

Echo

The internal newspaper of Marconi Radar Systems and its people

FINAL STAGE REACHED IN SEAWOLF TRIALS

An installation team from Marconi Radar Systems headed by Dave Bryan has been working in H.M.S. Penelope at Devonport Dockyard installing the radars for the guided weapon Seawolf, GWS 25.

Penelope has had a twenty-eight week refit for the sea trials of Seawolf, and sea trials are the last stage in the evaluation of this new defence system for ships of the Royal Navy.

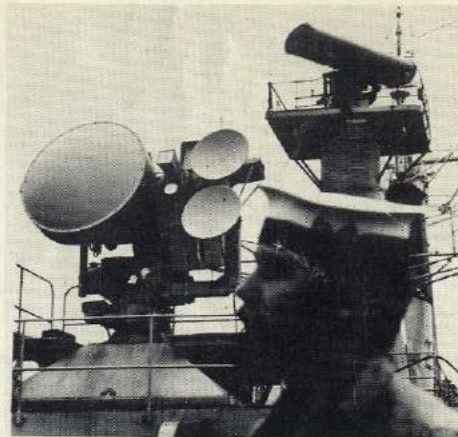
In land based trials, Seawolf has already proved its capability against all types of target, particularly small targets travelling at more than Mach 2.0. It is required to meet one of the most exacting specifications laid down for naval anti-missile / anti-aircraft defence.

Responsibility for radars

The missile is fast, but cheap, small and light-weight, with no on-board testing. Thus it is simple with only a minimum of electronics. The ship's installation contains the necessary sophistication, and because of the concentration of electronics Marconi Radar Systems Limited is the overall contractor with special responsibility for the radars. BAC are responsible for the missile and Vickers the launcher.

During the refit our team installed the latest models of the tracker and surveillance radars and all the associated electronics. The project was completed in May, and H.M.S. Penelope was rededicated for sea trials.

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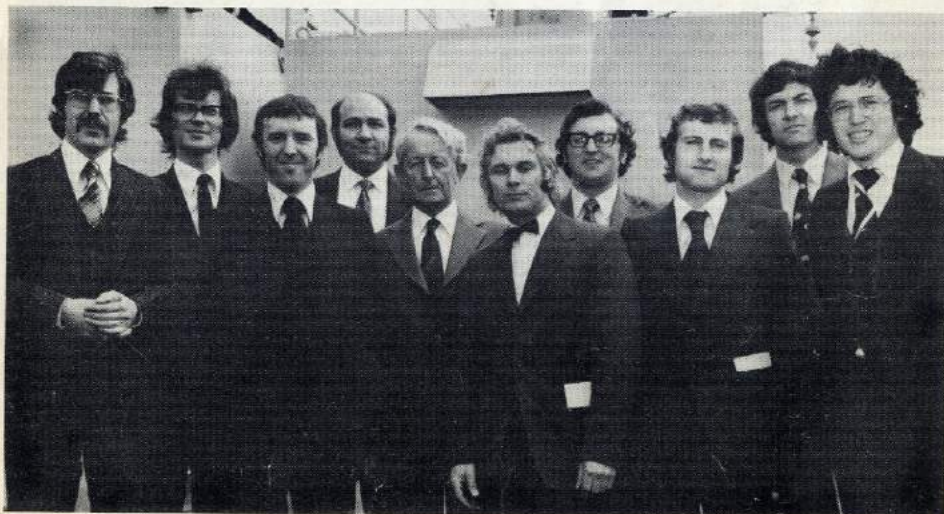
Above, HMS Penelope's Marconi radar tracker and surveillance aerials for GWS 25.

Below, HMS Penelope leaving Devonport for exercises.



Below: Here, on board H.M.S. Penelope, are the resident Marconi Radar Systems, Field Services trials team. From left to right, Trevor Hayden, Alistair Thomas, Dave Breen (Ship Site Manager), Brian Keeble, Jimmy Wheeler-James, Roger Patrick, John Wardle, Brian Marjoram and extreme right, Phil Hunt. Second from right is Terry Deane, Trials Co-ordinator visiting from Baddow.

Below: In front of the missile launcher, in 'Penelope' are Vice-Admiral Philip Watson, Director General, Weapons (Navy), left, John Sutherland, Managing Director, MRSL, centre, and 'Penelope's' captain, Commander Ian Lachlan.



Our men in Saudi

SAGEU, the Company's unit for the Saudi Arabian Ground Environment contract, has completed the handover of the last 40T2 Radar.

Seen here, left, with the Arab site staff are some of the Marconi Radar personnel who took part in the handover trials. The picture includes Don Howe, Malcolm Favell, Jim Jones, Arthur Lee, Frank Watkin, Don Cooper, Derek Slaney, Tom Huxley, Mark Rutherford, Dick Cruse, Ted Friday, Fred Wilde, Peter Dickson, Alan Lafferty, Brindley Morgan, Jim Scott, all of Field Services; John Whellens, Dave Brayshaw, both Engineering Department, Leicester; Cyril Froggatt, Chris Devine, both Systems Engrg, Chelmsford.

