

CHELMSFORD

# NEWS AND VIEWS

**Marconi**  
Radar Systems

NOVEMBER 1983

ISSUE No. 7

## HALF YEAR FINANCIAL RESULTS

ORDERS RECEIVED this year so far are £33M giving an order book at the half year of £224M.

SALES so far this year are £34M of which over £14M were for export.

Whilst Sales were in line with our targets there are a number of ORDER prospects which have yet to materialise due to delays outside our immediate control, but expectations still remain high that better news will be heard before the end of the Financial Year on both the export and home fronts.

C. R. CHALLIS

# NEW FRIGATE TO HAVE LIGHTWEIGHT SEAWOLF

ADVANCED details have at last been released for the new Type 23 frigates for the Royal Navy. The design has been on the drawing board for some considerable time during which time many changes have been incorporated, some, of course, resulting from the war service experience gained (at some cost) during the Falklands conflict.

Although the Type 23 was first envisaged as a 'simple' low cost warship, time and events have caused the design to be changed to a much larger and more costly vessel, aimed at being both complementary to and the successor to the successful Type 22 Frigate.

The required capabilities of the Type 23 are expected to be as follows; detection and destruction of submarines, surface attack with guided missiles and guns, shore bombardment and amphibious support, point defence against aircraft, missile and torpedo attack, and also force co-ordination and command.

The Controller of the navy, Sir Lindsay Bryson, has stated that he expects the first order, for eight ships, to be placed in the coming year. The projected vessels will be 133 metres (436 ft) long. The armament is expected to include a main 4.5 inch gun, the Seawolf vertical launch silo, two quadruple surface-to-surface missile launchers, two 30mm single gun mountings, four fixed torpedo tubes and four chaff decoy launchers.

The sensors include the main surveillance radar, two Seawolf tracking radars, active hull mounted sonar and towed array sonar. Also shown on the model of the projected ship (exhibited at the Royal Naval Exhibition,

Portsmouth) are two 'Scot' communication antennas, manufactured by our sister company Marconi Space and Defence Systems Limited.

### Hull and construction

The hull and superstructure of the Type 23 is to be of all steel construction, using standardised steel sections to simplify design and construction. For probably the first time, commercial sections will be used, rather than the special Admiralty types normally used in HM ships. The hull and freeboard have been designed for minimum roll, a dry weather deck and also propulsive economy.

### Vertical launch Seawolf

Development of this new system has already commenced, with missile firing well under way. Designed to give a speedy deployment of the missile, without the use of aimed missile launchers, the system also does away with the manual loading system. The new system will be a lighter and more advanced variant of the existing Seawolf system, used with great effect in the Falklands campaign.

Marconi lightweight Seawolf radar is at present undergoing trials at our test sites on Bushy Hill. An exhibition version of the

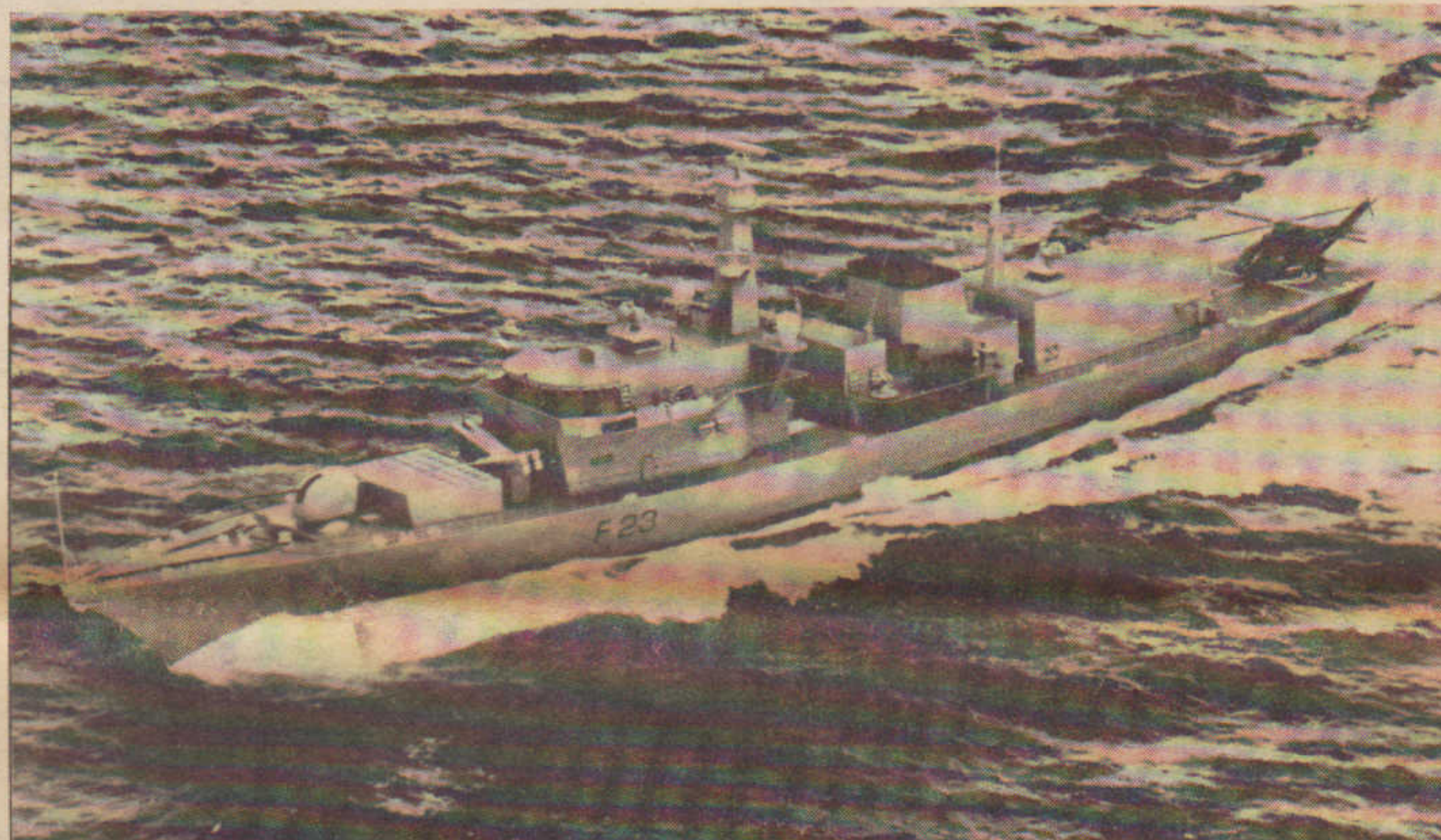
tracker was shown at RNEE in September.

### Equipment

Some of the ship's equipment has already been selected, the remainder to be decided by competitive tender. The gun (shown on the model) is the Vickers 4.5 Mk 8, as fitted to the Type 22 class. The servo controls for this weapon are provided by our factories at Leicester. It is expected that other equipment from the Marconi companies will be part of the ship's fit.

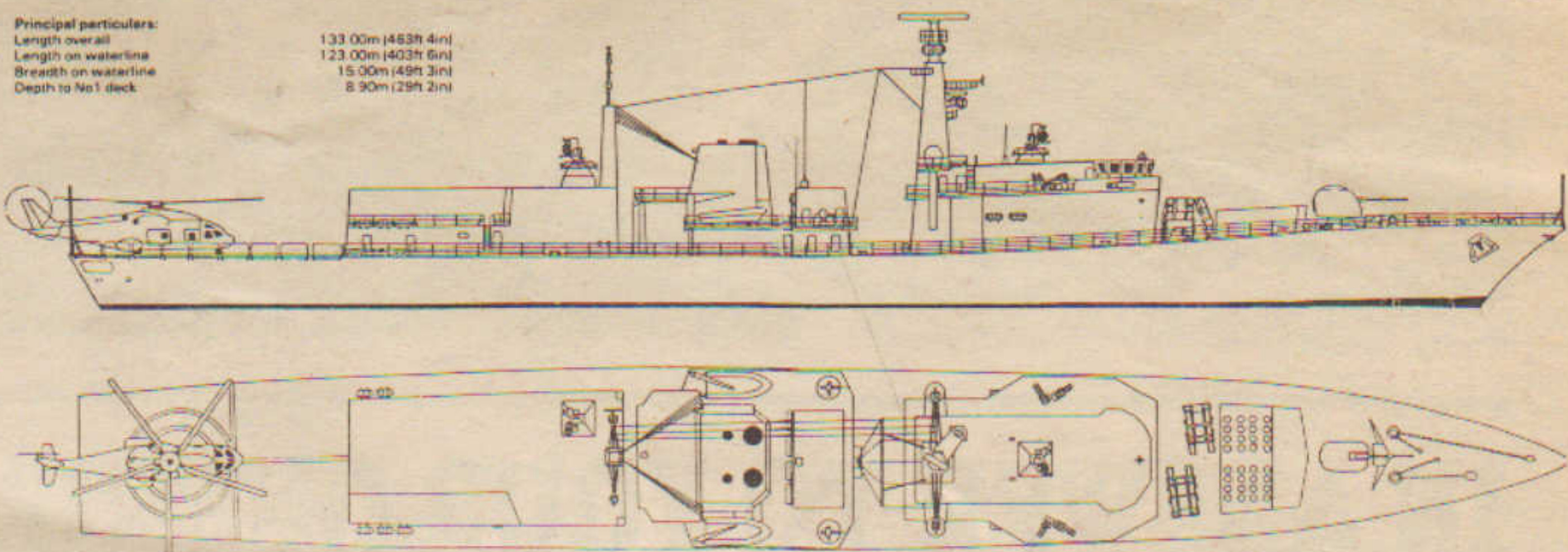
### Multi-role

While the anti-submarine role is to be a major feature of the new class of ships, the Type 23, if constructed as envisaged, will probably have the best multi-role capability of any British warship for many years. For naval gunfire support, the well proven 4.5 inch gun is provided, offensive missile capability is supplied by the surface to surface missile battery, with adequate point defence provided by the Lightweight Seawolf vertical launch system. It is expected that 32 of these Seawolf missiles will be carried in the silo, all ready for immediate use. The new Seawolf missile differs from its predecessor mainly by the fitting of a booster motor to give the necessary vertical launch.



Principal particulars:  
Length overall  
Length on waterline  
Breadth on waterline  
Depth to No 1 deck

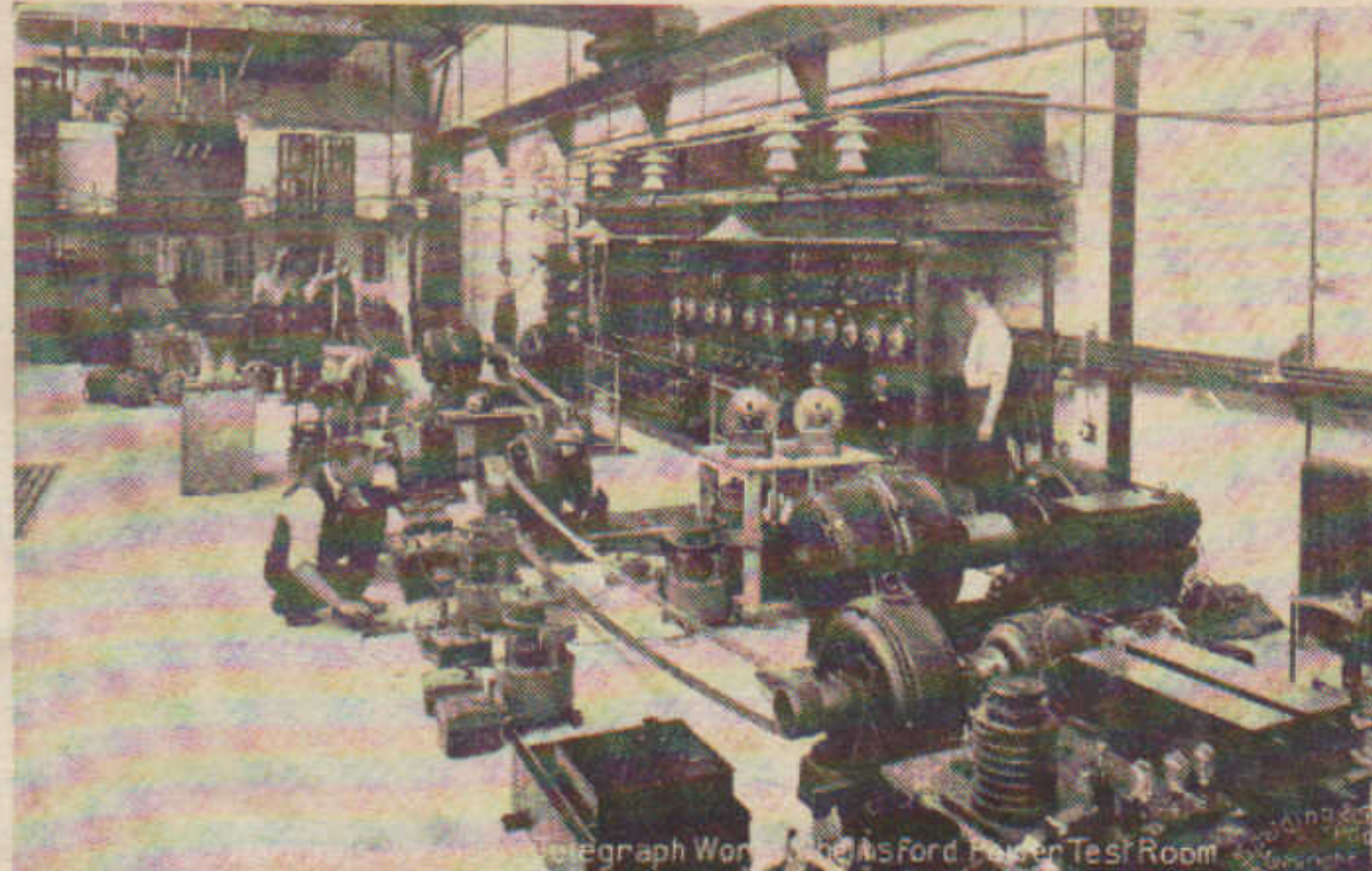
133.00m (436ft 4in)  
123.00m (403ft 6in)  
15.00m (49ft 3in)  
8.90m (29ft 2in)



## PICTURES OF THE PAST . . .



Capenters Shop.



