

★ ★ MOTTO FOR THE MONTH ★ ★
 "Feminine bridge spans a flood of gossip."

MARCONI AVIONICS TEAM AT PARIS AIR SHOW



Photograph by courtesy of Parrett and Neves Ltd.

Background (back to exhibit): Roy George, FCD.
 Foreground (back row, left to right): Richard de Verteuil, ISD,
 Peter Burlong, APD, Pat Hobson, ATE.

Front row (left to right): Barry Read, PSD, Representative from
 Optical Division, Basildon, John Applin, FARL, Elizabeth Lieuvon,
 Interpreter, Malcolm Moulton.

**PRESENTATION OF A
 BED TO ST. BARTS HOSPITAL, ROCHESTER**

After a spell of incapacity, necessitating surgery, a member of MASD decided that on recovery he would endeavour to do something to show his appreciation of the skill and attention he had received. Having looked around him he decided that a modern-type bed would be an advantage to the staff and future patients.

When Laurie Collier of MASD Drawing Office returned to work, he began to put his plan into action by enlisting the help of his fellow workers. The idea was enthusiastically taken up and a small band began to gather funds by means of raffles, 'do's' and contributions.

The end result came in July when, on behalf of the members of

MASD, Laurie, Margaret, McIntyre, Wendy Turke and Mr. D. Clews, Divisional Manager, handed over to Sister De-Ath, on behalf of the Hospital Management Committee, a 'Hoskin' king bed. The bed can be lowered and raised by a pedal pump, can be tilted as may be required and is fitted with a personal hoist.

The McCulloch ward, where the bed is situated, caters for male surgical cases and on receiving the gift Sister De-Ath acknowledged the benefits that would accrue to the staff from its use, as well as the help it will give to the patients. The first patient to occupy the bed was Mr. Henry Heather who was recovering from major surgery.



Sister De-Ath showing obvious delight at the gift with Laurie Collier, Margaret, Wendy and Mr. Clews at her side.



Laurie Collier pointing out the donor plaque at the foot of the bed.

NEW COST-SAVING AVIONICS HELP RAF CREWS TO OUTWIT SUBMARINES

Marconi Avionics Trainer, on Nimrod aircraft, offers better training for less cost

With the installation of a new kind of training aid in Nimrod aircraft, aircrew of the Royal Air Force can now undergo realistic anti-submarine training without a co-operating target and without expending sonobuoys. Designed and produced by Marconi Avionics Limited the ACT-1 (Airborne Crew Trainer-Mk 1) which physically resembles a TV game, can also be used during transit between the aircraft's base and the area to be patrolled, a flight period previously regarded as unproductive, in terms of 'hands-on' training for acoustics system operators.

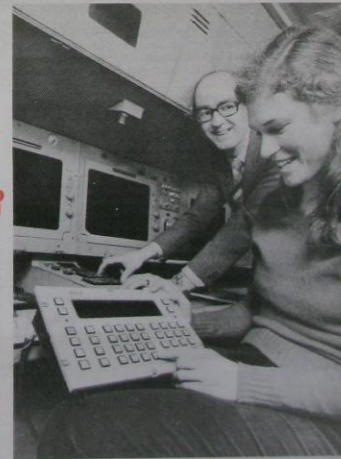
The Company's Maritime Aircraft Systems Division, Rochester, which is responsible for the new on-board training aid, also supplies Nimrod's sophisticated AQS 901 acoustic processing and display system. This system, which enables the Nimrod to provide an effective answer to the submarine threat, presents, on five television-like electronic displays, processed information from which Nimrod aircrew can identify, locate and track even deeply-submerged submarines.

ACT-1 consists of a single exercise control unit, which is a control and display panel with push-buttons and a reel of magnetic tape containing the software program, by means of which the AQS 901 can operate in a training mode.

Using the exercise control unit, a member of the crew can inject data simulating a submarine's position, course and speed and sonobuoy data relating to that target. Other crew members operate the AQS 901, exactly as if a real submarine and real sonobuoys were involved. Different submarine manoeuvres can be simulated in an attempt to evade localization.

For this reason ACT-1 has been likened to a 'TV game' for two to four 'players' using five 'TV sets' simultaneously, with a crew member playing the part of a submarine and trying to outwit his colleagues. It is the training aid's complex digital program, or software, which enables so simple an equipment to carry out such a comprehensive and useful task.

The ACT-1 is believed to be the world's first airborne training aid in squadron service to make use of this technique. Conventionally, when no practice target has been available, airborne anti-submarine training has involved a ground simulator, linked by radio to an aircraft patrolling in a range area. Whilst ACT-1 does not replace ground-based simulation as a training method, it permits an aircraft captain to train his crew at his own tempo, in an area and at a time of his own choosing, without the expenditure of sonobuoys, and clear of the air traffic close to his base.



Pictured with the Marconi Avionics ACT-1 are the engineers who have led its development. Joanna Moore, 23, Project Leader in the Company's Maritime Aircraft Systems Division at Rochester, is depicted using ACT-1 to simulate a submarine evading detector, whilst her boss, Project Manager Peter Hyle, 35, is operating the Nimrod's AQS 901 acoustic processing and display system, to pin point her 'submarine's' position.

Although the two are pictured in the Marconi Avionics factory, both have flown on an operational sortie in the Mark 2 Nimrod. These are equipped with the AQS 901 system and are being fitted with the new ACT-1. Joanna, who lives in Woultham, carried out the software programming for ACT-1 and later became responsible for the equipment itself. She has a degree in mathematics and joined MAV in 1972. In her spare time, she is a keen horsewoman and owns her own horse.

Peter, who joined MAV in 1969 is responsible for the ACT-1 and other projects and has a B.Sc. in electronics. He lives, with his wife Susan and two young boys, in Burham. As a hobby, Peter likes to play badminton.

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 Joan Golding, ISD, Ken Castle, Ann Golding, D.H. Pells, ATE
 Others are required for: AS & R (New Road), CQG, GYRO,
 AS & R (Flying School), RAS.



Volunteers should offer their services through Divisional Administration Officers or direct to Editor.

OBITUARY

We deeply regret having to record the death of the following employees:

Mrs. Iris (Daph) Hyde, aged 52, who began work in September 1964 as an assembler in TACD. In 1970 she joined FCD, until transferring to IND in 1971. She later became a Stores Operative and transferred, within the same position, to ADD in 1979. She died in St. Barts Hospital on 25 April, a day after her birthday. To her husband Ken, a well-known employee of our Company, our deepest sympathy.

Lewis (Lew) William Rayfield joined the Company in March 1962 as a Storeman within AS & RD becoming Chief Storekeeper on 1 January 1968. He maintained this position until his death at home on 29 May 1981.