CMM for Scottish ATC

Marconi Radar Systems at Leicester are to supply a Marconi CMM (Computerized Modular Monitoring) system to the Civil Aviation Authority for the new Scottish ATC Centre at Atlantic House, Prestwick.

The Authority's decision to adopt Marconi CMM follows their order placed with the Company in 1973 for a system to control and monitor the en-route radar at Raith Hill from the CAA control centre at Gales. This application allowed the equipment at Raith Hill to be operated unmanned.

The new order is for a computer-based control and monitoring system (CCMS) which will be used to gather system status information from the CAA equipment at Atlantic House and from three en-route radar stations at Stornoway, Lowther and Raith Hill. The same network will be used to control CAA equipment remotely at the out-stations.

Marconi CMM is a versatile control and monitoring system which can be built up from a range of hardware units and software packages to meet the control, management and maintenance requirements of almost any group of equipments.

The Scottish Air Traffic Control Centre is already being equipped with a major display and data handling system designed and produced by Marconi Radar Systems based on the Locus 16 processor.



Leicester's BEM

Arthur Preston, who retired from Leicester's Blackbird Road factory in February and who was awarded the British Empire Medal in the New Year's Honours, was recently presented with his medal by H.M.

Lord-Lieutenant of Leicestershire, Colonel R. A. St. G. Martin.

The Investiture took place at Burley Hall, Oakham, and was attended by Mr. W O. P. Jones, Works Manager at Blackbird Road, and Mrs. Jones.

Mr. Preston had previously received a letter from Buckingham Palace, signed by the Queen, which read: 'I greatly regret that I am unable to give you personally the award which you have so well earned. I now send you my congratulations and my best wishes for your future happiness'

Mr. Preston, who was Foreman of electrical inspection when he retired after 29 years' service, was concerned for most of his career with Ministry of Defence work, notably radar and gun control systems for the Services. During the last war he served with the Royal Navy.

Left: The Lord Lieutenant of Leicestershire with Arthur Preston, B.E.M.



(Continued from page 1)

Speaking at the ceremony her captain, Commander Ian Lachlan, said he had great faith in the standard of work at Devonport. 'The refit of Penelope was up to that standard, and the spirit on board was as impressive as the installation work carried out by the Dockyard. I am sure the contractors would agree with me.'

Expressing his thanks to the Dockyard, Cdr. Lachlan said the crew members enjoyed working with the Dockyard employees engaged on the refit. 'Everything went well, and the extra effort put in by everyone helped considerably to meet our completion date.'

'It was absolutely imperative that we met this date as our trials programme was geared to making the ship sound as a ship at this stage. The refit was done during winter months when conditions have been the worst. Taking this factor alone into consideration, it has been quite an achievement.'

Right: To mark the occasion of Penelope's rededication for Sea-wolf sea trials and in token of our close association with the project as overall systems contractor John Sutherland, Managing Director, Marconi Radar Systems, presented Penelope with a statuette — 'Penelope's Challenge' — commissioned from Nancy Coulson, wife of the Managing Director E.E.V., here being received by Cdr Ian Lachlan.



New Computer Purchasing Link

A new computer-based purchasing suite is now being developed for Purchasing Department. This will be connected to the new 370 computer at Baddow, and ten video terminals are being installed in C building at Writtle Road. Here, right, is the first of the new terminals, now being used for training, and here, also, are some of the ladies who will use the system: left to right, Mo Clamp, Rosemary Chesterton, Audrey Price, Carol Hynus, Christine McAllister, Susan Grimwade, Anne Anthony, Elsa Cole, Janet Dimond, sitting, front, Sheila Bissett, Supervisor, clerical typing.

Presenting IVR in Prague

IVR—the instrument which measures runway visual range

A team from Marconi Radar Systems, Leicester, recently paid a flying visit to Prague to give a presentation of IVR-Mk.2 to civil aviation and meteorological delegates from Poland, Hungary, Yugoslavia and Czechoslovakia. The Marconi IVR (Instrumented Visual Range) system is operational in many parts of the wor

The MRSL party, consisting of Messrs. Eric Heys (Sales Manager), Ken Sims (Sales Department), Ian Stage (IVR Engineering Project Leader) and Stuart Gibbins (Technical Department), was accompanied by Mr. Reg Hosking, Head of the Civil Aviation Authority (OSO 2). The journey to Prague was made in the GEC company jet, and on arrival the team was joined by Mr. H. Lavington-Evans (Vienna office) and Herr E. Meitner, the Company's Eastern European representative for IVR systems. In the evening, Mr. and Mrs. Richard Escripp of the British Embassy gave the proceedings a good start by holding a reception to welcome Marconi's guests.

