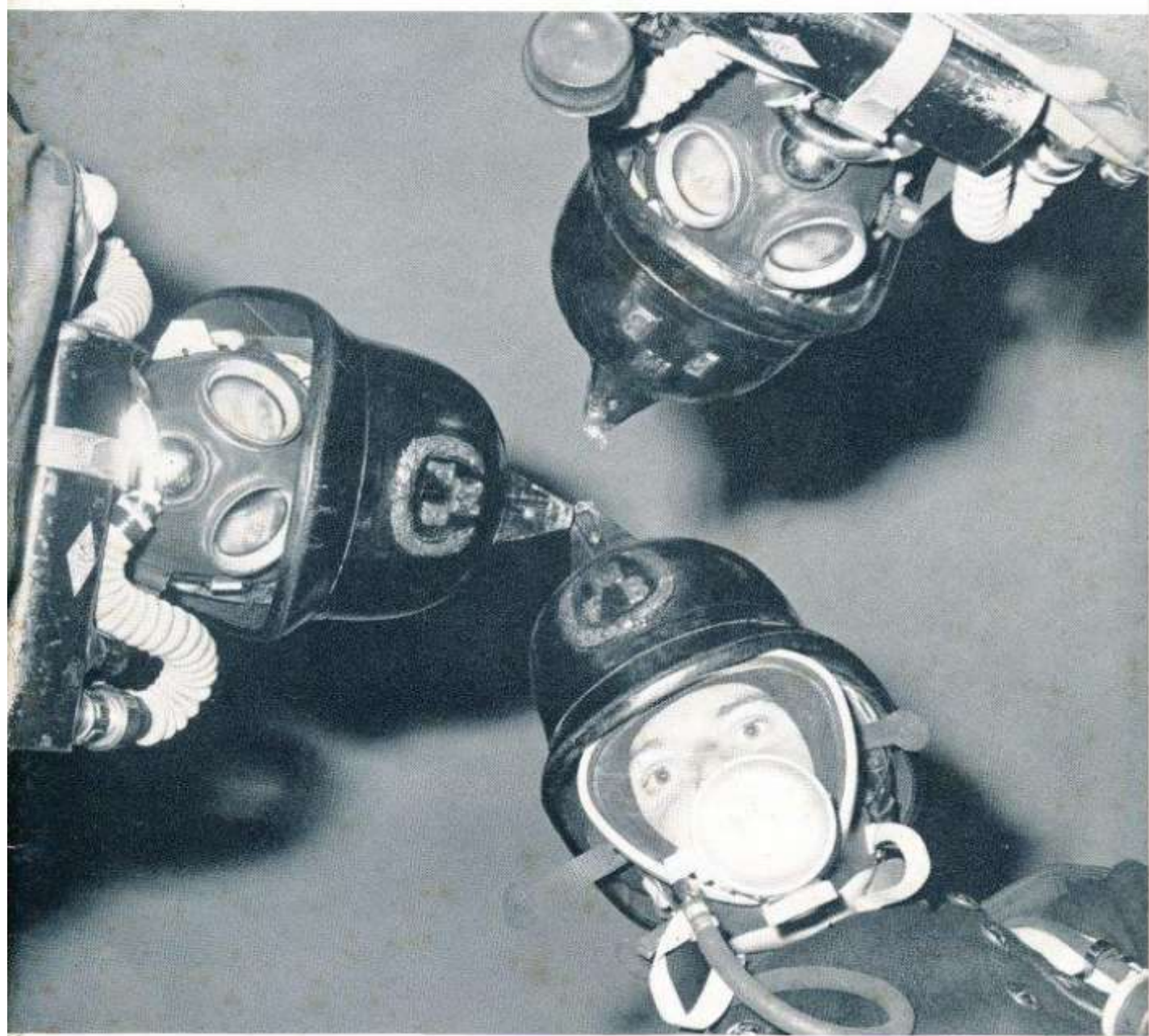


HEM

Marconi

companies and their people



Volume 18 Number 4 November 1967 Sixpence





Marconi

An 'English Electric' Company

Another order from Sweden

SWEDEN HAS ordered thirteen Marconi u.h.f. transmitters for her new second television programme. 'This is the largest order for this type of equipment we have won from a Scandinavian country', says the Manager of Broadcasting, Mr. Tom Møyer. 'It can be attributed to our experience in the u.h.f. field, and to successful installations in Sweden in the past, involving no less than eighty-one television transmitters and translators, and 186 f.m. sound transmitters and translators.'

Delivery of the equipment will start in November and continue until February.

Left: Scandinavian light reveals the beauty of Stockholm, as seen from Strommen harbour. Sweden is buying more of our TV [J. Allan Cash]

Cover: The call of fire may come at any time, and a fire in a key position on Company premises could cause chaos in deliveries and shatter promises of dates. Men of the Marconi Brigade are particularly aware of this and train each week to meet every hazard. [See 'On the Spot', Page 16]

The Marconi Companies and Their People

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

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THE QUEEN'S AWARD TO
INDUSTRY 1966 1967

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BUILDING BLOCK RADAR

—meets today's needs

The changing pattern of air traffic control over the past twenty years has demanded new forms of radar equipment. With the increase in air charter flights and air-freight, the volume of traffic has outstripped the rate of fitting airports with ground-based types of navigational aids.

Today the successful radar manufacturer must foresee market trends, and design his product well ahead of demand. The Marconi Company has therefore developed a 'building block' radar system, comprised of separate elements which can be applied to meet numerous requirements.

J. W. Sutherland, Manager, Radar Division, describes this revolutionary new Marconi system.

RADAR HAS developed rapidly since its birth in the mid-1930s, and ground radar has developed in two ways: for air defence, and for civil air traffic control.

Many large airports now are equipped with airways surveillance radar systems. Marconi's, supplying a substantial number of this equipment in Britain and elsewhere, have amassed considerable experience in air traffic control techniques.

Requirements in the military and civil fields are changing rapidly, and a completely new approach must be made. In civil aviation the recent rate of air traffic expansion (due particularly to the increase in charter flights and air-freight) has far outstripped the rate of fitting airports with radar and other types of ground-based navigational aids.

The successful radar manufacturer must be able to foresee market trends, and to design and develop equipment to satisfy them, well ahead of demand.

It is against this backdrop of experience that the Marconi S600 series of radar equipment has been formulated. Its fundamental aim is to provide a number of basic compatible radar elements from which it is possible to build up radar systems to meet practically every operational requirement. The system can be applied in the static military role for early warning, general air surveillance, control of fighters, control of guided weapons, coast watching or military air traffic control.

In the tactical military application, similar functions can be performed by equipment which can be

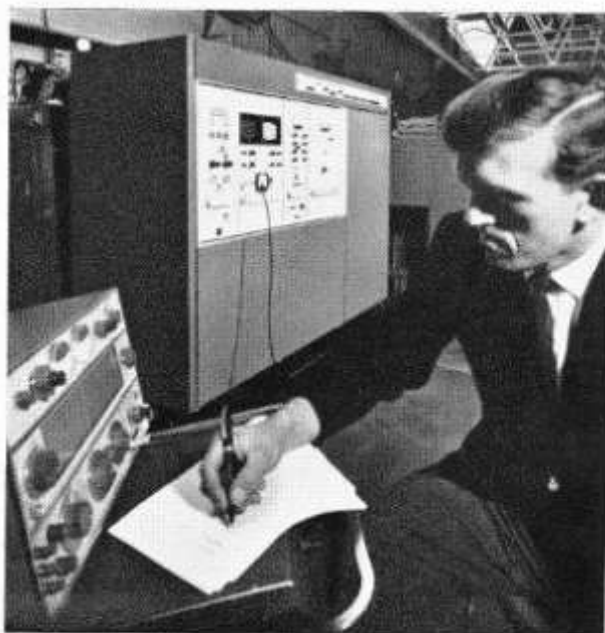


helicopter-lifted, carried by transport aircraft, or towed across country. Other versions can be fitted in warships. For civil air traffic control installations the S600 series can be used both for airways surveillance and terminal area applications.