David Travis Broadbent, aged 63 years, who had spent over 40 years with GEC companies, died tragically in a car crash in France on 15 June 1981. In 1946 he was a Research and Development Engineer in Precision Developments Company Ltd. and transferred to Elliotts in 1948 and was Chief Engineer Aviation Division until March 1957. He went to Treforest as Technical Director of Elliott (Treforest) Ltd. and in 1963 returned to Rochester as Technical Advisor to Flight Automation, responsible for the Fuel Research Laboratory based on the New Flow Rig. Prior to joining BP Swift in 1946, Dave Broadbent was employed by Metropolitan Vickers Ltd., at Trafford Park, Manchester.

To the members of their families we extend our sympathy and share with them the loss they feel.

Many a true word spoken in jest SERVICING A FRAME TENT

This is the time of year when campers should be thinking of equipment maintenance and repair. Using an 'Authorised Supplier' can be a costly business and with a little care and attention you can save EEEs doing it yourself. First find a spot to pitch your tent. This

should be, as far as possible, flat and facing south-west. Prepare the site using a friend's 'mini-digger' if you don't have your own, or try hiring equipment from a local building firm or District Council. If time permits, after levelling treat surface with potters ash to fill small indentations. When erecting the tent inspect the tubing for infestation by aluminium weevils, if it is only slightly damaged, drill out using 3,77mm drill (minimum) and plug using Bungler's No.3 paste. Allow to 'go off' before sanding down with wet and dry.

Small holes in the canvas can easily be repaired with a piece of canvas larger than the hole and proprietary contact adhesive. For larger holes and tears proceed as though repairing sails from a Dragon class cruiser. Inspect mud walling for damage by stick insects and make good as necessary. Non manipulative eyelets should be re-roped with a Hipkiss die and punch, but do not exert more than 7,23 kg/cm² force on soft brass.

A tip for cleaning plastic windows is to use a solution of one part draught Guinness to 23 parts fresh (or rain) water by volume. This should be applied using a garden spray on a mild day with wind less than force 2 (Beaufort scale).

Ropes and guys should be thoroughly cleaned by an overnight soak in a weak solution of Perfluro (1, 3 - dimethylcyclohexane) PFC obtainable from your local Camping 'n' Caravaning Centre. Proof by 'rubbing in' beeswax.

Finally, tent pegs should be straightened in a shipwrights vice with a dolly and hardened and tempered. A local smithy will often undertake this task very cheaply.

Indoor desk gardening

I was extremely interested in the article on 'Indoor desk gardening' by Professor B. Loon of Special Products Division, featured in issue 34 of MAV News. No doubt many hundreds of employees will be taking up this hobby so I would like to pass on some advice based on my own experiences.

When I tried to purchase the 1ft by 2ft tray, the Professor recommended, a rather rude shop assistant said "You must be joking, don't you know we've gone metric?" This came as quite a shock and in my bewildered state I opted for a 1m by 2m tray instead. This found was a little bit on the large size, in fact it occupied the whole of my desk top. As you can no doubt realise, this caused a complete stoppage of work on my part. Luckily no one finds this unusual.

I would strongly advise against daily watering of the plants as I found this caused excessive condensation on the inside of the Tower Block windows. Combined with the thick dirt on the exterior it completely blocked the view of the outside world. This caused many complaints from my workmates whose main occupation is watching the new estate rising on the site of the old Greyhound Stadium.

I also think it best if a small amount of rye grass seed is added to the bowling green seed recommended by the Professor. This produces a much harder wearing surface and avoids the worn pathway which soon appeared on my lawn due to the aforementioned workmates using it as a short cut to the loo.

I hope all budding desk top gardeners will find my advice useful - perhaps we could form a society with Professor Loon as chairperson?

Miss A. Foal
 Typing Pool Section.



Some more recipes suitable for the picnic basket.

CHICKEN LIVER PATÉ

A quick to prepare paté which improves if it is allowed to mature for two days. It can be stored in a freezer and should be served cold.

Ingredients: ½ lb chicken livers
 1 small onion
 1 tbs oil
 salt and pepper
 marjoram
 2 eggs
 1 tbs brandy
 2 tbs softened butter
 paprika

Method: Clean the chicken livers and cut them into tiny pieces. Finely chop and cook the onion in the oil until transparent add the chicken livers and continue cooking until these are tender, about 10 minutes, stirring frequently to keep livers soft. Remove from the heat and leave to cool, then blend the mixture in a liquidiser until smooth and creamy. Hard boil the eggs, chop finely, and blend in with the brandy and softened butter. Season to taste with salt, pepper, paprika and marjoram. Pack the paté into a jar and chill.

STUFFED FILLET OF PORK

This lean cut of meat is stuffed with apricots and served cold, cut into slices.

Ingredients: 2 pork fillets
 8-12 apricots
 2 tbs of roughly chopped parsley
 salt and pepper
 1 oz butter
 ½ pint single cream

Method: Remove the fat and skin from the fillets, cut them lengthways through half their thickness and open out and flatten. Sprinkle the fillets with salt, pepper and parsley and lay 4 to 6 apricots on each fillet. Roll up the meat and tie with pieces of fine string. Melt the butter in a heavy-based pan and brown the fillets all over for a few minutes. Mix the cream with water to make up to ½ pint and pour into the pan - cover with a lid and braise over a gentle heat for about 30 minutes. Lift out the fillets and allow to cool completely before removing string.

OAT CAKES

A very simple but tasty Scottish recipe

Ingredients: ½ lb fine oatmeal
 ¼ tsp bicarbonate of soda
 2 tsp of melted lard
 pinch of salt

Method: Mix the oatmeal, bicarbonate of soda, salt and lard. Mix with lukewarm water to make a fairly stiff dough. Roll out the dough thinly and cut into small rounds. Bake on a greased griddle or hotplate for 2-3 minutes on each side.

CASTAWAY

We have persuaded Mrs. Mary Bell of CACD Wiring Department to be our pseudo castaway. Mary has been with the Company at Rochester for 6 years after spending some time in Mobile Computers at Borehamwood. Among her out of work activities she says gardening, walking and needlework are pursuits she enjoys and she is also a Cub Leader, within the scout movement.

MUSIC
 The Last Night at the Proms - preferably with Sir Malcolm Sargent, pure nostalgia.
 Roberto Delgado and the Botticelli Orchestra - easy listening
 Frank Sinatra's Greatest Hits with Nelson Riddle - timeless lyrics from a great artist.
 Tribute to Jim Reeves - one of my favourite artists.
 Geoff Love and his Orchestra - good musical entertainment.
 A BBC recording of a Goon Show - for when I need a good laugh.