Chelmsford Power Test Room

THE two 'Spaldings' post cards were lent by Alec Prail, who found them among his father's papers. The 'rates of pay' was found by Ernie Sorrell in Y Building, after the apprentices school had vacated the place.

Unfortunately there is no date on either of the postcards, although the postage rate is given on both as 'Inland 1/2p, Foreign 1p'. . . Study the Power Test Room picture, it is obvious just how much safety measures have changed over the years. The Carpenters Shop 'photo emphasises the fact that manning levels have dropped considerably since those times.

Spaldings the photographers, by the way, were situated at No 4 High Street, near to the Saracen's Head. When I first came to Chelmsford about 1951, the shop front was still in existence, although the business was extinct.

### MARCONI WIRELESS TELEGRAPH COMPANY, LTD CHELMSFORD WORKS

#### Rates of Pay for Male Juveniles

Age	Grade	Basic Rate	Ability Rate	Food Bonus	Total
14	1	6/-		4/6	10/6
15	2	7/-	1/6	4/6	13/-
15	1	7/-		4/6	11/6
16	2	9/-	1/6	4/6	15/-
16	1	9/-		4/6	13/6
17	2	11/3	1/6	4/6	17/3
17	1	11/3		4/6	15/9
18	2	13/6	3/-	4/6	21/-
18	1	13/6		4/6	18/-
19	2	18/-	3/-	4/6	25/6
19	1	18/-		4/6	22/6
20	2	22/6	5/-	4/6	32/-
20		22/6		4/6	27/-

NOTE: For boys employed in the Shops, opportunities occur where piecework bonus can be earned and where this is not operative a Lieu Rate of 25% of the Basic Rate and Ability Rate is paid; the Ability Rate is paid to boys of outstanding merit. For Example: a boy between the age of 19 and 20 years would receive 18/- Basic Rate plus, if an efficient boy, 3/- Ability Rate plus 25% = 5/3 plus 4/6 Food Bonus = Total 30/9, 29th December, 1936.



# OBOE part 3

by Bruce Neale

"I expect the British to be advanced but frankly I never thought they would get so far ahead. I did hope that even if we were behind we could at least be in the same race."  
Hermann Goering, May 1943.

In the last issue, two limitations of Oboe were considered, viz (a) the inability of the system to control more than four target marking Mosquitoes per hour and (b) the limited operational range imposed by the Earth's curvature (Radar Horizon).

## Delta approach

The first problem was elegantly solved by using multiple interlaced P.R.F.'s enabling 10 control channels to be worked simultaneously through a single Magnetron transmitter. The PRF's in the range 100 to 200 p.p.s. were selected by precision filters in the aircraft's transponder. It will be recalled that each aircraft was required to follow a circular track (the radius of which is the range of the target from the CAT ground station) for some 15 minutes before the bomb release signal was given (see Issue 6 part II Fig. 2). A new type of approach to the target was evolved whereby the aircraft's radial velocity as seen from the ground station, in addition to its range, was fed into the 'Miestro' computer. Provided the aircraft heading derived from the velocity component was correct at the point of release, there was an infinite number of approach tracks to the target and a skilled pilot could enter a track from any angle. The dot — equisignal — dash signal to the pilot enabled him to steer along any chosen track by keeping his

'heading' correct (Fig 1). An experienced pilot could pick up a track and be correctly positioned at the bomb release point in about 3 minutes allowing a maximum of 20 sorties per hour per pair of ground stations. In fact, for operational reasons, the best ever achieved was, I believe, 10 sorties per hour. This technique was known as the 'Delta' or 'Exponential' approach.

One weakness of early Oboe was the requirement for the aircraft to fly a fixed circular track thereby giving the German defences the opportunity of predicting its course thus making it vulnerable to attack. The Delta track, on the other hand, was unpredictable and confused the defences. The speed and operational height of the Oboe Mosquito were important factors in its survivability.

## REPEATER TECHNIQUE

The problem of range limitation due to the Earth's curvature (about 250 miles) was a more difficult nut to crack. It was partially solved by the use of repeater

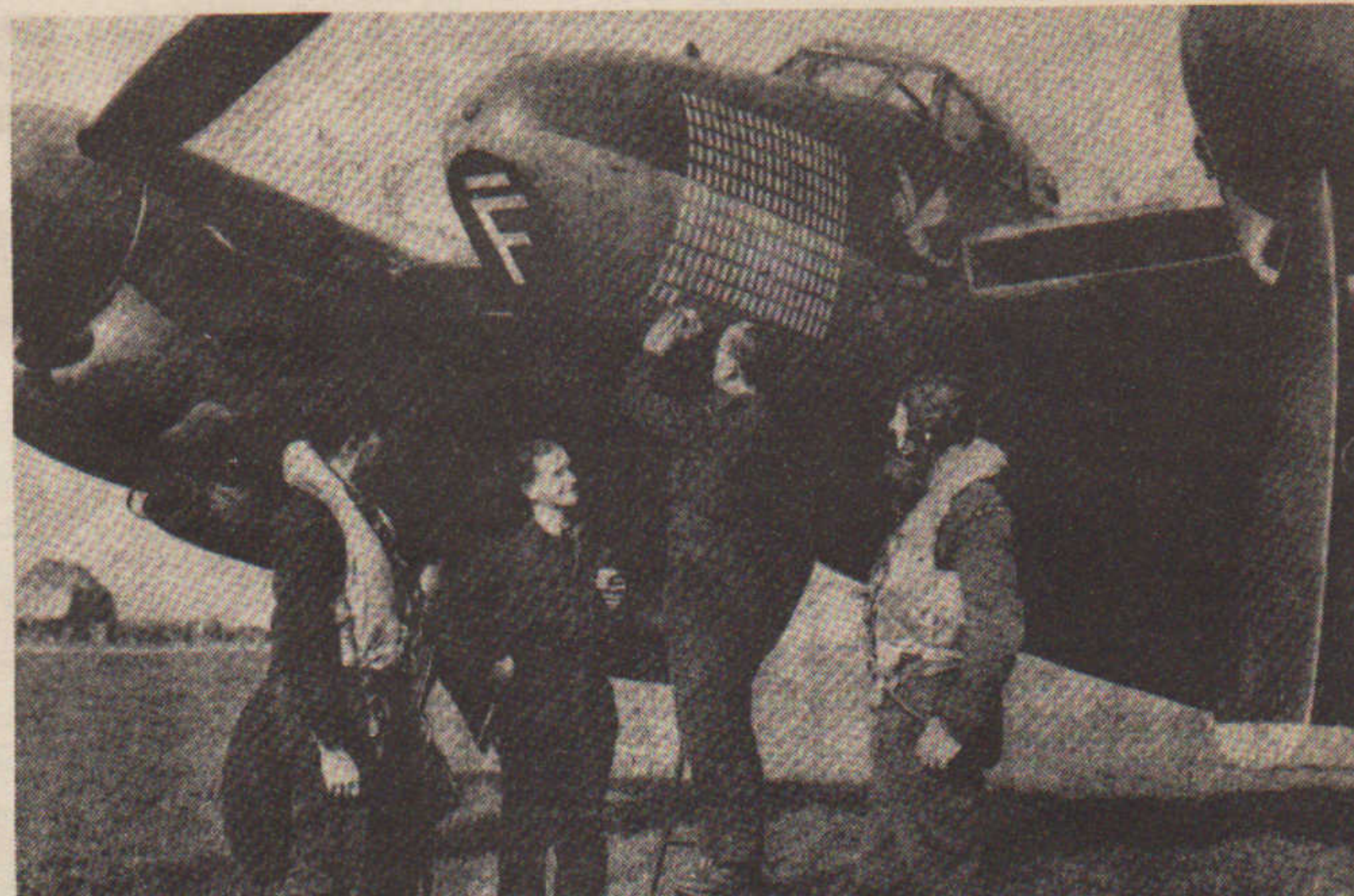
aircraft flying a racetrack pattern (Fig 2) one for the MOUSE and one for the CAT. The aircraft, usually Mosquitoes, were flown at maximum height, around 32,000 ft and kept 'on-station' by 'Gee' (Type: 7000). Ranges of 600 miles plus were theoretically possible, putting Berlin well within Oboe range. The big problem was not technical but operational; as can be imagined, it required a considerable amount of planning and it exposed the repeater aircraft to attack; they were sitting ducks.

The war in Europe ended before the operational advantages of these new techniques could be fully exploited.

## D Day

Oboe played a vital part in the support of D Day landings both during the run-up phase, knocking out radar and coast watching stations, airfields, gun emplacements and troop concentrations, and the subsequent landings by precision pattern bombing of enemy forces just ahead of the advancing Allied armies.

Oboe stations such as Hawkshill Down, Kingsdown (Kent) Winton and Scraby (Norfolk) worked round the clock, target marking and precision bombing designated



Oboe Mosquito 'F' for Freddy. Marking up the 204th sortie!

key targets. The success rates or 'copes' as they were called, were in the region of 90 per cent, a cope being defined as an impact within 'x' feet of the aiming point where 'x' depended on the type of operation. Mobile versions of Oboe (Type 9000, Mk II) were deployed behind the Allied lines to support the advance thus bringing a large area of Germany within Oboe range. The siting, operational and organisational problems were prodigious as can well be imagined.

## V1, V2 and V3

The part played by Oboe in the destruction of V1, V2 and V3 launching and supply dumps in the Pas de Calais area was decisive in minimising the impact of Hitler's 'Grand Slam' of vengeance weapons. The terrifying V3 site at Mimoyeques never did become operational.

Precision reconnaissance photographs pin-pointed V1 and V2 sites and these were translated into target ranges from both CAT and MOUSE stations (with incredible accuracy) The reconnaissance was followed up within hours by oboe Mosquitoes dropping 'Cookies' (4,000 lb bombs) which literally pulverised the site (see photograph in issue 4 of 'News and Views').

## Mercy Mission

If the destruction of these sites was Oboe's only success, it would all have been worthwhile in terms of the lives saved from the flying bomb. As it was, Oboe (along with H2S, Gee, G.H.) played a decisive part in the total bomber offensive against Germany. But one must never forget the courage, skill and dedication of the pilots and navigators of the Pathfinder Force and, of course, the superlative qualities of the ubiquitous Mosquito!

It is not generally known that towards the end of the war in Europe, food 'bombs' were dropped on Holland for the starving Dutch people in the Hague and other towns. By pre-arrangement with the Dutch Resistance, a site was chosen well away from the German security forces for a 'drop.' The precise aiming point was signalled to London and the CAT/MOUSE ranges calculated. At a pre-arranged time Oboe Mosquitoes carrying food canisters (with good ballistics!) set out to rendezvous with the Resistance and the cannisters were dropped