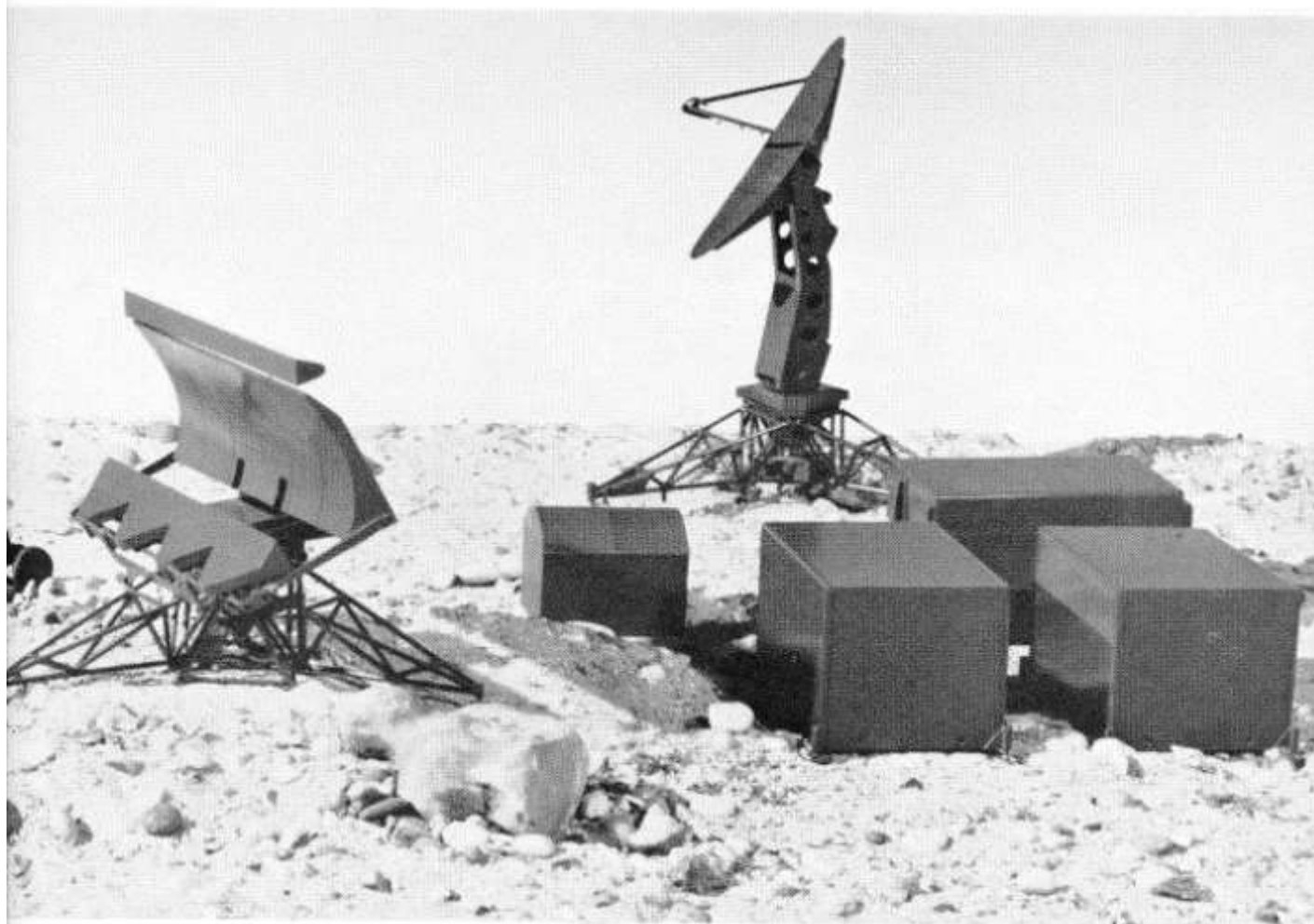
In the S600 series, maximum performance has been achieved at minimum overall expenditure, an expression which covers not only the capital outlay for the equipment, but also the total cost of operating, maintaining and sustaining the service of the equipment throughout its life. Thus, high reliability, ease of maintenance, and operation with minimum numbers of men, all contribute to overall cost effectiveness.

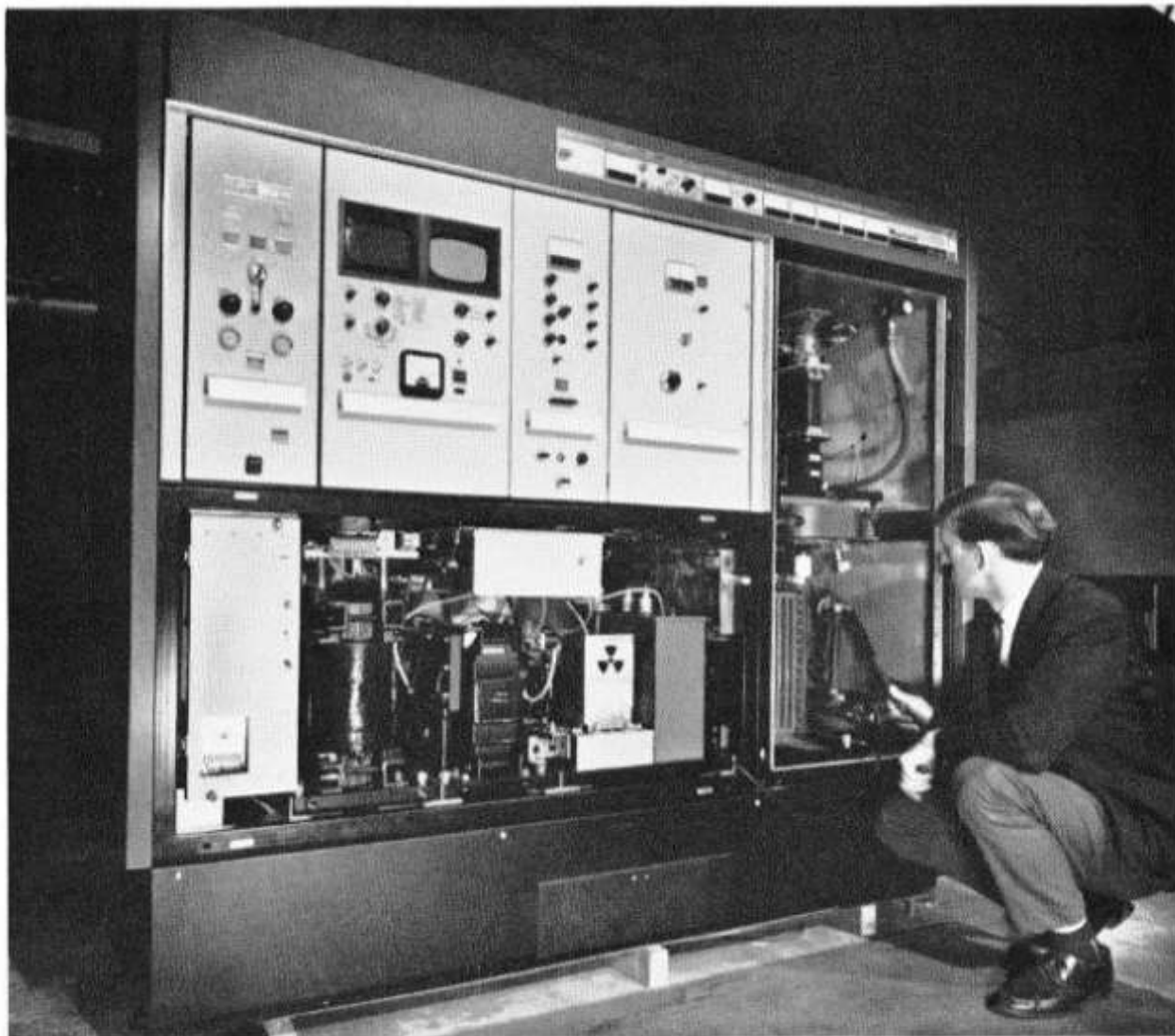
Secondly, the intrinsic radar problem of 'clutter suppression' has been tackled in a new and fundamental way, and excellent results achieved. The received signal in a radar equipment not only, contains the 'echo' or 'return' from the wanted target,

A new concept in radar—a complete station in transportable sections. This model shows a surveillance system including secondary radar, a height-finder and a data-handling cabin



A transmitter for the S600 series radar being tested in High Voltage Laboratory, Baddow





This is the 1MW, S-band (10 cm.) transmitter/receiver S2010 for use with the S600 series radar in either static or mobile roles. Panels have been removed to show the modulator and R/F units. It is the prototype of one of four types of transmitters of different power and frequency supplied for the series, production modules of which are now being built. The L-band transmitter, S2011, is half the volume of the former transmitter capable of the job, and its weight has been very much reduced. Two types of the transmitters have new tuneable, vapour-cooled magnetrons, developed by English Electric—another Marconi first

but also reflected signals from fixed objects such as buildings, trees, mountains, waves and precipitation.

In the past, some measure of discrimination has been possible by examining the difference between the moving target and the fixed clutter—a technique known as 'moving target indication' (MTI). In the S600 series, MTI techniques have been embodied in the design of the transmitters from the outset;

all the phenomena which have degraded MTI performance in the past have been remedied. The result is clutter suppression of an order never previously achieved.

Thirdly, 'reliability' has been pursued through the whole design of all elements. Solid state devices, including microcircuitry, are used throughout the transmitter-receiver except for the output valves.

Finally 'flexibility' has been achieved by the building brick approach to the design. A very simple system can be formed from a small number of basic elements; by adding to this nucleus, more sophisticated facilities and higher performance can be achieved, ending with a comprehensive radar system with maximum capability.

A wide variety of aerials can be used with transmitters in the static and mobile/transportable role. For example, in static applications a number of

New TV test gear

M.I. HAS RECEIVED a £40,000 order from the G.P.O. for television transmission test equipment. The instruments, sixty-five Sine-Squared-Pulse and Bar Generators, TF2905 6, will be used for testing the transmission quality of communication links in conveying colour-television signals.

The TF2905 6 is part of a new and comprehensive range of television transmission measuring equipment, with units suitable for all colour and monochrome systems. The Company expects to capture a significant share of the rapidly growing, world-wide market for such equipment, worth several million pounds.

This equipment created a large amount of interest to technical visitors when it was shown at the first International Broadcasting Convention. It was also featured at a private exhibition held by M.I. in the Kensington Close Hotel, London.

These instruments, the widest range of fully compatible television transmission test gear, can be built up into composite test assemblies. New instruments in the range include; Sine-Squared-Pulse and Bar Generators for monochrome and colour; a test set for luminance/chrominance gain and delay inequality measurements on colour-television links; blanking and sync mixers enabling



The M.I. colour and monochrome television transmission test and other new equipment created considerable interest at the first International Broadcasting Convention. Discussing some of the equipment are (left to right) C. N. E. Woodley, Publicity Manager; John Akam, Technical Representative; and Joe Tripp, Senior Sales Engineer, Sanders Division

sweep or video test waveforms to be superimposed on studio blanking and sync pulses.

These are complemented by existing M.I. equipments, including the extremely successful television transmitter sideband analyser and the 20MHz sweep generator.

45-foot (14-metre) and 30-foot (9-metre) aperture aerials have been designed to operate at S-band and L-band, both singly or back-to-back. Aerials of 18-foot (5-metre) aperture are available at L-band and S-band for static or mobile and transportable requirements; the C-band transmitters are used with two sizes of height-finder aerial, which again can be used in either static or mobile transportable configurations.