BOOKS
 Diary of an Edwardian Lady by Edith Holder - detailed descriptions of English flora and fauna beautifully illustrated.
 The Agatha Christie Companion - good mystery stories.
 One of the 'Vet' series by James Herriot - lifelike descriptions of the Yorkshire Dales and the people who live there.

Marriages

On 2 May at St. Augustines Church, Gillingham, Paul Childs of ISD Logistics married Jane Whymen a hairdresser in Rainham.

Michael John Bradford, ISD Technical Publications Department, married Carole Melanie Luckhurst, ADD Drawing Office, at St. John the Baptist Church, Tunstall, on Saturday 11 July. Suitable gifts were subscribed for by members of both divisions.



Michael Bradford and Carole Luckhurst. (A)

Keith Dixon, ATE Drawing Office, and Anita Craig a typist with Lloyds Overseas on 8 August.

Steven Broom, ATE Drawing Office, to Lesley Fallow a VDU Operator with the Kent Fire Brigade on 29 August.

Births

To Linda and Martin Boardman a son Christopher Alvin, in All Saints Hospital on 27 June 1981. Linda was formerly in PSD Stock Control, while Martin is in ISD Model Shop Planning. Martin also celebrated his own birthday on 10 June.

Maria Sampson, of CAC Progress Purchase Department gave birth to a daughter Tracey Caroline on 27 July 1981, weighing in at 6lb 9oz.

To Peter (Pooh Bear) Reeve and Linda the gift of a son, Matthew, at All Saints Hospital, Chatham, on 17 July 1981. Matthew turned the scales at 6lb 4oz. Special greetings and good wishes from their friends and colleagues in MASD.

Best wishes to all parents.

Anniversaries

Congratulations and best wishes to Ann Golding who celebrates her 21st birthday on 16 August.
 A Computer Programmer Trainee in ATE, Ann also holds the Duke of Edinburgh Gold Award.

Congratulations and best wishes to Mr. and Mrs. Arthur Fairbrass, who celebrated their 40th (ruby) Wedding Anniversary on 26 July 1981. For many years Arthur has been employed in the Cashiers Department of MAV Accounts.

HOUSE FOR SALE Davis Estate

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Bedrooms (2) Large gardens
 Bathroom Large garage
 Lounge at rear
 Kitchen
 Dining room
 Very convenient for Airport Works
 Contact - Frank King 899 (MED 65110)

ODD ODE TO A S & RD

IN RETROSPECT

There's an AS & R Div at Flying School
 What's noted for workshops and S.O.N.
 The blokes, they play with their Gyros
 While the lassies make tea and have fun.
 Now 'Jimmy the One' 'E's' the Boss Man
 He's referred to by many as Jim
 He's tall for this height, loosely speaking
 They say his favourite tipple is gin.
 Bill 'E', he's the financial wizard
 And has quite a load on his plate
 I'd give him the job of chancellor
 He'd get us out of this state.
 The Technical 'Type', his name's Michael
 Ex Service you can see at a glance,
 And a very likeable fellow
 'Top Floor' material given the chance.
 There's Ann 'B' the Sec to his ribs
 She's a typist with very good looks,
 If she'd only take me to her island
 Instead of her perishing' looks.
 Now Pat and her brood of young ravers
 They look after the drawings and plans
 No messing around in this section
 You may look at the breads—but no hands!!
 In Planning there's J.P. and B.J.
 And a U/T Brown job' called Vic
 He's a bit of a card, and no 'kiddin'
 He's constantly taking 'the mick'.
 We've got Maureen, Wendy and Heather,
 Uncle Jack, Kevin and me
 The 'Birds' are a formidable trio,
 The soup they make is called tea.
 Mustn't forget progress and Sidney
 Better known to his 'oppos' as Sid,
 He'll chase the pants off suppliers
 Providing you slip him a quid.
 We've got Controllers, Foremen and Officers
 Project Leaders and Managers galore
 Plenty chiefs, but not many Indians
 Who could ask for anything more?
 The Inspectors along with W.B.,
 In their back room slurring their tea.
 You ask for a 'Quickie' The Boss says not likely
 Come back in December around three.
 There's Keith, George, Martin and Ted
 Jerry, John, Alfie and Bob
 The two that are missing are travelling the road
 Out in 'The Field'—on the job!!!!
 The girls in Systems are quite groovy
 Controlled by a geezer called Rod.
 What a din they make when they're working
 Did I say working!!—How odd.
 Then there's Q.A. with Bob, Pat and Alma,
 Scintillating Sam with his 'woods'
 Tom the 'Bike' and the lass with the giggle
 They assure us the quality with the goods.
 Now enough of this 'Ode' to Kidology
 The verse of which is quite rare,
 Please pardon the warped sense of humour
 Blame Aviation, Service and Despair.
 I'm 'awa' to the woods in September,
 But afore I go I would say,
 Many thanks to you all whom I've worked with,
 Good Luck, God Bless, Yours Aye,
 G.W.G. White-Winchester, AS & RD



In response to many requests, we present our own page 3 girl!!

Personality

Our personality victim is the well-known Dave Marvell—the man of the toothy grin who is in charge of the ADD Model Shop producing first-off prototypes. He is a 'Seagull' from the Isle of Sheppey and began his industrial life at Short Bros. as an apprentice, commuting from the island to Rochester esplanade daily, by pedal cycle.
 During World War II he was called to the Royal Navy and having passed his trade test as an ERA (following in his father's footsteps) he was promptly passed over to the Fleet Air Arm and posted to the RAF Technical School at Henlow for a nine month course on aircraft electricals and instruments. Being Dave, this was convenient for him to travel from Henlow to Sheppey at weekends using his pedal power, experiencing the blackout and London bombings.
 On completion of his course, as an Air Fitter, Dave went on duty to Lea-on-Solent to dispense coal around the station. As 'D' day approached Dave became swept into the preparations and started ground support duties. After 'D' day Dave was transferred to Eastleigh where his time was spent reducing shot-up aircraft in the least possible time. He recalls how Eastleigh was a designated 'prang' landing drome for receiving diverted stricken aircraft to prevent them causing damage to operational airfields.
 The usual affable and genial Dave was affected at this time by the sight of trains rumbling past full of troops on the way to Southampton, and ambulance trains carrying returning wounded from the battlefields.
 After VE and VJ days and after being transferred to a variety of locations Dave returned to civilian life again in May 1946.
 During the severe winter of 1946/7 he was employed, by Shorts, in the High Bay Hangar (what is now MAv Transport Department) on Sturgeon Prototype Aircraft. Lack of fuel caused the factory to close but a chosen few, including our Dave, were sent to Portsmouth Aviation to assist in producing the first all metal 'Aero-Car'. As the weather conditions became more tolerable, he took to the open road again, to travel back home at weekends to be with his young family.
 The original intention of producing the 'Aero-Car' in quantity at Rochester never reached fulfilment, even though it was put on show at the first post war Farnborough Air Show, a period of unemployment followed, until he joined Swift and Swallow, in October 1947, who had now taken over part of the Shorts Hangar. In those days there was no daylight due to the boarding up of the roof after bomb damage—rain however managed to come through the roof by means of shrapnel holes.
 As the company prospered, so did conditions, and when it was decided to commence a Toolroom the young 'Marvell' took up duties and quickly progressed to Leading hand, Chargehand and Foreman. With great pride he recalls how the products of Swift and Swallow B