System in operation

The presentation on the following day included a visit to Prague Airport to see the Marconi IVR-2 system in operation. There were Technical lectures and discussions, and the day's proceedings concluded with a dinner in the evening attended by the Czech Deputy Minister of Transport.

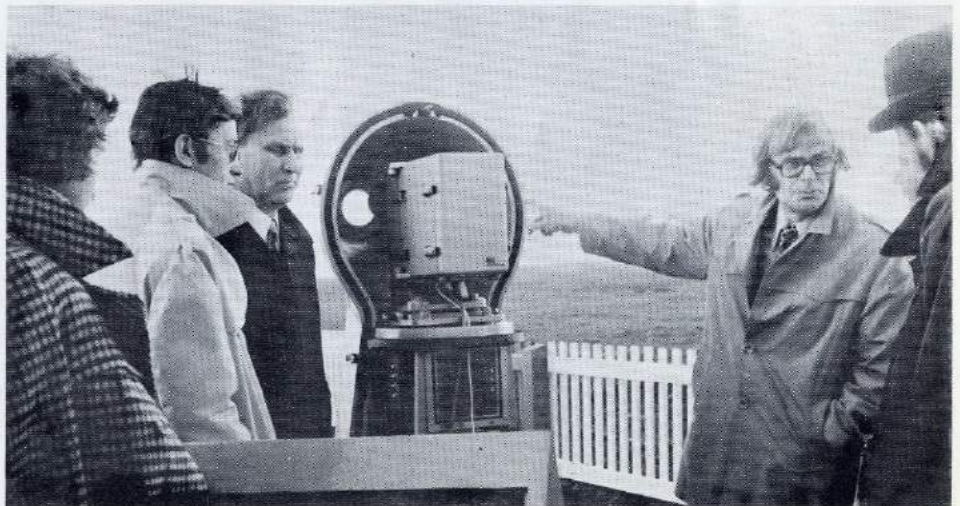
The smooth-running of the visit was largely due to the Czech organisations *Made In (Publicity)* and *CEDOK* who ably handled all the local administrative arrangements. Dr. Cernava and his staff of the Prague Hydromet Institute made the visit possible and kindly put their IVR-2 system at the team's disposal for demonstration.

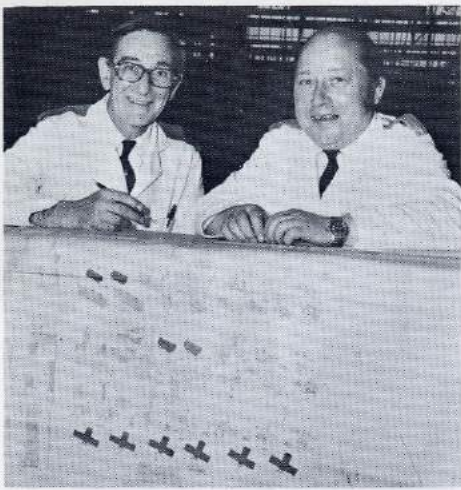


By jet to Prague

Below: At Prague airport with the GEC company jet are, from the left, R. Hosking, CAA, Capt. M. Whatley, pilot, and S. C. Gibbins and K. R. Sims of MRSL. The Marconi IVR system is in operation at Prague.

Bottom: Ian Stage, pointing, IVR Engineering Project Leader, explains the workings of the transmissometer to Hungarian delegates at Prague airport. Immediately to the left of the instrument is Herr E. Meitner, the Company's Eastern European Representative for IVR Systems.