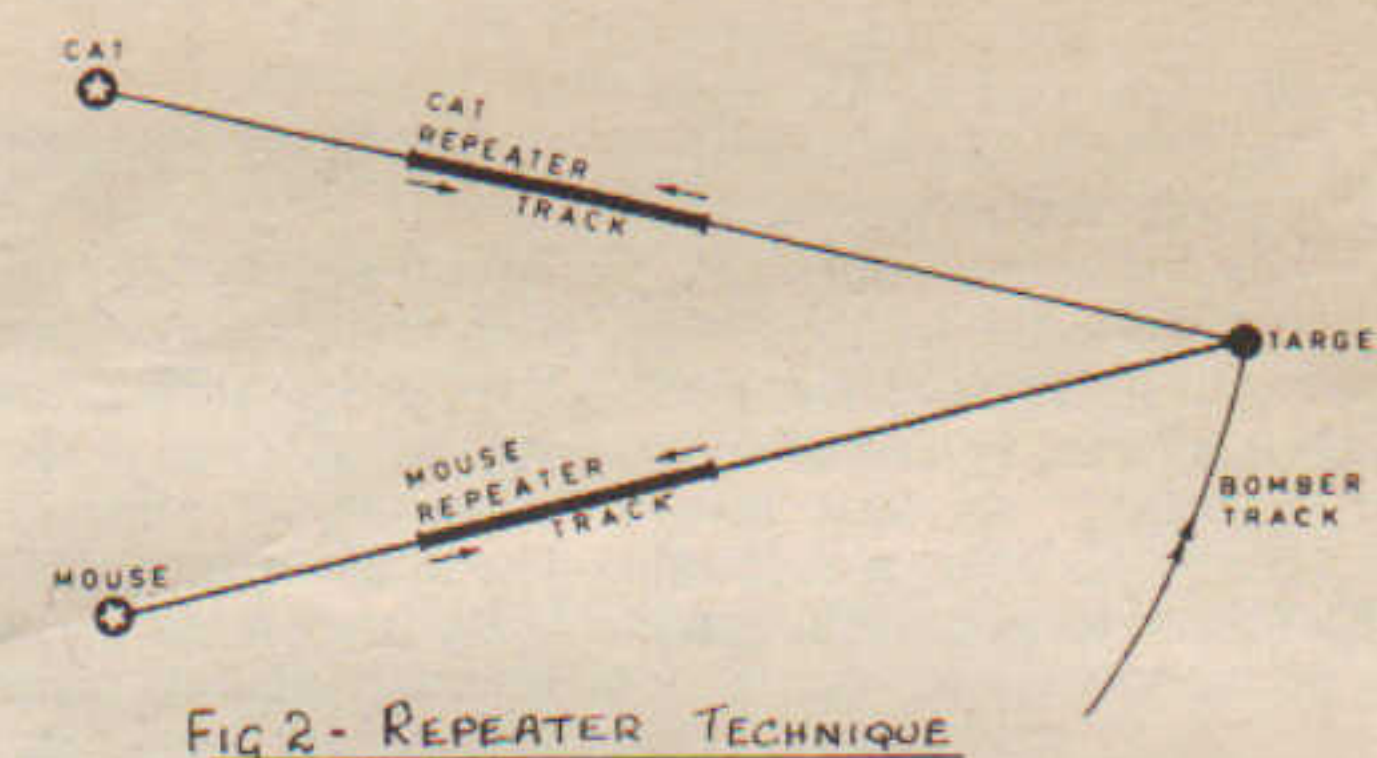
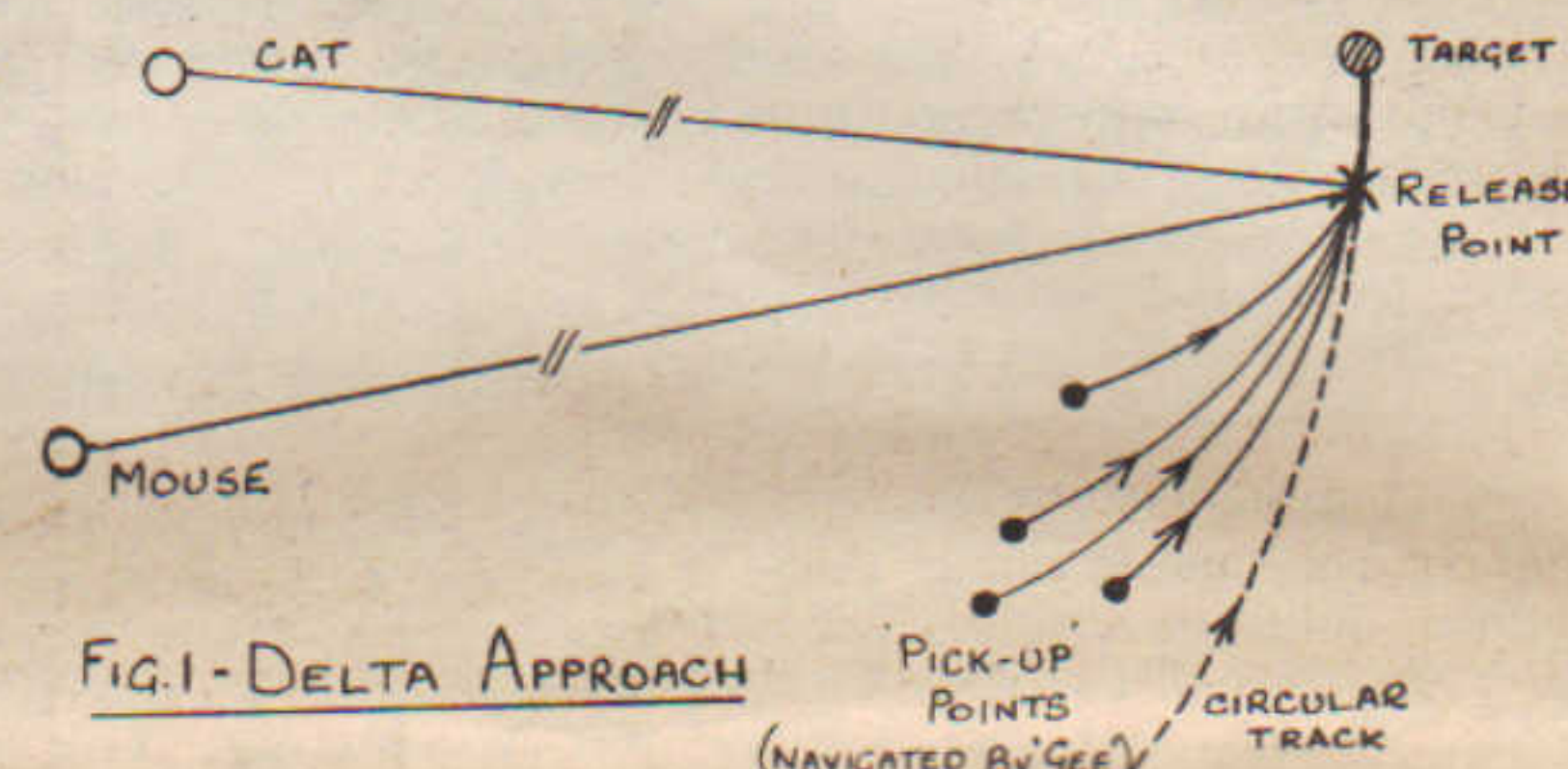
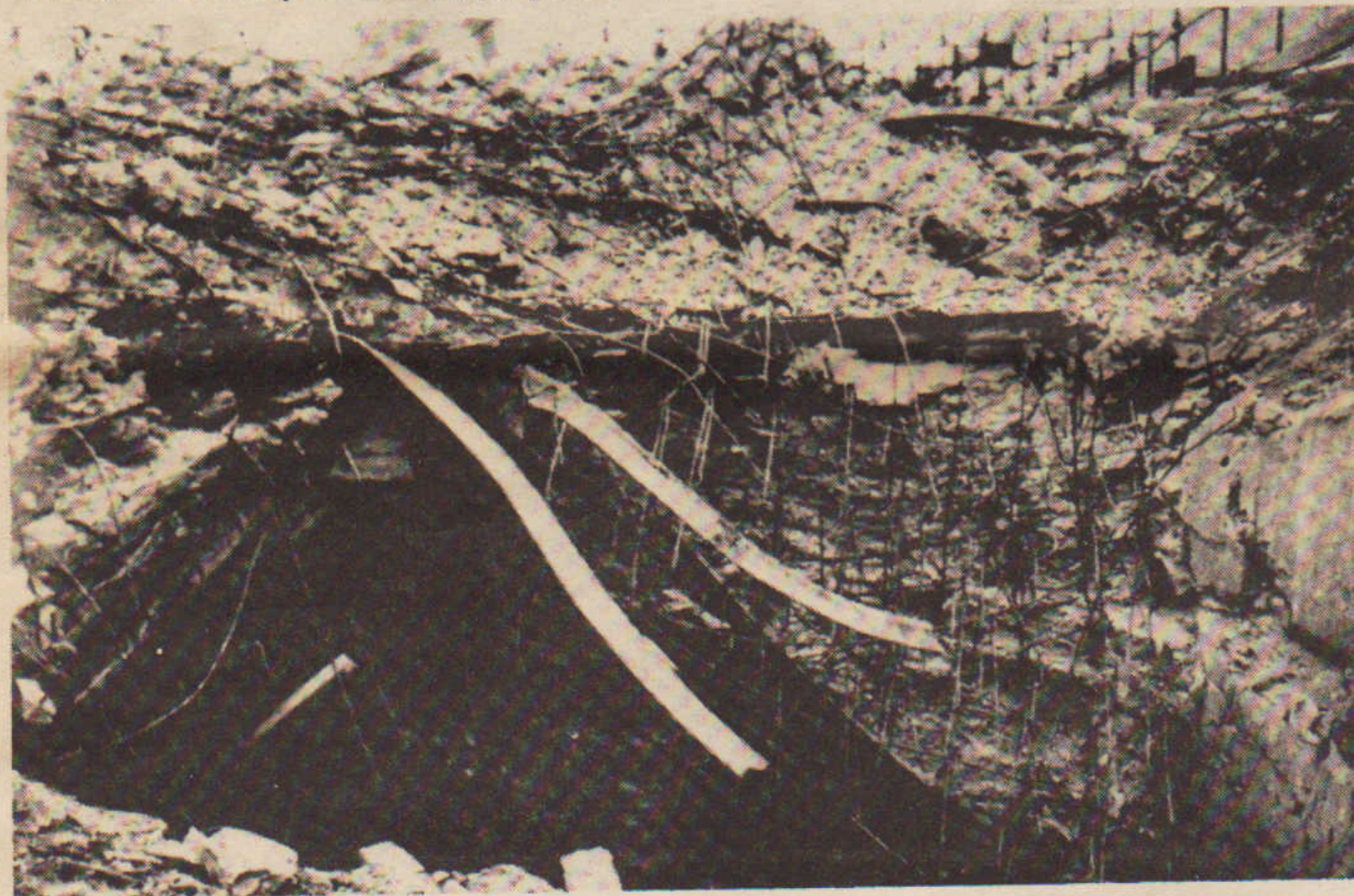
to within 30 yards of the aiming point where eager hands rapidly distributed their contents.

## Postscript

In 1976, the author was in the Hague and had the good fortune to meet a Professor Eric Goldbohm who was a member of the Dutch Resistance and was present at the receiving end of one of these operations. He remarked on the fantastic accuracy of the 'drop'; in fact, he was very nearly clobbered by one of the cannisters. He said how truly grateful the Dutch people were and bought me a pint.

B. T. Neale

This was a U-boat pen at Brest, pin-pointed by OBE, wrecked by a twelve thousand pounder.



## IN ANSWER TO YOUR QUERIES

FOLLOWING the publication of part 2 of the OBOE story in issue six of News and Views, several people asked just what was meant by the 'trail-distance' diagram. To alleviate their puzzled minds, Bruce has put together the following description:

### TIME OF BOMBFALL

Both bomb and aircraft have the same initial horizontal velocity at the moment of release, but the bomb is then retarded by air drag so that, in still air, the point of impact will lie directly behind the aircraft by a distance known as the trail distance. This is given by  $H \tan \lambda$  (Fig 1) where  $H$  is the height of the aircraft and  $\lambda$  is the trail angle

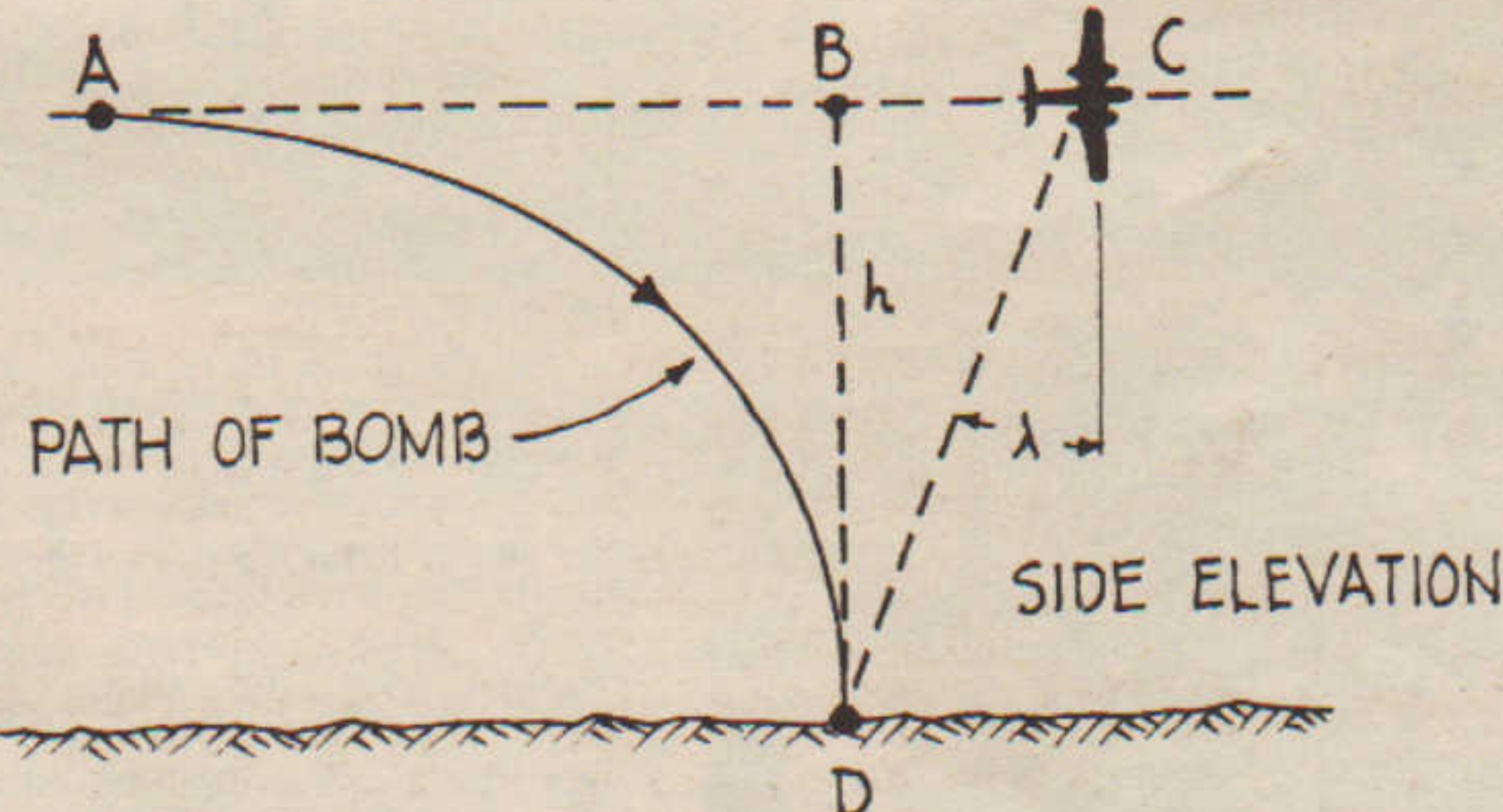


Fig 1. Effect of air-drag on fall of bomb.