and P Swift) flooded the market of food preparation machines which had the edge on competitors with delivery and a ten year guarantee! A foretaste of the reliability of our present-day products.
 As an amusing anecdote he tells the story of how a super salesman sold a considerable number of cake mixers to the War Office, for use in officers' ward rooms, capable of chipping potatoes 7/8 inch square ± 1/16 inch. No such attachment was available, so a model was rapidly produced and a tryout party got to work, only to find that after cooking the micrometer decreed they were undersized! So redesign was done!! Then it was Trial and Error—nowadays it is R & D.
 When a larger site for the expanding Toolroom was needed they moved to space on the lower floor and joined with Paint Shop, Heat Treatments, Print Room and Gear Shop, to be termed Production Services.
 At this time the company name changed and the MER Division began, with Fisher Controls and Aviation Division; necessitating a nightshift in the Toolroom. Within the Toolroom and among the workmen began the Elliott blood doing scheme and rumour has it that if you were not prepared to give blood you could not get a job in Roper's Toolroom. With his bike, Dave managed to outstrip the field on their way to donate blood at the Balmoral rooms, Gillingham. To date, he is still giving blood when the team comes to the works and has given some 60 plus pints.
 Devoted to 'pedal power' from an early age, he became a keen racing cyclist in his youth and his interest has been maintained ever since. Currently President of Medway Velo Club, committee member and founder member of the Fellowship of Kent and Sussex cyclists and a road and track judge. He also gives help at the Company Sports Day. But Dave still finds time to cycle—and can be seen in all weathers taking to the open road. Dave has a further interest—a love of all things to do with railways. At the Company fete days he brings together a band of enthusiasts to display and operate model railway layouts for the delight of the men and boys, who marvel (no pun intended) at the wonders of '00', '0' Gauge and Bassett-Lowke models.
 David Eugene Marvell (sorry it slipped out!) is a man of many 'firsts'. He worked on shorts MAIA Composite Aircraft (the first), The Sunderland, Empire Flying Boat, Stirling Shetland and Sturgeon aircraft, the Aero-Car and was first in Elliott's Toolroom and first in ADD Model Shop. Modest, yet efficient, he gives credit to the team he leads for doing a top class job.
 Happily married to Joyce, who shares his interests they have two children and seven grandchildren, to which they devote their spare time. A devoted family man—domestically, socially and industrially—he delights having people around him with whom he can share help, knowledge and experience.



Dave in hot pursuit in days of yore.

For those interested in nostalgia:
 Who is the gentleman standing, with spectacles, on the bank?

If you know send your answer to the Editor who will award a prize to the first correct answer drawn out of the hat. Please see that your entry reaches us no later than 9 September and includes your name and Division/Department.



Ooh! Away she goes.



SPORTS

The weather was kind to the competitors and sportsmen on the road ground on Saturday 11 July. A new name goes winners CMS.

The leading results of the events were:

MEN

100 metres

200 metres

400 metres

800 metres

1500 metres

1500 metres (walk)

Inter-divisional relay

High jump

Long jump

Shot

Discus

Javelin

Tug o' war

1. I. Gower, ISD	2. M. Butler, FCD	3. T. Atkins, ISD
1. M. Butler, FCD	2. I. Gower, ISD	3. T. Atkins, ISD
1. M. Butler, FCD	2. I. Gower, ISD	3. D. Minter, ISD
1. B. McCloy, MASD	2. D. Minter, ISD	3. G. Clark, ATE
1. B. McCloy, MASD	2. D. Minter, ISD	3. G. Clark, ATE
1. T. Hayes, ISD	2. K. Randall, CMS	3. M. Jury, IND
1. ISD	2. ADD	3. PSD
1. K. Sayle, CMS	2. M. Martin, CMS	3. L. Martin, ISD
1. T. Atkins, ISD	2. K. Sayle, CMS	3. M. Martin, CMS
1. J. Smith, PSD	2. K. Sayle, CMS	3. A. Peak, PSD
1. J. Smith, PSD	2. K. Sayle, CMS	3. M. Chapman, ADD
1. M. Chapman, ADD	2. P. Jarvis, CMS	3. A. Peak, PSD
ISD		

WOMEN

100 metres

Inter-divisional relay

High jump

1. J. Peddie, ISD	2. K. Purdon, IND	3. N. Saker, ATE
1. CMS	2. IND	3. ADD
1. D. Stone, CMS	2. J. Peddie, ISD	3. T. Walker, ISD



One way to 'roll over'.



Steady now! Hold on.



Will it stay on?



Determination.



Beauty and the throw.



Inter-divisional cup for ISD.



Will it be a good one?



Prizewinners being congratulated and presented with prizes.



One of the prizewinners.



ISD relay team.

SPORTS DAY 1981

Spectators at the annual Sports Day, held at the Featherby onto the Inter-Divisional Trophy, as ISD outdid last year's



The 'shot' away.

Long jump
Shot
Javelin
Discus

- | | | |
|--------------------|--------------------|--------------------|
| 1. J. Peddie, ISD | 2. D. Garrett, ADD | 3. N. Saker, ATE |
| 1. D. Firth, ADD | 2. J. Hodge, CMS | 3. S. Shannon, CMS |
| 1. S. Shannon, CMS | 2. C. Diffley, PSD | 3. D. Firth, ADD |
| 1. D. Firth, ADD | 2. J. Hodge, CMS | 3. N. Saker, ATE |

BOYS AND GIRLS

(B) 100 metres 12 years
(B) 400 metres 13/14 years
(B) 800 metres 15/16 years
(G) 100 metres 13/14 years
(G) 100 metres 15/16 years

- | | | |
|----------------------|----------------|------------------|
| 1. N. Roberts | 2. B. Morris | 3. P. Stevens |
| 1. G. Jones | 2. G. Morgan | 3. I. Langley |
| 1. S. Buttling-Smith | 2. A. Budd | 3. I. Langley |
| 1. N. Saker | 2. L. Williams | 3. D. Garrett |
| 1. J. Peddie | 2. A. Haggerty | 3. A.A. Haggerty |