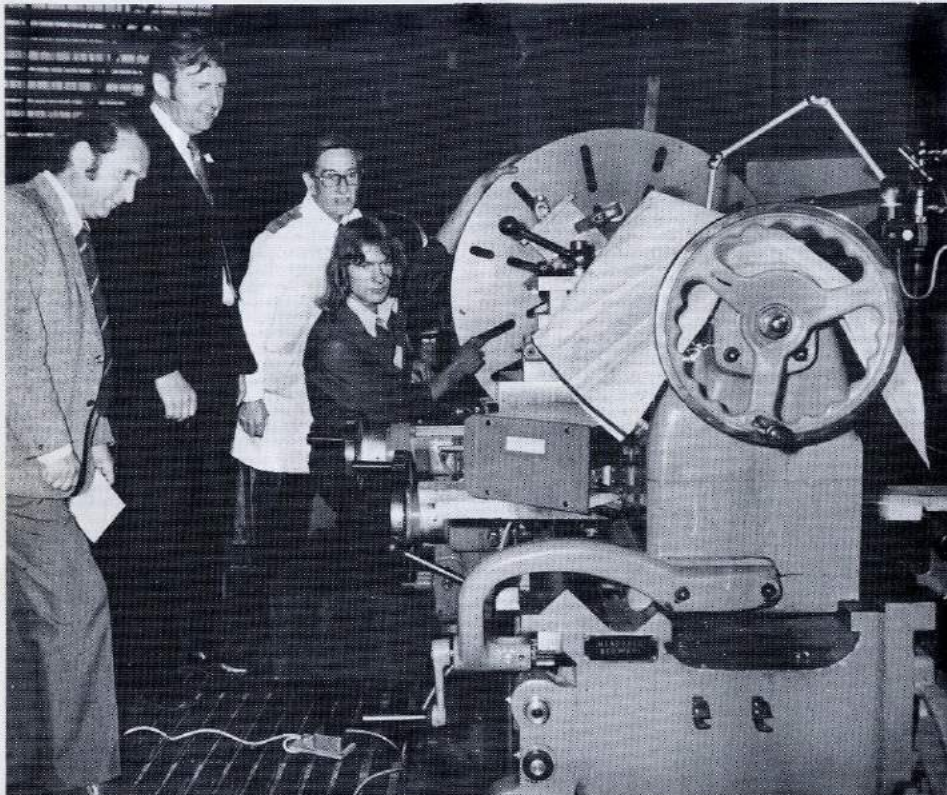
New machines in production

The new and large machining area in A building is now in operation. Fifty-two machines were brought up from G block by ingenious methods without stopping production; and new machines have also been installed. The job was done by Plant Engineers and Maintenance in two and a half weeks—well ahead of schedule.

Top left: Don Whitaker, Foreman, Machine Shop, and Hubert Hawkes, Chargehand, watch the formation of their new machining area in A building as machines are moved in.

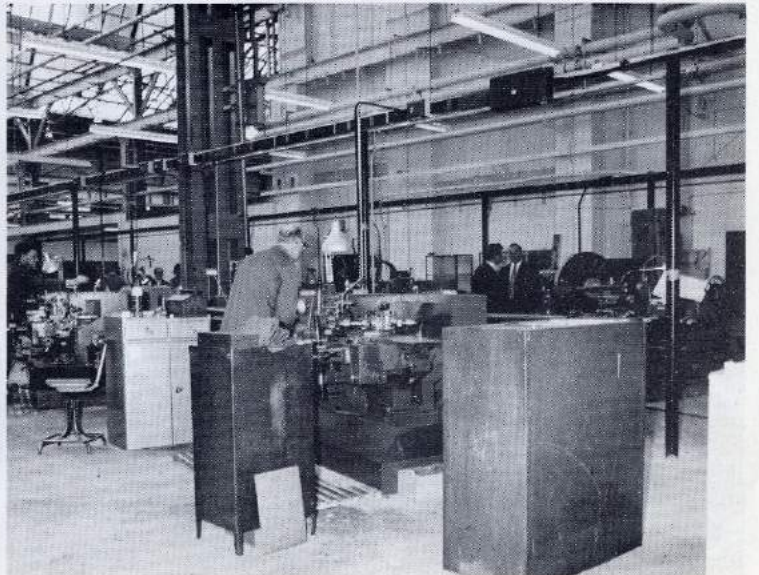
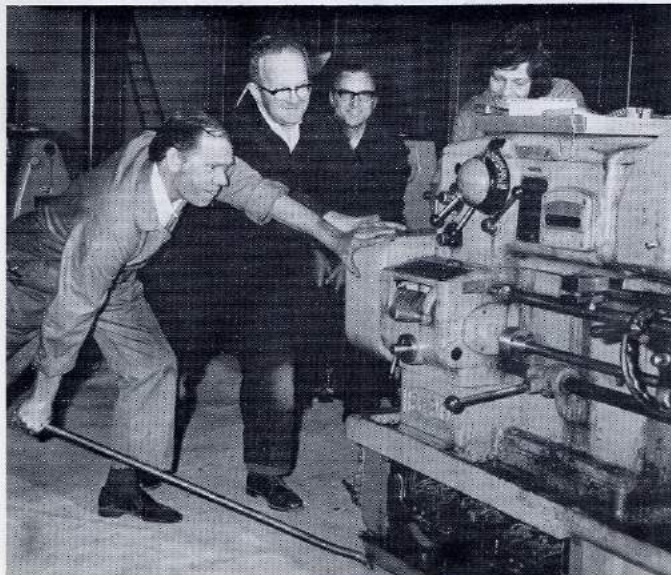
Top centre: The machines are wired up with an overhead system by Bill Creswell, Electrician, who, like other Maintenance people, worked weekends as well on this job.

Top right: Studying the plan. Left to right: John Hawley, Don Ketley of Plant Engineers, responsible for the layout, Percy Wyatt, Foreman, Maintenance, and Peter Clegg, Chargehand, Electrical/Mechanical Maintenance.