The trail angle is a function only of airspeed and type of bomb.

In the presence of a cross wind the aircraft crabs along its track and as the trail distance lies along

the reciprocal of the direction of course or heading, drawn through the position of the aircraft at the moment of release, the track of the aircraft must be offset to the

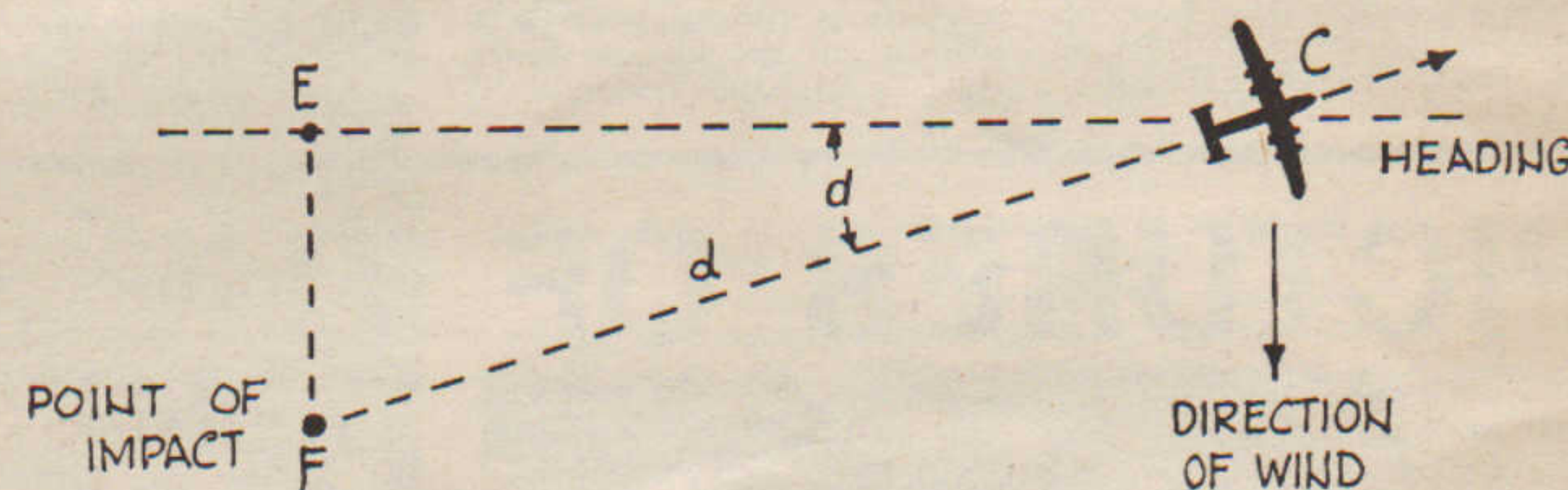


Fig 2. Illustrating allowance required for cross wind.

side of the track from which the wind is blowing, by a distance  $EF = d \sin d$  where  $d$  is the angle of drift (Fig 2).

The component of trail distance  $EC$  parallel to the track is then  $d \cos d$ .

The time taken for the bomb to fall (t.b.f.) is a function only of height, airspeed and type of bomb.

It is clear that the time taken for the bomb to fall is equal to the time the aircraft takes to fly from A to C (Fig 1) and is therefore equal to  $vg \times t.b.f.$  where  $vg$  is the ground speed.

In practice the value of  $d$  and  $d$  are evaluated from a knowledge of the meteorological-forecast wind, direction of track and prearranged height, airspeed and type of

bomb. The two components trail,  $EF$  and  $EC$ , are allowed in the setting-up of the target range at the appropriate ground stations.  $vg$  is measured at releasing ground station by electronic circuit called Miestro.

(Derived from: Frank Jones notes)



# NEWSFLASH

## Another S511 sale.

SINCE the last News and Views, we have sold another S511 radar, this time to Newcastle Municipal Airport. This is the first sale of an S511 equipment to a municipal airport and the radar will be used for marshalling aircraft to and from the airways, for holding patterns near the airport and for sequencing runway approaches. The radar will play a key role in controlling en-route traffic in the north-east of England. The installation will consist of an S511 antenna on top of a 10 metre tower, two transmitter-receivers, together with signal processors and remote control equipment.

Since the above words were written, the S511 installation at Newcastle Airport is proceeding apace.

## First CAA transmitters delivered.

The first pair of CAA transmitter-receivers, for Cardiff Airport, have been delivered. They are to be installed before Christmas, in time for the airport's busy holiday traffic period.

Cardiff will be the first of six Civil Aviation Authority airports in the United Kingdom to be equipped with new Marconi Radar transmitters, all due to be installed by Easter 1984, ready for the next high point in the airports' traffic profiles.

The greatly improved performance given by these new equipments will be a most effective introduction of the innovative ASR S511 systems into the air traffic control 'market place.' All the transmitter-receivers and associated signal processors have been manufactured under the most stringent time and quality delivery conditions.

The pictures show the Cardiff transmitter-receivers being packed in Packaging Department in A Building. Our modern style equipment packing is well in view, with pallet type bases and top panels combined with reinforced cardboard sides to provide easily and speedily made packages. It is also obvious how our modern transmitters break down into fairly small pieces, unlike earlier equipment which tended to be made in rather large lumps!

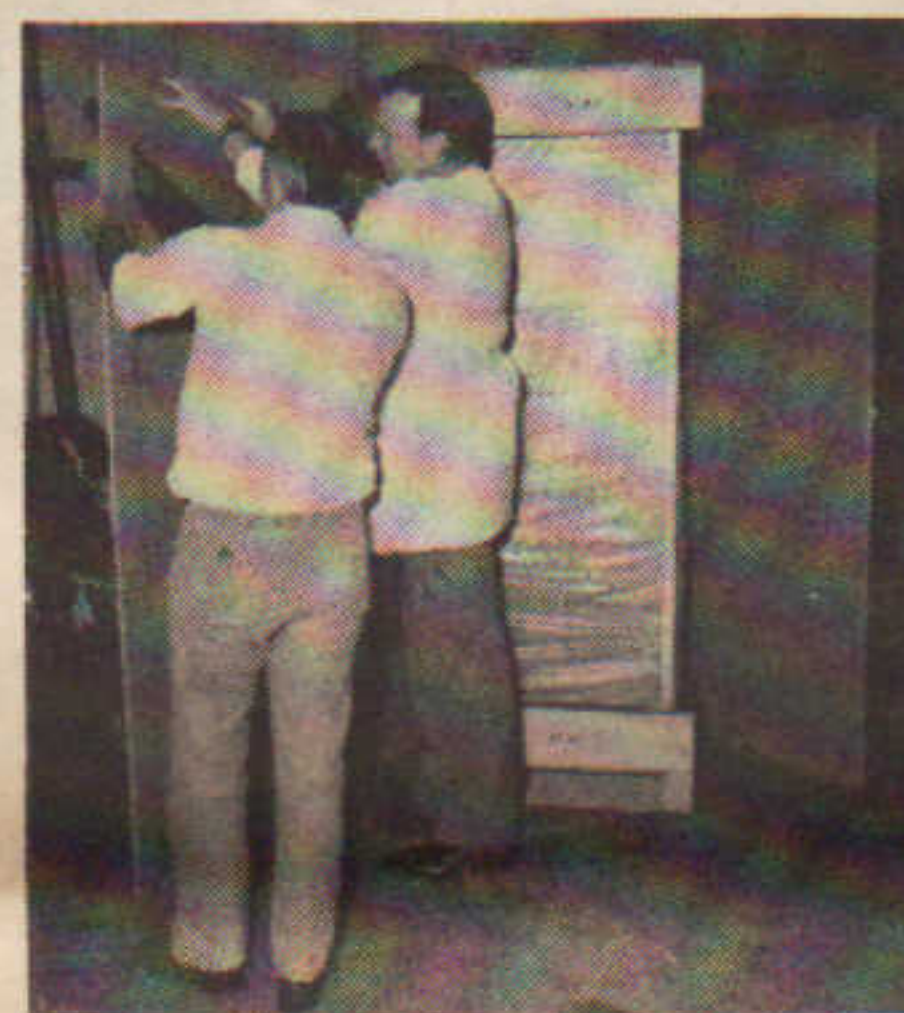
## 'Astrid' display for Shetlands Radar.

Astrid displays, developed as part of the S511 ASR, have been sold for installation as part of the Shetland Radar. Comprising an air traffic control suite with S3022 displays, main and standby central data processing units, control panels and rolling balls, a secondary plot extractor and video display units, the order was obtained against strong competition from other radar suppliers.

All equipment is mounted in the console suite, except for the secondary plot extractor and the video display units. The secondary plot extractor, based upon the Locus 16 format, being mounted in a free standing cabinet.

Raw radar will be displayed, from either of two radar heads, together with range rings, raw secondary radar and/or decoded secondary responses displayed in the form of labels. Video maps are provided by the central data processing unit, plus an adjustable range and bearing line. The suite

provides two two-man radar control positions, each comprising one controller and one assistant.



## Bob Scott leaves

On 30th of September we said goodbye to Bob Scott, leaving after over four years at Writtle Road, the farewell speech being given by Keith Chittenden, our Managing Director. Over one hundred people crowded into Room 40, D Building, to bid Bob goodbye, the room temperature raising dramatically as a consequence! Bob was presented with a set of Waterford crystal glassware as a memento. He is now with M.E.L., a Phillips company.

## RNEE

We recently exhibited our naval wares at the Royal Naval Equipment Exhibition on Whale Island, Portsmouth. The exhibition, held this year from September 11th to 16th, is mainly for overseas naval personnel and overseas British business people. The general public are not admitted.

This year we exhibited our naval capability, both Chelmsford and Leicester, on a stand in the main tent, and also had a specially built outside exhibit based around the 805SW, 805SD, S1840 and a navigation radar. The exhibition was well supported, although a large amount of rain dampened things more than somewhat. Still, what's a naval exhibition without water... This year was the last time that RNEE was held at Portsmouth, as Whale Island (HMS Excellent) is due to be closed down.

# MORE MOBILITY for ST JOHN!

The Chelmsford Marconi Division of St John Ambulance have stationed their newly purchased and impressive Range Rover ambulance at Writtle Road Works. It replaces the much older Ford Transit which had served well for the last 6 years.

The Range Rover with its permanent 4 wheel drive and transfer gearbox with differential lock will cope with the most arduous terrain and with its 3½ litre V8 engine is capable of over 100mph.

Divisional Superintendent Peter Weathersby of Data Systems Division says that they needed an ambulance with a cross country capability to ease the task of rescuing casualties from the nearly inaccessible places they are often found in at Motorcycle Scrambles, and at Hunter Trials and at events held in winter weather conditions. It benefits the casualties to be able to be loaded directly into an ambulance rather than be carried long distances on a stretcher across fields. Indeed on its first duty the Range Rover was used to rescue five motorcycle scramblers from such places.

It's unlikely that these capabilities will be needed for its secondary role as our works ambulance unless we happen to find ourselves with deep snow conditions!

The St John members were delighted when the ambulance became available from the Mid-Essex Area Health Authority recently. A thorough service and a number of mechanical repairs were necessary and then it was refurbished and adapted ready for service with St John by Peter Weathersby over a few weekends.

