

## Teamwork and innovation bring Queen's Award to ADD

*Electronic Display and Computer innovations prove successful in new US fighter plane*

GEC Avionics has again won The Queen's Award for Technological Achievement.



The 1985 Award, for advances in electronic head up displays for pilots, has been won by Airborne Display Division, which supplies head up displays for all General Dynamics F-16 multi-role fighters, and is now producing an entirely new 'see in the dark' version for the latest F-16C and F-16D aircraft of the US Air Force.

This new advanced equipment, with which pilots will see to manoeuvre fast at low altitude in total darkness, was put into production in less than a year. As a result, deliveries of head up displays for the F-16 programme always remained on schedule during the transition to the new standard.

The head up display system for the 'Fighting Falcon' aircraft (a model of which is depicted) comprises a 'wide angle' pilot's display unit with its very advanced digital computer. The system enables a pilot literally to see in the dark and to manoeuvre safely at low altitude, much as in daylight.

To develop such an advanced system, prove it in the USA and produce it in Britain, while maintaining the high rate of production of head up displays



Bob Eves, Technical Manager of ADD, is pictured with the Queen's Award-winning equipment which his team developed in under one year for their American customer.

required for the F-16 programme, called for outstanding skills in project management by Bob Eves, Technical Manager, and his team.

Bob is naturally delighted at the Award. 'Our new wide angle HUD', he says, 'had to be designed, developed and brought into production in less than one year, when usually this sort of programme would be expected to take three years. This considerable task was

accomplished thanks to a dedicated and enthusiastic team of staff from all parts of our organization. The F-16 C/D HUD was successfully transferred to production on schedule without impacting any existing programmes. Customer reactions to the HUDs already delivered are excellent. The honour of the Queen's Award is a tribute to the whole team.'

*Congratulations from all of us to Airborne Display Division*

## Stafford Ellis, MBE



GA Design Consultant 'Staff' Ellis received his MBE, awarded in the New Year's Honours List, from Her Majesty the Queen on February 19.

This honour is now the gem in his collection of awards; last year's Lord Nelson Gold Medal for Technical Excellence was preceded by the Prince of Wales Award for Technological Innovation and the Bronze Medal of the Royal Aeronautical Society.

A fitting accolade for Staff, a tribute to his many outstanding inventions in the service of this Company — our congratulations are given.

## GEC Avionics A.C. sweeps the board

At the Aer Lingus AC International Business Houses Cross Country races held near Dublin in March, over a 5 mile course, the four GAV AC runners took first place (Steve Rayner), sixth (Stephen Fury), fourteenth (Matthew Stickles) and fifteenth (Neill Graham) places. This out of a field of 343 finishers in the men's race.

## City and Guilds Silver Medals

Mr W. H. Alexander, OBE, acting on behalf of the City and Guilds of London Institute, presented Gareth Ghost with the City and Guilds Silver Medal at a small reception on April 22, in the Lounge Bar. This medal is awarded for attainment of the highest marks nationally in the Certificate of Quality Control examinations. Gareth has been following this course at Canterbury College of Technology on a part-time basis since obtaining his Higher Technical Certificate in Electronics at Mid-Kent College, which itself followed completion of his Technician Apprenticeship. Gareth, now 23, is continuing his career as Quality Assurance Engineer in ADD. The presentation was attended by Mr A. Offord, representing the Institute, and Mr F. Howitt, Principal, Mr D. Stuart, Head of Technology, and Mr S. Lambert, Lecturer, respectively of Canterbury College, as well as management from ADD, ATED and the company. Mr Offord passed on the congratulations of the Institute, on behalf of the sixteen companies in the

Guild; Mr Howitt remarked that the Medal was the first in Quality Control awarded through the College, although other subjects were honoured over the years, with two this year. Gareth's achievement was a tremendous credit, with over 900 candidates in the national exams. To cap it all, Gareth Ghost is getting married at the end of May.

Also at the reception was Ian Pestell, Trainee Computer Programmer in ATED, who as briefly reported last month was presented with his Silver Medal at the Mid-Kent College, for his attainment of highest marks internationally in City and Guilds Electronic Servicing, the subject being Electrical Control. Ian undertook that course when he was an Electronic Technician Apprentice prior to his promotion to the 'TCP' scheme. Mr Alexander congratulated Ian on his award, which had been given to him by the Rt. Hon. The Countess Mountbatten of Burma.