Finally, at 50-centimetre wavelength, there are two aerials of 52-foot (16-metre) aperture for operation in air traffic control.

Associated with the data acquisition elements of the S600 series, display data handling and communications facilities are provided to complete the overall operational package.

High definition 12-inch (30-centimetre) and 16-inch (40-centimetre) radar displays are so

engineered that they can be built up into several different arrangements and provided with many operational facilities to suit particular needs. The whole system is adaptable in the numbers of displays fitted and the facilities available with each. The data-processing component of the system is based on the Marconi Myriad high-speed on-line computer, with storage capacity appropriate to the particular requirement.

To complete the display and data handling complex, flexible electronic data displays are used to assist the operators in their functions, and to provide a rapidly assimilable presentation of information to the operational staff.

The high performance, cost effectiveness, and complete flexibility of the Marconi S600 series make it attractive for almost every radar requirement. It has an enormous export sales potential.

Electronic Blackboard—

a feature of Baddow Autonomics Open Day

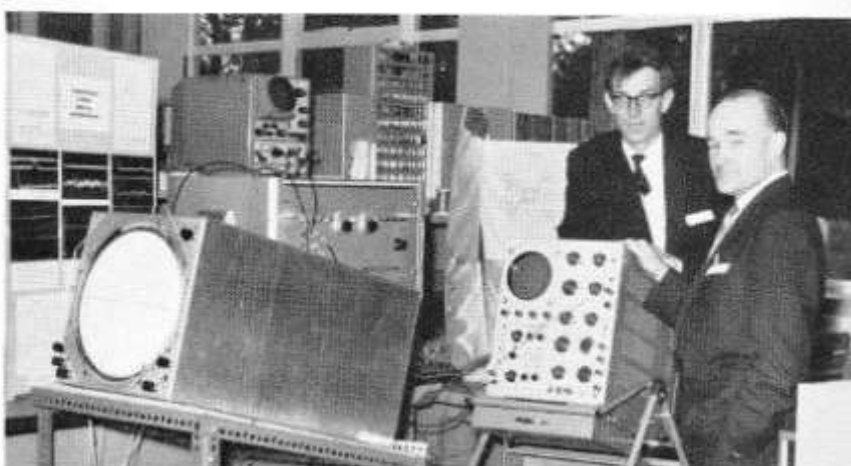
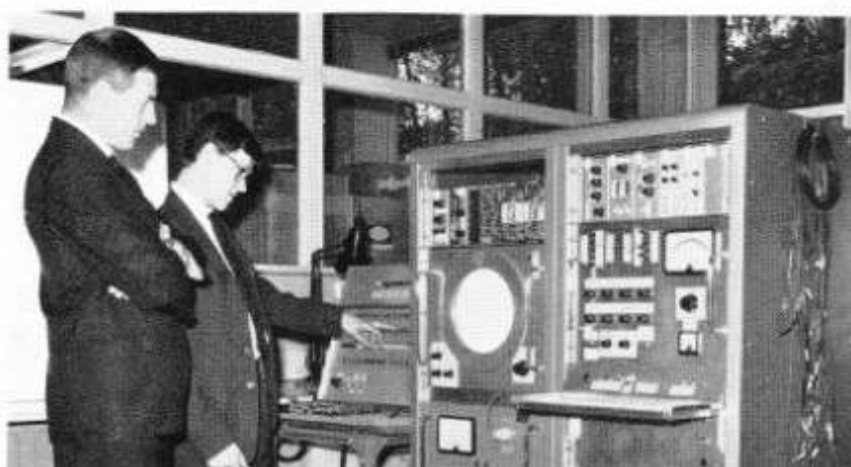
COMPANY ENGINEERS were able to see some of the latest examples of research on exhibition during Open Day in Autonomics Laboratory.

The exhibition gave a cross-sectional view of the work of this Research Division Laboratory which covers private venture investigations, projects initiated by Company product divisions, and Government contracts, all related in some way with data handling. The work includes data generation, extraction, processing and presentation with emphasis on automatic methods.

It was not surprising, therefore, to find that one of the features was a plotter which would feed to a computer information written on it with a special pen.

This will provide an aid to the engineering designer, making it possible for him to communicate directly with a computer without the need to understand or use complicated languages. The pen will enable him to draw on the face of a transparent overlay as easily as he could with a pencil on paper.

Other features of the exhibition are shown in the photographs on the following pages.





Opposite

Top left: Top engineers from English Electric Computers having a look at the new Marconi transparent, resistive overlay—the sketch-pad used in association with storage displays. This is an electronically sensitive sheet of glass which will record, transmit, or feed written or drawn information to a computer. Left to right, G. P. Darwin, J. F. Winterbottom, J. M. M. Pinkerton, all of English Electric Computers, with D. W. G. Byatt, Chief of Semiconductor Physics Group, Baddow, formerly Chief of Data Presentation Group. Top right: A. Beasley of Data Presentation Group demonstrating the selective erasing of a graphical display. This is the computerized 'blackboard' for the top mathematician. Anything written can be recalled and erased by the pressing of a button. Bottom left: Assistant Director of Engineering, C. D. Colchester, left, with Peter Foster and Roger Stableford. They were talking over details of a new isometric display used for the study of automatic radar plot extraction. Bottom right: A. B. Ellis, Chief of Data Systems Section, right, and A. Woolard, with a digitally deflected display and an instrument for detecting very weak signals in ionospheric research

Above

Top left: Tom Alcorn of Data Presentation, right, describes aspects of the work on character recognition. This machine will read documents directly into a computer. Top right: An experimental solid state character recognition optical scanner being demonstrated by Brian Hammans, right, with, left to right, Bill Gordon, Michael Wintersgill, and Mel Davis. Bottom left: Joe Thompson, Chief of Data Recognition Section, explains assembly techniques used in integrated

circuits for character recognition. On the left is Martin Clare of Radar Division

Bottom right, above: H. W. Holton, K. C. Ginn, Joan Wernham, all of Radio Communications, with R. G. Eley, Space Communications, and right, Michael Ginn of Data Presentation Group. Michael was demonstrating an automatic aerial beam recorder for ionospheric investigation

Below: Professors and lecturers from British universities came to the exhibition to keep university teaching in touch with industrial research. Here with A. B. Starks-Field, Manager, Autonomics Laboratory, right centre, are Professor G. R. Hoffman, University of Manchester, second from left; Mr. G. R. Nicoll, Cambridge; J. Thompson, Chief of Data Recognition Section; Professor W. E. J. Farvis, Edinburgh





Above, top left: This is a buffer storage system for a data storage and rate conversion unit. Describing it is Ivan Kibble, right, with, left to right, D. K. L. Leitch, Clive Hoggar and Brian Hammans. Top right: An evaluation of MOST, a metal oxide silicon transistor array by R. Mostyn of Data Measurements. This eight-bit full access register is an example of inter-divisional co-operation. It was developed by Data Measurements and manufactured by Microelectronics Division, and could be used in an integrated circuit computer. There are eighty-eight MOST devices in an integrated circuit. These reduce size and cost. Centre left: This is a tape-controlled automatic tester designed and built by Data Measurements Group for testing Microelectronics Division's integrated circuits. It is known as MACE. Left to right, Robin Webb, Fred Barchou, David Ayres, Ernst Schelisch, Bryan Aldred, Fred Kime, Avid Liam and Jack Wild. Centre right: This is FREME, the fast response measuring equipment used for testing active and passive circuits in pulse compression radar. Left to right, Peter Schaffe, Section 217; Professor G. R. Hoffman from Manchester University and E. F. Schelisch, Chief of Data Measurements Group

Below left: An automatic circuit tester widely used in production. Ron Tyler, Section Chief, 217, left, George Baldwin, Section 210, and Frank Whybrow, Section 217

21-year celebrations

THE FORMATION of the M.I. Social and Sports Club at Longacres in 1946 was recently celebrated with an enjoyable party. The club originally started in 1942, at High Wycombe, and when the Company moved to Longacres at St. Albans the club brought their canteen.

The old canteen was the centre of activity, although at that time there were only the football, cricket, table-tennis, and dancing sections. There are now twenty active sections, and the new canteen is used every evening by one or another.

Until about ten years ago the sports sections hired pitches at Verulamium; then, with the acquisition of the sports field at Cotlandswick, the club had its own ground with a pavilion.

Present at the party was M. Kelsey, Works Manager, at one time a committee member of the club, and Mrs. Kelsey who cut the handsome cake. The music was provided by Frank Harwood and his band; and here's another link—Frank is Machine Shop Inspection Supervisor.

Flower (fruit and veg.) People

FOLLOWING THEIR SUCCESSES at the M.I. and local horticultural shows Harry Botwright, Finished Goods Store, and Ron Forward, chauffeur, decided



When the Mayor of St. Albans, Councillor J. H. Brett, toured the M.I. works he talked to Pamela Cocksedge, who was engraving dials for the TF1313A Universal Bridge. He stayed for about two hours, studying the Company's activities and looking round laboratories, machine shop and the main assembly building

to try, for the first time, the large Friern Barnet Summer Show.

Harry came away with three firsts, three seconds, two thirds and a highly commended. Ron won the Muswell Hill Record cup for gaining the most points in the open flower sections, three firsts, one second, three thirds for dahlias, one first, and two seconds for chrysanthemums, with two firsts and two seconds for vegetables. What about that!

The party to celebrate M.I. Sports and Social Club's twenty-first birthday was a very happy one. It was held in the Longacres canteen and here enjoying themselves are: Left: Left to right, Mrs. Walker, Mrs. Kelsey, M. Kelsey, Works Manager, and W. Walker, Chairman of the Club. Right: A lively group of dancers celebrate 'Twenty-one today'





Some of the city buildings and part of the large docks at Madras



D. Camp, consultant with the English Electric Company of India Ltd.

M.I. IN INDIA

"IT IS HOT AND HUMID in Madras", said Doug Camp when he came back to St. Albans on leave from India, 'but one gets used to it.'