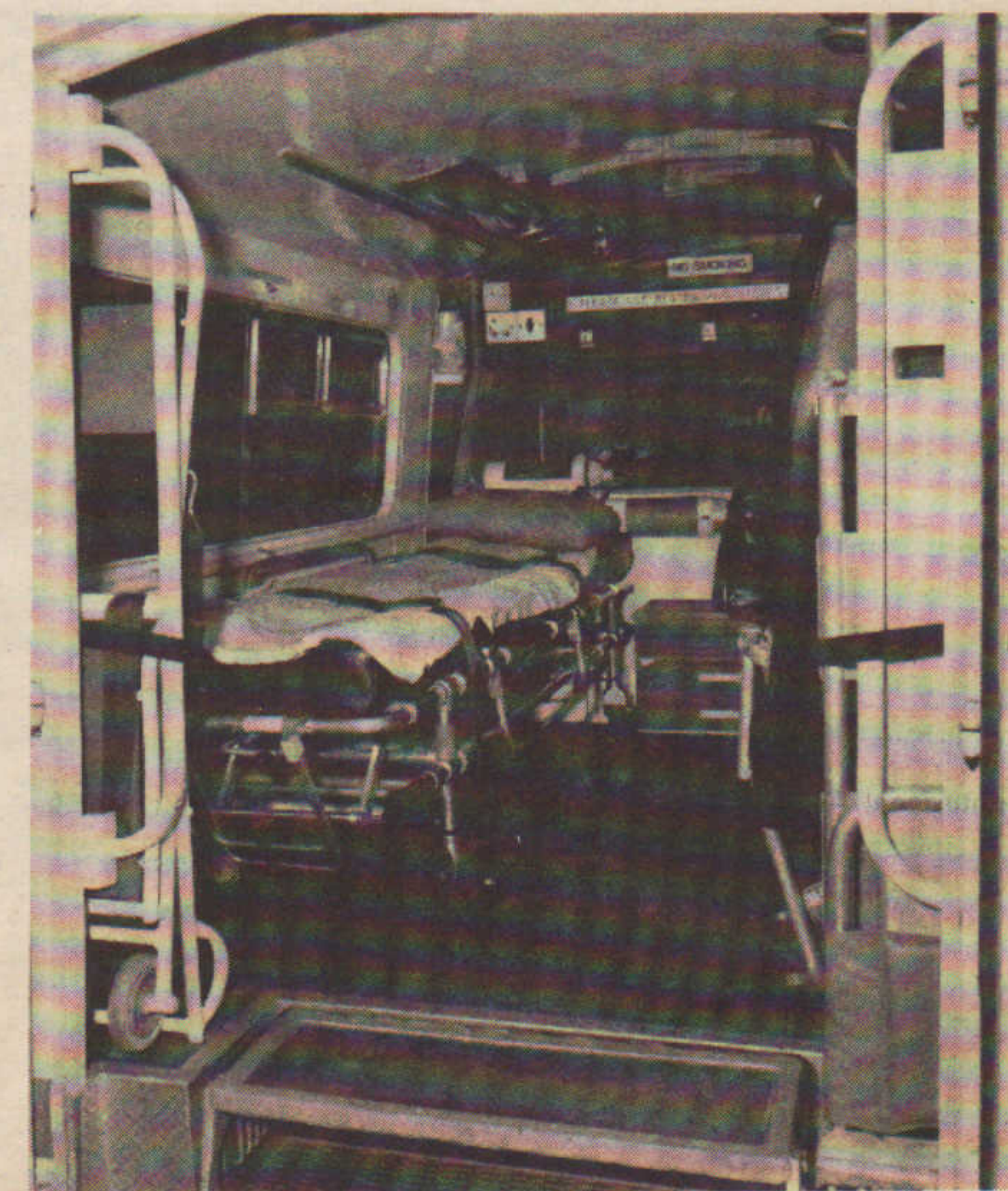
All the drivers have needed a little special training especially those who will be doing any cross country driving.

The ambulance cost £2,500 plus a further £700 approximately, for repairs and refurbishing. The money had been saved up from the proceeds of flag days, donations and fund raising events such as sponsored parachute jumps, as well as the payments received from the company for making the works service available.

The ambulance has a comprehensive range of first class medical and patient handling equipment. It includes a multi-posture trolley stretcher which also elevates to a height of about three feet to facilitate transfer to hospital couches or beds. There is oxygen therapy equipment, two resuscitators — one automatic and one manual, Entonox pain relieving gas, an ambulance carrying chair, an orthopaedic scoop stretcher, inflatable splints, spinal boards etc.

Many people at Writtle Road are not aware that the ambulance is not a company owned vehicle but is owned and maintained by the Marconi St John Ambulance Division using its own funds. The ambulance service provided at the works is not a legal requirement, but having one almost immediately available is a great benefit to any employees who have an accident or become ill suddenly. It is also used to take patients to Doctors or to their homes when transport by car is unsuitable or sometimes just not available.

The works ambulance crews are primarily drawn from the official company first aiders who are also St John members since they re-



ceive continual practice and training in ambulance procedures.

St John Ambulance exists primarily to provide a first aid and ambulance service at public events where accidents are likely to occur. It also operates a private ambulance service and should any-

one have a need for these services they should contact Peter Weathersby. The trained ambulance crews are all unpaid volunteers who freely give their time to help others, but the vehicle expenses usually have to be paid for by the organisers of the events.

# FEELING RESTLESS?



Pictures taken abroad by Field Services personnel.

**THERE ARE** those of us who at times are afflicted with the desire to search for pastures new, a disease sometimes known as 'itchy feet.' For quite a lot of us this feeling eventually wears off, but for those who are seriously searching the vacancy columns, why not do a very simple thing? Contact the Personnel Department to see if your longing for change can be satisfied by an internal transfer... There are often good reasons for 'staying put' as it were.

There are quite often opportunities available within the company, especially for those of you who feel an urge for travel. Why not scan the vacancy lists, available at most notice boards, or if this is not possible, as I said above, please contact the Personnel Department.

As regards travel, several departments require their people to go afield. The one that immediately springs to mind is Field Services, whose main task in life is the installation and support of the company's gear both at home and abroad.

Saudi Arabia and similar places are familiar ground to our Field Service people. We see them occasionally, deep brown in colour, when the rest of us are very pale in shade. Not all a garden of roses, of course, but there are snags to everything, as the vicar said when he caught his fishing line on a tree.

Recently, one of our employees decided, for various reasons, that the time had come for a change, and he applied to another company for a job — and got it too. What he didn't realise at the time, was that we were looking for someone to do practically the identical job, and in the same country.

Luckily this was spotted before he actually left and he is now doing exactly what he wanted, but still with Marconi Radar. Sometimes quite an advantage these days, when moving can so easily affect pension rights.

So if you are suffering from itchy feet, don't be too rash. Before you throw in the towel and jump in with both feet... consider, and try contacting the Personnel Department. They may have just the job that you are looking for...





## MORE IDEAS WANTED!

THE new Ideas and improvements scheme has been in operation since June this year. Over sixty suggestions have been received in this initial period and a number of awards have already been made, ranging in size from £25 to £150. Remember, every idea received is considered, and many are exhaustively investigated.

It has been noticed, however, that the great majority of ideas have been concerned with general company administration and operating procedures. While happy to receive any idea, the committee would greatly welcome more ideas relating to technical improvements and inventions.

Our Managing Director, Keith Chittenden, has several times stressed that the entire success of our company depends on remaining well in the forefront of technology. We must also design and manufacture our products in the most cost-effective manner possible. The Ideas and Improvement Scheme is one important means where you can personally contribute to improving the company's performance.

So, if you have any bright ideas which you think may be useful, don't waste time, write them down on the yellow Ideas and Improvements forms, which can be found prominently displayed throughout the site, and send them to the Ideas and Improvements Scheme Secretary, who will pass the ideas to the Committee for discussion.

Every idea is examined by the Committee. Every idea receives a considered reply. It is often the simple idea which saves the company money — and improves performance of the product and method.

Ideas and Improvements Scheme Committee:

Derek Watkins, Chairman.  
Bob Haste.  
Ted Jeffery  
Ted Overy  
Alan Thorogood  
Martin Havelock, Secretary

Ideas and  
Improvements

## A guide dog for the blind



Our picture shows the committee of the Marconi Employees Charity Fund together with Shirley Bowden of the Chelmsford Association for the Blind and also Michael Pinder with his guide dog 'Beacon'. Shirley and Michael met the committee to thank them personally for a contribution of £1,000 for the purchase and training of a guide dog. They also presented the committee with a photograph of Beacon.

## OPINION

### NOISE REPRODUCTION

Once upon a time, in those distant days when lighting was by gas (if you lived in a place where the mains were laid), transport was by horse, shank's pony — or railway train if you were lucky — home entertainment was something that you provided yourself, with actual musical instruments . . .

In the midst of this bucolic age, when the use of the horse, in enormous numbers, made an instant effect upon the olfactory senses, especially in large cities, a certain Mr Edison, in the great US of A, made a very interesting discovery. With more than a little ingenuity, he found that it was possible to record sound — and also play it back when required.

His cylinder style recording system was an instant success. Able to record voices and even musical instruments (rather crudely I admit), the system had one great advantage, it could also be used for home recording. The idea was siezed upon by other inventors, by the Berliner brothers, for instance, who invented the well known flat plastic record playing system.

For many years, Edison's cylinder system was the only one available for home and office

recording, and it stayed in use for a surprisingly long time, finally being put to sleep by the invention (by the Germans) of the tape recorder.

The Berliner system, which is still with us after over eighty years, had one disadvantage, it could only be used easily for home playback, a rather involved and expensive machine being required for the recording technique. However, this disadvantage didn't worry the folk who used the new method for one prime use only, that of home entertainment.

Almost instantly (or so it seemed) home entertainment underwent a dramatic change; instead of whole families playing musical instruments and singing to their own accompaniment, all now gathered around the record player, or gramophone as it came to be called. Instead of home produced entertainment, there emerged the first use of manufactured entertainment. Entertainment produced in the recording studio and disseminated around the country — and indeed the world — for all who had gramophones.

From this simple gramophone, all modern home entertainment has evolved.

## HAVE A DANCE WITH US THIS CHRISTMAS

### The Marconi Radar Christmas Dance

This year's Radar Christmas Dance will be held in the Waterhouse Lane canteen on Saturday 3rd December. Get your tickets early — there's bound to be a great demand!

Tickets this year are £7.50, which includes wine. Dancing

is to 'Boulevard' a very versatile group who can supply music to suit all tastes. An excellent meal will be provided of prawn cocktail, followed by roast turkey, bacon rolls, chipolatas, stuffing, creamed and roast potatoes, sprouts and baby carrots. La-

ter courses include cream gâteau, cheese and biscuits, coffee and cream, After Eight Mints — and of course, wine. All tastefully prepared by Sheila Moss and her staff! Why not come and join us! You'll have a marvellous time!

## Employees Sales A CHRISTMAS SPECIAL



### EASY PLAY MUSIC FOR ALL THE FAMILY

Learn to play Music on the new Bontempi "Beta" electronic keyboard.



CONTACT YOUR SHOP MANAGER AND ASK FOR A DEMONSTRATION! OR HAVE A GO YOURSELF!  
**SPECIAL EMPLOYEES PRICE £109.50**  
(All products subject to availability)

No need to be a musician, the Beta has all the features of a full size keyboard—40 keys of professional size with six solo voices, plus Vibrato and sustain, eight automatic rhythms, with a rhythm tempo control.

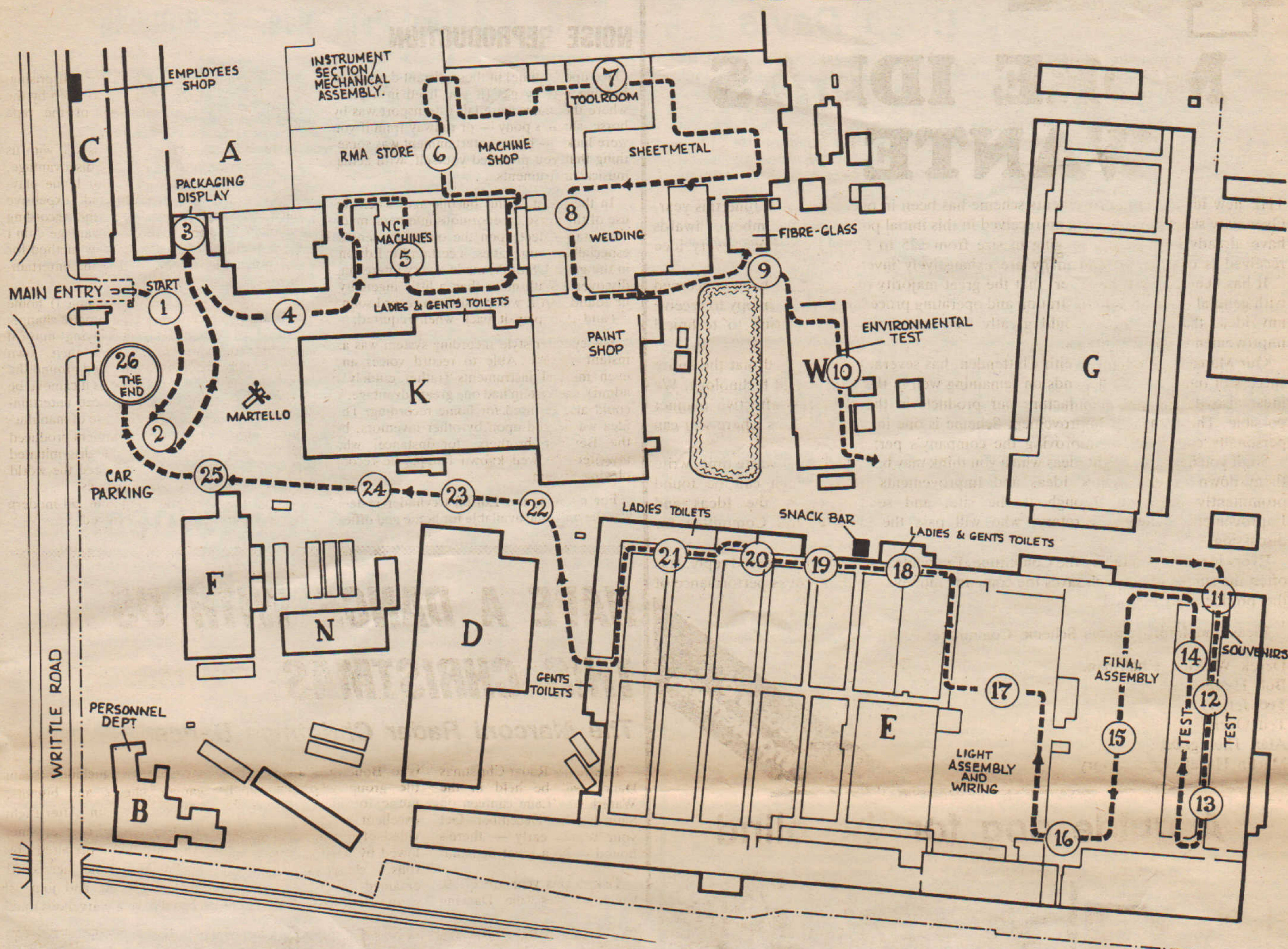
Also easy play single finger chords automatically synchronised with the rhythm unit.

