKerrell from Sales. Also amongst the team were Ray Matchell, Norman Porter and John Winn from Development, Stan Moore from the Television Demonstration Unit and Dave Parkinson, their resident engineer in the United States. T.D.U. Sales Manager Vic Prior and Eugene Borysiuk represented the interests of CCTV and for the first time this year Publicity Department were represented by John Pool, Exhibition Manager, who studied the scene with the view to taking an even greater interest next year.



Working behind the scenes during the short period allowed for preparation before the N.A.B. Convention are Cyril Teed, Dave Parkinson and Ampex man Raoul Proctor



Beside Chicago River rise the spectacular columns of the Marina Towers, some 60 storeys high. WFLD, 'the station of tomorrow', which Marconi's have played a major part in equipping, lies between the two towers. Its aerial will top the west tower



Old friends from Waterhouse Lane are, left to right, Ted Bryant of the Milling Section, Jack Chapman, Tool Room Chargehand, Arthur Dann, Sheetmetal, and, in the front, Sid Reed who worked in the Tool Stores until he retired. Although there are over thirty veterans at Waterhouse Lane, only three came to the reunion. How about coming along to the next one?

Hackbridge, past and present. Though several of these veterans have now retired and many have moved to other parts of Marconi's, at one time or another they all worked at Hackbridge

Meeting old friends

On the membership register of the Marconi Veterans' Association are the names of nearly 2,500 veterans and a record number of these, over 350 in all, enjoyed meeting old friends at the thirtieth reunion in the New Street canteen. After an excellent lunch put on by the canteen staff, there was a floor show followed by the annual general meeting.

Distance, as far as many members were concerned, was no deterrent: they came from as far afield as Bristol, Glasgow, Falmouth, Liverpool, Scarborough and Bagenalstown, Ireland. One even came from Hong Kong, though he was on leave.

President for the year was veteran J. R. C. Johnson who joined the Marine Company in 1917 and served at sea as a radio officer until he came ashore in 1950. He was Manager of Contracts Division when he retired in 1963. Many telegrams of good wishes were received, including three from veterans in the Indian and Hull Marine depots, and the Canadian Marconi Company.



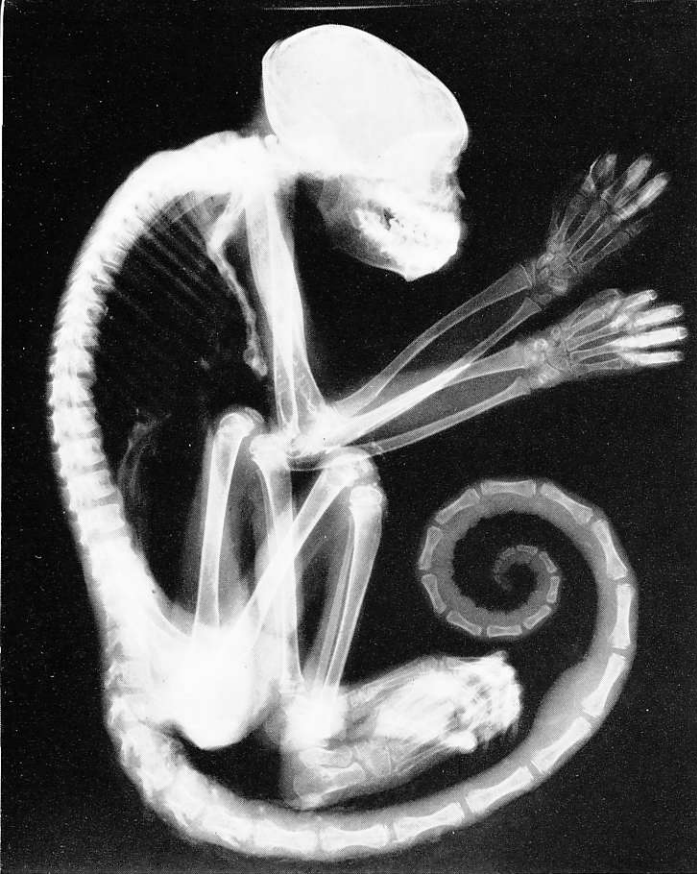


Wearing their orchids which were presented to all lady veterans are, from the left, Sister F. E. Rankin, Mrs. D. Holder, Miss P. Payne, Miss E. C. Bate and Miss E. Mead. Must be the floor show capturing their attention

Remembering the good old days are Bud Cooper, chairman of the veterans' committee, the oldest member present, E. E. James, who joined Marconi's in 1914 and is now ninety-seven, and Tommy Crees

Baddow Librarian F. E. Goodenough with two charming ladies, left, Mrs. O. Eady, formerly Miss Marchant, and Miss R. Strait of the library



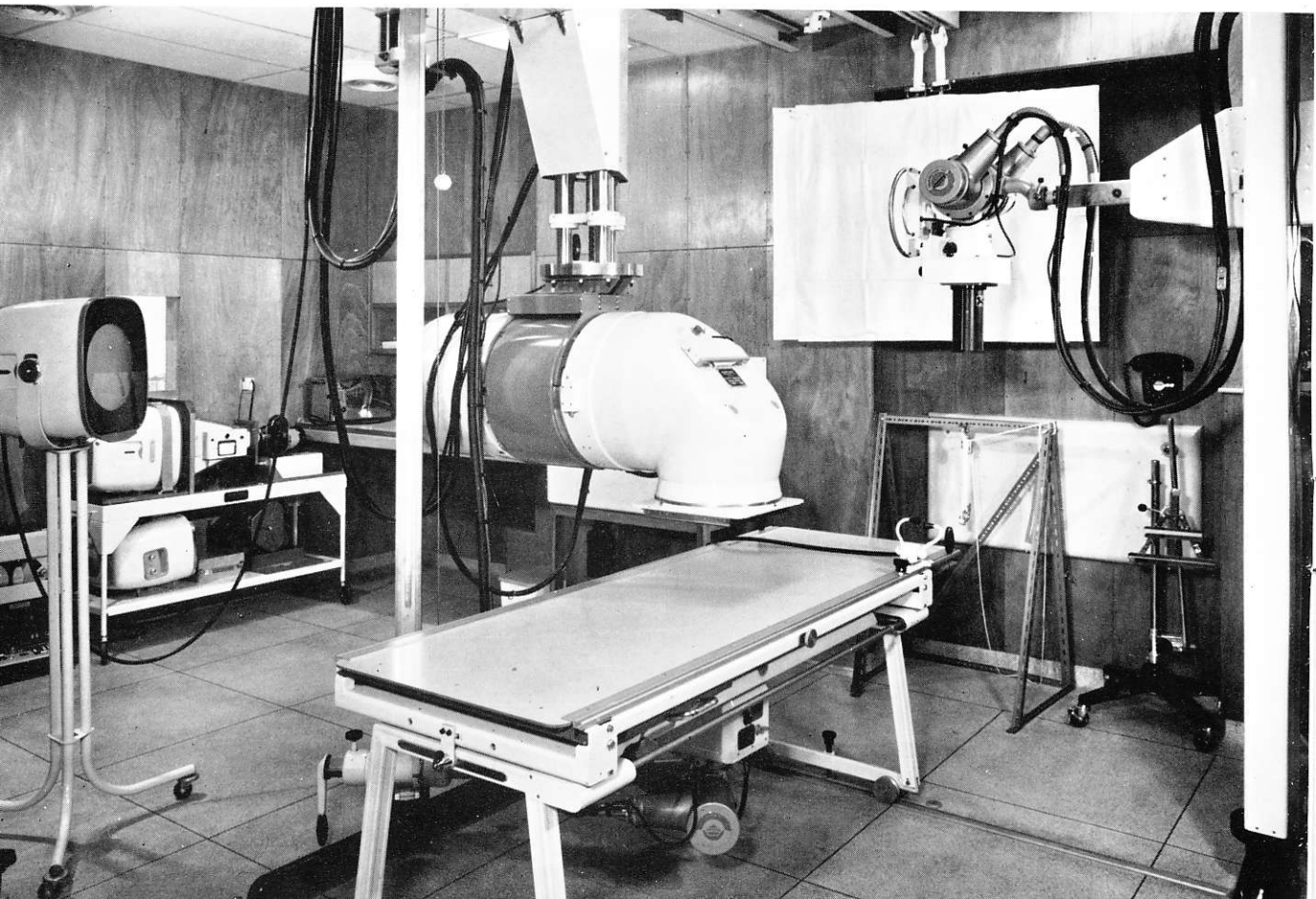


FOR THE BENEFIT OF BOTH

To use modern medical science for the welfare of animals is the object of the Nuffield Institute of Comparative Medicine. The Institute's new building in Regent's Park has a lead-lined animal X-ray room specially built for the purpose and a comprehensive range of equipment, including the M.I. 12-inch image amplifier.

Already the amplifier, with its combination of television and X-ray, is helping the workers at the Institute to do research never before possible. Those in charge, and the officers of The Wellcome Trust who presented the apparatus, consider that the benefits of modern medical techniques should be

ABOVE: *What's your little trouble? An X-ray of a monkey.* BELOW: *The X-ray Department at the new Nuffield Institute of Comparative Medicine, Regent's Park. M.I. supplied the complete 12-inch image amplifier equipment, ciné camera apparatus and SONY video recorder*



A wallaby sits quietly eating an apple under the image amplifier while Miss P. Verity, radiographer at the Institute, poses him for the camera. BELOW: Video tape view—the wallaby has a jointed lower jaw which it moves like a pair of scissors

available to animals as well as man, and that advanced research can be of future benefit to both.

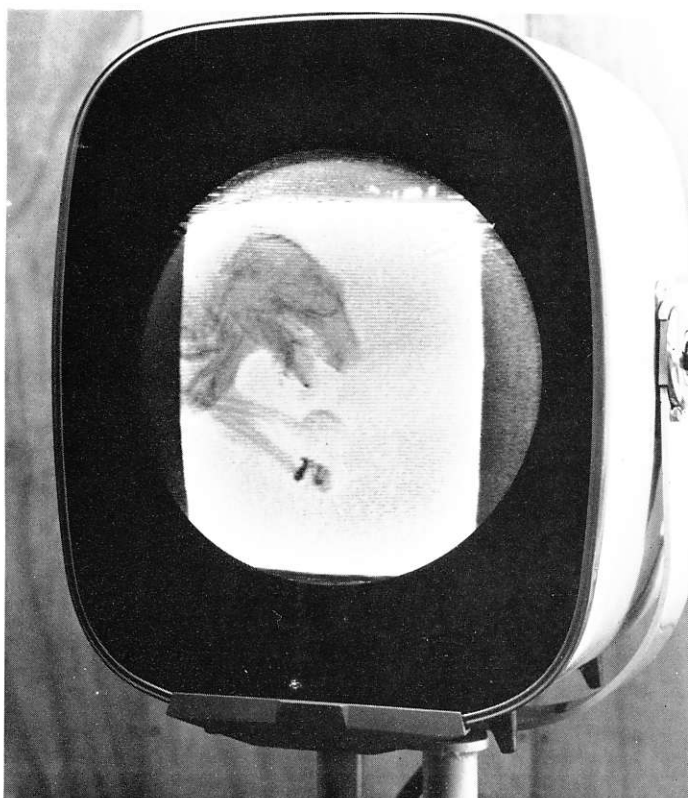
The serious radiological study of animals is a fairly recent thing, how they move and how their digestions and blood circulations work. Sometimes knowledge of a particular animal is so sketchy it is not even known what is normal and what is abnormal. The Institute, one of the few establishments of its kind in the world is, therefore, building up a collection of radiographs as part of The Wellcome X-ray Museum and these radiographs will be available to scientists and veterinary radiologists at other centres for comparison with their own.