We were pleased to see Doug, a consultant with the English Electric Company of India Ltd., when his jolly face was seen again at M.I., even though it was only a temporary visit. He and H. C. Gribben, Manager of the M.I. Division of the new works in Madras, went out to start assembling instruments late in 1965.

The Madras English Electric factory was established about six years ago and has been continuously expanding. When they arrived, part of the works was handed over to M.I., staff was engaged and trained, and signal generators are now being delivered to the Indian government.

Although the temperature varies between 75° and 110° F, and the humidity is uncomfortably high, the members of the staff work very well, and even though they have not been long in electronics their

work is passed by the strict government inspectors.

When Doug and his wife arrived in Madras the Company provided housing about ten miles south of the city, and also a car. He had, however, to engage his own servants. This was no trouble, one just lets it be known that domestic help is required and the news travels fast.

One of the things to get used to in India are the snakes. When Mrs. Camp was first shown round the garden by one of the Indian staff, a small snake jumped from a nearby gatepost some three feet into a tree. She asked 'Is it deadly?' 'No, not until three days' was the casual reply. By which was presumably meant, that if one was bitten there was time to get treatment.

There isn't much time for relaxation, but Doug belongs to the gymkhana club and the near-to-his-home rowing club. He doesn't do much rowing—the spirit is willing, but darts and skittles are more in his line these days. Madras is a dry area, and a permit is required if one wants to drink. One has to have a reason for applying for a permit and, like

most people, Doug had to enter himself as 'a habitual drinker'. This entitles him to eight books of twelve coupons each month. A beer is one coupon.

Although the only time Doug has previously left England was in the war, he has settled very quickly to life in India. Madras is a large port and, with its ancient buildings in the Eastern style mixed with Western architecture, there is always something to see.

The country outside the city is green and wooded and there are pleasant bays along the coast. At Christmas time last year the Gribbens and the Camps went swimming. Sometimes they are joined at picnics by Merrick Elderton, seconded from M.I. Export, when he brings paperwork from New Delhi.

One of the things that has made a deep impression on Doug is the abject poverty in India. He and H. C. spend all their time in the factory but Mrs. Gribben and Mrs. Camp give cooking demonstrations, with hardly any kitchen equipment, in an effort to train girls at the local Social Service Centre.

Apprentices see Air Traffic Control

A GROUP of M.I. apprentices recently made a most interesting visit to the B.O.A.C. headquarters at London Airport.

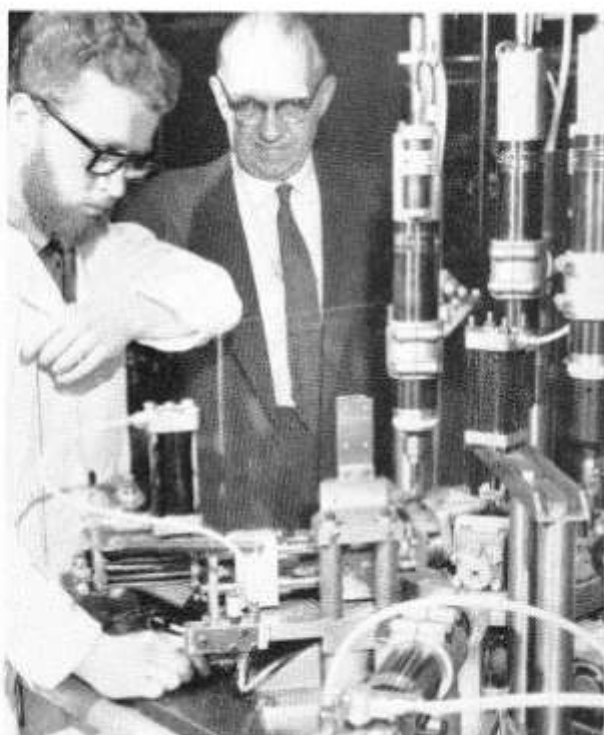
The tour began with an introductory lecture using slides, and showing the working of the control-room, flight simulator, and pre-flight checks on board aircraft.

Next came an inspection of the flight control-room in the control tower, where the highly skilled work of guiding aircraft by radar was seen.

The tour was concluded with a visit to the vast maintenance hangers where the apprentices boarded several aircraft, including an Argonaut belonging to the B.O.A.C. apprentices.

Serving on the M.I. Apprentices' Committee this year are Paul Erasmus, chairman; John Arthur, who is again treasurer and vice-chairman (what, some of us ask, is he doing with our money?). Graham Clarke is the social secretary; Richard Penn, general secretary; Peter Daw, apprentice stores secretary; Christopher Blomfield, tool club secretary, and Derek Matthews, minutes secretary.

D.B.M.



Brass inserts for instrument knobs drilled and tapped with two holes 120° apart at the rate of 750 an hour—quite an advance on the conventional forty an hour. This new M.I. special-purpose machine, which carries out six operations simultaneously, was designed by Reg Watson, right, Senior Tool Designer, Production Engineering, and practically all of it was made by Charles Macdonald, Tool Maker



Cutting templates cuts time

Scores of detailed drawings eliminated

ON THE NEW loft floor at Gateshead, the loftmen are drawing out their plates with the same magic that their forefathers used to shape the hulls of ships. But now they draw the structure of an aerial to life-size and painstakingly make a template of every single piece of it.

The templates go to Fabrication Section with instructions written on them, and the operators there cut and punch to the measurements given.

Where is the gain? A flow of work can be maintained in Fabrication Section because all reference to drawings by the operators has been cut out. For example, there are forty-two items of work in a

Bob Nesbitt, left, with Alan Deacon, Apprentice, take calculations from the drawing before reproducing it on the floor



sub-assembly for a radial truss of a 90-ft. dish. With the aid of templates, one man can manufacture all these without reference to a single drawing. The template maker, in interpreting the original drawing in liaison with the Drawing Office, and indicating in code on each template the fabrication work to be done, has eliminated scores of detailed drawings, the time taken to produce them and the time taken to open and question them on the shop floor.

By the normal system this sub-assembly would require forty-two drawings plus forty-two operators' instructions type-written in the Works office. These would require forty-two progress and payment slips to go with them, and then forty-two polythene bags to carry them.

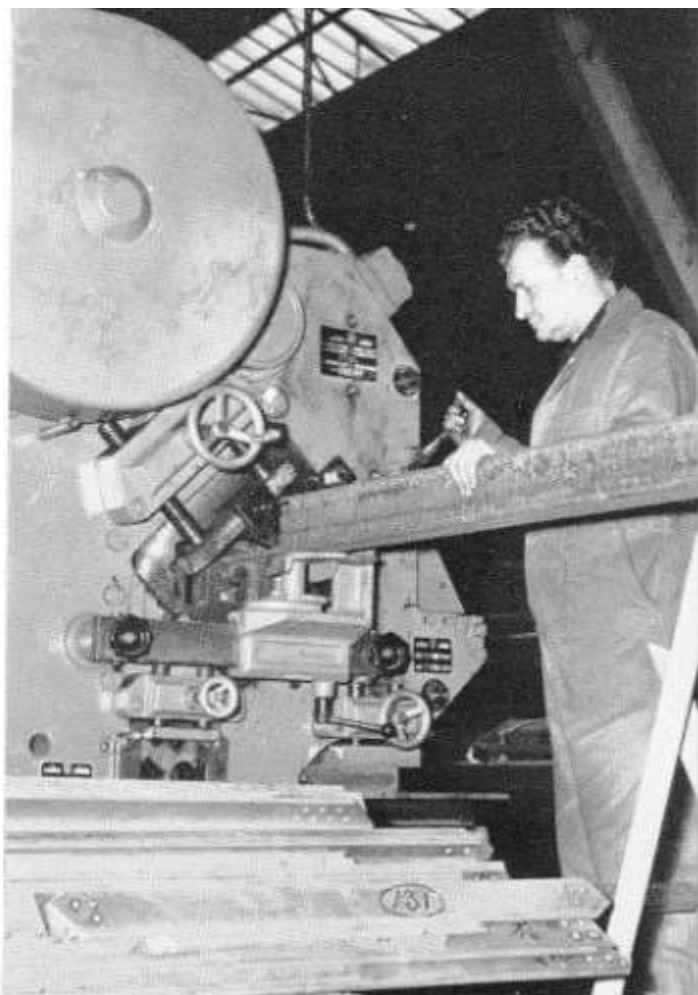
There are many more items of work in the 90-ft. dish than those in the sub-assembly of the truss, and the Nadge aerial has three sections of structure with 128 items in each.

The key to speed in production is a master list of processes—up to fourteen operations on one item—and templates.

Gateshead stands ready for orders for aerals.

Left: This shows part of the 'loft' floor at Gateshead with a section of the backing structure of a radar height-finder drawn out on it in actual size. Templates of some of the pieces have been made and laid in position for checking. Bob Nesbitt, template-maker, right, is checking the arrangement, and numbers off against the drawing with Frank Symm, Chief of Production Group B.

Below left: Fitting a template to the drawing on the floor to see that it is right are Lew Fionda, template-maker, left, and Alan Deacon. Lew has written fabrication instructions on it. Right: The first frame for the Nadge height-finder structure being finished in Assembly 008 Pelaw. Ensuring tight bolt fit with the reamer is Denis Colligan, right, and on the left is Bob Donnelly, Foreman. 'This frame went together without any mismatch of holes, and results are excellent', says Dick Amos, Works Engineer.



Above: In Fabrication Shop, Fred Proctor is cutting angle-steel to lengths indicated. This machine does not waste time sawing, it chops clean through half-inch angle. Tons of metal can be cut as quickly as it can be handled.



Installation engineer takes Mediterranean cruise

THE TRADITIONAL PICTURE of an installation engineer, is of a man risking his life on mountain tops, hacking his way through jungles, or frantically twiddling knobs on a piece of equipment in the middle of a desert.