Above: A brand new 30 inch Dean, Smith and Grace centre lathe: the largest lathe we have. Left to right: Peter Bates and Jim Pelling, Production Engineers, Don Whitaker, and Mick Partridge, Operator. Below left: Bringing in the machines from G building. Left to right: Harry Kimber, John Hawley, 'Twiggy' Wood and Reg Dodd.

Below: Two new Herbert Monoslide turret lathes for batch production which have also been installed by Maintenance.



BIRTHDAY HONOUR FOR GATESHEAD

George R. McCullough, known to everyone at Gateshead as Dick McCullough, Manufacturing Manager, was made a Member of the British Empire in the Queen's birthday honours.

Dick McCullough joined the Company at Gateshead as a Factory Superintendent in 1963; and was appointed to his present position in Marconi Radar Systems two and a half years ago.

He started work as an apprentice to the Lambton, Hetton and Joicey Colliery in 1929, and gained extensive experience in manufacture in the engineering industry working with firms such as the Birtley Company, later the Caterpillar Tractor Company.

Dick is a keen gardener; he is married and has a daughter.

PRODUCTION FLOW

The flow-soldering machine at Writtle Road Works which takes the production of printed circuit boards from Assembly in G building reduces the time to solder all the connections on a board to a few minutes.

With it, below, are, left to right: Jim Campbell, the operator, and Geoff Phillips and Ron Bright of Production Engineering. Geoff is an ex-apprentice, a prizewinner last year, who started his apprenticeship in 1970. Ron Bright completed forty years with Marconi this year and was presented with a gold watch for long service. He is still going strong, and has *not* retired as was reported in *Topic*.

He was a Territorial, and retired from the Essex Yeomanry last year.

Good wishes

Ron started at New Street under Charlie Britton, was at Widford many years, and joined Mr. Rand when MRSL moved to Writtle Road. We wish him good health and many more successful years in Production Engineering.



We are concerned at the falling value of the pound and unabated inflation

By
John Sutherland,
Managing Director

We are all of us naturally concerned at the national economic situation—rising unemployment, the falling value of the pound, and above all, unabated inflation. Against this background we in Marconi Radar are fortunate. We have a full order book and are continuing to invest heavily for the future both in new plant and facilities and in new research and development. Although we have suffered to some extent from the effects of the British Government defence review, there remains a good demand for our systems and products in the export market. But—and a big but—we must complete our current order book within the cost and time that we estimated, or we shall undoubtedly end up in financial difficulty. And, just as important, to remain firmly in world markets for the future we must be competitive with other industrial countries whose rates of inflation are now substantially less than ours.

Productivity the key

This calls for more effective work from all of us—cutting out wasted time and effort, economising in whatever way is most appropriate, be it telephones, power, postage, transportation, fuel, raw materials, and getting more tempo and pace into our work; in a word, *productivity*. If we, and other exporters

like us, could achieve an improvement of between five and ten per cent in overall productivity, in terms of the speed and cost of design and manufacture, and the consumption of resources, the country would be on its feet very quickly. It really is up to every one of us genuinely in our own interest to get on with it and see how we and those around us can improve the way we do our jobs. I believe very strongly, and I am sure that you must agree with me, that whatever the job, there is more satisfaction to be had by doing it better.

The way ahead

The months ahead are undoubtedly going to be far from easy; no one knows how effective the Government's anti-inflation measures will turn out to be. The effects of actions beyond our control are quite unpredictable. What I do know is that we have plenty of work to be done, and that if everybody 'gets stuck into' the jobs in hand, with energy and goodwill, and my Managers, in whom I have great faith, exercise an extra measure of leadership and enthusiasm, we shall emerge from the economic crisis both technically and financially strong. This is a progressive and exciting industry; we can be proud that Marconi was the first in 1897 and still leads the world.

Below; Presentation at Gateshead:

A presentation was made to Dick McCullough after his Queen's Birthday Honours award. Mr. Sutherland presented him with a watch on behalf of the Company, and a tankard on behalf of the Foremen and Supervisors' Association. Here is Dick McCullough, Manufacturing

Manager, Gateshead, centre, with John Sutherland, Managing Director, MRSL, left, and right, Bill Henderson, Works Manager, Gateshead.

Dick McCullough has been concerned with the building of aerials, turning gear and other hardware for many important contracts.



Leicester's Sapphire Success

Sapphire, the new name for the lightweight gunfire control system which combines Leicester's ST802 tracking radar with Sperry's DWC100 gun predictor, proved to be an outstanding success in its first live firing trials at HMS Cambridge, the Royal Navy's gunnery range at Wembury, near Plymouth.

The system had been taken to HMS Cambridge and integrated with the Navy's 4.5 inch Mark 8 gun mounting. After system pre-firing trials had been carried out to the satisfaction of the Ministry of Defence trials officer, firing trials began in May against both air and surface targets.