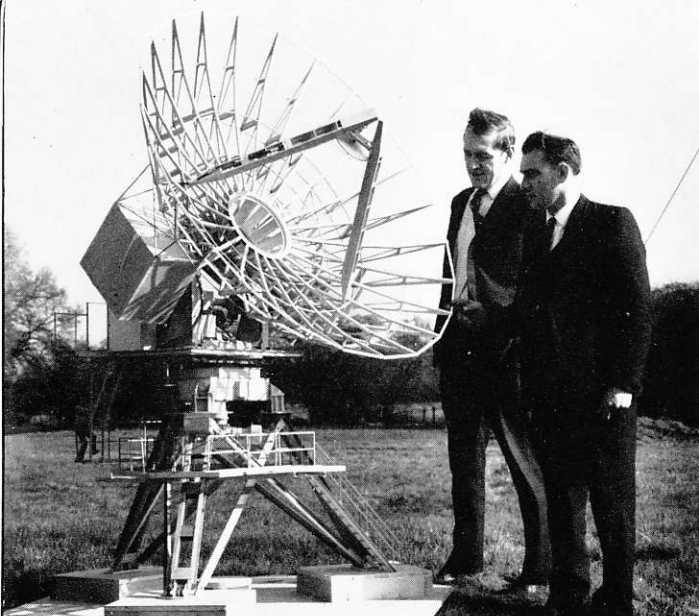
In research into movements of all kinds, the image amplifier coupled to the Sony video recorder—which stores the TV pictures on tape—is particularly valuable. Ciné film is also made, normal room lighting is employed, and the low radiation dose will not harm the animal. An example of this kind of research is provided by the work of an Australian zoologist on how a wallaby bites and chews. These animals have a joint in their lower jaw the purpose of which has long been disputed.

One of these wallabies, of the almost extinct banded-hair species, was used as a model when the photograph shown here was taken. When the image amplifier and video tape are being used the animal does not have to remain still, so if size permits, it is put into a plastic container which allows it to move freely but not to roam around the room. It is surprising how warmth, comfort and kindness keep a wild animal quiet. The wallaby used in the photograph was placed on a sheet of plastic which was rested directly on the tubehead. It was a little lively at first, but it had been handled before and a piece of apple and radiographer Miss Pam Verity's careful attention soon had it quiet and ready to pose.

In the fluoroscopy of animals, the magnification and inversion facilities of the amplifier and the slow motion device of the video recorder are most useful. To see, in slow motion, an owl swivel its head round so that it is looking backwards is fascinating. It does not, by the way, just swivel its head. It has a comparatively long neck which is hidden by its feathered ruff.

The M.I. image amplifier is doing diagnostic and research work in many hospitals in this country and abroad, so it is reasonable that at least one such equipment should be used for the same purpose with animals.





Model of Apollo

This one-eighth scale model of the Apollo aerial was built by the Mechanical Design team at Baddow as a proving exercise. It shows how the gantry has been designed to carry the 42-foot dish aerial, and how the two transmitter cabins will be attached to the back of the reflector.

On the right is Peter Bowkett who will lead the erection team on Ascension Island. He is working out erection methods with John Perrin, one of the design team.

This project is on a very tight time schedule for the aerial, which is being assembled and tested at Rivenhall now must be in Ascension by September.

New look staff committee

To improve channels of communication between management and staff employed, the Staff Committee has been re-formed. Following discussions between J. F. H. Pease-Watkin, for the management, and a sub-committee of G. D. Shevel, F. Whybrow, W. Baker, E. Bradford and S. Calvert, it

was felt that staff employees could better be served by divisional representation rather than geographical location, as has been done in the past. Now the twenty-three newly elected members are each responsible for a division or divisions in the Company.

Any member of staff is free to take his or her problem to the divisional representative and, if it is

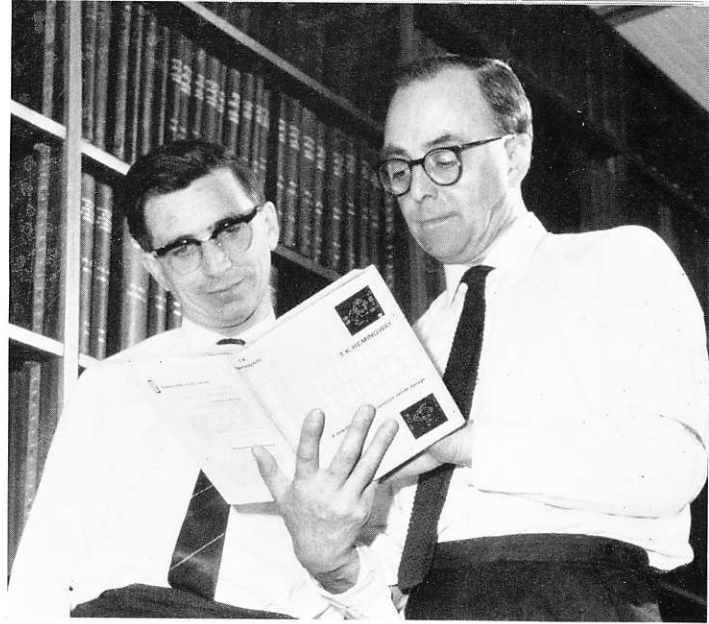


Members of the newly-elected Staff Committee at the one hundred and ninety-fifth meeting. Each member represents a division or divisions. Back row, left to right: T. Rogers, Microelectronics Division; M. Mayhew, H.O. Accounts; K. Butt, Radio Communications, Line Communications and Writtle D.O.; D. Pope, C.C.T.V. and Waterhouse Lane D.O.; B. Stammers, Research, Baddow D.O.; O. & M.; F. Swain, Aeronautical Division and Basildon D.O.; F. Leach, Research and Development Workshops. Front row, vice-chairman Mrs. Y. J. White, Broadcasting Division and Broadcasting D.O.; E. Morley, Central Division; chairman R. Marshall, Works Manufacturing; J. Kliskey, Research, Baddow D.O., O. & M.; E. Ellis, Publicity Department, Standardization, Computer Division

A guide to transistor circuit design

A new book written by Keith Hemingway, Chief of M.I. Advanced Circuit Development, left, will provide the newly qualified electronic engineer with a working knowledge of transistor circuit design.

Entitled *Electronic Designer's Handbook*, the book is divided into sections describing the properties of the transistor used as a switch and as a small-signal amplifier, and the design of a number of conventional and unusual circuits. Finally, some useful practical techniques are discussed. *Electronic Designer's Handbook* is published by Business Publications Ltd., at three guineas.



not resolved after discussion with the Divisional manager, the matter is brought up at the next convenient meeting. At a recent meeting, matters discussed included acoustic hoods to be fitted over the coin telephone boxes at New Street; change machines; and the new distribution system for the Exchange and Mart. The committee can only discuss matters brought to their notice by staff employ-

ees: they cannot recommend or request the management to take action.

The committee is under the chairmanship of R. Marshall with Mrs. Y. J. White as vice-chairman and F. Whybrow, secretary. Representing the management is J. F. H. Pease-Watkin, while V. C. Sayers represents Works management, and Mrs. J. Cross, Welfare.



Back row, left to right: J. Levett, Management Administration, Central Staff Services, Commercial Services, General Managers, Engineering Directorate, Directorate of Product Planning, Company Production Control, Central Estimating Services, Secretary's, Patents, International Division; J. Candler, Specialized Components and Research Divisions, Billericay; J. F. H. Pease-Watkin, management representative; A. Rogers, Space Communications Division, Mercantile Marine and Mercantile D.O.; S. Calvert, Works Manufacturing; P. Scrutton, Works Engineering; D. Hammond, Works Planning; V. C. Sayers, Works management representative. Front row, J. Lucas, C.D.O. and I.D.O.; G. Hankinson, Automation; F. Whybrow, secretary; A. Wilkinson, Works Supplies; Mrs. J. Cross, Welfare Officer

SCAT TEAMS IN ACTION

Achievements of the engineering teams and how they overcame some of their problems

The dust has settled, the main task has been successfully accomplished: three stations have been built.

This contract has been a major test for us. A test because of the type of design and because of the terms of the contract. The A in S.C.A.T., let us not forget, stands for airtransportable, which has meant that each of these equipments has been built of light but strong material to save weight so that at short notice it can be flown off across the world to a new site.

The project represents a great deal of original work by the specialist sections of the Company and many long hours of dedicated concentration. Some of the jobs tackled during last year's big push were overcome in an extraordinarily short time. This was because of the intuitive know-how of engineers, who, guided by experience, were able to produce the answers when they were wanted.

Every individual of the Scat teams has pulled his weight, and the combined effort of all hauled the project through on time.

Frank Dutton, of Baddow, told us that a major factor in this contract was that an aerial of this type had never been built before. It was complicated. The dish itself had to be large—forty feet in diameter—and yet built even more accurately than a smaller unit. The r.f. design demanded exceptional care to give the right illumination of the dish from

the feed horns, to reduce noise temperature to the minimum, and thus gain the maximum efficiency. The structure must necessarily be light, and the dish must rotate in such a way as to point vertically upwards without unduly complicating the joints in the waveguide systems. For these reasons, among others, the conventional method of mounting the aerial was not adopted and a novel system, the non-orthogonal system, was used with the aerial rotating about an inclined axis in elevation.

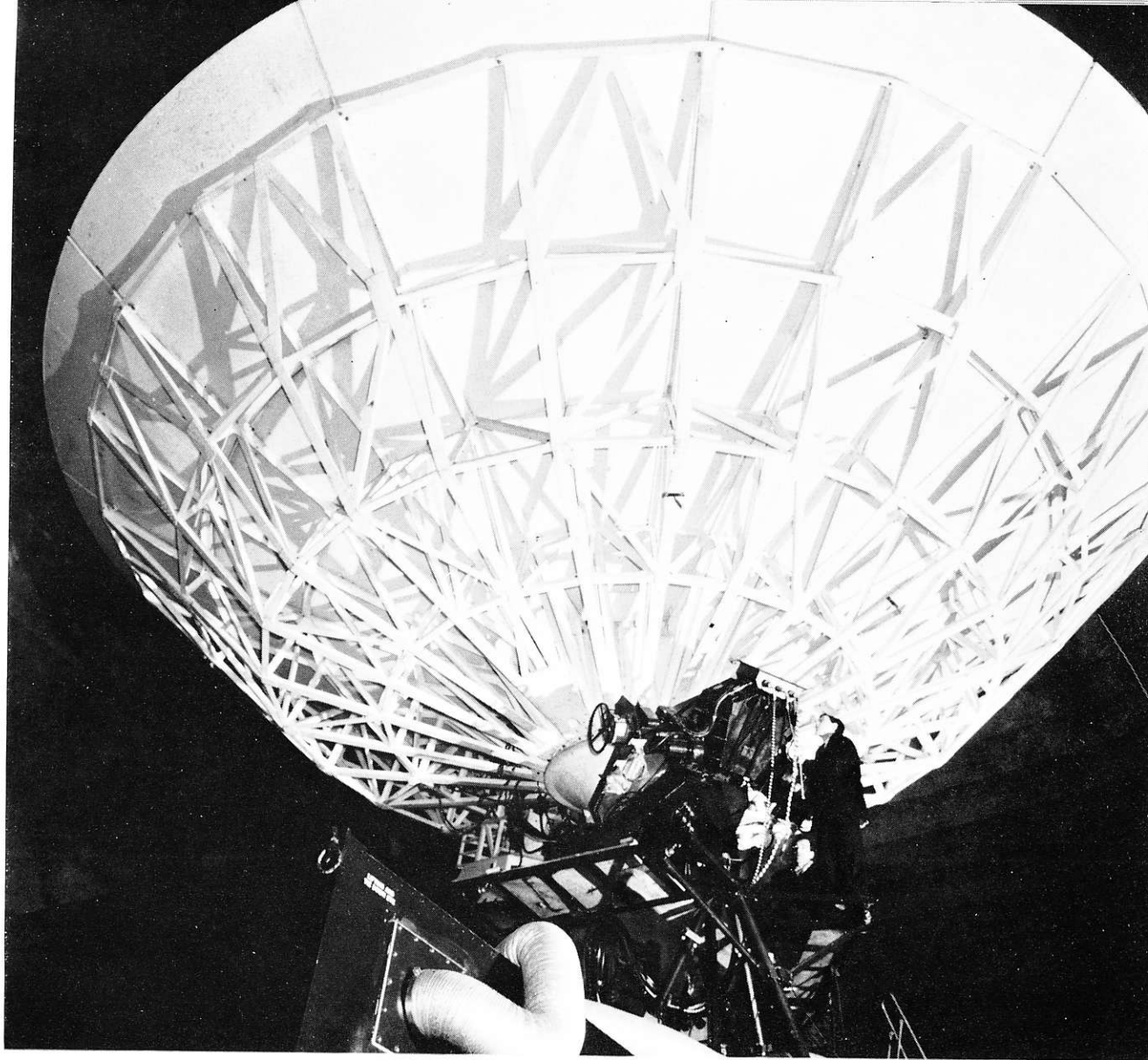
The mechanical design of the forty-foot dish was carried out under the direction of Len Gill. The honeycomb-sandwich reflectors were stretchformed by Hawker Siddeley and the dish structures were built by English Electric, Accrington. So accurate was the work that when segments of a dish were dismantled and reassembled in random order on test, the result was as successful as the first assembly.