(L-R) Gareth Ghost, Mr Alexander and Ian Pestell.





**GEC Avionics News**  
 Editorial Office  
 Training Dept.  
 Airport Works  
 Rochester, Kent  
 Tel: 44400 ext. 188  
 (int. 2835)  
 Editor: Francis Latter



**Liaison Officers:**

Lynn Bates, Atlanta, USA  
 Gerry Rich, Nailsea  
 Beryl Downie, Accounts  
 Lee Tribe, AS & RD  
 Sid Golding, CA/PCD  
 Farfus Maloney, FARL (New Road); Clive Baker, GSD (IND)  
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Volunteers should offer their service through Divisional Administration Officers or direct to the Editor.

## Hampshire Convalescent Home

One of the many welfare facilities available to all GEC employees is Hampshire, the Company's Convalescent Home at Grange-over-Sands, Cumbria.

The Home is designed to help those who have been ill but happily are on the way to recovery.

Set in a fine estate of 13 acres, Hampshire is a place for rest or activity. It would be difficult to imagine a more beautiful or healthy site for convalescence, adjacent to the Lake District and standing over 400 feet above sea level on the upland heights of Grange-over-Sands — with views looking over the broad sweep of Morecambe Bay.

The house is comfortable and offers a restful atmosphere with good food, care and companionship, all of which are so important in assisting recovery from illness. During a stay at Hampshire visits are arranged to the nearby coast and countryside.

For the small subscription of 5p per week any employee may become eligible to use the Home. If, after illness, convalescence is advised by the Doctor a subscriber can enjoy the benefits of Hampshire and its pleasant surroundings, free of charge, for a stay of twelve days.

This information is given to all who commence employment here at Rochester but there may be longer-serving people not aware of Hampshire. This thought is provoked by a letter received from a GAV employee who has recently

enjoyed the facilities. In common with so many other 'good causes' funds are urgently needed, and GAV News seeks to ensure that all of us and our families are aware of the need, so as to consider joining the scheme. The appeal, passed through our friend mentioned above, is quoted.

Hampshire functions purely on 5p per week contributions paid by employees and a matching 5p per week from their employing companies. There are no further monies from our parent Company, therefore Hampshire is 50% owned by the employees. Because of redundancies and early retirement exercises throughout the country our band of contributors has greatly decreased. We desperately need more contributors. Can you try to recruit at least 5 employees each when you return to work? Please bear in mind that it has cost £140 for each of you to stay at Hampshire — some of you will never repay that amount. It would be a very sad day if Hampshire were to close and be lost to us all. Do try your hardest for us.

Yours most sincerely,  
 Barbara Haywood (Mrs) SRN.OHNC., Matron.

Maybe five-and-a-half thousand of us can manage more than five new members. (Further information from Personnel Dept.)

## GEC Avionics (Rochester) Long Service Association

The following new members have been welcomed into the Association recently.

J.F. Smith (GSD), C.C.F. Naylor (GAV), R.W. Richards (GAV Admin), D.R. Rudland (AS&RD), F.J. Hogan (PSD), E.J. Bailey (ATED), E.S. West (AS&RD), J.E. Dodd (ADD), C.M. Scott (MASD), A. Comery (GSD).

The Annual General Meeting of the GEC Avionics (Rochester) Long Service Association is to take place in the lounge bar of the Main Canteen on Friday 21 June 1985 at 7.30 pm.

## Cruising Down the River for Charity

Melvyn Doggett, Production Engineer in AS&RD, and Jim Farrow who is a Newsagent in Strood, are setting out on a sponsored 200 mile canoe trip down the River Thames, starting from near the source at Lechlade. They will cover the whole length of the river and into the estuary, and if weather and water conditions permit they will continue into the Medway and up to Rochester.

The journey is planned to last from Sunday 19th May to the 26th; overnight stops will be in the tent carried aboard, so the canoe will not be in lightweight trim when all the stores are included. Nevertheless Melvyn and Jim hope for portage round the Thames locks rather than transit through them; it is unlikely that Tower Bridge will need to be raised but they do need permission to go through, also at the Thames Barrier.