Special package includes keyboard, mains adaptor and extension cable to connect through your own Unit Audio/Hi-Fi for extra amplification.

Short or long term credit facilities available! Plus ACCESS and VISA  
Optional Extras—fold away legs, and carry case.



# IT'S THE MRSL GAME!



Some of our bright lads have got together to produce a special Marconi Radar game, based upon the open day route map.

No prizes will be given for completing it . . . All you need is a dice.

You're off. Not so fast!

1. Throw six to pass security.
2. Unlucky! Car park full! (Usual). Throw 1 to find a space.
3. Delay in 'Goods In.' Throw a 3.
4. Seen Martello in working order. Move on 5.
5. Encountered first MRP . . . Back 3.
6. Stores operating at usual pace. Miss 1 go.
7. Toolroom tea break. Wait 5 minutes or throw a 5.
8. Arc Eye strikes! (Who forgot mask then?) Go back 4.
9. High on resin fumes . . . Float on 4.
10. Lost in Environment Test due to weather effects. Go back 4.
11. FREE stick of rock! Forward 2.
12. Require engineers' help. Back 3.
13. Failed spec. Back 3.
14. It's happened! Passed spec first time! Throw again.
15. What G.A.? Miss 2 goes.
16. Out of stock . . . Throw 4 to continue.
17. Comment about monkeys in a cage agreed with! Move on 5.
18. Have to go to the loo. Miss 1 go.
19. Food from snack bar takes affect. Move back 2.
20. Paper work passed on to DCO. Move on 4.
21. Paper work passed back by DCO. Move back 10.
22. Run down by a certain blue XJ. Miss 1 go.
23. Stop to bow. Miss one go.
24. Go back 13 to take an overseas call in E Building.
25. Your car is obstructed. Miss 3 goes waiting for an announcement.
26. You've finally done it! Congratulations!

## A TOUCH OF HUMOUR . . .

### The public parking area

WAY back in the distant past, early man faced a basic problem. How to get from A to B? It wasn't too difficult then, people travelled on shank's pony — when they travelled at all — and carried their goods on pack ponies.

Now the use of pack ponies tended to cut up the pathways, causing the ancient Brits to get their feet wet, so eventually the roads were paved. This evolved over the years to our present system, where some sort of organisation exists to keep the roads in good repair. The present organisation isn't very effective, due to there being more clerks than actual road menders, but that is another matter altogether.

In the old days, the use of horses, while cutting up the roads, also produced useful side products. The same can-

not be said for present day vehicles, whose only side effects are damaged pedestrians (and other vehicles), unpleasant fumes and splashed stockings (and trousers of course).

Another unfortunate side effect is that motor vehicles, while designed for moving around the towns and countryside, spend the great majority of time at a standstill, either in traffic jams or parked by the side of the road.

Yet another very strange thing about them is that they appear to have the ability to reproduce themselves. Where ten years ago one vehicle per house was the general rule, nowadays many folk are not happy unless they have two or more. Probably they're worried that one car gets lonely all by itself.

Now all (or a great many) of these vehicles are parked on the road outside the houses to which they are attached. The result, naturally, is that the roads resemble one vast car park, littered with vehicles of all descriptions.

In the road where I live (at least I call it living), at certain times, when all these vehicles are at home, the negotiating of the road is somewhat akin to forcing the passage across the Tiber against the might of the Roman Army.

It is almost as bad in other roads around the town. In fact, in roads near the Odeon roundabout, rather than stop the residents from parking on the highway, the Council is now making noises about stopping other folk from using the roads . . . Ah, well, they call it progress . . .



# LIFE'S LIKE THIS . . .

By Russ Davis

MY dear wife is a scientific inebriate. When I told her the valves on her car were going she suggested we could replace them with ones from "The old telly in the attic."

She even had the audacity to accuse me of being slightly drunk on my return from the local the other evening. Being a patient man I took the time to explain to her that placing a small key in a small hole, in the dark produced some problems. Having overcome these problems I then had to push an area of two feet six inches by

six foot six inches against a pressure of 14 lbs per square inch. To my mind enormous feat of strength. I then had to step on a small area of carpet travelling at 25 miles per second in a variety of directions. All she could say was "you didn't have that trouble going out."

At parties my better half has the habit of bringing puzzled expressions to peoples faces with remarks such as "She was very indignant" or "radar aerials are rotatory."

I have far better ways of

killing the conversation. I, for example, say things like 'if you would fill a bucket with electrons the number would relate very closely to the number of insects in the universe.' I have implied that no only am I a physics genius, but also an authority on insects of the universe. Another good one is "if a tennis ball was travelling around the inside of the dome of St Pauls cathedral at the speed of light you wouldn't be able to open the door."

What you must never do is say something that people can

prove or disprove, for instance, "a pin dropped on a A4 size piece of paper from a height of 26.83 cm will produce a noise 3.284 dB's down on a golf ball hitting the same piece of paper from a height of 2.385 feet." Some idiot is bound to take out the latest in pocket calculators and prove you wrong!

PS Regarding "engineers" — my thanks to Mr J. K. Gregory for his letter to the editor and to Mr P. J. Prowse (Q.E.D.?).

## THE NUMBER GAME

by Pete Roe, E. Building

### PROBLEM 1

Using all of the digits in the Marconi Radar telephone number 67111, obtain the numbers 1 to 10 inclusive by using only the normal mathematical operators: +, -, × and ÷.

Note: No re-arranging of digits is allowed.

For example: If we wanted to obtain the number 13 from this combination, one solution would be,

$$(6 + 7 - 1 + 1)/1 = 13$$

### PROBLEM 2

By using all of the digits in the new Marconi Radar telephone number 267111, obtain the numbers 30 to 40 inclusive by using only the mathematical operators +, -, × and ÷.

No re-arranging of the digits is allowed.

For example, if we wanted to obtain the number 12, one solution would be,

$$(2 \times 6(-7 + 1 \times (1 + 1)) = 12$$

(Answers given in the next issue.)

## Notes from NORWICH IS YOUR DEPARTMENT OVERLOOKED?

ALTHOUGH the Norwich office has been in existence for nine years, not many Marconi Radar, Chelmsford people are aware of the scope of Norwich activities, capabilities and potential. A few think of us as an outpost of Technical Information Department, producing technical handbooks and similar documentation . . . just a handful of authors in some foreign place north of Ipswich! Others (sadly some in high places) are under the impression that the site is run by Marconi Avionics, Rochester, and that we have little connection with Marconi Radar.

To set the record straight and call attention to our skills, we have overcome our modesty(!) and are about to blow our own trumpet.

The Norwich office is part of Marconi Radar, Chelmsford, and the staff of over 100 are all Radar employees. Over 70 are programmers (of one type or another), engineers, technicians and back-up staff. The remaining 30 or so are authors, drawing office or word processor people.

While we have made a major contribution to the preparation of technical handbooks for Marconi Radar Chelmsford and Leicester products, much of our work, particularly over the last five years, has been for Marconi Avionics Rochester. No doubt the misconception that Norwich is an Avionics site arises from this . . .

Most of the programming and engineering group have been, and many still are, working on the preparation of test, self-test and

system programs for ATE Division, Marconi Avionics, Rochester. Aspects of this work are ATLAS writing, designing interface adaptors, maintainability and reliability studies, teaching customer's personnel and installing and maintaining hardware. Another facet of our work for Rochester was assisting MAS Division with a primary software design for data processing and display aspects for a sonic system.

In recent months we have successfully demonstrated several Tornado programs to PANAIA, who act on behalf of the participating nations. The demonstrations include location of faults (inserted by the customer), fault free runs of the program with a servicable LRU, and full acceptance tests according to PANAIA specs with Quality Assurance specialists from Ministry of Defence, Germany and Italy. With all this history behind us, it is with

confidence that we offer our services . . .

We hear on the jungle drums that there is a shortage of engineers and programmers at Writtle Road, which leads us to ask if we can assist, even in some small way. Perhaps you require help with preparation of test specs — or program writing for automatic testing — with our assistance perhaps some of your engineers could get on with more essential or creative work. The assistance or advice of our small team of experts may also help with quality, reliability and maintainability analyses and predictions.

Our Norwich Branch is adaptable, flexible in approach and attitudes, and we are able to do three shift and week-end working to obtain high utilisation of computer hardware. Working away from base for short periods is accepted by most of our staff as just part of the job. We also have project management capability and are cleared for classified work.

Don't say that we are too far away to be cost effective . . . we've heard that one before and proved that distance is no problem . . . Good will on both sides produces good results for the benefit of us all — and don't forget, we're just as much part of Marconi Radar as you are!

From time to time we have capacity available and we undertake tasks on a 'body-shop' or total package basis. Our current tasks begin to run down in 1984 and we shall be able to take on new work. Why not consider just how we can help you?

It is worth noting that we have room for expansion in our present disciplines or others that fit into an office type environment. We also have many qualified and experienced people available locally for recruitment. These, for reasons such as domestic or not wanting to leave the area, do not want to relocate. So why not save relocation expenses by forming a team at Norwich to do some of your work? We have the space, administrative framework and communications available to put at your disposal.

If you are interested, pick up the telephone and ask for Ken Holliday, the Manager of TIS Norwich, or Peter Howell the Group Head of Programming. They will be keen to discuss your needs or requirements. Better still — arrange to visit us and see for yourself!

## SAFETY



### Don't overheat the kitchen . . .

RECENTLY produced statistics show that in 1981 there were 17,600 chip pan fires reported in the UK resulting in 21 deaths and 1,447 injuries. Numbers do not give any indication of the terrifying experience this can be even if there is no injury.

A few useful points for everyone to learn and practice are as follows:

1. Never fill a chip pan more than half full of oil or fat.
2. Never leave a pan unattended with the heat turned on.
3. If the fat or oil boils over, turn off the

heat but do not attempt to lift or move the pan.

4. If fire breaks out turn off the heat. Cover the pan with a lid, with a dampened cloth or a fire blanket to smother the flames.\* Leave the pan covered until completely cool.

\*Hold the cloth or blanket by the top two corners at as high a level as will permit you to see what you are doing then carry the top edge forward and over to smother the flames. Never throw water over the fire and never attempt to carry the pan outside. Never attempt to deal with the fire in the manner described if it has got to be beyond the pan. In those circumstances get everyone from the house and send for the fire brigade.

Ken Gamlin, July 1983

## NEW PERSONALITY

MR W. T. NEEN, Financial Director, Marconi Radar Systems Limited.

Mr Neen joins us as Financial Director, succeeding Peter Causey who left some time ago. William Neen is a Scotsman, who attended Leeds Polytechnic and qualified as a Chartered Accountant in Cardiff with Ernst and Whinney.

From Ernst and Whinney, Mr Neen moved to the well-known automotive business LEX, where he was Management Accountant for Bristol and Cardiff. Upon leaving LEX, he moved to American Can, where he was Finance Manager at their Rhymney Plant, and then to FRAM, manufacturers of automotive filters, industrial filters, industrial filtration plant and similar equipment. Here he was the Controller and Company Secretary at their Head Office in Llantrisant, S. Wales.

The Neen family are already settled in Essex. Mr and Mrs Neen have been married for ten years and have two children, Daniel aged eight and Rebecca aged six.



## NEW PERSONALITY

MR W. D. DUNCAN, Divisional Manager, Airspace Control Division.

Mr W. D. Duncan has recently joined us, succeeding Ted Sismore, who has moved on to be Director, Business Developments. Bill Duncan was born in Malawi, Central Africa, and has had an interesting and varied career.

Commencing as an apprentice engineer with AEI in Rugby, he studied at the Strathclyde University, gaining BSc Electrical Engineering. Following this, he decided to switch to a slightly different career, and obtained an MBA Major in Finance at Strathclyde Business School.

As a Project Engineer with GKN Contractors, he had various responsibilities for airfields in Zaire, a tractor plant in Ursus, Poland, and Telemetry for integrated steel works in North Korea. From GKN he moved to Bur-



roughs Computers as Financial Analysis and Management Accountant and then to Motorola Semi Conductors Limited of East Kilbridge, where he was the Financial Controller.

Bill Duncan joins us from The Plessey Company plc, where he was Solid State Divisional Controller before being appointed General Manager of Plessey Optoelectronics and Microwave Ltd at Towcester.

A Divisional Manager, Airspace Control Division, his aims will be to continue to build the existing already strong product capability, and to increase the business activity by focussing more sharply on maximising profit opportunity in an increasingly competitive market.

Mr and Mrs Duncan, together with their two children, Paul aged seven and Joanna aged five, are looking forward to moving to the South East in the near future.



# LETTERS

I AM writing in response to your request to supply material for insertion in 'News and Views.' Very briefly, I would like to know, along with several of my colleagues, why the company has adopted the odious policy of penalising employees for being sick? It has certainly affected my pay packet this year.

I informed my eldest daughter that I wouldn't be getting a full pay 'rise' this year because of the time I had off sick last year. Those confounding migraine headaches would keep occurring (I'd much rather been at work) and a most unwelcome throat virus came 'out of the blue.'