Don Harris of Aerial Department designed and supervised the testing of the complicated r.f. feed horn which was required to bring out the best performance from the dish.

Ken Perry of Baddow said that the waveguide system was, in the main, a new design. This was high-level c.w. The guides were to carry high power from the transmitter to the aerial and the problem was to minimize the loss of power and consequent overheating of the system. The final design achieved

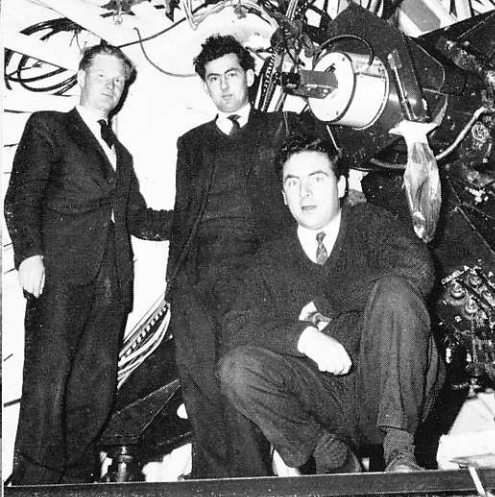
LEFT: Some of the waveguide team at Baddow. From left to right, Hugh Kindell, Ivan Mills, Cliff Barham, Paul Griffin, Ken Perry, Chief of Microwave Components Group, Rod Newbould, Ian Powell, Peter Whitnall and Maurice Jepson. RIGHT: Alec Kravis, Seat Project Manager, centre, with his deputy Geoff Davies, left, and Peter Foakes, the Pert engineer. Behind them is the main Pert data control board





ABOVE: This shows the aerial in the satellite overhead position. The honeycomb dish is supported by the structure bolted to the neck casting. The high-power rotating joint is just below this. LEFT: The aerial and support structure was designed by Len Gill, right, until recently Chief of Chelmsford Design Group, M.P.D. With him is Alan Taylor, leader of the Mechanical Design team who produced the azimuth and elevation turning gears. RIGHT: The receiver team. Peter Cott, Chief of Receiver Group, Space Communications Division, is second from the right, and from the left are Frank Walker and Jim Selby of Receiver Group, and Keith Coleman, site engineer of Scat site 3, Rivenhall





LEFT, TOP TO BOTTOM:

The complicated r.f. feed horn for the aerial was designed by Don Harris of Aerial Department, left. With him here on the mounting are Hugh Kindell, of Microwave Components Group, centre, and Rod Brunning of Aerial Department



Frank Dutton, Manager, Aerial Department, Baddow, left, and Ken Perry, Chief of Microwave Components Group, right, with Ray Willis, a senior mechanical designer of Baddow Design Office, who is holding one of the complicated sections of waveguide



Engineers who designed the servos and power control systems. Ernie Hoare, Chief of Servo Laboratory, Writtle, second from left, Geoff Cross, Chief of Power Control, Baddow, right, with John Palmer of Power Control, left, Tim Moss, Chief of Metrology, Writtle, centre, and George Hine of Servo Laboratory

Peter Bowkett of Mechanical Design, second from right, with some of the team of riggers who did a good job on Scat



RIGHT, TOP TO BOTTOM:

Working with Myriad in a computer container is Tom Gaskell, now of Central Automation Systems Department, Baddow, who was responsible for control and recording on Scat. With him is Allan Davies, also of C.A.S.D.

The manufacture of the mountings was a major works effort at Felling. Here is Eric Gilbert, Chief of Mechanical Design, Baddow, at Felling with Martin Fenn-Smith, Scat Project Engineer, Felling, right, and Jimmy Rumbles, Sub Contracts Engineer, Felling

Felling engineers with a mounting constructed at Felling. Left to right: Martin Fenn-Smith, Matthew Walton, Superintendent of Assembly Shops, Felling, and Peter Neate, a Space Communications Division engineer

Examining a support structure at Felling, left to right, Gilly Lowe, Scat Production Engineer, Malcolm Donaldson, Progress, and Neil McOnie, Scat Shops Progress



as low a loss as is technically possible. It is also of paramount importance that loss be minimized in the receiving guides, for otherwise the tiny signal from the satellite will be masked by electrical noise generated by the metal guide-walls. Furthermore, leakage of the transmitted signal can paralyse the sensitive receivers, making the satellite signal even more difficult to detect. Therefore protection filters were devised which demanded the combined efforts of engineers, mathematicians and toolmakers to design and construct special waveguide shapes to tolerances of plus or minus three tenths of a thou.

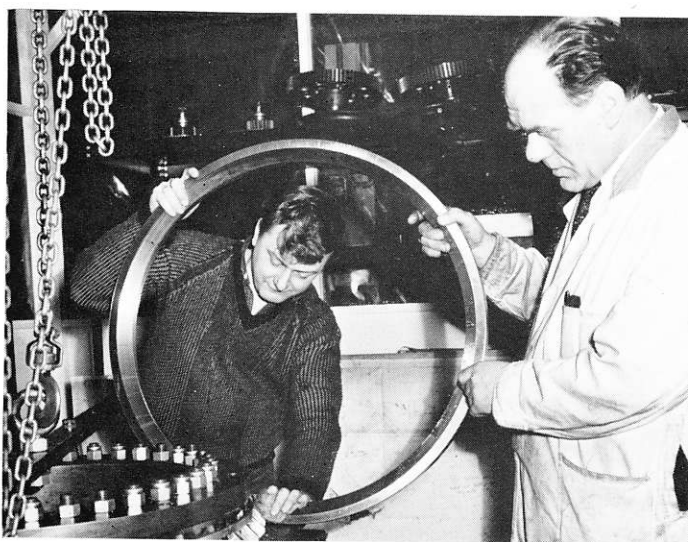
Machining guide internally is not an every day operation so a combination of spark erosion and electroforming processes were used and a suitable plant was located in the Isle of Wight. There were as many as 200 individual components made by these processes. As batches became available they were picked up by one of our engineers who, with a van at the ready and a ferry crossing booked, made a fast run to Chelmsford, where the shift team responsible, alerted by phone, would be gathered ready to receive his load. This was done time and time again through the summer of last year until all the key pieces had been made. The special furnace brazing plant necessary for making the joints was located at English Electric Valve Company's Maldon factory. It was working to full schedule, but English Electric kindly made it available to us on Saturdays and Sundays, and it was operated by Dick Rowe of Baddow D.O.

The waveguide team worked very closely with the transmitter team for harmonic filters, couplers and flexibles were built for the transmitter. The two main problems, explained Peter Naish of Transmitter Group, were the transmitter cooling system and the method of cooling the specialized waveguide components. The whole waveguide run-up to the aerial including the high-power rotating joint, is water cooled.

With continuous high power it was also necessary to engineer absolutely reliable protection circuits for the very expensive klystron. This in itself is a sophisticated piece of engineering, the only item in the transmitter which came from the States.

'We are very proud of our main h.t. transformer', he said. 'It weighs about a ton and would have taken about eighteen months to make outside the Company.' Working day and night, the design was produced by J. B. Newton and his staff in one month. It was executed in a very short time by R and D Workshop.

On the down-run of waveguide from the aerial,



Checking the outer race of a crossed roller bearing for an aerial turning drive are Jack Stokes, Foreman of Section 20, Felling, right, and Sam Benzie, also of Section 20

below the protection filters, are the low temperature, helium cooled parametric amplifiers, the 'front ends' of the receivers which pick up the satellite signal and pass it through to control; and to keep the aerial pointing precisely at the satellite there is a sensitive system for detecting errors in alignment. Don Harris's feed plays an important part in this, as also do the novel tracking receivers designed by Stuart Radcliffe of Baddow and Frank Walker of Writtle.

New ground has been broken to meet the stringent specification for the communications receivers. Peter Cott and his team at Writtle, have had to prove that their way of thinking was the right one, step by step. They even started work on new designs for a system better than their original conception as late as Christmas. The pace has been terrific.

Eric Gilbert and his mechanical design teams at Baddow were responsible for the mechanical engineering aspects of Scat. They produced all the designs and drawings for the mounting and its aerial drive units, for the aerial support structure and the tricky castings which form its angular neck. They designed from scratch the central rotating water joint which circulates a colossal flow of water from the transmitter to the motor-driven heat exchanger outside the radome. This joint maintains its seal in spite of the thermal distortion caused by both hot and cold water passing through it.

For the first three months of the project until the synthesis of design was complete, Mechanical Design, like the other sections, had a hectic time,

and then, with 85% of components being made outside the Chelmsford area, their engineers scoured the country. Finally they were responsible for the installation and erection of the units, which converged on arctic Rivenhall in January.

The manufacture of the mountings was a major works effort at Felling. The Scat project leader there, Martin Fenn-Smith, showed us one ready to leave for Rivenhall and said that they had been working on the job during the Christmas holiday until late on Christmas Eve. Felling had made mountings of all kinds for the Company particularly those for radar and had a knowledge of this kind of work. But this one presented its own features, its own problems. The frame was carried on a ring and bogies. There were gears to cut for the azimuth and elevation drives, gear-boxes, and special castings to be made. Eric Gilbert said that the managing director of the foundry concerned poured the aerial neck casting himself, to ensure a sound job.

Felling set up a separate paper work organization for the Scat project team, and turned sections of the works into a development workshop. Over and above normal experience this mounting had to be constructed so that it could be dismantled like tubular scaffolding and packed into an aeroplane at a moment's notice.