Success was immediate. All the operable

rounds fired in the anti-aircraft mode with proximity-fused ammunition produced target triggered bursts (TTB), proving that the shells were all accurately placed. Firings against a surface target gave results which also proved the accuracy of the system against hostile surface vessels.

As a follow-up to this, the Marconi and Sperry companies decided to demonstrate Sapphire to members of the press for the first time. The assistance and co-operation of the Royal Navy was sought and willingly granted.

Accordingly, on the first day of July, a dozen prominent members of the technical press were flown to HMS Cambridge, where

they were able to inspect the equipment, view trials recordings and see an air target being automatically tracked. This opportunity to get first-hand experience of a new all-U.K. fire control system was warmly welcomed by the press and we have had first-class coverage in the leading technical publications.

The next day was reserved for invited guests with a special interest in the project, such as shipbuilders, MOD staff and high-ranking officials, when a similar programme was followed with equally gratifying results.

Perhaps Sapphire is best summed up in the words of Commander Archie Orr, of Leicester, who acted throughout as Systems Trials Co-ordinator, when he told the members of the press: 'This is the most exciting equipment and these the most rewarding trials I have ever been involved in since I first started in radar with the Royal Navy in 1941.'



The Marconi ST802 radar director on the Royal Navy's gunnery range at Wembury, near Plymouth, during live firing trials at air and surface targets.

Invited to a hanging

The newly-formed Art Society at Leicester, which draws its membership from both Marconi Radar Systems and GEC-Elliott Process Automation, recently launched its first exhibition of work in the New Parks canteen shared by the two companies.

At lunch time, every day for a week, a wealth of amateur talent was on show, mostly of oil paintings but including a few pencil and pastel drawings. The display aroused a great deal of interest and comment among the employees who daily milled around it in large numbers, the general opinion being that the standard of achievement was remarkably high. One of the guest visitors was Mr. Ronald Moore, art critic of the 'Leicester Mercury', who produced an encouraging write-up in the local paper.

The venture was organized by E. C. 'Johnny' Jones, a contract officer at Marconi Radar, ably assisted by Cyril Phillimore, section leader, drawing office. As a result of the exhibition, the Society's original membership of 26 has already grown to 40, with a possible figure of 50 in sight.

It is hoped to organize a September to April programme of monthly gatherings to discuss art, arrange visits to galleries and exhibitions, and hold painting or drawing sessions at places of beauty or interest.



before the judges with their teachers and not with each other. The dances they performed were the waltz, foxtrot, quickstep and tango.

'Five years ago neither of us knew anything about dancing,' says Maurice, 'but when we took it up we found we had a flair for it and we seemed to go from strength to strength. Now it's a regular hobby and we go dancing twice a week.'

Having won the coveted statuette, they intend to concentrate on their favourite field of dancing in future—the Latin American.

Snap! Maurice and Gladys Cooper with their ballroom dancing awards.

Dancing award for Maurice

You could say that Maurice Cooper, a production control clerk at our Blackbird Road factory in Leicester, didn't know his waltz from his rumba until he first took ballroom dancing lessons five years ago.

Now both he and his wife Gladys have just been awarded their third gold bar, a top international award which brings with it a statuette, having already won their bronze, silver and gold medals—the last with first and second bars—at the Regent School of Dancing in Leicester.

Although Maurice and Gladys won their awards on the same occasion, they danced

Food for the mind . . .
While some studied the works of art on display at New Parks, others (in the background) were devoting their attention to the delights of the canteen menu.



Writtle Road Power Project

A new power-house is being built at Writtle Road to ensure that work can continue throughout the whole factory should electricity supplies be cut during the coming winter.