Not so Ernie Shelvey, of Line Communications Division, who is presently cruising the high seas in a Shell Oil Company tanker, as it follows its route around the world.

However, this is not entirely a pleasure cruise, for Ernie is conducting trials on modified Marconi Autospec equipment. The trials, and the cruise,

will last three months, and involve evaluation of results obtained from transmissions between the ship and the G.P.O. station at Burnham-on-Sea in Somerset. The tests are being carefully monitored by G.P.O. engineers, and could initiate even more interest in this successful piece of equipment, which automatically corrects errors on radio-telegraph circuits.

Of course there is always the chance that Ernie will be twiddling his knobs in a howling gale, and the cruise will be somewhat less than a rest cure.

J. H. ENGLEFIELD

ANOTHER SPECIAL PROJECT

The Chairman made a presentation on behalf of the Company to Alec Kravis to mark his award of the O.B.E. The award was announced in the Birthday Honours list after the successful completion, in record time, of the Seat transportable satellite tracker for military communications, of which Mr. Kravis was Project Manager. Left to right, E. S. Atkins, Manager, Computer Division; the Chairman presenting a Georgian silver goblet to Mr. Kravis who is now Deputy Manager, Computer Division; G. D. Speake, Director of Research, and the Managing Director, R. Telford





St. Clement Danes between the Strand and Fleet Street

Oranges and Lemons

—and an Investiture

THE LONDON OFFICE of the Company, situated in 'English Electric' House, is in the parish of St. Clement Danes. This is the Royal Air Force church, visited by people from all over the world. Wherever English is spoken, we find the bells of St. Clement's are familiar from childhood. But what is not universally known is why 'oranges and lemons'?

As its name implies there has been a church on this site from Danish times, and perhaps even before, and in the olden days the church and its surrounding land lay astride the direct route from the Thameside wharves, where the Savoy Hotel

now stands, to the fruit market in what was then known as the Convent Garden. Sailors, with their cargoes of citrus fruits, would ensure their wayleave by offering the church portions of their wares.

Nowadays we do not receive any fruit—except perhaps raspberries—but life in the London Office is nevertheless not devoid of all flavour of ancient customs. Thus, it was a great pleasure and honour recently to make arrangements for and accompany A. F. Evans, the Superintendent of the Special Projects Group at New Street, to his recent investiture, when he received the insignia of a Member of the Order of the British Empire from the Minister of State for Technology, Mr. J. Stonehouse. Mrs. Evans and their son, P. J. Evans, a senior inspector at Baddow workshops, were present at the ceremony in the Old Admiralty—a justly proud day for the family and this Company, and on which they were entertained by the staff of the London Office.

J. C. MILLAR



ON THE SPOT

Marconi Fire Chief puts first things first



"WE DON'T just run up and down the yard on Friday night training for competitions", said Chief Officer Jan Frewer speaking of Brigade activities. "We are industrial firemen, trained as such, and our job is fire prevention and the protection of Company workshops and buildings."

Men of the Marconi Fire Brigade, a voluntary organization, are particularly aware of this and train each week to meet every possible hazard.

To be on the spot in the least possible time is the whole essence of a fireman's training: but the

industrial fireman's greatest success is never to be called to a fire. He plans to beat it before it reaches flashpoint. Should fire, nevertheless, get a hold, he must be on the spot to beat it with something better than a broom. Trained men with the right equipment are our main safeguard.

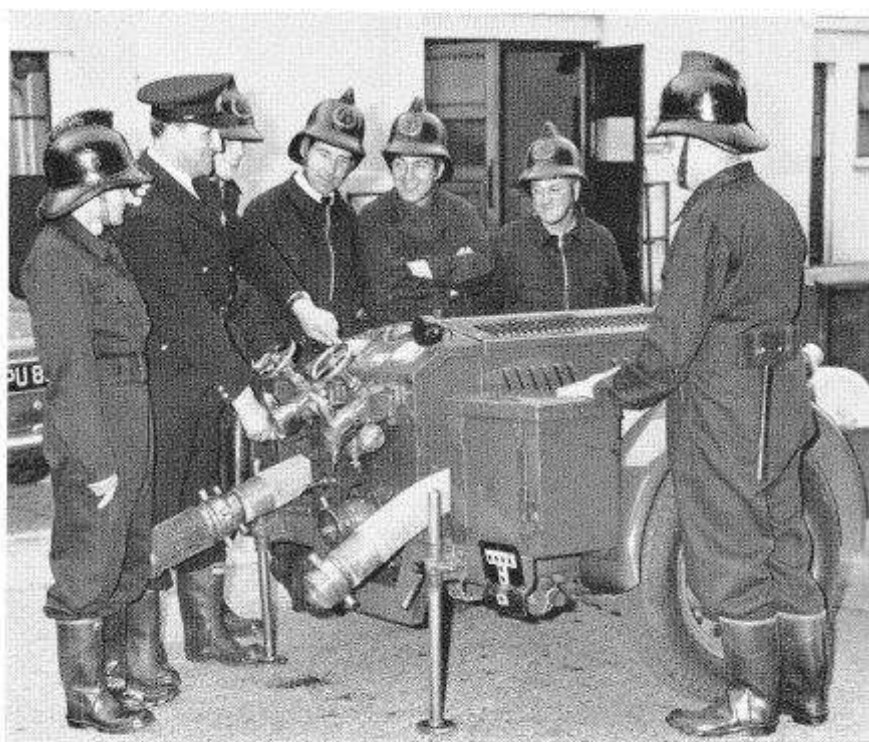
The risks of fire are still the electrical fault and the cigarette end, but the real ones are chemicals and the automated machining of metals such as

Left: On the spot and bringing two branches to bear. Left to right: Firemen Trevor Lodge, Tom Hull, Bill Rose and Cavan O'Connor. The branches are of three-quarters-of-an-inch bore. The water pressure is 130 p.s.i and the jet-throw is fifty feet on to buildings

Below, far left: This diesel sprinkler-pump supplies water to eight systems at New Street. An inspection and a test is being carried out by Leading Fireman Bill Pain, right, and equipment maintenance-man Ernie Lapwood

Right: Ladder-rescue drill. This is the fireman's lift. It's not as easy as it looks. Balance is difficult to maintain, and it needs a great deal of practice to win the confidence of the victim who, in this case, is John Potts, carried by Trevor Lodge. At the foot of the ladder is Second Officer Graham Murdy. Below left: The maintenance of all portable appliances is carried out by members of the Brigade. These two-gallon water extinguishers being recharged by Ernie Lapwood give a spray or will throw a small jet of water twenty feet

Below right: Pump-drill instruction. Left to right: Fireman Arthur Leveridge, Chief Officer J. Frewer, Firemen Rhett Hazell, Trevor Lodge, Cavan O'Connor, Tom Hull, and Leading Fireman Alan Munday. This is a Beresford heavy trailer-pump with a six-man crew who can run out and get to work, with two deliveries



magnesium. For this special fire-fighting techniques are required. Operators of some of the machines are trained in the use of hand-appliances, and speed of application is the effective fire-control.

Electrical hazards in Company departments are commonplace, and now inflammable liquids are more widely used. A hose and a couple of buckets on the wall may still be legal coverage, but if anyone throws a bucket of water on an inflammable liquid there is going to be a real roast.

One of the most important of the Fire Officer's duties is to give five prevention requirements for new buildings during the planning stage. For it is during construction that adequate apparatus can be put in—fire detection, alarm, and automatic extinguishing systems.

In all departments the equipment necessary to meet different hazards has been provided, and it is important that people know how to use it effectively.

Below: The New Street Brigade. Left to right, standing: Second Officer Graham Murdy, Leading Fireman Bill Pain, Leading Fireman Alan Munday, Fireman Trevor Lodge, Chief Officer J. Frewer, Firemen Rhett Hazell, Percy Holland, Bill Rose. Kneeling: Firemen Arthur Leveridge, Tom Hull, Cavan O'Connor, and John Potts. In the background is the Land-Rover, the Brigade's general-purpose vehicle. It was fitted by them to suit the type of risk and fire ground conditions likely to be met at New Street. It has its own water-tank and carries foam, dry powder, and CO₂ equipment, as well as breathing apparatus and safety clothing

HACKBRIDGE HIGHLIGHTS

Speed King

TO ENTER the Manx Grand Prix in the Isle of Man is the height of ambition for amateur motorcyclists, but before qualifying they have to graduate on tracks like Brands Hatch, Mallory Park, and Crystal Palace. Even after all that hard riding, they still need time and money. But for the really enthusiastic, it's no real hardship to give up holiday-time and savings for the chance to have a go at winning this major event. Among those with the required amount of enthusiasm this year was Roger Greenwood, Filter Development Section, who raced his Triumph 500 c.c. engined Manx Norton in the Senior race. This is a six lap race—thirty-eight miles a lap—strictly for amateurs. Unfortunately for Roger, a crankcase bolt sheared during the third lap and wrecked his engine. Roger now wants to meet any enthusiast who has some good engine spares for a 'Tiger 100'. Any offers?

In spite of this year's bad luck Roger is determined to have another crack next year.

Personality parade

HEADING A TEAM of men who process crystals to tolerances measured in Microns, is Reg Brabham,





Roger Greenwood in action in the Isle of Man

Chargehand in the Dimensioning and Lapping Section. Reg, who served his apprenticeship in the optical industry, joined Marconi's at New Street, under J. P. Wykes, in 1944.

Outside working-hours, Reg is a keen flower grower and spends many hours in his garden in Morden. He is on the Committee of the Sutton Horticultural Society, and takes part in their shows with considerable success.