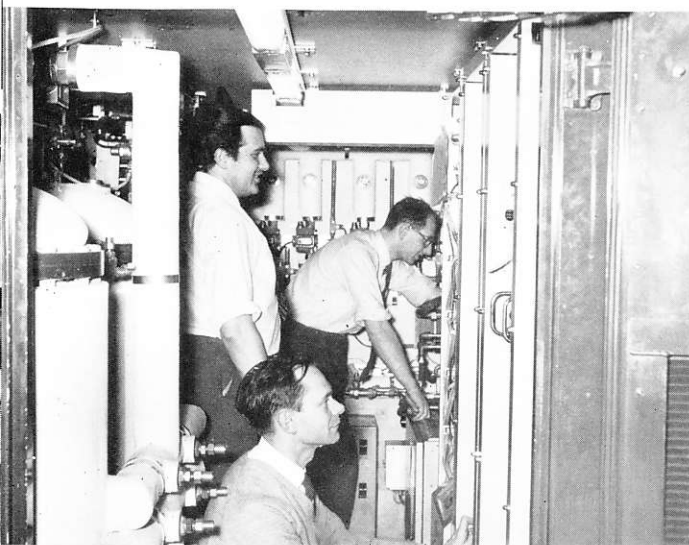
The tracking and pointing movements of the mounting and aerial are monitored by a complex control system in the power cabin. Servos regulate the power supply to the motors so that the aerial is

directed to the satellite and made to follow it. Detailed instructions for this are derived from main control in the form of a track to follow or from the aerial tracking receivers in terms of alignment with the signal from the satellite. The design of the overall servo system was in the hands of Ernie Hoare of Writtle, and Geoff Cross of Baddow.

Tom Gaskell, of Baddow, responsible for the control and recording system, could hardly get any real joy until everyone else was ready. It was he who had had to solve the computer navigation problem, for the computer can calculate from a forecast the position of the satellite in time and space and point the aerial to it. Once on it forms a mathematical model of the track, and in auto instructs the aerial to follow this. The computer will monitor the operation of the station continuously and produce statistical data on tape of the aerial's satellite-path performance.

The source of power for the whole station was quite a headache in the early stages of planning, until the new Rolls-Royce engine became available. This is the only engine within the weight limitation which will generate enough for the job. It is a turbo-charge, opposed-piston, two-stroke engine which will run on diesel oil, paraffin or petrol, as well as a mixture of all three, and at 1,910 r.p.m. drives a 25-cwt. alternator at 3,000 r.p.m. Two of these generating sets were needed for one station each carried in a container weighing three and a half tons complete. Here was the next complication for Alf Lund, Power Engineering. Who could build a con-

LEFT: A transmitter in its container undergoing systems test at New Street before being shipped to Rivenhall. In the foreground is Peter Naish, Section Leader, Transmitter Group, Radio Communications Division, and behind are John Blyth of Transmitter Group, left, and Mike Morgan, at that time a test engineer. RIGHT: Power Control engineers in force. Colin King and Brian Burgess with Geoff Cross and John Palmer. Niall Davies and Chris Arnold missed the picture





The Scat management team. From left to right, Jimmy Cowburn, Supplies Co-ordinator; Alec Kravis, Project Manager; Peter Foakes, Port Engineer; Norman Tingey, Systems Engineer; and Bill Claydon, Manufacturing Co-ordinator

Alf Lund, Chief of Power Engineering Section, New Street, top, and Brian Hesketh, Scat power engineer, with a main power distribution board for Scat. This is carried in the maintenance container



tainer in time which could do that job? Again manufacturers sucked their teeth and wagged their heads, until one enthusiast got cracking. He pumped a hard setting stiffener into a double skinned frame and this was the type of container which could carry the load.

The load of the whole Scat contract was carried by the main teams whose work we have only been able to touch on here; and they in turn were supported by all departments. We would like to pay tribute to the many people throughout the Company who did such good work for Scat, to the Workshops who took part, to the Drawing Offices, to Supplies who purchased 750,000 items, and particularly to Packing and Transport who have done so much to tie up the far-flung ends of this enterprise. Having supplied more than eighty special crates for packing each station, they delivered the first of the three to the Ministry of Aviation using eighteen vehicles, ten of them fifteen-ton hired lorries, to take it to Christchurch. There the Press and B.B.C. saw their British-built station for the first time. This new system, a technological advance only to be compared with that of the Marconi-Franklin beam stations of forty years ago, has already been heralded as essential to the future of communications.



Short break for refreshment on the slopes of Snowdon. Some of the scouts during a training week for the Duke of Edinburgh award [photo by J. Aldridge]

Scouts prepare for award

Even though there were heavy falls of snow a party of scouts from St. Albans carried out walks every day when they spent a week at Nant Gwynant, Snowdonia. Two of the leaders of the party were 4th St. Albans rover scout leader Gordon Gould, Group 834 Manager, and 1st St. Albans scoutmaster Jim Aldridge, apprentice, both of M.I.

Their headquarters, not far from the lake, was a converted coach-house where they cooked for themselves and lived very comfortably. The time was spent mainly in mountain walking and among the peaks explored were Snowdon, Y Lliwedd and Yr Aran. Twenty of the party were patrol leaders from various troops in the district who are preparing for the Duke of Edinburgh award, so during the evenings talks were given on map reading, use of the compass, mountain safety and so on.

A visit was also made to one of the earliest hydro-electric power stations to be opened. The first turbo-alternator was installed in 1904 and is still in working order.

On the right lines

Although Alan Young spends his time at M.I. as a technical illustrator drawing engineering diagrams, his hobby is painting in oils. He is treasurer of the London Colney Art Society, a thriving group who will be holding an exhibition in September.

Alan has had an interesting career. On leaving school he joined the railway and was a fireman on steam trains running from St. Pancras. He served his National Service in the army, mostly abroad, and then joined the M.I. X-ray Department, transferring to Technical Publications some two years ago.

Keeping in touch

One of the most dramatic places at M.I. is the little room just off reception—the telephone switchboard. Through this room comes much of our contact with the world, a constant flow of incoming orders, enquiries, reports from representatives and overseas agents and outgoing calls to suppliers and all the usual business phonage.

Keeping the switchboard operating smoothly and cheerfully are Mrs. Joyce Mullen, supervisor, whose husband is in charge of the Spray Shop, Mrs. Cressa Reece and Anne Sealey, who has operated on the G.P.O. Continental exchange.

From 8 in the morning to 5.30 p.m. the twenty-five external lines—more to follow soon—are kept busy being plugged into the two hundred extensions, most of the names for which the operators know by heart. 'It would help us though', says Joyce, 'if, when people leave their normal place of work, they would tell someone where they are going.' Every phone call is important as it is made or accepted in

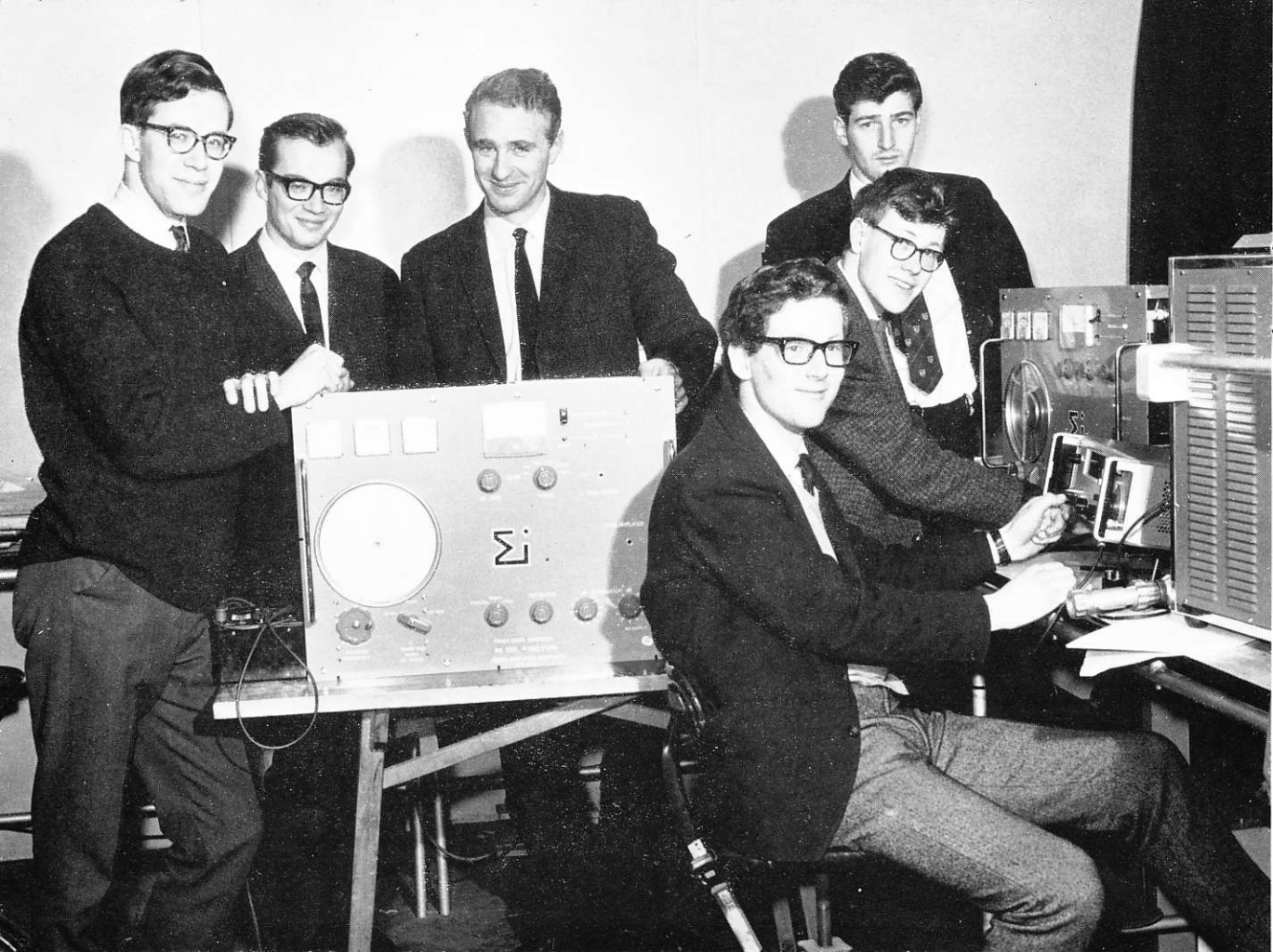


the name of the Company, even those callers who ask for Mr. Marconi.

As well as the stream of telephone calls we also keep in touch with the world—literally—by printed messages received via the Telex machine, operated in the Commercial Department by Margary Davidson-Smith. Then the Service Division has its own switchboard operated by Mrs. Brenda Bullock. Attached to this board is an Ansafone which will accept telephone calls after hours.

It's always busy on the M.I. switchboard. Mrs. Joyce Mullen, supervisor, and Mrs. Cressa Reece keep the lines of communication open while Anne Sealey does some directory searching





A final check before handing over the equipment that took only seventeen weeks to design and build during a graduate project. Left to right are John Rundall, Gordon Brogden, Peter Austin, Chris Cheney, Alan Beasley, and Brian King (back)

Graduates in Business

Two power signal generators now being used for design in Radio Communications Division's Transmitter Laboratories are the first products to be launched into the Company under a new graduate induction scheme.

The generators, which took only seventeen weeks to design and build, are meeting a demand which was not catered for by other generators on the world market. 'Nothing similar was available', says Roy Martyr, Section Leader of the laboratories. 'That was why we specified this particular type, and they will do the work we require very well'.