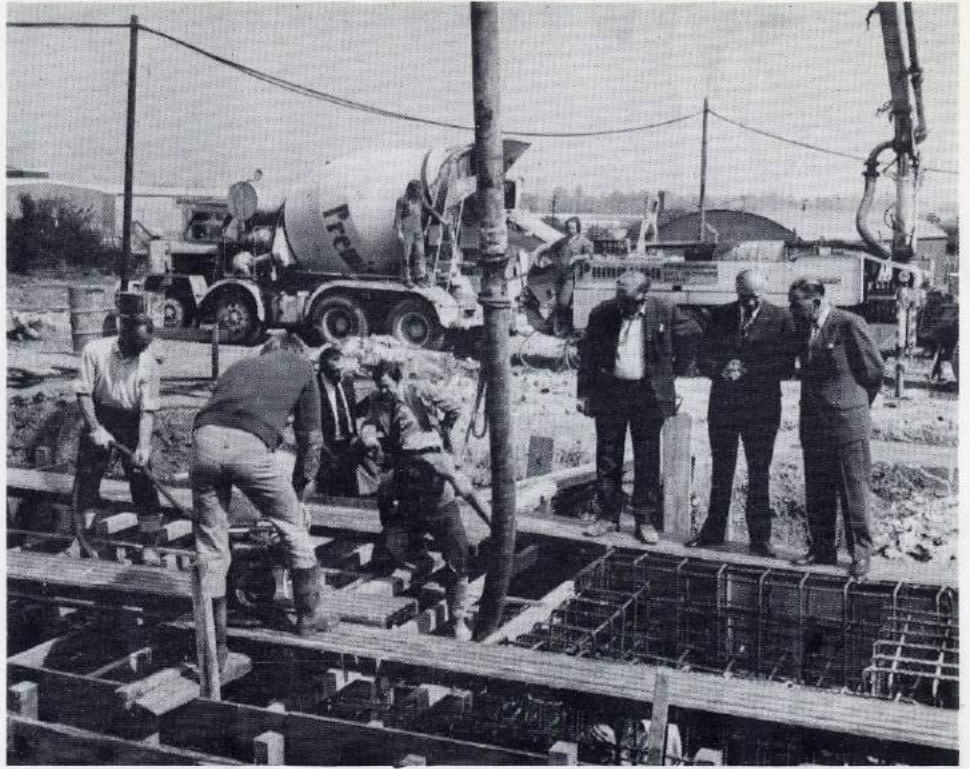
Last year departments had to take turns in the use of emergency power with the result that work schedules became complicated.

To guard against similar troubles and to maintain full production in an emergency the Company has bought a diesel alternator which will supply 1,500 KVA for the whole Writtle Road plant.

This generator is coming from the Eastern Gas Works in Navigation Road, and an engine-bed and a power-house are now being built for it behind A building.

Cedric Dancer, Site Liaison Officer of Establishment Manager's Dept., and Eddie Miller of Plant Engineer's, the project co-ordinator, who have got this job under their wing, pointed out some of the necessities. To start with, a generator of this capacity is going to take some holding down when it gets going: it needs sixteen bolts one and a half inches thick and three feet six inches long embedded in a solid block of concrete seven feet deep, twelve feet wide, and twenty-five feet long. Load after load of ready-mix concrete was poured into the foundations—over ninety cubic yards, at 1.8 tons a cubic yard, all compacted with a vibrator.

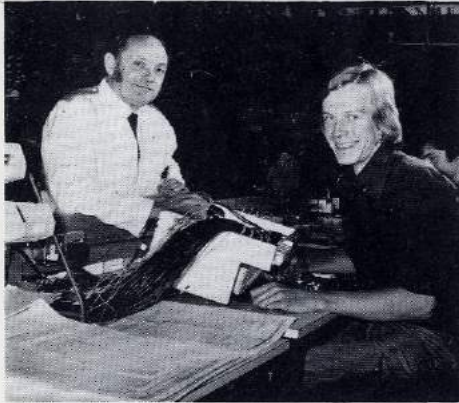
Obviously, production-wise, we are going to be able to honour our contracts this winter.



Concrete being poured into the foundations for the new power plant. The transfer pump, right background, supplies the liquid mixture from the carrier for pouring, and the vibrator operator, left foreground, extracts the air from it as it settles. On the right are, left to right: Reg Lappage, Contractor's Foreman, Eddie Miller and Cedric Dancer



The winner of the MASC's thirteenth car draw, Arthur Paxton, right, was presented with a cheque for £1,200—a record amount—by John Sutherland, Managing Director. Left, Janet Smith, club agent, and Bryon Brewer, Club Chairman.



Above: Colin Saltmarsh, right, a prize-winning apprentice, and Tony Grimwood, his Apprentice Module Training Instructor.

Apprentice wins award

Colin Saltmarsh, an apprentice in Wiring Assembly, Writtle Road, has come third in the final tests of the EITB's Competition, Craftex 75.

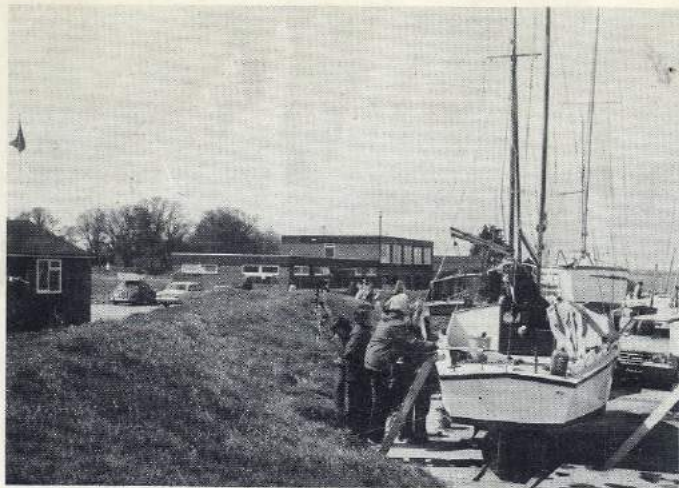
Colin, now in his third year as an apprentice, went to Coventry Training College for the presentation of the Engineering Industry Training Board's certificate and cheque and was accompanied by Arthur Alchin who represented the Training Department.