My daughter was truly amazed. "Did they think that you were ill on purpose?" she asked. "Why should your pay packet be affected? Have you been naughty at work?"

Being a parent who attempts to answer my children's questions, I was some-what stuck for an answer to this one.

It would be nice if someone in higher management would explain just why we are being penalised for being sick. When I joined the company in 1978 it seemed to be a 'caring company.' Are we just disposable numbers now?

D. L. G. Reed

## Answer from Personnel Department

Although I do not rate even as a member of lower management, I would like to assure Mr Reed that there is no Company policy to penalise its employees for being sick. On the contrary, it most emphatically is the intention of the Company (as well as the natural inclination of managers) to be as helpful and understanding as it can be to any of its employees suffering from illness or in any other personal difficulty. All members of the Personnel Department, particularly the Pensions and Welfare Officer, Mrs Rosie Prowling (ext 2468) are always available to assist in any way they can.

I would, however, like to deal properly with the point he has made and will do so in the next issue of News and Views, when there should be more space available.

Martin Havelock  
Industrial Relation Officer

## Reply to Mr Barchou's letter in Chelmsford News and Views — Staff Shop

HAVING spot checked the staff shop it seems that they are stocking a fair range of GEC products and not only IIT goods. Telebank confirm that the price guarantee applies equally to GEC products and that the conditions of sale are not there to be awkward but purely a measure against anyone trying to take advantage of this contingency.

Telebank inform us that they are updating their conditions of sale and will take due action of Mr Barchou's criticism. If Mr Barchou has any specific criticism it would be sensible to make them known, in the first instance, to the Site Shop Manager.

Brian Edwards (Personnel Manager (Chelmsford))

## A thank-you from the Falklands

Our readers may like to know of a letter which was received by my daughter recently. The letter was from a soldier who is doing his second term of duty down in the Falklands, his first being during the Falklands War.

He discovered my daughter Ann's name and address inside the cover of a book which was amongst the ones collected by Marconi Radar employees and I quote:

"I got your name and address from a book which I picked up today and thought that it would be nice to say a thank-you for the books and games which have made such a tremendous difference to us here. There is so little to do and with freezing temperatures, fifty feet of snow and winds of up to 150 mph, we have little inclination for outdoor activities!"

I felt that it would be nice to share this appreciation with all who made a contribution. Pat Woodhead, (Accounts Department).

Reading the article 'It's your paper after all' prompted me to write. I remember when I was a schoolboy in North Devon, my mother paying 10 shillings (50 new pence) for a train ride to London to see the sights, in those days a real treat. The next two days at school were spent writing an essay on what we saw and thought of the idea . . .

Upon leaving school, I started work in the garage trade. From a 'grease monkey,' I graduated to being a motor engineer, repairing and testing vehicles. Job satisfaction was great, and it was a pleasure to hand a vehicle over to an owner who showed appreciation.

With the coming of the war, I was conscripted into the Royal Tank Regiment as a fitter. Here again I was able to test out my repairs and have the satisfaction of a job well done.

When war was over, I returned to the garage, but unfortunately my leg caused problems and I was forced to give up manual work and seek an office job.

On January 12, 1960, I joined The Marconi Company at Great Baddow as an instrument maker, making bits and pieces from sketches drawn on the backs of 'cigarette packets' by research engineers.

Later I progressed to the Planning Office, where I had the satisfaction of planning parts for the Type 84 radar, Goonhilly satellite dish and many other projects, but unfortunately was never able to see the finished product in operation.

I joined the Documentation Section in 1973, where the writing and maintaining of schedules for the army was my first task. Since then I have been allocated the writing of schedules for the Royal Navy.

Although working with and dealing with navy projects, we are never able to see the end product in operation and not being electronically minded, I don't really know much about the finished system.

My time is now drawing to a close, having just two years to complete. How nice it would be if the company would let me accompany an engineer to Portsmouth to see the radar in action! What a nice finish to my career!

Of course I realise, with all the people at Writtle Road, it would be practically impossible for all of us to see the products in action, but it would be nice if it were possible . . .

My leisure time is well occupied, with gardening and also with painting, in oil, of scenes I have taken with the camera. The wife and I also dance in the evening in the Modern Dance Sequence way, so time is fairly full — and satisfaction is the keynote to my life.

Irwin H. Pratt, (Documentation Section, E Building).

# OUR POETIC PERSONALITIES . . .

## OPEN DAY

It was on the 25th we had an Open Day, With signs and pointers to show us the way. Doors were open for VIP's and public alike, They arrived by car, train, foot and bike.

First we were ushered to the front of 'A' To the entrance of our loading bay. To see a packing display, face to face, Showing the skills of a packing case.

Onwards the arrows said, to the N.C. shop, Where all the machines click, bang and pop. Turning out goods of that we're certain, Among other things behind the curtain.

On the office of Charlie Rand, Who, if allowed, would've had a large brass band. To see some models, Oh he was proud, To show his miniatures to the crowd.

Into the Instrument shop we then flip, To see a pipeman, who musn't trip. He balanced high above us all, The public prayed he would not fall.

To the Machine Shop, through the door, A display to see which prevented the bore. A chess game to see, but not to take, And definitely not for use during tea break.

Into the Tool room next we were fed, To see a room full of tools or so we were led. Jigs and pins and things and plenty more, One wondered what all these thing were for.

Round the corner we began to wonder, If we, the Company had made some blunder. For the stripet machine, like something from Mars, Was producing a gadget for undoing your jars.

Next we saw some man of kind of face, We soon discovered it spoke like Tony Blank. It spoke so quick it made us frown, We're sure it was Tony that made it breakdown.

Amazed at what was costly to insure, Here a Seawolf missile sat upon the floor. The Coytee Mascot above on his seat, Was used for GWS-sea trials, now obsolete.

On now to see some spray and paint, The heat outside was making some faint. Good job the public wasn't made to cough, Like us, they could've watched the paint fall off.

On we passed right through 'W' block, The public and all were made to flock. With free food we were watered and fed, Watching our children on a bouncing bed.

One has so much more time in the summer, especially when on holiday, there is plenty of time then to do Christmas shopping. And just think how much money could be saved! No heating would be required. None of the expensive Christmas fare. A corned beef salad would do — or a cheese sandwich and a packet of crisps. The money saved could be put towards a trip to Australia so that you could enjoy two warm Christmas's in one year.

from there to be retransmitted to a central computer which looks after notifying the guilty parties.

"What a good idea!" You'll say. "I can't wait to see it in operation. What a good way of increasing taxation! With luck it should also mean a large increase in the number of civil servants."

★ ★ ★

## They'll be collecting him soon . . .

A friend of mine is never too happy during wintertime, he heartily dislikes the long night and also the wet and cold. Wouldn't it be nice, he asks, if somehow we could improve matters, sort of inject some decent weather into winter for a change.

Now it seems an impossibility, but what marvellous things we can do these days! We can fly men to the moon; make computers so small that they nestle in the hand; transmit and record pictures — there seems to be nothing that we can't do! So, says my friend, why can't we do something to help the winter to be more pleasant?

It is a nice idea. One way would be to borrow some nice weather from the summer, when we have

We had our rest, but wondered too, Back or forward, where was the loo? The Company's plan for a fun day out, Our legs now crossed in some doubt.

Next in line we could not knock, Here they gave away some sticks of rock. Free posters, balloons, all sorts galore, Now this at Marconi has never been known before.

One wondered where was the end at best, For round the bend lay 110 Test. All sorts of wonders were to be seen, For it was where most employees had never been.

Then we entered what was not a flop, E. Fewell's final Wiring Assembly shop. We at last could see what Marconi make, Models and telly's and bits that were fake.

On we went, but not least, Our eyes were given a really big feast. For here in the darkness, Oh! it was heaven, To stand in the room as used in Double 0 Seven.

To the car park slowly we made, The memories of the Company beginning to fade. Tired and weary it was suddenly dawning, At the thought of coming back on Monday morning.

For those I've mentioned by name, It was not intended to give them fame. Nor was any cheek or insult meant, For an excellent job and money well spent.

Dave Welsman

## OPEN DAY, 1983

It was a joy in this day and age To visit a place set like a stage. The wonderful work made by man From start to finish it all began. With thinking and drawing and planning so fine The skill and workmanship makes us proud in out time.

The various places in every part Held your interest right from the start. The young lads that saw them their faces aglow Just wanting to share this wonderful show. Also the models the student did make Were real works of art — not one was a fake. Even the youngsters had their share With computer games and balloons everywhere. Also tea and cakes galore Some of them even went back for more. It shows the world whatever is said That Britain's alive we are not dead. Our electronic ants will lead the way To show the brains of our country on open day.

Mrs L. Piper

# SNIPPETS . . .

## Drip, drip

Talking of sealing against the rain, reminds me that we had troubles of that sort at the RNEE Exhibition, Porstmouth, this year. The outer stand, built to accommodate four of our radar heads, was unfortunately erected in a period of very heavy rain. The result of this was that the roof sealing, being applied to already wet timber, did not seal at all. Whenever it rained at the exhibition, therefore, water trickled down the walls and produced a very wet and soggy carpet . . . Even when I, myself, went to see about dismantling the exhibition, there was still a water problem. When I and the lorry driver sheltered under the awning of the stand to avoid a downpour, he carelessly leant against the outer wall — and a

stream of water poured all the way down the inside of his trousers . . .

★ ★ ★

## Taking the lead

The new roof recently placed over the E Building conference room and outer offices is using lead flashing as a means of sealing against the rain. Strange how this extremely ancient building method is still in use after so long a time. Sort of doing what the Romans did . . .

★ ★ ★

## Tinkle, tinkle . . .

IT is rather noticable that one of the outer windows in C Building

has been smashed. Was someone being thrown in or out?

★ ★ ★

## The Christmas Syndrome

Why is it that Christmas comes at such an inconvenient time in the year? It's not at all pleasant, all that shopping and searching around, for presents and food — all never in the shop where one expects them to be — and all in the very worst of weather.

The Australians have it organised much better. They, being sensible people, have it in the nicest part of the year, not in the nastiest. In their Christmas, all shopping, etc. is done in the warmth of summer, when searching around is so much more acceptable.

★ ★ ★

## Thing to come

Why is it that a large majority of motorists find it impossible to adhere to the legal speed limits? (That is, unless a police car is immediately behind). For some peculiar reason, to these toughed law breakers, a '30' sign means '40,' a '40' sign means '50' and so on. Perhaps all they require are new spectacles? But to get to the point. With the advent of ultra-small solid state devices, it should be child's play to produce a 'spy-in-the-cab' type device for private cars.

All that is required is a device that will transmit the vehicles' speed, licence number, tax disc, etc to roadside receiver stations,

plenty of nice light evenings and (in general) warmth. If, say, we took just a few weekends from mid-summer and transferred them to mid-winter, perhaps a dozen or so, we would be able to inject 24 light and warm days right into, say, January. Think what a boon it would be! It would break up the winter nicely and give us all a boost just when we needed it! We wouldn't miss the days in summer — and if the exchanged days were snowy, then how pleased would be the skiers among us! Anyway, the days from winter wouldn't seem so cold, being right in the middle of summer, as it were. My friend says that he can't understand why some political party hasn't picked it up. It would be a certain vote catcher, he says, but, then, politicians haven't much of a reputation for being clever.

Of course the above idea couldn't possibly work — or could it? The most zany ideas often come to fruition. Who would have thought that television sets could be made hand size — or that farmers would be paid to produce butter that no one wanted!

By the way, Mark Twain, the noted Yankee humourist, once proved, by much cleverer logic, that the Mississippi was getting shorter — and that soon Memphis would be next door to New Orleans . . .



# SPORT

## GOLF

**THE annual challenge match between Marconi Radar and Marconi Communications took place this year on the Three Rivers course at Cold Norton. The match was fought out this year for the new Challenge cup presented jointly by Keith Chittenden, our Managing Director, and Paul Robinson, Managing Director of Marconi Communications.**

The match was won conclusively by Marconi Communications (unfortunately!) by a margin of 4½ to 2½ over the seven matches. The Marconi Radar winners were Fred Jackson and Reg Willis, who won 3 and 2 and Sid Woodhall and Roly Crompton who won 2 and 1. The remaining Marconi Radar players did not have a good evening's golf — but the social activities that followed more than made up for the disappointments.

Keith Chittenden presented the cup to the Marconi Communications captain. The Marconi Radar team all hope that they can turn the table next year!

The Marconi Radar inter-site match was held this year at the



Stoke Rochford Golf Club, on Friday 19th August. It turned out to be a most enjoyable event. Gateshead were unfortunately unable to attend and the Chelmsford team arrived with one player missing. However, this did not detract one iota from the prowess of the Leicester team who won the trophy with 164 points, produced from a very high standard of golf.

The Blackbird Road Works Manager, Dennis Lodge, joined the teams for an enjoyable evening meal and presented the prizes.

The winners were: Inter-site Trophy: Ron Copeland, Leicester Captain.

Best Pair's score: LenCross and Cyril Smith, Leicester, with 46 points.

Best Visitor's score: Geoff Clarke and Wally Wakins of Chelmsford, with 44 points.

Best score on the 3 par holes: Bernie Wassell and Alan Stephenson of Writtle Road.