A new exercise designed to acquaint graduates with the internal workings of the Company, the project was carried out, on time, by nine graduates who joined Marconi's in September, two months after coming down from university. It came at the end of the usual induction course followed by a

course in graduate production appreciation at Colchester. Then they were handed the specification and given a room in which to work. Strictly to a budget they then had to consult the experts, get the design down on paper and start the manufacture of the generators. At the end of the exercise they had produced two generators, plus manuals, working production drawings, together with a report on budgeting.

Within the small room in the Training Centre which had been allotted them at the time of their briefing by F. R. J. Langridge, Company Education Officer, the group set to work. Sharing the multitudinous tasks involved, they often had to work through the night to keep to their tight schedule.

The members of the group were Peter Austin (Nottingham University), Brian King (Imperial College, London), David Bishop (English Electric

Fellowship and Imperial College), John Rundall (St. Andrew's), Alan Beasley (Imperial), Richard Andrews (Edinburgh), Chris Cheney (Christ's, Cambridge), Gordon Brogden (Liverpool), David Steel (Strathclyde). At the successful conclusion of the project they were transferred to various divisions and departments.

Describing the hectic weeks during which the group learnt a great deal about internal procedures and personalities, Brian King says: 'We had to take short cuts, jump queues, and make direct approaches in a way which was not normal, but we received tremendous co-operation all along the way and are very grateful to all those within the Company who helped us.

'We all think this was an exciting introduction to industry and are sure we have profited a great deal from it.'



Handing over the generators at the College are the nine graduates who did a round-the-clock job to complete them. Left to right they are Gordon Brogden, Richard Andrews, John Rundall, Christopher Cheney, Alan Beasley, Brian King, David Steel, David Bishop and Peter Austin

MAGAZINE NEWSHOUNDS

People's News

We are always on the look-out for news: if you have anything of interest, contact the following people:

Apprentices: P. Chadwick, TV Test
Baddow: Mrs. Dilys Daff, D.O.; F. Masters, D.O.; R. Clarke, Workshop; H. Cutmore, Room 274
Basildon: Mrs. Barbara Brigden, Personnel
Beehive Lane: H. Butt, Workshop Office
Billericay: G. A. Sheardown
C.D.O., New Street: R. B. Lewis
College: Jackie Bartlett
Eddystone Radio: H. N. Cox
Felling: Mrs. J. Wales
Hackbridge: W. G. Redman
Rivenhall: Mrs. H. Omey, Cableform Section
Sanders (Electronics): M. G. Amos
Tool Room: H. Whitworth
Waterhouse Lane: D. Perkins, T.D.U.
Wembley: Mrs. M. English
Witham, Microelectronics: Miss J. Kendall
Writtle: P. Freeman

Sport

Angling: Mrs. P. Welham, Church Green
Archery: F. Leach, Baddow

Auto Club: T. S. Welford, Baddow
Badminton: Peggy Payne, Baddow
Billiards, Snooker: E. Knight, Waterhouse Lane
Bowls: A. W. J. Price, Bank Chambers, Broomfield
Bridge: J. Gorrie, College
Cricket: W. Brown, Waterhouse Lane
Cycling: R. Haworth, A.T.C.
Darts: E. Knight, Waterhouse Lane
Drama: A. Hartley-Smith, Baddow
Football: A. Rogie, Baddow Workshop
Golf: E. B. Marshall, T. M. Watson, Purchasing
Hockey: ladies, Sandra Smith, Insurance Department; men, D. Fathers, Central Staff Services
Horticulture: C. Myhill, Widford
Judo: A. G. Millen, Baddow
Rifle Club: N. Jessop, Baddow
Sailing: B. Partridge, Kensal House
Table Tennis: P. Cross, Baddow
Tennis: P. Ager, Waterhouse Lane
Ten-pin Bowling: T. Koszulinski, Finished Part Stores

MARCONI INSTRUMENTS

Geoff Dunk of Publicity, assisted by departmental representatives and Social and Sports Club correspondents. Int. ext. 439.



For the best film performance in the drama *Kirchhoff was Here* David Barnicoat was awarded the Arbour Academy 'Oscar'. Here he is receiving his award from Miss Marconi College, Jackie Bartlett, while the film directors look on

Well, was Kirchhoff here?

Film night at the College and getting the equipment ready for a session are Ian Gillespie, Roy Masefield and Cyril Taylor. Humorous films about College life, made by these three, are always popular

A woad-bedaubed, skin-clad figure leaping round a fire in gay abandon might cause raised eyebrows in some parts of Chelmsford, but at the Marconi College it's an accepted thing when there's a film being made. The three Daryl F. Zanucks whose combined bright ideas have brought forth several eye-catching productions are Roy Masefield, Cyril Taylor and Ian Gillespie, aided and abetted by any unsuspecting member of the College, staff or student, they are able to shanghai into their film miniatures.

Of the three films to their credit, *L for Lecturer*, *Normal Service* and *Kirchhoff was Here*, the latter is undeniably the masterpiece with woad-painted David Barnicoat in the leading role. David, who won an Arbour Academy Oscar for this performance, can often be seen playing in Marconi Dramatic Society productions—dressed in more than a skin.

Film-making started in 1958 when the College staff decided to give ITA engineers doing four-month courses at Marconi's, a light-hearted and critical look at an institute like the Marconi College. Hence *L for Lecturer* was born. The students replied with *L for Learner* and the pattern was set. During courses at the College film shows are often given in the evenings and the comedies always make for laughter.



HACKBRIDGE SPOTLIGHT

Social Club A.G.M.

The seventeenth annual general meeting of the Hackbridge Social Club was held in the canteen at the end of April under the chairmanship of R. G. Eaton. Although more members than usual attended, the percentage was still low.

After the chairman's opening remarks, Helen Brown, retiring honorary secretary, reported on the year's events, mentioning several successes such as the visit to Butlin's, Bognor Regis, two motor treasure hunts organized by Terry Dagnall, ten-pin bowling and ice skating, an enjoyable dance at the Greyhound Hotel Croydon, and the children's Christmas party. Disappointments, bingo and films in the clubroom, were due to bitterly cold weather.

The secretary's report was followed by the treasurer's, R. C. Appleford, who said that the club's turnover for the year was 100% up on 1960, and this was quite a sizeable sum in five years. Although the year's trading had shown a loss of some £18 the club had now got a good working capital for promoting future events where payments must be made to secure advance bookings, and for the purchase of goods for resale to members. Good housekeeping is essential.

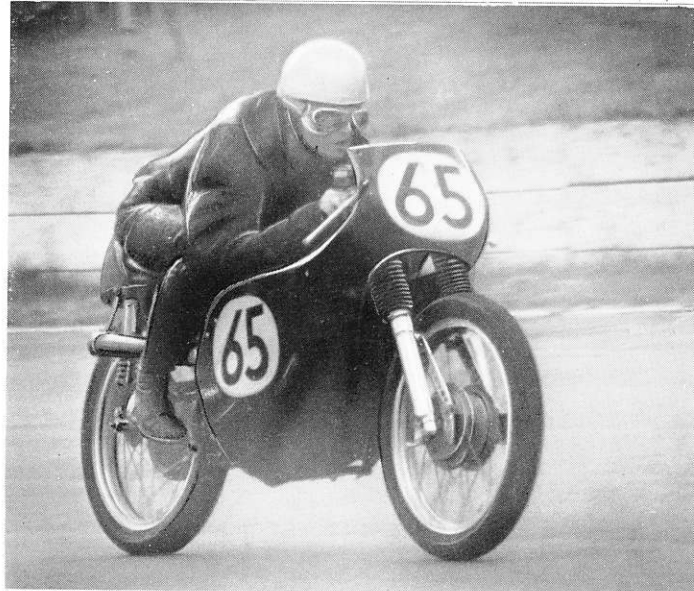
The new committee for 1966-7 is as follows: chairman R. G. Eaton; treasurer R. C. Appleford; members Michael Eddolls, Douglas Dwyer, Nancy Savell, Julie High, Derek Loudon, Audrey Morris and Doris Halford.

The chairman thanked all the members of the 1965 committee for their help during the year, and particularly Terry Dagnall who had given so much of his time to organizing several successful events. Terry has retired from committee work for a time in order to concentrate on his studies. The chairman also said that the committee would welcome suggestions from members on future club activities. Discussion had taken place on the subjects of amateur dramatics, visits to TV studios and block bookings for exhibitions at Earls Court and Olympia.

The committee would like to thank Helen Brown, retiring secretary, for all her hard work and honorary auditor J. R. Walsh, retiring, for completing his seventeenth successive audit.

Speedster

Although he drives a racing green Triumph TR 4, currently bent, Roger Greenwood, Junior Development Engineer in Filter Development Section, is not particularly interested in car racing as such. He uses a car as a means for moving from point A to point



Riding it out in a 500 c.c. event at Crystal Palace is Roger Greenwood, Filter Development Section, Hackbridge, who is a motor-cycle enthusiast. Roger, although he finished the course, was unplaced in this event

B in the shortest possible time. But he is interested in motor-cycle racing and owns a Triumph Tiger 100 which is a 500 c.c. twin motor-cycle capable of something in excess of 120 m.p.h. Roger has been riding for five years now, using 250 c.c. and 350 c.c. Ariels and a 500 c.c. Manx Norton under A.C.U. rules at B.M.C.R.C. meetings over distances of twenty to thirty miles at Brand's Hatch, Crystal Palace, Silverstone and Snetterton. He has now reached the level of national events and tells us he has an ambition to reach international level as an amateur rider. So far a place in the first three has eluded him but he keeps on trying, and we wish him many successful and safe rides.

Summer Outing

An outing to the Isle of Wight has had, regrettably, to be abandoned this year due to an insufficient number of interested people. As an alternative the committee is now arranging an outing on Sunday, 19 June, by ship to Southend. At time of writing there are eighty names on the list. Coaches will be laid on from Hackbridge to Tower Pier and return for about 5s. per seat. The cost of the outing will be: members 10s., friends 15s., children 5s.

Obituary

We are sorry to hear of the death of the following employee and offer our sympathy to his family and friends:

Francis Richard McDonald who had worked at the Wembley factory from 1959, latterly as a Stores labourer.



Parts of All Saints' Church, Springfield, date back to A.D. 975. The Festival of Flowers and Music, the first of its kind to be held in Chelmsford, is being held on Saturday and Sunday, 9 and 10 July, 10 a.m. to 9 p.m.



The lovely church at Springfield, decorated with spring flowers for Easter. Wardens of the church are W. F. Chapman of Production Engineering, and Dr. G. M. Ward, who are helping to arrange the Festival of Flowers

Festival of Flowers

In odd corners of gardens, in greenhouses, out-houses and conservatories, Springfield parishioners are anxiously watching their flowers. For in July, on Saturday and Sunday, 9 and 10, All Saints' Church, Springfield, is holding a Festival of Flowers and Music and way back in the chill months of the year anyone with a spare space in his garden was asked to grow flowers to decorate the church.

Now gladioli, larkspur, sweet peas, delphiniums, lilies, roses, stocks and all the other lovely summer blooms are being carefully tended for the great day.

The Festival will be open from 10 a.m. to 9 p.m. and during the day there will be half-hour organ recitals. The many flowers will be arranged with theological themes and church treasures will be incorporated with the arrangements where possible.

With fine sunny weather it is hoped to have many visitors to see the flowers and enjoy this Festival.

Guide dog to be called 'Sanders'

Through the generosity of Sanders folk, £250 has been raised over the past two years to buy a new guide dog for Leonard Oakes of Inspection Department. His dog Jenny has unfortunately got rheumatism.