VETERANS
100 metres

- | | | |
|-------------------|----------------------|----------------|
| 1. L. Murphy, ADD | 2. R. Hedgecock, ISD | 3. R. Day, ISD |
|-------------------|----------------------|----------------|

INTER-DIVISIONAL CHAMPIONS ISD

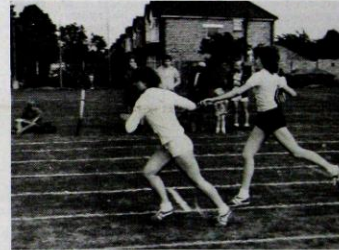
VICTOR LUDORUM 1981 Mark Butler, FCD A310 Programming



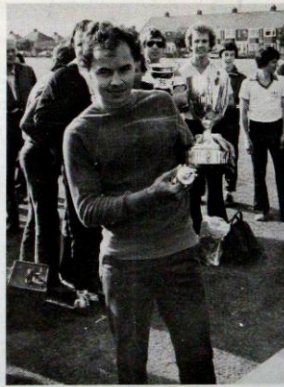
Pull - pull we've got 'em.



Sailing the air with the greatest of ease.



A good change - all yours!



The man, the smile and the cup.



Walking to success.



John Smith, PSD, receives his trophy.



Diane Firth, all smiles as she receives her trophy.

www.rochesteravionicarchives.co.uk

RETIREMENTS

A loyal hardworking and steady fellow who came to the Company some 16 years ago has retired—having survived a serious illness in the latter months.

Bill Metters, a much travelled and experienced chap joined Elliotts in 1965 in MAC and served in FCD within the Contracts Department and continued under the reconstituted FCD until retirement earlier this year.

Bill was an ex-Army man and began his career as an Apprentice Fitter in the Royal Engineers, with whom he served for 10 years. In 1941 he was posted to RAOC, until demob in 1946. He then became a Technical Representative for a national tyre service company and after 2 years took up a post with IND COOPE as a Maintenance Engineer. In 1956 he rejoined the Army as a Warrant Officer on maintenance. He is a holder of the Dunkirk Medal, one of a select band who were awarded this special decoration. A former rugby player, he once played in a Wales versus Rest trial match, when he was based at Chepstow.

A subscription among his friends and colleagues, enabled Mr. Dick Godden to present him with a farewell gift of a pair of binoculars and in doing so spoke of the sorrow in seeing Bill go, while expressing the pleasure of all that after his long and severe illness he was now looking so well and gave voice to the hope that he would enjoy a

happy and long retirement. In reply, Bill said it was good to be able to express his thanks for all the many kindnesses and help he had received and for the encouragement of his colleagues during their visits while indisposed.



Bill Metters and Dick Godden. (A)

The CAC Division is now the poorer by the retirement of Mrs. Hilda Ord, after some eight years with the Company.

She joined FCD and worked in the DQ Library and when CACD was established she became the new division's Librarian. As such she was responsible for the entire processing of drawings handled in the division.

Colleagues describe her as a friendly, sympathetic and helpful person with a delightful personality, and will be remembered for her readiness to help people in all ways. Her going leaves a gap which will be difficult to fill.

Her fellow workers and many friends contributed to farewell gifts—a silver tea service—which Mr. A.E. Mulford presented to her on their behalf.



Mrs. Hilda Ord. (C)

25 YEARS' SERVICE

Glen Bartle of AS & RD, Quality Assurance Team has joined the LSA by virtue of having completed his 25 years' service.

When he was presented with a clock to mark the event, Mr. Duhid, Senior QA Engineer, recalled that Glen came to the Company from the RAF joining the Aviation Division as a Mechanical Inspector. He was an early member of the Repair Section which eventually evolved as the AS & RD. He progressed up to Leading hand and in 1978 became a QA Surveyor.

He has been associated with servicing and repairs to equipment on Jindvic, VC10, BAC 1-11, Buccaneer flight control and air data systems and Jaguar.

Interested in many other pursuits, he serves the Company and his fellow employees as a Safety Committee member, has contributed to MAV News as a cartoonist and lists as his hobbies—playing golf and doing art work. He is now one of the originators and a leader in the newly-formed Art Society.



Mr. Glen Bartle. (D)

A native of West Malling, who still resides there and commutes daily from the Weald, has completed his quarter century. **Daniel Saul** (no biblical quips please!) began his service with the company on 16 July 1956 in the then Guided

Weapons Division as a TA and progressed to be an Engineer. He then joined MAC, as a Trials Engineer on TSR2 and spent some years on site work. He returned to Rochester to join Air Space Control under Mike Propoy and later joined ACD as a Project Engineer. On the formation of MASD, Daniel left ACD and joined the then new division. He is now a Project Engineer, responsible for the Divisional Component Engineering.

Starting life as an apprentice with A.E. Reed of Aylesford (Reed International) he then served 2 years National Service with REME within the UK. On return to civilian life, he again joined Reeds for a short spell, before becoming a member of an export packing company, prior to his joining the Airport Works personnel.

He says of himself, he just likes to do the usual 'homely' things—gardening, decorating and car maintenance. He is married with two daughters one of whom is married and the other engaged to be so.

Mr. David Clews, Divisional Manager, carried out the honours of presenting his chosen gift—a wrist watch—to mark the occasion.



Mr. Saul and Mr. Clews. (C)

The son of a Kent village Police Constable, who came inland to begin work at the dockyard has recently been admitted to the LSA after 25 years' unbroken company service.

Roy Hubbard left the dockyard and became a member of the Royal Navy, having spent the early days of World War II as a police messenger. After the navy, he came to the Airfield Works and started as a Wireman in Radio and Radar then moved on to the original Air Space Control as a Chargehand. Progressing onwards by way of TAC, Precision Test Equipment and Fuse Division, where he became Leading hand. He transferred to ATE as a raterifier but later returned to Fuse Division as Model Shop Technician, until 1972 when he entered service with ADD, in the Model Shop on prototype work.

Roy is married with two daughters, both are employed within the Company, and one son, who is currently working at the dockyard.

A lover of nature and the countryside, he will enjoy his ramblings all the more by using the binoculars he received from Mr. A. Coldwell, Divisional Manager, which marked his quarter century of service.



Roy Hubbard and Mr. A. Coldwell. (A)

One of the early 1981 entrants to the Long Service Association is **John Walkier**, having completed his 25 years in April.