Among Reg's team is George Fairman, a skilled Crystal Dimensioner, who specializes in contouring, dimensioning, frequency measurement and the angle correction of crystals. George joined the Hackbridge personnel in 1949, and worked for seven years on the night shift before changing over to day-work. He has been an ardent Spurs supporter for the past forty-eight years and likes nothing better than a natter with the 'boys' about football.

Around about now, George dusts his whiskers, brushes his cloak, and gets ready for his annual role of Father Christmas at the children's party, a 'job' he has been doing since 1959.

George Fairman (left), and Chargehand Reg Brabham outside the Hackbridge works [W. Redman]





Mrs. Phyllis Bassett has taken over as Sister at Basildon works in place of Sister Solomons

New Sister for Basildon

MRS. PHYLIS BASSETT has come to Basildon as Works Sister. She has taken over from Sister Solomons, who has left the Company to go with her husband to Holland.

Sister Bassett did her training in Llandough Hospital near Cardiff, and did a course in midwifery before going on to Sunderland where she spent nineteen years as a Health Visitor. Although primarily involved with medicals and the day-to-day running of the medical centre, part of her duties includes welfare work, and she is always interested and willing to help. Anyone with problems of any kind will find a visit to her well worth while. She has an infinite understanding, and a fund of practical suggestions to help you.

Destination 'Honeymoon House'

'IF YOU can't beat 'em, join 'em', is a well-known saying, but Max Bonner of Mast Design Section, Building 46, has done the opposite, he beat 'em and joined 'em. He was a member of the Singles football team which beat the Marrieds in a recent High Power Communications Design Office challenge match. Office friends wished him well, however, and presented a pressure-cooker for the new house in Braintree but, arriving there with his bride, the former Shirley Digby, after their wedding at All Saints Church, Terling, and Kentish honeymoon, it was not the quiet home-coming they had expected. The outside had been gaily festooned with balloons, streamers and 'do not disturb' notices, as well as a banner saying 'Honeymoon House'. There was no doubt that he had joined the Marrieds.

Name changes

FOUR WRITTLE young ladies each went on an important walk, over a four-week period, and everyone of them came back with a name change. You must have guessed that they had all been on a trip down the aisle, and to them all we offer our very best wishes for the future. They were Judith Burr, now Mrs. Tony Pitt; Kate Marsh, Mrs. Joe Elgie; and Margaret Payne, Mrs. Barry Bryans; all draughting assistants in the Design Office; and Sheila Manley, Mrs. Roger Williams, secretary, Line Communications. Barry Bryans is at Guy's Farm.

GATESHEAD NEWS

Ladies only beano

THE FIRST EVER Ladies' outing organized by the Sports and Social Club, lady committee-member Miss Bridget McKinney, was to Otterburn. Thirty-five of them left the works at 5 p.m. and, after a pleasant one-and-a-half-hours drive, arrived at the Towers Hotel for dinner, an excellent meal, which turned out to be the prelude to a very enjoyable evening. So successful was this venture that everyone voted for another one in the not too distant future.

Mixed doubles

A MIXED DOUBLES competition organized by the Bowls Section for all members of the M.S.S.C. was very well attended, and also entertaining. Jack Shaftoe, Section 18, and Mrs. 'Nellie' Wood, Forward Planning, were the winning couple. For Mr. Shaftoe there was a bottle of whisky, and for Mrs. Wood a bottle of gin.

Farewell to Mrs. Prior

BEST WISHES to Mrs. I. Prior, who has retired from Reprographic Services Group after five years with the Company. Before she left, C. E. Harper, Superintendent, Master Library, presented her with a tartan travelling rug and bouquet of chrysanthemums on behalf of her many friends.



This happy bride and groom are Christopher Vickers, Commercial Programming Group, Baddow, and Jean Mason, Cableform, Rivenhall, who were married at St. Michael's Church, Braintree. Christopher's colleagues gave him bathroom scales, and Jean's friends gave her a standard lamp and wall mirror, presented to her on their behalf by S. Steele, Chargehand. Christopher is the son of Mrs. Hilda Oehme, the Magazine's Rivenhall correspondent

Three Marconi families

EARLY AUTUMN 1967 will be a time to remember in the lives of the Morrison family. John, former police sergeant now of Order Control, Beehive Lane, and better known as Jock, walked down the aisle of St. Andrew's Church, Chelmsford, on the eve of his daughters' twenty-first birthday—twins Doreen and Dorothy—to give them away to two members of the Company, and thus three Marconi families were joined by matrimony.

Doreen, who was at one time with Radio Communications Division, married Robert Humphrey, Training Centre, whose father, Tom, is in Test and Inspection, and his mother, Kathleen, is at Beehive Lane. Dorothy, who had been with Supplies Division, married Brian Sargent, Maintenance, whose father is L. Sargent, Manager, Fabrication Division, and his sister, Margaret, one of the bridesmaids, is in International Division.

Added colour to this double-wedding was the presence of the twins' Uncle Tom, Jock's brother, who had travelled from Sarnia, Ontario, Canada, to keep the promise that he made many years before, to pipe them into church.



The Morrison twins after their double-wedding at St. Andrew's Church, Chelmsford. Left to right, Dorothy and Brian Sargent, and Doreen and Robert Humphrey. Both bridegrooms are at New Street. (See 'Three Marconi families') [J. Dufton]

Jock, a member of the Bowling Section and runner up with Ivor Gill in the pairs competition in 1966, changed his part from father of the brides when he and his wife attended the wedding of their son, Ian, in Jersey two weeks later. Doreen and Robert went too.

Hullo twins

CONGRATULATIONS to Owen Diplock, Operational Services Group, Waterhouse Lane, and his wife Janet, who have started their family with a son, and a daughter—James Owen, weight 6 lb. 1 oz. and Sarah Catherine 5 lb. 8 oz.

Pictured after their wedding at St. George's Church, Stevenage, are Ray Austin and his bride, Valerie Doyle, both of M.I. Sanders Division [E. A. Brown]



WITH BEST WISHES...



Left: About sixty colleagues got together at a Smoker held in the 'White Swan', Heworth, when M. C. Walton, Group Chief of A.M.T.G., Production Department, Gateshead, right, left the Company after fourteen years, and O. McClurry, Section Leader, presented him with a clock on their behalf [J. Wales]. Right: A double presentation at Stevenage for apprentice Ray Austin, and Valerie Doyle, Goods Inwards, before their marriage, and Works Manager G. Wordsworth gave them a Mongolian goat-skin rug, electric blanket, flower stand, and autographed scrap book from their friends [E. A. Brown]. (See page 21)



Left and right: Two development engineers in Radio Communications Division were recently presented with wedding gifts by W. V. Barbone, Engineering Manager, before he became Technical Manager, Space Communications. Keith Newson, left, received an egg whisk and automatic coffee-pot, and Barry Gannon an electric drill and attachment. Keith and Barry have six and five years Company service, respectively



Left and centre: Billericay brides at their presentations, when Gwen Seaman, left, received a battery-operated clock on marrying Brian Butler of Baddow, and Wendy Collier a pressure-cooker before becoming Mrs. Terry Lord. D. W. Gill, Manager, Specialized Components Division, officiated on both occasions. Right: On the point of signing a marriage licence, so his M.I. friends gave a record player to Philip North, Test Supervisor, Printed Boards, which was presented by I. Tye, right, Group Manager, Printed Boards Inspection and Test



Left: Three generations attended this Widford wedding presentation to Veronica Foster, when she received a mirror and other gifts from W. Staines, Production Controller, watched by her mother, Mrs. Joyce Foster, Section 155, and her grandfather, Wally Worgan, Rainsford Lane Repair Section, right. Right: Widford Foreman G. Root, and Rainsford Lane Repair Section Chargehand Ken Tyler officiated jointly at the wedding presentation to Jean Byford, when she received a candlewick-bedspread and pillow from her friends. Michael Bignell, Jean's bridegroom, was formerly at New Street



Left: A china wedding-gift from his M.I. friends to Martin Pibworth, Sales/Production Monitor, which was presented by J. Brodrick, Commercial Manager. Centre: Cutlery and other wedding gifts from her M.I. friends for Maureen James, Printed Boards, which were presented by R. Gibbs, Group Manager. Right: Before Carol Bontoft, comptometer operator, was married she was presented with pillows by T. Milton, Cost Accountant, on behalf of her M.I. friends



Left: This happy occasion was the presentation of a fitted-bedspread and tumble twist rug to Margaret Franklin by J. Coker, Works Drawing Office Supervisor, before her marriage to Geoffrey Brewster, Billericay. Right: Janice Madgett, typist, and Ian Sankey, instrument mechanic, are congratulated on their forthcoming marriage by B. Morris, Manager, M.I. Hedley Road Service Department, who presented them with steak knives and forks, and egg-cups, on behalf of their friends



Left: Before sales engineer Eric Balmer left the Company, after thirteen years, to enter the teaching profession, T. Mayer, Manager, Broadcasting Division, presented him with a battery-operated clock and cheque from his friends and colleagues. Centre: Wedding bells for Margaret Downey, Printed Boards, so her M.I. friends gave her a table-lamp and cooking utensils which were presented by R. Gibbs, Group Manager. Right: Before his secretary, Mrs. Betty Martin, left the Company, P. R. Keller, Manager, Line Communications Division, Writtle, presented her with a baby-set and herb cabinet from friends at New Street and Writtle



Left and right: Wedding bells for Trevor Gardiner, New Street, and Josie Wicks, Widford, and to mark the occasion two presentations were made. Trevor received a rotary clothes-line from A. Adams, Foreman, Section 20, and Josie a cheque to use towards an electric fire from C. R. Collen, Superintendent, for their new home at Great Totham



Left: One of the first people at Beehive Lane to work on the Myriad, Jim Foster, has now left the Company. Here he examines a paper-weight, one of the gifts presented by Chief Production Engineer C. Chorley on behalf of his many friends [G. Murgatroyd]. Right: Before leaving to get married, Judy Avern, secretary to the M.I. Personnel Officer and to the Sports Club committee, was presented, on behalf of her friends, with saucepans by J. Bliss, Personnel Administration Manager, and with cutlery by W. Walker, left, chairman of the Social and Sports Club