At the moment Leonard is attending Leamington Spa training centre to get acquainted with his new companion whose name, fittingly, is to be Sanders.

The cheque was presented by Miss Mary Whitehead on behalf of those who gave so generously towards the training of a guide dog.

On behalf of the Guide Dogs for the Blind Association, Leonard Oakes of Inspection Department, W. H. Sanders, receives a cheque for £250 from Miss Mary Whitehead. The money has generously been given by Sanders folk to buy Leonard a new dog



Gala attraction

One of the attractions of Gala Day will be animals, including bear cubs, monkeys and macaws, from Stanway Zoo near Colchester. The animals are to be a surprise for the children on the great day but here, at the zoo, are a llama and her baby being fed and groomed by two cubs during a recent bob-a-job week. They turn their hands to anything these days [Essex County Standard]



Basildon apprentices on the move

With the coming of summer, the Basildon apprentice committee are thinking up new schemes for outings. On the books at the moment is a visit to London to see a big film, possibly *Khartoum*, regular ice-skating sessions, and later, a day trip to a seaside resort. The party season is dormant at the moment but their last gathering, at the Kingswood South Community Hall, was a big success with over 150 apprentices and guests enjoying the free bar and dancing. Two recent competitions have been an inter-works darts match and a football tussle with Mobil apprentices on the Pegasus ground at Hutton.

The committee hold monthly meetings, usually on a Monday evening, at the 'Five Bells', Vange. Any apprentice who would like to air his views at these gatherings is very welcome to come along. They start at 8 p.m. For further details contact the chairman Dave Brown, at present working at Guys Farm, Writtle.

Wedding Veil goes to Museum

The beautiful veil of Valenciennes lace which was worn by Mrs. Janet Gilroy when she married recently is now being displayed at Chelmsford and District Museum.

Janet, who until the time of her marriage worked in Works Orders, New Street, and is now in the Personnel and Welfare Office at Wembley, was lent the 200-years-old veil by a school friend of her mother's. Woven on a hand loom by a friend of the late Queen Mary, it is cobweb fine and patterned with roses.

Janet, better known at New Street as Janet Harris, wore the veil with a pretty wedding gown of cream brocade, a perfect partner for the lace veil.



Wedding Bells

LEFT: Happy smiles from Barry Claydon and his bride Wendy Hutchins after their wedding at Baddow Road Congregational Church. Barry's friends in the Maths Section at Baddow gave the couple money for a goatskin rug [B. Atkinson]. CENTRE: Outside Widford Church after their wedding are the former Sandra Gray and Allen Ellin. The bride worked at the Marine Company, Westway, and before that in Section 16 at New Street. Allen is with the Marine Company at their Grimsby depot, and the couple will live in Cleethorpes [D. Whipps]. RIGHT: Miss Janet Harris, formerly of New Street and now at Wembley, after her wedding in Chelmsford. See Wedding Veil goes to Museum



Our Folk Five

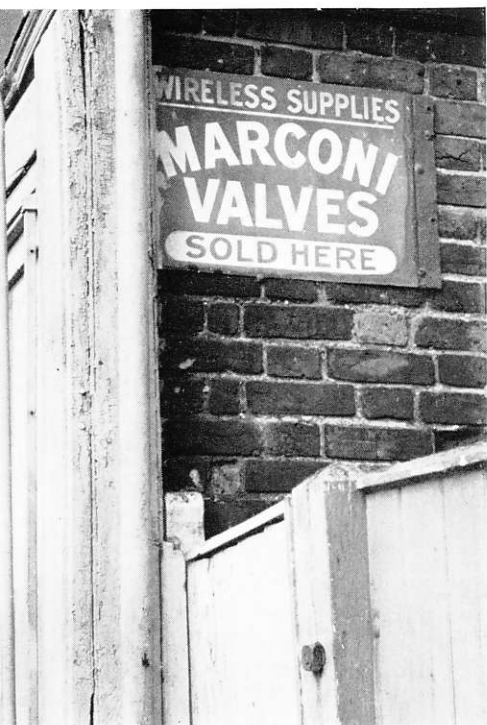
With a repertoire of two hundred numbers to draw upon the Folk Five grows in popularity and are to be seen—and heard—at many Company and north Essex functions.

With lead guitarist Brian Green (Microelectronics, Witham), Don Budds (Billericay), David Hanson (Baddow), and John Clark, the only female in the group is Ann Clark, also at Billericay, who is the soloist.

They have been together for more than two years, are booked up throughout the season, but still manage to find the time to get-together for rehearsal twice a week.

The good old days?

This sign appears in the High Street at Burnham, tucked on the side of an old shop, and was spotted by Basildon photographer George Hoare. We don't know how old it is, but its probably been there a long time.



Can't get away from it

In a book *Working and Living Conditions in Canada*, issued by the Canadian Emigration Service, is an illustration showing an M.I. TF867 standard signal generator.

A friendly gesture

Alf Dennis had been with the Company thirty-one years when he retired, but he couldn't get in for his presentation so Dick May, Chief of Supplies Test, and Graham Boughton, Supervisor, Supplies Inspection, went out to see him. They took with them all the best wishes from Alf's friends and a cheque as his retirement gift.

We wish him all the best and enjoyment of his new-found leisure.



Basildon first

Five hundred copies of Basildon's first discount trading book are now in circulation. Want a copy? Contact the Club Secretary Les Norton.

They seek him here . . .

A well-known character at Wembley, Norman Butterworth often has the scouts out on a thorough search of the premises. Like the well-known Scarlet Pimpernel, he is sought here, there and everywhere . . . and often turns up where least expected.

In his spare time Norman acts as Wembley photographer for the magazine and we are very grateful for the pictures that keep us all in touch.

Flying high

A bird's-eye view of Marconi establishments at Chelmsford, Baddow and Witham, were amongst the highlights of

a recent week-end flip for a group of Microelectronics people. Piloted by Tony Buckland, who learnt to fly while serving with the R.A.F. in Canada about eight years ago, technical assistant Linda Partlett and engineer David Bremner, and his fiancée Suzanne Fox, started their flight from the Herts and Essex Aero Club at Stapleford.

Tony, who recently qualified for his private pilot's licence, had hired a Piper Cherokee, which lapped up twelve gallons of fuel in an hour.

In time for the tax year

Congratulations to Beverley Steger Lewis, M.I. Production Controller, and his wife on the arrival of Samantha, a 7½ lb. sister to Alistair, before 5 April.

Bridging that gap

In the quiet of the lunch-time break at Witham Microelectronics something stirs. It's the flip, flip, flip of playing cards as they hit a sandwich-laden desk.

But this is not a gambling school. Oh no, it's the daily session of the bridge club run by Stephen Vant, Jack Smith, Derek Brumby and John Ellison. Membership and enthusiasm increase daily.





Family gathering

Before the opening bowls match of the season, our photographer caught Ron Bernhardt, Superintendent of Baddow Workshops, enjoying the lovely sunshine with his wife Lilian, son Peter and daughter Linda.

Writtle landmarks disappear

Following the dismantling of the two aerials comes news of the disappearance of two further landmarks: the two large oak trees standing beside the car park have been felled in the interest of car safety. A bulldozer has now increased the size of the car park.

... Adding to his tally of daughters is John Newby, ex-Writtle-ite Handbook Section, now moved to Basildon. His wife presented him with Helen Julia, sister for Carol and Janet.

... The stork has also visited Chris Leahy, Lines Division, and presented him and his wife Joan, who used to work in Sub Contracts, with a son Christopher David. They already have a daughter.

... After a lapse of many years, efforts are being made to re-form a Writtle football team in order to take part in the inter-departmental competition. Dave Sims, Writtle Workshop, is organizing it and already two friendly games have been played.

Ducks and drakes

A pair of mallards in search of a spring home have settled on the Works reserve water tank and show little sign of moving on.

Why should they when they have all mod. cons. laid on for them. They are being fed tit-bits by bird watchers and are able to supplement this diet with a few pickings from the fish which have been breeding in the tank for some years.

The water, by the way, is centrally heated by a hot inlet pipe. What more could they ask for?

Golden wedding

'We've been together now for fifty years.' Bob Bailey, who retired from Stores about two years ago, and his wife Daisy who worked in the Baddow canteen for a number of years, are celebrating their golden wedding on 16 June.

Congratulations to them, and may they have many more years together.

Hospitalized apprentice

After his tangle with a tractor in which he came off second best, Roger Paul, secretary of the M.A.A., is recovering in St. John's hospital. Here he is with a gift from his apprentice friends—let's hope he didn't eat it all at once.



Not so thirsty after all

'Scuse our blushes. Basildon people haven't such vast thirsts—they drink 9,000 pints a week, not 9,000 gallons as we mentioned in the May issue.

Match postponed

The first match of the cricket season at Basildon was to have been on 7 May at West Wickham in Kent, a lovely journey for a sunny day. Cricketers, supporters and wives filled the coach for a pleasant day's outing—but the rain came down and not a single stroke was played.

L for learner?

A little bird tells us that a certain young lady in Basildon Personnel—who shall remain nameless—had some trouble with a Cortina the other day. When she arrived back at the works to collect her own green mini she found several L plates has miraculously appeared on her bumpers. Watch out, you culprits!



Bunny box

One avid TV viewer the census people have overlooked is a much cossetted wild rabbit which is the pet of Bert Day, commissioner at Kensal House.

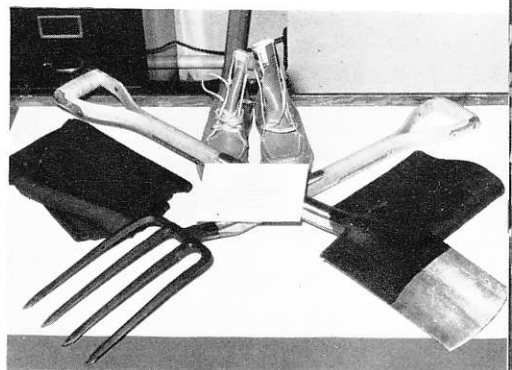
The rabbit, on its last, was found in a field by Bert's son who brought him home tucked into his sweater and set about reviving him. He made a remarkable recovery and has become more of a house guest than just a pet. He is as keen on television as the rest of the family, tending to favour serials such as 'Mrs. Thursday' and 'Coronation Street'.

Stationery query

Wonder what M.I. Production want a jumbo marker for? Don't remember seeing an elephant there. Not very likely but it might, perhaps, be a trade name for a pen which writes with a thick line.

Tools of the trade

If you have a smallholding, what nicer present to have from your friends than a stout pair of waterproof boots, leggings and a spade and fork. When L. Campbell of Works Drawing Office retired, his friends gave him just that, and a greenhouse heater for good measure. See *With Best Wishes*



WITH BEST WISHES...