There were thirty candidates in this Craftex competition. The first test covered fourteen and a half hours' work, and the second test five and a half hours. Working from drawings, Colin made a chassis, wired it up and tested his circuits.

Tracing history

Mrs. Eileen Stern first joined Marconi fifty years ago. She left to bring up a family, re-joined, for twenty years, and has now retired with a total of thirty years' service. She worked in tracing sections at New Street and Writtle and joined TID, Central Division, which became TID MRSL. Below: Ken Stoker, Manager, presented her with a clock on behalf of her colleagues.

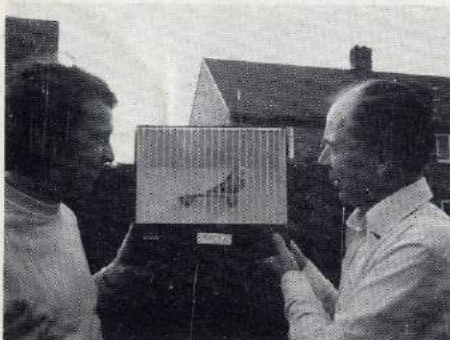




New clubhouse

Left: *The Sailing Section's new clubhouse at Stansgate with the flag still flying on the old clubhouse, left. On the hard is one of the members and his cruiser. Photo by Gerry Bamford, TID, Bad-dow.*

Right: *On the hard below the clubhouse preparing for racing on the Blackwater.*



Blackbird Road win cricket

Smiles all round at Leicester after the annual cricket match between the managements of New Parks and Blackbird Road which this year was won by the Blackbird Road team by 144 runs to 98. On the left, works manager Owen Jones prepares the bubbly, while winning team captain Ron Jones, centre, Production Control Manager, shakes hands with opposing captain Ivan Richardson, Contracts Manager.



In the final itself, the MRSL Blackbird Road Inspection Team, after starting slowly and losing the first two legs, pulled themselves together and eventually ran out winners, beating F.E.S.D. (GEC-Elliott) by 3-2.

In the singles event, Alan Forman played consistently to win the individual trophy, beating Neil Tipton 2-1 in the final. The

trophies, together with bottles of sherry for the losing semi-finalists Ian Yarwood and Martin Fretter, were presented at the end of an enjoyable evening by Stan Heath, Manufacturing Manager of MRSL Blackbird Road.

Fancy a Budgie ?

Two people in the Accounts Department at MRSL, Gateshead, with a common interest are Jim Storey and Ken Parker. Both of them breed budgerigars as a hobby, both breed for exhibition, too, and both appear in the picture above.

Jim first became interested in breeding budgerigars in 1967 and confesses he can't remember what attracted him to them, but suggests that it was possibly because they were less trouble and cheaper to look after than the other 'birds'.

Ken's interest stemmed from a lifelong interest in wildlife, particularly birds; and the decision to commence breeding budgerigars came in 1970 after several visits to Jim's aviary.

Both Jim and Ken are active members of the Sunderland and District Budgerigar Society for which Jim is Social Secretary and like Ken, is also on the publicity committee.

In past years, Jim has arranged for a large cage of different coloured budgerigars to be on display at the MRSL, Gateshead, annual flower and vegetable show, as an added attraction.

Both derive a great deal of pleasure from their hobby and meet and make friends with many other fanciers at the shows.

Skittles success

MRSL/GEC-Elliott Automation people in Leicester have been contesting the very first annual, departmental, long-alley skittles knock-out competitions at two local hostleries over the past four months.

When the finals night of the team and individual events arrived recently, over 100 spectators and contestants turned up at the Birstall Social Club to witness the final stages. The team event had started way back in January and, playing two matches a week, the 27 teams who entered have been slowly whittled down to the two for the 'big night'

MASC win

The MASC Saturday XI who played Old Cautelians at Beehive Lane: left to right, Alan White, Jeff Harrington (Captain), Bryn Morgan, Peter Smolen, Dave Frew, Terry Arter, George Ottley, Graham Elkington, Gerry Wignall, Andy Wignall, Micky Parkhurst.

The MASC batted first and made 167 for 9. Jeff Harrington MRSL 31. Bryn Morgan carried his bat for 25. The Old Cautelians were all out for 107.



Skittles team

The winning team, Blackbird Road Inspection. Left to right, back row: Alan Pease, Jim Williams, Alan Forman, Scott MacDonald, Ernie Gibbins. Front row: Robin Clements, Norman Pearson (Captain), Bob Alan.