Left: Twenty-one today so Mary Fitzpatrick, Special Products, was given by her M.I. friends a travelling-case and a vanity-case which were presented by J. Cooper, Manager, Special Products. Centre: Leaving Gateshead to enter the nursing profession, Carol Ogle, a popular member of Accounts, received a watch from her colleagues. Sponsored by the Sports and Social Club in a recent thirty-mile Oxfam Walk accompanied by the family dog, she completed the course herself, but the dog had to be carried for the last two miles [J. Wales]. Right: On leaving Aero Test, Basildon, Ken Smith received a brief-case and cigars at a presentation by Chargehand J. Goodyear. Ken has gone to South Africa to take up duties with the Company as Test Supervisor [R. Owers]



Left: Friends in S Group, Widford, and A Group, New Street, subscribed to a rotary clothes-line as a wedding gift for Dick Baldwin, and G. Root, Widford Assembly Foreman, made the presentation on their behalf. Right: Baby clothes, a carry-cot and other gifts were presented to Mrs. Joyce Johnson of 'Lazy Susan', Aero Assembly, Basildon, from her friends by L. Griffin, Foreman, before she left the Company [R. Owers]



Left: Keen dart-player Bill Hunt of Aero Assembly, Basildon, received an appropriate gift when he left the Company recently—a silver dart—presented on behalf of his friends by L. Griffin, Foreman [R. Owers]. Centre: Two weddings in Aero Test at Basildon, and for Charlie Wire, left, a canteen of cutlery and companion set, and for Barry Pearne an electric-clock and towels from their colleagues, presented on their behalf by J. Goodyear, Chargehand [R. Owers]. Right: Off to Marconi South Africa to become Assistant to the Production Manager, Ron Jones of Estimating, and former Assembly Foreman, Basildon, was presented with a coffee-set by D. Simms, Estimating Controller [G. Hoare]



Chelmsford

Sailing

It was dead calm and windless as nine boats set course up-river from Stansgate for the 'Over 40s' race. The destination was Salcote Sailing Club, who were kind enough to keep their bar open to revive the stragglers who had to accept a tow from the rescue launch. The race back was with the tide, and most of the entrants managed to complete it in spite of the continued lack of wind. L. W. Hunt, sailing an Enterprise, won the first race, Tom Gaskell won the second, and Norman Palmer had the best overall position. The jackpot goes to Norman.

Four series of points races have been held this season. The first, The Enterprise series, for which the Knight Cup is presented for the best nine races out of sixteen, was won by Nick Tovey with 11½ points. Norman Beadle was second with 17½, and John Witter was third with 19½.

Left: Marconi Athletic Reserves, who played against Great Baddow at Beehive Lane and lost 2-1. Back row, left to right, Ray Dixon, Colin Britten, Jack De'Ath, Stuart Batsford, Les Ryder, Wayne Hill. Middle row, Colin Dixon, Ray's son. Front row, Peter Parkhurst, Paul Cast, Derek Carver, George Smith, Martin Noonan. Right: A good save by Stuart Batsford, with Colin Britten there ready to assist



The second series, best seven races out of twelve, for Hornets, was won by Geoff White with 10½ points. Richard Houlding was second, with 13½, and Simon Darney third with 15.

The third series, best nine races out of sixteen, for the G.P.14 class, was won by Norman Palmer with 8 points. Second was Ken Beavins, 13 points, and Mrs. Joyce Reeve came third with 37½.

The Handicap class series, best five races out of eight, was won by Susan Tillotson with 12½ points. Jim Chalwin came second with 15 points, and Peter Batey third with 19½.

Charitable archers

Visitors to the scout fete at Terling Place were invited to try their hand at archery by members of the Marconi-English Electric bowmen, to raise money for the scout funds.

A similar invitation was issued at the Dunmow carnival, and the money raised there was donated to cancer research.

Wine guild

As a result of many members being on holiday, the projected quiz and wine competition organized by the E.W.F. had to be indefinitely postponed. As soon as a new date is arranged members will be informed.

To start the autumn activities John Capon, one of our founder-members, demonstrated how sound wines may be blended to produce an improved product, a most interesting exercise, but the numbers attending were somewhat disappointing.





Marconi ladies' hockey team in action against Burnham at Beehive Lane, and Eileen Bamford makes hard work of a tackle with their right wing

Right: Team line-up. Back row, left to right: Rosslyn Gidney; Mary Tucker; Madge Knight; Jenny Woodrow, captain; Dawn Bennett, vice-captain; Eileen Bamford. Front row: Jenny Stone; Helen Johnson; Elizabeth Warren-Wren; Beryl Agar; Jenny Heseltine

Below right: Jenny Woodrow scores the third goal. Marconi's won 8-0

The proposed commercial-wine appreciation evening on Vermouth will not take place as it has not been possible to arrange it, but it is hoped to plan something similar and details of this will have to be circularized individually.

Because of increasing interest in home wine-making, a basic course of instruction will be held at the Maldon Evening Institute. Anyone who is interested is requested to contact the Warden direct.

Ladies' hockey—An eight-nil starter

Setting themselves a high standard to maintain, the ladies' hockey team won the first match of the new season 8-0. This high score, against Burnham, proved that their many hours' practising during August and September had not been wasted.

Although on the attack most of the time, it was half-way through the first half before a goal was scored, the first of six for Madge Knight. The other scorers were Jenny Stone, and the team's new captain Jenny Woodrow.





Brothers Roy and Reg Sleet coming out of the clubhouse to open the batting for Marconi's



The Marconi cricket eleven plus. Standing: Dave Poole, umpire; Roy Sleet; Norman Faulkner; Roger Adams; Denny Clark; Clive Denny; Reg Sleet; Rowley Hawes; Jock Simpson, scorer. Kneeling: 'Yarn' Audsley; Ray Morgan; Bobby Lincoln; and Bill Brown



Left: Opening batsman Roy Sleet deflected this one for a single with no trouble, which is more than can be said for the bowler and his trousers. Right: Some of the Marconi team waiting their turn to bat. Above them are, Marconi wicket-keeper, Jim Dyer, and Rowley Hawes, right, both on the injured list, watching the game with interest

Marconi's v. Hoffmann's

After a delay caused by Hoffmanns turning up without their gear, this local derby got off to a fine start with the Marconi opening pair, brothers Reg and Roy Sleet, taking the score to eighty-five before Roy was run out. Reg stayed in to score eighty-two before being caught, an innings that was a delight to watch. After this, Marconi's progressed steadily until tea when they declared at 173 for seven wickets.

Owing to the late start, Hoffmann's began their

innings later than planned, and consequently a draw or a win for Marconi's seemed inevitable. However, Lawson soon put paid to that idea by thrashing the bowling from the word go. He scored seventy-nine before being bowled, bringing the score right up with the clock, but the light was fading fast, and the scoring rate dropped after Lawson left. In fact, it became so dark that the match had to be abandoned with the Hoffmann total at 161 for five wickets, eight minutes before close of play.

Bowls

On finals day rain threatened all the afternoon but did not break until the last two ends of the the knock-out team competition were being played. This was a disappointment to the two teams, Test Engineering and Stores. The game was strongly contested, but looked like being a victory for the Stores until the twenty-first end, when Test Engineering got two shots to make it a draw. Thus, a twenty-second end was played and once again T.E. got two shots to win the cup in their first year.

The handicap singles final was between Chairman Roy Garwood and Doug Robinson, and the final score showed a good win for the chairman. In the championship singles final Ray Parker played the club captain, Les Gurney, and, although the measure was constantly in use to decide the winning shots, Ray eventually ran out the winner.

Treasurer Ken Collins and Rink Warden John Robinson played Ivor Gill and Arthur Webb in the seeded pairs competition final, and once again Ivor has to be satisfied with a runners-up trophy. Better luck next year, Ivor!

The Annual General Meeting is on 17 November, at the M.A.S.C., Beehive Lane.

Ten-pin bowling

The 67/8 season has started off with quite a bang. In the first match of the season Stan Fish, of Central Division 'A', made a fantastic individual score of 235 pins in reply to a score of 213 pins made by Roly Baggs of 'C' Group Team. For this feat, Stan Fish was presented with a '230 League' badge by Ambassador Bowling. In the past, only

Test Engineering, winners of the Bowls Section knock-out competition. Left to right, Ken Collins, Bob Coffee, Fred Weavers, 'Bud' Abbott



Handicap singles finalists Roy Garwood and Doug Robinson, deciding the 'shot' wood. Roy Garwood won

one of our members has received the Ambassador award for such a score.

Thanks to the hard work of the committee members, the section has considerably increased this season and we have now formed a third division. We are delighted to welcome the team from Witham Microelectronics, entered by our President R. M. Carroll. We hope all our new members have an enjoyable and successful season.

In Division 1, Stores, Central 'B' and Central 'A' top the league tables with maximum points. M.I.M.C. are outright leaders of Division 2, with Spares division and Accounts 'B' both one point behind. In Division 3, Kensal House 'B', and Elettra, are in the lead both with maximum points. Beehive Lane follow only one point behind.

Runners up in the knock-out competition were the Stores. Left to right, Ken Braybrook, Arthur Webb, Howard Ward, Bertie Borley



St. Albans

Visit to Oaklands

Just down the road from M.I. is the Herts Institute of Agriculture, situated in the Oaklands estate. Here is a model farm, with animals, crops, and many kinds of market garden produce. All these are grown by students, by the most modern systems, on a commercial basis.

When the M.I. Horticultural Society were given permission to visit our near neighbours, a considerable crowd assembled outside the Oaklands house. Most of the time was spent being shown round the huge greenhouses, in several of which grew over a thousand cucumber plants. There were spectacular cactus and sub-tropical plants, and colourful coleus cuttings were being watered by an intermittent spray.