A West Londoner who joined the Royal Navy as a young man; he served as a sick berth attendant and saw many adventures. On final discharge from the service, he joined Elliotts as a Purchasing Progress man in the then Central Purchasing Department and progressed within the department to Assistant Buyer and as such he joined Radio and Radar. After the Company divisionalized he became Buyer for MER. In 1959 within IN Division he became Senior Buyer and later Chief Buyer, he then joined ADD in 1973 as Material Controller and Assistant Production Manager, where he remained until 1981, when he was appointed Purchasing Co-ordinator. This followed a period in 1980 when he had special responsibilities with reference to import/export controls and finance.

Married with a son in the army and a daughter doing social service work in London. A keen motorist, he was for some years secretary to the now defunct Elliott Motor Club. His hobbies include course fishing (angling) golf and photography.

The chosen gift of a clock was presented to him by Mr. A.J. Harrison, Director-Production Services.



A.J. Harrison and John Walkier (holding clock). (A)

The oft repeated information that the Company is the leader in its field, has been justified recently when a presentation was made to one of the divisions as proof of success.

Ian Wylie, a chief technician in the RAF, who has been attached to ISD for the past five years has been reposted to other duties and on his departure presented to the division a unique memento. This consisted of the first two cartridges (spent) fired at the initial testing of the Stores Management Weapon Control System which ISD had designed and produced. The spent cartridges are mounted on a plinth, with a photograph (by the RAF Photographic Unit) of the actual release showing the system to be efficient and first-time successful.

Ian Wylie was a popular member of the group involved on the SMS project, and he was given reminders of his aptitude for practical jokes from the project team and friends on his reposting.

Sue Wylie, the wife of Ian, had been a member of our Reception Staff since the start of using female staff at the reception desks. Sue served at the Towers reception and was presented with tokens of goodwill and best wishes by Mr. H. Staff, Site Security and Safety Manager on behalf of the many friends she had made since joining the Company.

Presentation



Ian Wylie (right) handing over the memento to the SMS (ISD) Project Leader. (C)



Sue Wylie (centre) with Pat Pilbrow and Mr. Staff. (C)

Avionics engineers volunteer new skills for meteor observation

Special electronics for studying a rare comet's meteors.

Two young avionics engineers, armed with a keen interest in astronomy, plus material help from their company, are making a unique contribution to an international scientific experiment this August, involving a comet which appears once in every 119 years. David Fosbery B.Sc., 25, Project Engineer with Marconi Avionics Limited and his partner, Joe Cardwell, 22, Development Engineer, have designed a single electronic detection instrument, the first of its kind which can tell the presence of meteors and count them automatically.

The new electronic meteor detection system (EMDS) is to be used as part of an international experiment, organized by the Meteor Section of the British Astronomical Association. Known as Project Perseid (pron. 'Percy-idd') it involves studying the appearance of the Perseid meteor stream, which is associated with the comet known as Swift-Tuttle 1862 III, recorded only once before and due to reappear this year.

The EMDS has been designed to meet the requirements of Europe's largest amateur group for meteor observation, the South Downs Astronomical Society, whose President, celebrated astronomer and broadcaster Patrick Moore, is taking a personal interest in the Project.

The South Downs Astronomical Society's 80 members are combining their efforts to observe the comet and its many thousands of rapidly-moving meteors, as their paths cross the earth's orbit. In addition to the new electronic means of detection, the Society is using visual observation and photographic methods, to gain important information about the behaviour of meteors, which can yield a better understanding of the nature and origin of the solar system itself.

The two Marconi Avionics engineers, and some 20 other young scientists from schools and universities, are travelling with the South Downs team to the Aubrac mountains in the Massif Central of Southern France, where, at an altitude of 1200m the best possible conditions will be obtained for their observations. Data will be acquired by the Society's team from late July until mid August, when the number of meteors is expected to be at a maximum.

Usually, meteors are observed by eye, as brief streaks of ionized gas, radiating in all directions, as if from an invisible point. Projecting the tracks back towards their apparent source, (known as the 'radiant'), indicates which meteors are of the Perseid stream. To aid the human observers, an 'all-sky camera' system is used and it is with this that the new electronic equipment is associated.

The EMDS responds to the transient streaks of light which characterize part of each meteor's path. The relatively constant background light from stars and planets is cancelled out automatically and an electronic tally is kept of the total number of meteors, together with the times between each occurrence, to an accuracy of 10ms (one hundredth of a second). All the human observer has to do is detect which are Perseids and which emanate from other sources. The results will help to determine whether or not the Perseid meteors are occurring at random and if dense 'knots' of more recent material are present in the stream, questions of particular importance to the better understanding of comets and their meteors.

About the size of a small shoe box, the EMDS is the first automatic meteor-counting equipment to be built, and its use is expected to encourage the more wide-spread use of electronic detection and counting techniques among amateur astronomers everywhere. The new unit is to undergo official trials at the South Downs Astronomical

Society's Observatory site on the Trundle, Goodwood, near Chichester, before being taken to France.

The two engineers, who work on advanced integrated circuit design in the Marconi Avionics Flight Automation Research Laboratory, Rochester, are being helped with cash, materials and the loan of test equipment by the Company, as part of its general policy of supporting innovation, particularly by its younger engineers.



This Perseid streak in the constellation of Andromeda, is typical of the thousands which are to be observed in association with the comet Swift-Tuttle 1862 III this August.

Personal notes

David Fosbery, who has been with the Company for five years, gained a B.Sc. degree in physics at Queen Mary College, London. He shares a long-standing enthusiasm for astronomy with his wife Bernadette, who is head of the Physics Department at Rochester



John Mason (centre) of the Meteor Section of the British Astronomical Association and a Project Director for the international meteor observation experiment, Project Perseid, went to Rochester on 6 April to visit the Flight Automation research Laboratory of Marconi Avionics. Explaining the advanced techniques, which they will apply to meteor detection, are Joe Cardwell (left) and David Fosbery B.Sc.

Girls' Grammar School. Both are taking part in Project Perseid. They live in Marden, near Maidstone, where their household is a centre for astronomical field studies by the young students. He is a founder member of the South Downs Astronomical Society.

Joe Cardwell, joined Marconi Avionics six years ago, as a technician apprentice and was, four years later, a member of the team which won the South East England final of the TECOMM '79 competition, run by the Electronic Industries Training Board. He gained a Higher National Certificate and, after only one year's research as a Technician in Flight Automation Research Laboratory, rose to the position of Development Engineer. He has since spent a year working on semi-custom integrated circuit design, with David Fosbery, who encouraged his long-standing interest in astronomy to take on a more practical form, as co-designer of the EMDS. Joe lives in Bearsted near Maidstone and his girl friend, who is reading Physics, also at Queen Mary College, will attend Project Perseid at the same time as Joe. His hobbies include photography, squash and riding his Moto Guzzi le Mans 850cc motor cycle.