A Magazine correspondent for many years up to a little while ago, Tom Wetherall of the Baddow Workshop has now retired after nineteen years with the Company. His many friends gave him three television chairs and a bouquet for his wife for getting him to work at 7.45 every morning. The presentation was made by R. F. Bernhardt, Workshop Superintendent



LEFT: Wedding celebrations in Printed Boards when Tony Gasson took the plunge. His friends gave him a pair of blankets, clothes airer and toilet tidy (suitably disguised), which were presented by F. M. Tricker, Group Engineering Controller. CENTRE: A double presentation at Widford when Rosemary Gowers, Planning Office, and David Dungey of Section 157, married. Their friends gave them a cheque, presented by G. Millar, Planning Section Leader. RIGHT: Saucepans and kitchen utensils from his friends at Waterhouse Lane for Bill Lee, Sheet Metal Shop, when he married. The presentation was made by Superintendent G. R. Raven



LEFT: Wedding bells for Terry Spooner so his friends of M.I. Printed Circuits gave him clocks—alarm and mantel—which were presented by R. Gibbs, Group Manager. RIGHT: On his retirement L. G. Campbell of the Works D.O., who had been with the Company seventeen years, was given gardening equipment, including a greenhouse heater, for his smallholding. H. H. Lightfoot, then Supervisor of Drawing Office, now Assistant Director of Engineering, made the presentation



LEFT: When Mrs. Mary Anderson left M.I. her friends of Technical Publications and the Theatrical Society gathered to see A. G. Wray, Engineering Manager, present her with a nursing chair. CENTRE: A host of gifts, including an Ali Baba basket, electric kettle, set of wine glasses and wall can-opener, from her friends for June Stubbings of Receiver Test when she married. Test Supervisor H. Williams made the presentation. RIGHT: When Henry Valentine of Standardization Division, Kensal House, married recently, his friends gave him cutlery, presented on their behalf by J. Thomas, Manager of the division.



LEFT: Leaving the Company after twenty-three years to go into the coin business, Derek Drury's friends at Widford, where he was Senior Storekeeper, gave him a cheque. A. L. Webb, Stores Controller, made the presentation. CENTRE: Before emigrating to Canada, George Brock's friends at Basildon where he was a storekeeper, gave him a silver tankard. The presentation was made by Basildon's new Stock Controller, Mick Maguire [G. Hoare]. RIGHT: Friends gathered to give Mrs. Violet Burton a big send-off when she left Wembley where she had worked as a progress clerk. Her gifts included a gold watch bracelet [N. Butterworth]



LEFT: A blanket for Andrew Hudson of Magnetic Materials Research Group, Billericay, from his friends when he married. The presentation was made by J. Penny, chief of the group. RIGHT: Before he flew to Bombay to marry, Dr. Neil D. Chinnmugund, of Magnetic Materials Research Group, Billericay, was presented with gifts of an electric iron and a wall can-opener by J. Penny, chief of the group



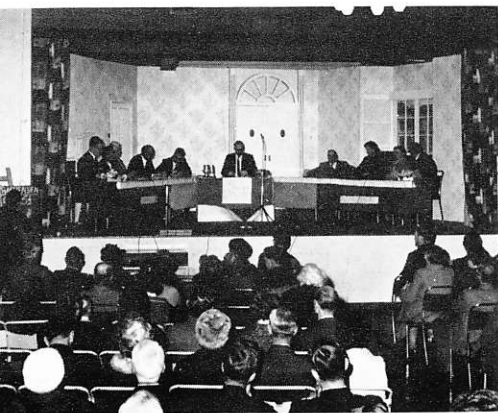
ST. ALBANS

Do you know?

During the spring the Horticultural Societies of Hertfordshire have been competing in a quiz organized by the Hertfordshire Show Society. The M.I. team were weeded out in the first round by Marshalswick H.S., last year's holders, but the organizers were invited by the M.I. Horticultural Society to hold the finals in the M.I. canteen.

On 20 April the teams from Ware and Harpenden, accompanied by a hall full of supporters, came to M.I. The question master was John Bloom, editor of *The Garden News* and after a long and most interesting contest Ware were declared the winners by 62 points to 57½. Ware will represent Hertfordshire in an inter-counties challenge match against Hampshire.

The teams were welcomed by the chairman of the M.I. society, Harry Botwright, and the trophies were presented by the president of the Hertfordshire Show Society, Lady Bowes-Lyon.



The Ware and Harpenden teams in full quiz when the final of the Hertfordshire Show Inter-Society Gardeners' Quiz was held in the M.I. canteen

Spring horticultural show

The flowers and floral arrangements made a colourful and attractive display when the Spring Show of the M.I. Horticultural Society was held in the canteen.

There were fifteen classes of daffodils and narcissi, two of tulips, three of polyanthus and individual classes for muscari, spring flowers, lilies of the valley, plants—flowering and non-flowering—cacti and collections of cacti. Two classes of floral arrangement, any kitchen utensil with natural plant material and arrangements of five flowers with any type of foliage, made a delightful splash of colour. The four classes of home produce, madeira cakes, open jam tarts, victoria sandwiches and marmalade, made an appetising exhibit but it was a pity that more ladies did not show their cooking skill. The three sections were kindly judged by experts Mr. L. Plant, Mrs. D. E. Partridge and Miss C. Robinson.

An exhibit, not in the competition, which attracted considerable interest, was a gigantic 'busy lizzie' which has been resident for some years in one of the offices of the Accounts Department.

Among those visiting the show were R. E. Burnett, Managing Director, with Mrs. Burnett, and W. A. G. Brian, Secretary/Accountant, with Mrs. Brian. Mrs. Burnett presented the awards.

Congratulations to Ron Forward for winning both the Premier Award Cup for the most points won in the flower classes, and the Committee Cup, for the outstanding exhibit. Congratulations also to Mrs. L. R. Fisher for winning the Creasey Cup for the best floral arrangement.

The other prizewinners were: A. Miles, Mrs. E. W. Richards, Miss A. Mudd, Miss P. Pearson, H. Botwright, A. Puckrin, Mrs. F. L. Dale, Mrs. K. M. Dunk, Miss I. Baker and A. Dawson.

The show was organized by Mike Mangan, show secretary, and Wilf Broughall, show treasurer, assisted by Harry Botwright, chairman, and committee members of the society. Harry conducted the sale at the end of the show and had the embarrassment of announcing that he held the lucky programme and also a lucky raffle ticket.

Table tennis cup holders

Now on display at M.I. is a very handsome table tennis cup: the result of winning the fourth division championship from Elliotts, who at only two points behind were close runners-up.



Mrs. F. Dale, after work in the canteen, made her floral arrangement of any kitchen utensil with natural plant material. She won a first prize



Mrs. Burnett, wife of the M.I. Managing Director, presented the awards at the Spring Show and Ron Forward received the Premier Award Cup and the Committee Cup



Visitors to the Spring Show of the M.I. Horticultural Society were asked to judge a class of narcissi to see if they agreed with the official verdict

The result of who would be league winners was in doubt right up to last game of the season when M.I. only had to draw to get the title, but from the word 'go' they raced into a 5-0 lead and ended up winning 8-2.

The M.I. A and B teams finished fifth and sixth respectively in the fifth division.

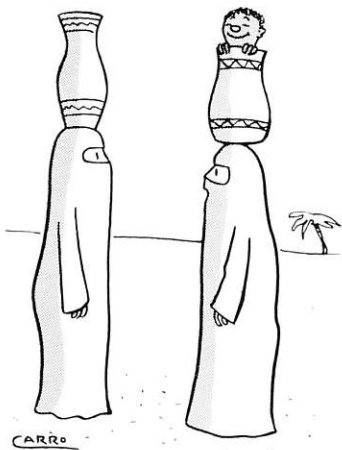
Once again the table tennis season has come to a close and members can congratulate each other on their efforts in making this a most successful season for the club. R.W.

Again comes cricket

First Sunday in May was a beautiful day, the pitch was a bright green, and the M.I. team made a good start to the season by beating Hawker Siddeley by three wickets. Hawker Siddeley 71 runs, M.I. 72 for seven wickets.

The team hope to complete thirty fixtures, including a match against Monarch's at Southend, and a game also has been arranged against the Marconi Company at Chelmsford.

The team will be defending the J.A.L. trophy and hope to get the same success as last year when they won it. Any supporters who would like to give the team encouragement during the season will be very welcome. R.S.



'He just loves to be in the pitcher'

A marathon social

A social was held in the canteen by the M.I. Sports Club recently which started at 3.30 p.m. and went on to 9.30 p.m. Admission was 1s. 6d. for members, so 3d. an hour for entertainment was about the best value anywhere. Although the weather was unusually sunny a good crowd of children and adults attended, some for an hour or so, some for the whole time.



'Put your right foot in.' The hokey-cokey was a popular request at the social

'Am I doing it right?' Some of the children in a twist competition at the social

During the afternoon a film, *Carry on Nurse*, was shown with breaks for ice-cream and bingo and the Clarion Group entertained followed by Bill Walker and his band who played for dancing and games lead by Arthur Adolph. About this time tea and refreshments were available.

In the evening the Clarions came back for a further half an hour, bingo was held with a coffee set prize for the ladies and a bottle of whisky for the men. Arthur Adolph entertained with magic and he also joined with Sid Beck in a mime, *Doctor, I'm in Trouble*. During the mime it is said that one lady laughed so much she fell off her chair.

The licensed and coffee bars opened and Bill Walker and his Band finished off the evening with music for dancing. While the main entertainment was going on there were various competitions, such as guessing that there were 277 screws in a jar, the lucky dip with substantial prizes, and a balloon race. One card was attached to a balloon at 6 p.m. on the Saturday and was returned first post Monday, having been to Lincoln and back.

Fun and games at the M.I. social with encouragement from Arthur Adolph





CHELMSFORD

Opening of the bowls season

The traditional match between the President's and Captain's teams marked the opening of the 1966 bowls season. The match was played in ideal conditions: the green was immaculate and the weather brilliant. The match, a five-rink one of 21 ends, was won by the President's team.

The committee has arranged a full season of friendly fixtures as well as the usual two inter-departmental leagues.



The bowls season got off to a fine start with the Presidents' versus Captains' match, won by the Presidents' team. Left to right are H. Hawkes, P. Scrutton, F. Burroughs and R. Telford



Putting the scores up is Sam Garratt, a member of the Captains' team



An anxious moment while Les Gurney bowls. Left to right are Ken Perkins, David French, Jock Morrison, Arthur Shaw and John Marsh

Two teams have been entered in the Chelmsford and District League, captains are Bill Walden, A team, and Hubert Hawkes, B team. Both captains will be pleased to have names of new players.

By the time this report is published, three teams will have taken part in the Chelmsford Sports Festival over the Whit weekend, and eight members will have competed in County competitions.

The Marconi Club have been honoured by the County Bowls Association who have invited us to act as hosts in the County game against Watford and District on Sunday, 14 August.

Gala Day flower show

Schedules are now obtainable so why not get one and enter to win one of the many prizes. There are special sections this year for young ladies and gentlemen, ages sixteen, seventeen and eighteen. Apart from all the competitions, there are some grand exhibits and many new ones including a special Marconi product which will leave you spellbound.

For the ladies there is something new in the cookery and needlework sections and for those keen gardeners there are displays by Cramphorns and Cants.

Don't forget to get a schedule and, on the day, a programme for each of these carries a lucky number. Look forward to seeing you on the day.

Best ever mixed hockey

In spite of injuries which robbed them of some of their strongest players, the mixed hockey team fought their way

through a heavy programme to the best results ever. Of the 29 games played, they won 22, drew 3, lost 4, scored 96 goals as opposed to the 44 made against them.

Both Norman Crier and Roy Hart lost several games each after being injured. For the first time in three years, however, the mixed team lost in the 'blood' match against the men's team.

Anyone interested in turning out next season can contact the secretary Colin Holden in Maritime Development, New Street, int. tel. 566.



'There's no need to bark at me like that, when I ask you a simple question!'

Ten-pinner on target

With the close of the ten-pin bowling season, winners in the various leagues have now claimed their trophies.

In Division I, Stores beat their nearest rivals, Central Division B, with 24 points against 19. The winning team was made up of Denny Clark, Mike Downes, Reg Blowers and Ted Koszulinski (captain). Winners of Division II were

Broadcasting, Pat Milton, Bob Halls, Peter Chapman and Jack Day (captain), who beat Central Division A, 25 points to 21.