The party also visited the tomato houses, with their drip feeding, the carnation houses, and especially the chrysanthemum houses, with their beautiful blooms. Dwarf chrysanthemums were also shown, where black polythene was used to regulate the growth to meet the market. 'A most interesting and worth-while visit', was the general comment.

Dr. H. S. Arms, M.I. Technical Director, Mrs. Arms and Harry Botwright, Chairman M.I. Horticultural Society, admire Alf Puckrin's prize-winning flowering plant at the Autumn Show



Colour in the canteen

Many more people than usual came to the M.I. canteen when the Horticultural Society combined with the Artists of M.I. in an Autumn Show. In the main canteen was a marvellous display of dahlias, chrysanthemums, roses and other flowers. These were judged by Mr. K. Davies. Floral arrangements were judged by Mrs. D. Cattnach, and tasty home-produce was judged by Miss C. M. Robinson. Mr. J. Ogilvie judged the fruit and vegetables.

'The flower exhibits were well up to standard for a works show,' said Mr. Davies, who had not judged at M.I. before, 'in spite of the wind and rain.'

A feature of the show, for the first time this year, was the display of art, organized by T. Palmer, which filled the snack bar. Altogether there were more than eighty exhibits, including oil-paintings, water-colours, pastels, and examples of collage, scraper-board drawings, pencil sketches, and pottery. M.I. Photographic also had a display. D. Turner's paintings, S. Perkins' model galleon, and the M.I. photographic display attracted a crowd all the afternoon.

Yet another feature of the show was a grand display of flowers, grown on the Company's premises, by J. Peek, the M.I. gardener. 'A really nice show' was the comment.

H. Botwright, chairman of the Horticultural Society, welcomed Dr. H. S. Arms, M.I. Technical Director, and Mrs. Arms, who presented the awards. The Social and Sports Club Challenge Shield for the highest aggregate points was won by R. Forward, who also won the Secretary's Cup for chrysanthemums and the Havilland Cup for vegetables. The Rose Bowl and the Jescot Cup for dahlias were awarded to A. Miles.

The Lady Radley Cup for floral art was won by Mrs. S. Rogers, and the Ada Mudd Plaque was gained by Mrs. J. Hooper. Other award winners were H. Botwright (Ailsa Craig Cup for onions), P. Davies (Novices Cup), Glenda Burfield (plaque for children's classes).

The winners were: vegetables; J. Arnold, H. Botwright, R. Forward, A. Miles, S. Walton, J. Young, H. Tomlin, E. A. Roycroft, G. Lloyd, E. Richards and Mrs. E. Richards. Novices; G. Lloyd, P. Davies, J. Akers, Mrs. Finnigan, Mrs. H. Burfield, Mrs. E. Hearn and J. Hooper.

Flowers; A. Miles, H. Botwright, R. Forward, A. Puckrin, J. Smith, Mrs. L. Creasey, R. Titchmarsh, E. A. Roycroft, H. Tomlin, G. Lloyd and Mrs. E. Richards.



Three of the ladies from the M.I. canteen, Mrs. L. Dale, Mrs. E. Hearn and Mrs. A. Fellows, naturally take an interest in the home-produce

Fruit; Mrs. P. Wood, Mrs. E. Richards, R. Forward and G. Lloyd. Home produce; Mrs. H. Botwright, Mrs. P. Wood, Mrs. Willbourn, Mrs. R. Flitton, Mrs. E. Richards and Mrs. Finnigan.

Floral Art; Mrs. L. Fisher, Mrs. R. Flitton, Mrs. Dale, Mrs. S. Rogers, Miss D. King, Mrs. S. Hill, J. Harris and Mrs. Finnigan. Children's class; Glenda Burfield and Julia Titchmarsh.

The show was organized by Mrs. L. Creasey, secretary, W. Broughall, treasurer, with Chairman H. Botwright and his committee.

Football

The season has given M.I. Football Club its worst start for ten years. With the loss of a number of players and the inability to score goals, after commanding most of the game in four of the five matches played, we are not very happy.

The club is, however, signing new players, and we hope gradually to get a blend of talent to help the club out of trouble. The first sign of recovery is in the reserves, who have gained seven out of ten points in Division 1 of the County League.

Our congratulations to Alan Long, now our

Over eighty exhibits were in the Art Show, all of them produced by M.I. people. Many of them were admired for their imagination and skill





'... think of the millions of people who'll have to watch fill-in programmes if you don't weather the second round!'

first-team goal-keeper, on being selected for the Herts county youth trial at St. Albans ground. Alan's mother is a member of the Assembly Department at Fleetville works.

Three players are still showing their loyalty to M.I. Brian Napier and Norman Woods, members of our first team, and Roy Turner, who acts as substitute under the new law, all work in the Assembly Department under Jim Akers, another keen football fan.

On 16 December the club holds its annual Christmas Dinner and Dance in the canteen, when present and past players can get together. Bill Walker and his band will be in attendance and also a group.

G.W.

Climbing with M.I.

After a pleasant week's holiday in North Wales, the writer joined the Longacres Mountaineering Club at their usual camping ground between Capel Curig and Llyn Ogwen in Snowdonia, a place of mountains and spectacular scenery. The others had travelled up from St. Albans on the Friday evening stopping for a meal on the way and meeting some old college friends.

Determined not to be done out of a good weekend by the weather, one group went for a walk on Saturday in the Carneddau, the range of mountains on the opposite side of the A5 from the camp. This range looks very gentle when compared with the far steeper and more rugged appearance of the Glyders and Tryfan behind the camp. The Carneddau are in fact very deceptive and on a much larger scale,

however, the party did get back intact after a good day with little rain.

The rest of the party went to try their skills rock-climbing on an outcrop above Capel Curig. This climb was conquered for the first time by members of the party, and although not recorded in any guide book it is probably of a severe standard. After cooking a meal at camp we retired to the local pub for well-earned refreshment.

Sunday was a sadder tale, the rain fell all day, made climbing very difficult, and striking camp rather a wet business. The rain did clear, of course, immediately we had finished packing, and by the time we had reached the border it was a clear starlit night. Just our luck!

Everyone turned up at their various places of work on the following morning, after having dried out, and were ready to plan the next trip.

Why do we go on such a trip? Think of it. Get up when you like, go to bed when you like, eat when and what you like, and do what you like. There is a challenge in everything you do and a sense of achievement when it is done, and you couldn't get anything more different from the business of the week. Of course some just like mountains, and if the weather is bad it is only a week-end, there are fifty-one others for which to arrange a trip. T.T.

Cricket club

In one of the last matches of the season Richard Laskey again hit a century not-out. Our opponents, Gorehambury Estate, were all out for fifty-nine, and M.I.'s score was 158 for six declared. Richard also took four wickets for fifteen runs, and his batting partner, Len Windmill, took six for twenty runs.

Now the season has finished we have put away the gear. It was reasonable as we played eighteen games, won eleven, lost six and drew one. We were unfortunate to have had eleven games cancelled through rain, but we managed to reach the semi-finals of the JAL Trophy, which we won two seasons ago.

We are running the Valentine's dance next year, and hope all our friends will make it a success. We would like to wish the football club every success this coming season.

R.S.B.

Outside back cover

PICTURE OF THE MONTH

The Old Watermill House at Mathyns, near Witham, locally known as 'Blue Mills'. This picture of the month was taken recently during his lunch hour by Norman James who works in Microelectronics Division, Witham

Christmas events at the M.A.S.C.'s



CHELMSFORD

23 DECEMBER

Personal appearance of

CYRIL STAPLETON

and his famous broadcasting band

8 to 9.30 p.m. and 10.30 to midnight

The dynamic comedy entertainers **Ted Durante and Hilda** will entertain between 9.30 and 10.15. Tickets are 12/6 for members and 13/6 for guests.

There is no need to drive your car to the club for this date, the M.A.S.C. has organized coaches to pick up you and your guests and take you home. Seats must be booked. See notices for stopping-places.

SUNDAY NIGHT, 31 DECEMBER 8 p.m. till 1 a.m.

New Year's Eve Dance

Dancing to the Kenny Few band

Coaches will be available for picking up people. Book your seats early.

M.A.S.C. Christmas Draw

Tickets 1/- available from all club agents in the Works
First-prize a hamper of Christmas fare valued at £25
Over 200 prizes in all

Children's Christmas appeal

There is a Christmas tree in the foyer at the M.A.S.C. Clubhouse, Beehive Lane.

Please bring or send toys or money for needy children in the Chelmsford area.

Last year people gave generously but we need even more this year.

These toys are distributed for the M.A.S.C. by Club officials, E.C.C. Welfare staff and by the Salvation Army.

Wines and Spirits at off-sale prices

Wines and spirits will be issued to members of the M.A.S.C. at Christmas off-sale prices on 11 December. Have you got your list? There are special price reductions. All orders must be in by Friday, 1 December.

Club opening hours

25 DECEMBER	Closed
26 DECEMBER	Open 12 noon to 2 p.m. Closed in the evening
27 DECEMBER	Open 11.30 a.m. to 2 p.m. 6 to 10.30 p.m.

BASILDON MARCONI CLUB

1 DECEMBER

Christmas Dance at Lorcarno, Basildon

Ron Saint and his Orchestra 8 p.m. Tickets 6/-

Entertainments Section's

NEW YEAR'S EVE DANCE

Dancing to the TW5 Group

8 p.m. to 12.15 a.m. in the canteen

M.I.S.S.C. ST. ALBANS

25 NOVEMBER Children's Party

2 DECEMBER Old-Time Dance

16 DECEMBER Football Club Dinner and Dance

30 DECEMBER Table Tennis Club's Modern dance

6 JANUARY Old-Time Dance

All these events will be held in the canteen