More good news about our star golfer, Johnnie Johnson, of Area Sales (2). Our picture shows Johnnie with even more trophies to add to his collection. On Thursday, 1st September, he took part in the GEC Overseas Club Inter-centre Golf Tournament, held this year at the Bedlow Manor Golf and Country Club, Bedfordshire. Johnnie came away with the A.A. Black Cup for the best scratch score, with a round of 77 (41 Stableford Points) against the standard scratch score of 71. He also captained the Chelmsford Centre team which walked off with the Australia Cup for the aggregate of the Best Four Handicap Stableford Scores, against stiff opposition from Manchester, Coventry, Rugby, Stafford and London Centres.

Another Chelmsford man to shine in the Tournament was Steve Stevenson of Data Systems, who joined Messrs Weatherall (44 points) and Broadbent (39 points) of English Electric Valve in the victorious Chelmsford team.

The trophies shown in Johnnie's picture are, left to right, Johnnie's personal miniature for winning the A. S. Black Cup, the A. S. Black Cup, the Australia Cup, and the personal miniature of the Australia Cup.

## MARCONI ANGLING SOCIETY

THE keen hardworking Treasurer of the Angling Section is our own Tony Bishop, Admin. Assistant to the Materials Handling Manager, Derek Creed.

Tony tells me that eager anglers were waiting this year, with some trepidation, for the opening of the season on the 16th June. With the late spring and the fish still spawning, the new season got off to a slow start. However, so far, match anglers have fared slightly better and the results of matches fished are:-

Wed. June 22nd 1st evening match — pit 2 and 3 Boreham.  
1st B. Nudd 5lb 13½ oz.  
2nd P. Clapperton 2lb 0½ oz.  
3rd S. Randerson 1lb 15 oz.  
Sun. June 26th Morris Cup — pit 3 Boreham

1st D. Fawcett 4lb 12 oz.  
2nd M. Smith 3lb 9 oz.  
3rd G. Clifford 9 oz.

Wed. June 29th 2nd evening match — pit 2 and 3 Boreham

1st B. Nudd 4lb 7 oz.  
2nd F. Foley 3lb 13½ oz.  
3rd P. Clapperton 3lb 8 oz.

Sun. July 3rd Edwards Tackle Open — pit 2 and 3 Boreham

1st G. Hinton 5lb 8¾ oz.  
2nd D. Fawcett 5lb 5 oz.  
3rd M. Jones 4lb 6¾ oz.

4th P. Clapperton 3lb 12½ oz.  
Wed. July 6th 3rd evening match — pit 2 and 3 Boreham

1st D. Fawcett 7lb 3¾ oz.  
2nd P. Clapperton 5lb 4 oz.  
3rd B. Charlik 3lb 12¾ oz.

Sun. July 10th Round 1 Basildon League — Paper Mills, R. Chelmer

Marconi finished in 4th place 51½ points

Marconi beat Roding Valley in the K.O. cup

D. Fawcett won section and second overall in match 4lb 11 oz.

Wed. July 13th 4th evening match — pit 2 and 3 Boreham.

1st B. Nudd 4lb 10¼ oz.  
2nd P. Clapperton 3lb 5½ oz.  
3rd K. Brown 3lb 4½ oz.

Sun. July 17th Donovan Shield — pit 2 Boreham

1st L. Hills 11lb 11 oz.  
2nd G. Baker 5lb 9¾ oz.  
3rd M. Jones 5lb 1¼ oz.

Wed. 20th July evening open match — pit 2 and 3

1st F. Foley 6lb 12 oz.  
2nd A. Cornwall 3lb 3¼ oz.  
3rd A. Druce 3lb 1 oz.

Sun. 24th July Basildon League R. Cam — Dimmocks Cote

Marconi finished in 5th place with 47 points

K.O. Cup, Marconi beat Billericay 'A' team

Marconi in 4th place overall.

Wed. 27th July evening open match — pit 2 and 3

1st A. Druce 4lb 4 oz.  
2nd F. Foley 4lb 2¼ oz.  
3rd C. Davis 3lb 9¾ oz.

Sun. 31st July John Ward Charity Open — Alton Water

1st R. Bambury 19lb 4¼ oz.  
2nd F. Foley 18lb 4½ oz.  
3rd T. Lowe 13lb 11 oz.

4th C. Merit 13lb. 6 oz.  
Sun. 7th August Becker-

man Trophy — Hylands Reservoir

1st K. Brown 5lb 5¼ oz.  
2nd K. Clark 3lb 5¼ oz.  
3rd D. Booth 2lb 4½ oz.

Sat. 13th August Marconi Pairs open match — Hylands Reservoir and River WID.

1st Pair D. Fawcett and K. Brown

1st R. WID L. Hills 12lb 9 oz.  
1st Res. K. Clark 3lb 11½ oz.  
Sun. 14th August Basildon

League R. Lee — Crown Fishery

Marconi finished in 3rd place with 46 points

Marconi beat 'Does' in semi final of K.O. cup.

Marconi in 4th place overall

Sun. 21st August Waite Cup — pit 4

1st K. Brown 7lb 14½ oz.  
2nd A. Stevens 7lb 2 oz.  
3rd J. Porter 4lb 4 oz.

## Marconi Bowling Club

THIS year marks the Diamond Jubilee of the Club and we are pleased to offer our congratulations, hoping there will be many happy years bowling ahead.

The Secretary of this popular Section, is Dr. Gordon Richards, of MRC Baddow. He informs me that to honour the occasion, the Club have invited a Representative Team from all the clubs they play, to take part in a celebration match on Saturday 24th September 1983 at the Club Green, Waterhouse Lane. This should be worth supporting. If anyone is not sure where the Club is, it lies to the rear of the Waterhouse Lane Canteen.

At present Radar bowlers are well to the fore in Club activities. Ted Ball, Accounts, is a member of the 'A' team who are vying for the Chelmsford and District League Div., 'B' Championship and Radar bowlers in the 'C' team, which also plays in Div. 'B' are:-

Bob Gibbons, Support Div.  
Chris Samms, Mech. Engineering

Bob Banes, Mech. Engineering  
Paddy Tindall, Support Div.

The League Finals took place on

Weds. August 16th.

## MARCONI INTER-DEPARTMENTAL FOOTBALL

THE 1983/4 season commenced in very hot weather, with the pitches in a very hard and dry condition. The match for the Mick Owen Memorial Trophy, between last season's cup winners Radar Software and Computer Centre, Baddow, was played on Wednesday August 31st, 1983, at the English Electric Valve ground, Waterhouse Lane. The winners were Radar Software by a score of 2 to 1. Malcolm Box had a super game and that useful winger Peter Reynolds slotted home the winner from a corner kick, with only minutes left to play. Ken Tracy had earlier opened the scoring with a good goal from a well placed shot.

## OUR MODEST DDHLers ..

### DDHL Rounder Team

DDHL's team of precision batsmen overwhelmed onlookers (and the opposing team) by their dominant style of play in a rounders match between mighty Marconi and Polkinhorne's 'Wreckless Rounders Team' at Admirals Park on Tuesday August 2.

The dynamic combination of unbiased umpiring and battle dress by courtesy of Transmitter Group laundry basket, helped DDHL to a satisfying and decisive victory by 15 rounders to 11.

The 'Wreckless Rounders Team' recently featured in a return match. (Editor's note: did DDHL lose — as there is no score given?) DDHL also look forward to the time when they may quell any attempt by DSD to beat them at the superlative game of rounders, to a challenge originally laid down by DDHL — and for which the DDHL 'roundry' has been developed.

Potential challengers are forewarned of DDHL's aim to perfect an 'inter-ballistic' bat capable of 3 megabonks per strike, using NASA based technology.

Phil Ager



## VATMAN STRIKES AGAIN! Tax pushes up the cost of lunching

People using the snack bar will have already noticed that the prices have risen somewhat. This rise, 15 per cent to be exact, is not due to the cost of living but to the cost of taxing!

Our friendly(?) local VATman has ruled that the snack bar is not a takeaway facility, rather that the whole site constitutes premises on which food is sold and consumed — somewhat akin to a restaurant . . . and for this reason the food is taxed at 15 per cent.

We have argued strongly with the VATman, but to no avail, and have no alternative but to impose the price rise. The Company, will, in fact, have to pay the back VAT on all snack sales since April . . .

Tim Jones

Assistant Personnel Manager



# M.S.C.

### 1983 GRAND CHRISTMAS DRAW

There are over 180 prizes of Christmas Fayre and Spirits to be won. Make sure you get your tickets — only 10p each of 50p per book — many agents throughout the companies — also available from the MASC reception desk. If you would like to be an agent phone Tony Clifford at the Club. Draw to be made on Monday, December 12

Friday, November 25, 8pm.

Free entertainment in the lounges with Liquer.

Saturday November 26, 8pm.

MODERN DANCE SECTION DANCE

featuring Ronaldo's Dance Band. Members £1.75, guests £2.25

Saturday December 3, 8pm

STAR CABARET SHOW AND DANCING

Starring comedy impressionist Tony Maiden TV's newest comedy genius plus Ventriloquist Ken Wood comedian/comper Squire Ronnie Hayward with singing/dancing to the Russ Pinder Trio. Basket meal inclusive of ticket. All seats reserved. Parties catered for. Late bar applied for. Members £4, guests £5.

Friday December 9, 8pm

Free entertainment in the lounges with Enterprise.

Saturday, December 10.

MARCONI MARINE ANNUAL DINNER & DANCE

Full details and tickets from Mrs Crouchman MIMCO.

Monday, December 12, 7.30pm

GRAND CHRISTMAS DRAW

In the lounges, plus comedy and dancing to the Russ Pinder Duo. Also surprise cabaret. FREE Labrokes Holiday and other prizes to be won if you are there on the night.

Wednesday, 14th December, 8.15pm

CHRISTMAS STAR STAG

Starring the one and only Bernard Manning

Plus Roger Fortune, Pat Page, 3 Girls

This is the one you have all been waiting for so get your tickets early to avoid disappointment.

Members £4, guests £5

Thursday, December 15, 7 for 7.30pm

LADIES CHRISTMAS DINNER & STAR CABARET

3 course dinner, novelties, star cabaret. Starring Fiddlygig A comedy show group who will have you in fits of laughter plus the dynamic voice of singing star Dave Gold and the humour of comedian Chris Carlsen backing by The Boulevard Trio. All seats reserved. Parties catered for. Book early ladies so as to avoid disappointment. Members £7.50 Guests £8.50

Friday, December 16

Free entertainment in the lounges with the popular Western Revival.

Saturday, December 17, 7 for 7.30pm

GRAND CHRISTMAS DINNER, DANCE & CABARET

4 course meal, novelties. Dancing to Tarmigan. Fresh from success both home and abroad. In cabaret, the complete entertainer Mike Felix and the Groovers Steel Band. Members £8.50, guests £9.50

Sunday, December 18, 8pm

CHRISTMAS BINGO & CAROL SINGING

featuring The Essex Police Band

Monday, December 19, 8pm

THE ESSEX POLICE BAND

Present their annual Christmas Band Concert. An evening you cannot help but enjoy. Tickets will be on sale from Reception

Wednesday, December 21

CHRISTMAS HAMPER DISTRIBUTION DAY

Friday December 23

Free entertainment in the lounges with The Russ Pinder Duo

Saturday, December 24

MODERN DANCE SECTION

Present and evening of dancing plus fun and games also buffet With your host Eddie Porter. Tickets will be available from reception. In the Lounges both lunchtime and evening the

First Generation Disco

With music for everyone. Golden oldies, modern and a bit of the romantic era.

Tuesday, December 27, 8pm

BOXING DAY SHOW

A full evenings entertainment for all with a little bit of dancing to start and finish the evening. Comedy, singing and fun. Featuring Barry St Clair, Pet Barry, Joe Goodman. Plus Paul Denham and Quality Sounds (back by popular demand) Members £1, OAP's 50p, guests £1.50.

Wednesday, December 28, 3.45pm

MARCONI COMPANY EMPLOYEES'

CHILDREN'S PANTOMIME

A professional company presents Goldilocks and the Three Bears a fun-filled fantasy to entertain and delight your children from 5 to 11 years old. This is free to all employees' children. Application forms available from all gatehouses and the MASC reception

Friday, December 30

Free entertainment in the lounges with Freeway.

Saturday, December 31, 8pm

NEW YEAR'S EVE DANCE AND CABARET

Dancing to the music of the Russ Pinder Band

In cabaret the all-round entertainment of Ken Joy. Members £3.00, guests £4.00. In the lounges Enterprise

PLEASE NOTE: The admission fee for all guests using the club this evening is £1.00.

Monday, January 2

M.A.S.C. FUN RUN DAY

For details watch posters and the Essex Chronicle on how to enter yourself or a team from your area or office.

CLUB SKI HOLIDAYS After all the Christmas Festivities how about a Ski Holiday to round the winter off — We have three available.

Depart 7th January PAMPOROVO, BULGARIA — 6 days. inclusive price £185. Depart February 12 TONALE, ITALY. 6 days. inclusive price £170.

Depart March 16 LES COLLONS, SWITZERLAND. 6 Days inclusive price £211. Inclusive price for all holidays include all you need. Equipment and personal insurance, lift pass, skis, sticks and boots, airport tax, coach MASC to airport and return, 2 hours daily ski lessons.

There are limited places only available on each holiday so book early to avoid disappointment. £40 deposit is required with Booking. Book now at Reception.

The staff of the MASC with all our members and friends

A HAPPY CHRISTMAS and A PROSPEROUS NEW YEAR

Bookings and tickets for all events in the programme now available at reception.