Suggestion Scheme

Among recent award winners participating in the Company Suggestion Scheme we note:

Mr. B.A. Downey Electrical Inspector - CADC £5-00.
A suggestion relating to an aid for wiring MRCA, CSAS motor boards.

Mr. F.E. Whymark L/H Wireman - FCD nominal £5-00.
Possible improvement in wave soldering procedure.

Mr. E.T. Neilson L/H Tester - IND nominal £5-00.
Suggestion concerning bonding polarizing keys into place in the sockets of LRUs as used on PMDFIU.

Mr. I.C. Dann Tester - IND £9-79
Suggesting possible improvement to testing and inspecting HSI mode switches in Test Department.

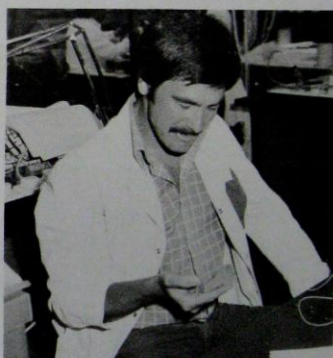
Mr. K.R. Lark Inspector - GYRO nominal £5-00
Suggested the possible appointment of a part-time resident dentist at Rochester establishment.

Mr. W. York Fitter - CMS nominal £5-00
Suggestion concerning manufacture of a bracket to assist production when using 'promecan' brakes press.

Mr. T.M. Crickmore AS & RD nominal £5-00
Mr. C.W. Partington AS & RD nominal £5-00
Suggestion concerns an aid to improve functioning of power interface module.

Mrs. P. Harper L/H Assembler - CADC £30-84
Possible improvement in humi-sealing of integrated circuits prior to mounting on PCBs used for BITE card on Tornado CSAS.

Mr. A. Fairbairn Wireman - ATE £13-10
Whose suggestion related to the manufacture of a template with guide holes to assist drilling and datum positioning of PCB.



Mr. Fairbairn with his award-winning template. (C)

Mr. R. Sexton Wireman - ATE £15-56
An aid to the efficiency of Wiring Department.

Mr. J. Dyer Security Guard £10-00
He suggested a form for checking commercial vehicles visiting main factory site.

APPRENTICE ACTIVITY

There has been a large transfer of personnel from training on completion of their course, to full-time specific employment within the divisions.

APRIL:
D.A. Conquer to ADD QA, C.J. Latter to ADD Eng., A.S. Medhurst to CQD Standards, Miss A. Leeds to Ind. Test.

MAY:
I.M. Hunter to ATE Eng., B.A. Ongley to PSD Insp.

JUNE:
J.D. Corris to ADD DO, P.C. Duhig to CMS Mech. Bench, N.E. Ferrett to ISD Test, T.D. Knight to AS & R Inst. Fitting, D.P. Long to GYRO QA, M.A. Rose to ISD Log, J.R. Sheppard to MASD Eng., P.J. Venn to FCD Insp.

JULY:
P.A. Buckle to PSD Prod. Wiring, D.J. Guillon Eng., M.J. Jarrett to FCD Insp., D.A. Jenman to MASD Eng., N.P. Munn to FCD QA, G.A. Payne to IND Test.

AUGUST:
G.A.T. Hammond to AS & R DO, R. Richards to FCD Eng.

To all these we wish a long and prosperous career in their chosen vocations.

New civil avionics system for British airliner can now yield military exports

Marconi Avionics communications control system makes speech more intelligible.

A new type of communications control system, selected for the British Aerospace 146 airliner, and recently delivered for installation in the 700B version of the BAe 125 business jet, can now also have important applications in military aircraft. The AD 1550 system is the most advanced of a series of communications control systems to be put into production by Marconi Avionics Limited.

The AD 1550 CCS, from the Company's Airadio Products Division, Basildon, incorporates special techniques to improve the intelligibility of speech, against the background noise encountered in any aircraft cockpit. The division's engineering team has now extended these techniques, to enable them to be effective in much noisier cockpits, such as those of certain military aircraft.

The technique, in which system characteristics are continuously and automatically adjusted, as a function of the acoustic conditions prevailing in the aircraft, is believed to be unique.

Another distinguishing feature of the AD 1550 system is that it fulfils, in just one unit, the complete intercommunication requirements of an aircraft, as well as controlling all incoming and outgoing audio services. The single 3/8 ATR unit contains all the electronics required in the system, enabling crew controls, or station boxes, to become entirely 'passive'. By this means, the aircraft manufacturer can tailor the station boxes, to suit the design and style of the crew station, whilst the electronics involved are properly accommodated in the avionics bay.

New return on British investment in gyroscopes

Marconi Avionics gets further order for an important missile programme

A major new order for precision gyroscopes, for Britain's SKY FLASH missile programme, has been won by the Gyro Division of Marconi Avionics Limited. The value of the order is not disclosed but it confirms the Company as by far the biggest supplier of gyroscopes for the missile's vital homing head, produced by sister company, Marconi Space and Defence Systems Limited.

The gyro in question, the GR-H4, is one of the world's most widely used of its kind. Marconi Avionics has made a considerable investment over the past 15 years to secure production of the United States design for Britain. As a result, the cost of production, in real terms, has been reduced nearly three-fold and the value of production at Rochester, based on this type alone, has well exceeded £15 million.

Precision rate gyroscopes and accelerometers, each hardly bigger than a man's thumb, are key elements for the stabilization of many kinds of land, sea and air vehicles, as well as missiles. The Company's expertise in producing GR-H4 gyros, in designing a number of important improvements over the years and in delivering consistently on or ahead of schedule, have led to adoption of the type for many applications, including SKY FLASH, which is the RAF's key armament for the new TORNADO fighter.

Other applications include the stabilization of HARRIER and SEA HARRIER aircraft and HOVERMARINE air cushion craft, aircraft flight test systems, underwater weapons and the guidance systems of UK MARTEL and SEA DART missiles.

The new order strengthens the Company's ability to compete successfully for further new applications of the GR-H4 design, at home and overseas. To secure a long-term future in gyro manufacture, Marconi Avionics has made a further substantial investment, in licensing production of the Northrop GI-G6 rate integrating gyroscope, a design which enjoys two-thirds of the world market for such sensors.

By investing in world-leading designs, Marconi Avionics has expanded the strength of its Gyro Division five-fold in 15 years and

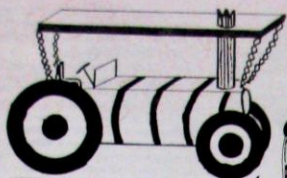


GR-H4 gyro. (A)

has achieved a leading position in gyro applications, in particular in multi-axis vehicle motion sensors. Significantly, these include Europe's first quantity production of 'strapdown' sensor units, built around microprocessors. They are for stabilizing, guiding and controlling the latest kinds of vehicle, including the MACHAN remotely-piloted aircraft, and missiles.

www.rochesteravionicsarchives.co.uk

service and despair...