The individual highest total pin score of the season in Division I was by Denny Clarke, Stores, with 4,379; second, Ted Koszulinski, Stores, 4,313. In Division II, highest scorer Jack Day, Broadcasting, 3,957, second, Gordon Townsend, Central Division A, 3,822. Highest score of the season in one game came from Barry Finch of Section 15 with 245.

In the individual knock-out, the winner was John Morley, Central Division B; runner-up Barry Finch.

Doubles winners were John Morley and Frank Lane, Works Service Division, with runners-up S. Fish, Central Division A, and Mike Johnston, Section 156.

This was the end of a most successful

season. The next one starts the first Thursday in September. Anyone interested in playing should contact Ted Koszulinski in Finished Part Stores.

Cups that cheer

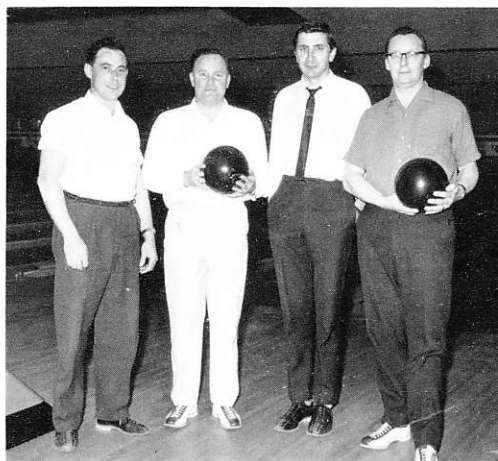
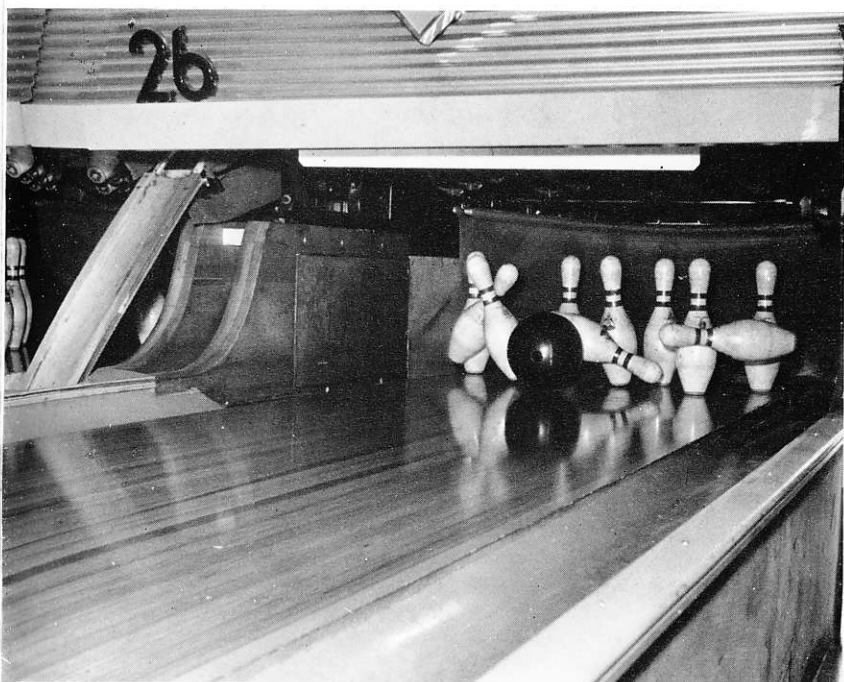
Only fourteen members attended the communal judging evening in April and only eight bottles of wine were presented for judging.

Analysis of the judging sheets showed that the wine submitted by H. F. S. Burn was generally judged as the best wine. A newcomer to the section, H. J. Bennett, and vice-chairman R. Anderson placed the wines in the order nearest to that the analysis of results showed. Mr. Anderson conceded the prize to Mr. Bennett, and both Mr. Burn and Mr. Bennett were presented with a miniature bottle of spirits.



Wine tasters all

Sampling some of the home brew at the Wine Guild's annual wine and cheese party in the Club up Beehive Lane



Winners of Division II, Pat Milton, Bob Halls, Peter Chapman and Jack Day (captain) after beating their nearest rivals Central Division A, 25 points to 21



Lucky strike for a ten-pinner on target

LEFT: Two charming scorers who had a busy time during the evening, Linda De'ath, left, and Janet Crispin

RIGHT: Winning team in Division I, Stores, Denny Clark, Mike Downes, Reg Blowers and Ted Koszulinski (captain), who beat Central Division B, 24 points 19

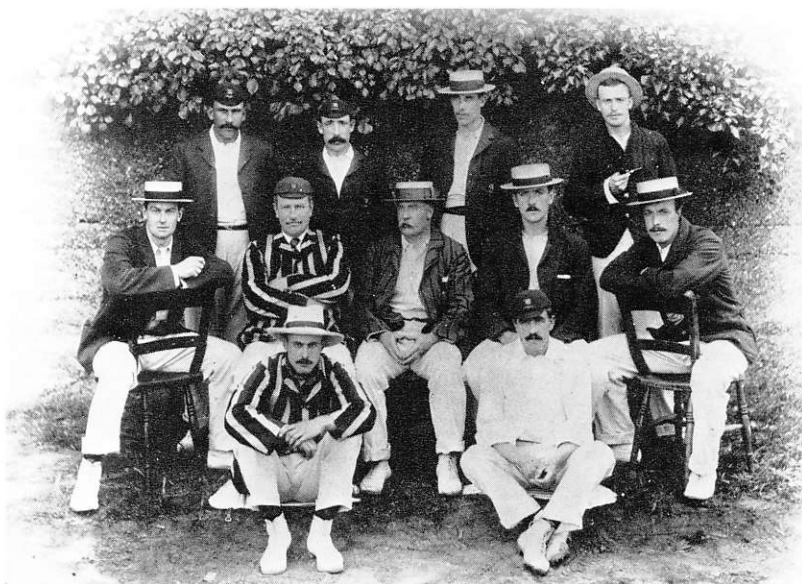


BASILDON

Look into the past

Past and present go hand in hand in the Basildon sports pavilion where fascinating photographs of old cricket groups line the modern walls. Those famous names which light up cricketing fans' eyes—Hobbs, Sutcliffe, Woolley—look out of their frames and remind us of cricket glories now past.

The link at Basildon with these photographs is George Young, full-time groundsman, whose father 'Doc' Harding Young played County cricket from 1899 until 1920 and umpired for England from 1920 until 1931. When his father died, George thought the Club might like some of his old photographs to grace the walls.



Badminton successes

This has been a most successful season for the Basildon Marconi Badminton Section. In the Basildon District League, the team in the mixed Division II won the league unbeaten, as did the team in the men's Division III. Congratulations to all players on their excellent achievements.

All new members are very welcome to the section—especially the ladies as there is a shortage of these at the moment. Contact the secretary, Chris Rivett, in D Building for details.

Darts finals

One of the highlights of the darts season at Basildon is the James Cup individual competition, and this year the quarter, semi and finals were all played off at the 'Crane' on the same evening.

In the quarter finals, Harry Menday beat George Hobbs, 2-1, George Butcher beat Ron Peters, 2-1, Arthur Sparrow beat Jack Beale in three straight games, and Peter Walker beat

Essex County cricket team, 1901

If you were a young lad in 1901, the chances are you might have seen these be-whiskered cricketers playing for Essex. Back row, Russell, Mead, Young, Turner; centre, Kortright, Lucas, Owen, McGahey, Perrin; front, Lane and Reeves. The gentleman in the back row, third from left, is 'Doc' Harding Young, famous cricketer and umpire, and father of George Young, full-time groundsman at Basildon. Not one of these cricketers is alive today, 'Doc' being the last to go last Christmas

Harry Bunch, 2-1. This last game, by two unknowns, was the best of the quarter finals: in the first and third games Walker was out in eleven and twelve darts respectively, and in the second game, Bunch was out in nine darts.

In the semi finals, in a game of average scores, Sparrow beat Menday, 2-1, while the brothers-in-law Butcher and Walker clashed with high scores on both sides. Walker won, 2-1.

The final, Sparrow v Walker, favourite against outsider, was an exciting one. In the first leg both scored high, with Sparrow getting 115, 92 and 81, and Walker 125 and 70. Sparrow finished on 17, X20.

Both finalists had high scores in the second leg, Walker with three 85's and Sparrow two 85's. Walker was first out with 15, X2.

In the decider, tension and nerves reduced high scores, even so Walker

scored 70, 70 and 60, leaving Sparrow trailing. Like the champion he is, however, Sparrow came back with 84, 81 to turn the game in his favour, and win on 15, X20.

In all, it was a most successful evening.

The Greenwood Cup pairs competition has been played off: results in a later issue.

In the Basildon Central Darts League Marconi's won the knock-out cup, beating Ford 2-1. This is the second year running Marconi's have won this trophy. In the same league, Barry Prince, Machine Shop won the individual cup.

Summer football at Beehive Lane

All footballers, please note! Training evenings at Beehive Lane, on Wednesdays from 6 to 8 p.m., will run throughout the summer months, with Eric Milburn in charge. It is hoped that all players who are members of the M.A.S.C. will come along to keep themselves in trim.



Winners and runners-up in the James Cup individual competition with Mrs. Greatrex, who presented the prizes. Back row, left to right, Ron Peters, George Butcher, Harry Menday, Jack Beale, Harry Bunch and George Hobbs. In the front, Arthur Sparrow and Peter Walker [G. Hoare]

Outside back cover

No more harvests for this old cart when the summer sun ripens the grain. This photograph was taken by N. J. James, Semi-conductor Physics Group, Baddow

GALA DAY

BICYCLES FOR TWO IN SPACE—looping-the-loop on a bicycle at a height of 60 ft.

SAVIOURS AT SEA—one-half scale model of the Southend-on-Sea lifeboat.

HOMES AND GARDENS—a show for all the family in the Horticultural Section's tent.

POTTER'S WHEEL—modelling, coiling, slab and wheel throwing as demonstrated by Mrs. Eva Faulkner of Halstead.

THE STARS FORETELL—have your fortune told by Madame Ailsa.

LIVING IT UP—winemaking and samples of home-made wine to be sampled in the Wine Guild's tent.

UNDER CANVAS—the delights of the open-air life and some of the items which can make camping a pleasure—even in the rain.

BZ...BZ...BZ...BZ...—a colony of bees is busy in the Essex Beekeepers' Association tent.

**SATURDAY, 16 JULY
AT WATERHOUSE LANE**



MARCONI MAGAZINE ART EXHIBITION

Marconi Artists

Please contact the Magazine to tell us that you would like to show a painting in the Marconi Magazine Art Exhibition on Gala Day, 16 July.

We also want more entries from young people, so please

Tell your sons and daughters of the painting competition and let us know if they would like to enter

There will be four classes with prizes in each for boys and girls up to sixteen years of age for paintings in oils, water colours or any other colour medium. Entries must be in colour, though need not be framed. Paintings can be of any subject provided you think that they are your best work. You can send one or two entries.

Three prizes will be awarded in each class, for pictures executed with the most skill and talent.

The age groups are: 1. Up to 8½ years 3. 11 to 13½ years
2. 8½ to 11 years 4. 13½ to 16 years

Prizes: Classes 1 and 2, 15s., 10s., 5s.
Classes 3 and 4, £1, 15s., 10s.

Father or mother please notify Magazine office of your son's or daughter's entry.