I know it's not as fast as the triumph, but it's a lot cheaper to run.



I don't care if you're scared of the dark ... let go of my hand.



I wouldn't use that arm for a day or two



If you don't want the Yorkshire Pudding just leave it on the side of your plate.



Dave! Have you got a minute?



...Something about wanting people to look up to her.

Sports and social club round up

RAMBLING

A new 42-bed Youth Hostel has been opened on the Pennine Way at Baldersdale. The new enterprise fills in neatly the 30 mile gap between Keld Youth Hostel in the Yorkshire Dales and Langton Beck Youth Hostel, Teesdale. Interested youth may now be encouraged to do the whole of the Pennine way.

CAMPING AND CARAVANNING

During the popular parts of the season, there are often difficulties in finding a suitable site. Attempts are now being made to keep people in these situations, especially those making for Devon, Cornwall, Cumbria or the New Forest, by setting up advisory centres around the country. Anyone likely to be at a loss for a site in these areas are advised to obtain copies of telephone numbers and operating hours from the ETB Travel Press Office, telephone 01-730-3145.

CRICKET SECTION

The cricket season of 1981 has so far had a far from sunshine spell, to enable ball to crash on willow and white-clad fellows to scatter around the green 'table'. Of the first ten scheduled games, five were called off, one was abandoned and the others resulted in three losses and one drawn game. But there were bright spots for individual members among the cold, damp and gloom of the early season. The AKCC Medway single wicket contest saw three Elliott CC members doing well as individuals.

Brian Hanson, ADD, took joint 3rd place for the second consecutive year.
Navinda Loomba, ETL, was awarded 2nd place.
Mark Jasper, an associate, though, not among the prize winners acquitted himself well.
It was unfortunate that Martyn Coleman, ISD, could not compete due to an injury sustained previously and Gerry Whitford had domestic commitments which precluded his taking part.

Fixtures for the immediate future include:

August	15 Otterden	A Otterden, East Ling
	23 Cooling	A TBA
	29 Leybourne Village	A Leybourne
Sept.	5 Detling	A Detling (2.00pm)
	6 Viking	H Knights Place (2.00pm)
	12 Nettleshead	A Nettleshead (2.00pm)
	13 Hempstead	H Knights Place (2.00pm)

New members are required, also supporters who can support the team by attending matches and boost their ego. The six-a-side indoor winter competition gets under way after the 'open-air season' closes. More details later.

ELLIOTT FIVE-A-SIDE FOOTBALL KNOCKOUT COMPETITION



Latest results			
ATE 'B'	0	MASD	2
Tech. Pubs	3	ISD	4
EDP	2	ATE 'B'	0
ISD	4	ADD	1
New Road	0	FCD	2
MAS Eng.	4	CMS	0
CSAS	1	FCD	2
New Road	0	ATE 'A'	7

League tables to date

GROUP 1	P	W	D	L	F	A	Pts
ATE 'A'	4	3	1	0	16	4	7
FCD	4	3	0	1	8	6	6
MAS Eng.	3	2	1	0	8	3	5
CSAS	3	1	0	2	6	8	2
CMS	4	1	0	3	8	13	2
New Road	4	0	4	3	3	17	0

Group 2	P	W	D	L	F	A	Pts
MASD	4	4	0	0	14	3	8
ISD	4	3	1	0	12	5	7
EDP	4	1	2	1	6	6	4
Tech. Pubs	4	0	2	2	6	10	2
ADD	4	0	2	2	3	8	2
ATE 'B'	4	0	1	3	1	8	1

Notes:

- * The last group matches will be played on 7 September and the semi-finals and final will be played on 14 September.
- * Thanks are in order for Steve Moreton and Barry Hodge for the refereeing of the matches.
- * Also the committee would like to thank the personality appearance of the month, 'Dave Golding' and his wife Beverly for letting him turn up.

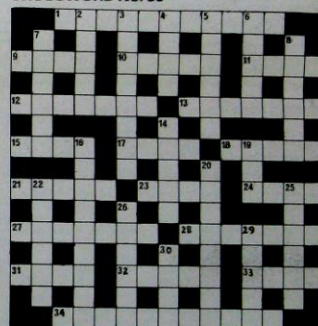
Question:

Has our away day specialist met his Waterloo?

Tom Smith Memorial Trophy

- 1st — Alf Blake, CMS
 - 2nd — J. Cremona, IN D/O
 - 3rd — A. Edmonds, CAC
- Consolation prize — L.King, ADD

CROSSWORD No. 36



ACROSS

- Every MP would like one (7,4)
- Mess a blunder (4)
- View, especially through avenue of trees (5)
- Sharp-ended small spike (4)
- Folk who sell wares (7)
- People who use professional services (7)
- Part of school year (4)
- Foreign language (4)
- Brother's daughter (5)
- Remains of fallen tree (5)
- Shortwhipstock (4)
- E25 (4)
- A fence or rail (7)
- Too close together (7)
- Intermediate or average (4)
- Waits for (5)
- Stupid person (4)
- Ordinary folk, maybe in line (4,3,4)

DOWN

- Furious, unreasoning (5)
- Place for keeping living animals (8)
- Fling up (by hand) (4)
- Parish officer (historic mainly) (6)
- Horseman's spear (5)
- Small sea shell from Indian Ocean (6)
- Bookies information service (3,3)
- Regard with deep respect (5)
- Notes or jottings (8)
- A little devil (3)
- An appetiser (8)
- Move from place to place (8)
- Black alloy for filling engraving (8)
- Nottinghamshire town (6)
- Representation of article (5)
- North French port (4)

SOLUTION TO CROSSWORD No. 35

ACROSS
1. At a loss for words, 8. Sequence, 9. Crayon, 11. Erin, 12. Hand-coiled 13. Stage, 15. Allegation, 19. Outlooker, 20. Stack, 23. No love lost, 25. Owey, 27. Finale, 28. Minister, 29. On speaking terms.
NB: No clue for 30—was part of 29.

DOWN

1. Answer, 2. Acquittal, 3. Ogee, 4. Social, 5. Work of art, 6. Royal, 7. Sand dune, 10. Adèle, 14. Good value, 16. Incubator, 17. To and fro, 18. Weild, 21. Assign, 24. Cyprus, 24. Fiat.

Photocopied taken by the Staff Photographers will be acknowledged in the following way: (A) Alan Smith, (B) Louise Jones, (C) Reg. Ross and (D) Alison Marshall.

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