Liaison with Thames Water and Port authorities, coastguards and other official bodies will be made.

Sponsorship proceeds are to be donated to the Leukaemia Research Fund and the All Saints' Hospital Baby Unit. Anyone interested in supporting Melvyn and these worthy causes may obtain forms from GAV News Divisional representatives (see above, left), from Melvyn or from the Editor's office. But quickly!

## Edna Bailey

"Dear Colleagues of Stan,  
 I would like to thank you on behalf of myself and my family for making a donation to the Molly Wisdom Hospice in Dear Stan's Memory.

I am sure he would have wished that the money be used to help others in the same tragic situation as he found himself and that their final days be made as happy and comfortable as his were.

With sincere thanks,  
 Edna Bailey."

## Blood Donor Unit

On their visit in March, the Transfusion Unit collected 549 units of blood. For your diaries, the next visit will be **September 30 – October 4.**

## LADIES — what do you know about Cervical Cancer?

Did you know that pre-cancerous tissue can be identified and treated before the disease sets in? Did you know that a simple smear test can detect this tissue?

Do you know where your nearest Cytology Clinic is and how to get an appointment?

If you know all these answers then you'll probably be all right, if not then you'll be glad to know that the Company is holding a three day campaign to highlight this serious problem.

There is no doubt that cervical cancer is on the increase. Many women die each year because they did not have a smear test.

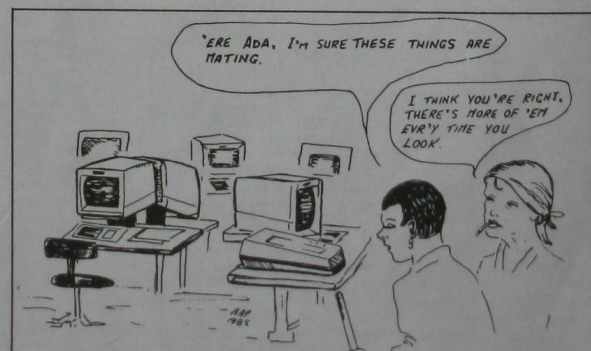
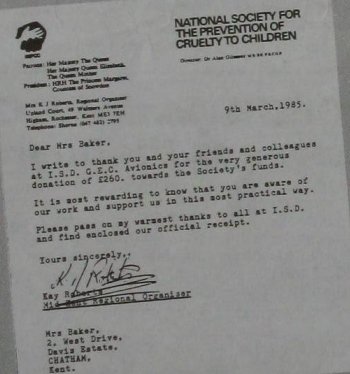
Notices are going up all over the Company reminding you of the dates when a nurse will be available to answer the above questions and any more that you may have.

### Please Come

Five minutes spent now may save your life.  
 Towers Surgery 14 May 1985 9.00am – 4.00pm  
 Main Surgery 15 May 1985 9.00am – 4.00pm  
 Flying School Surgery 16 May 1985 9.00am – 4.00pm

## ISD's Latest Charity Effort

Joan Golding writes — Christine Baker and Judy Wallace were pleased to be able to send a cheque for £260 to the NSPCC. This was raised mainly by raffles, thanks to the generosity of their colleagues in ISD. We would also like to say a special 'Thank you' to John Graham who raised £80 in a Weetabix sponsor. He managed to eat 17 in one hour. Below is a copy of the letter of thanks from NSPCC.





# INDENTURE TIME

Mr Alexander was once again the host at Hopewell Drive for the annual open evening and presentation of indentures to the latest intake of Apprentices. Two of the Electronic Technician Apprentices have sent us their own impressions of the occasion.

## Training Centre Open Evening

by Sally Murphy

On Thursday evening 28th March all first year electronic and mechanical apprentices arrived at the Training Centre to sign their indentures. Parents and friends were also invited and were given a guided tour around the building by their son or daughter. Six months' hard work was displayed by the mechanical apprentices in the bench fitting area, while complicated electronic

experiments were on show in the classrooms. This also gave parents the opportunity to discuss the work and progress of their daughters or sons since September.

Also on display was work that we would be completing during the second year of our apprenticeship. Apprentices were able to discuss the course with Mr Beby (Training Officer), Mr Perry (Manager, Training Services) and Mr Ainley (Manager, Personnel Services) who were all able to give us an insight as to our future training.

With our parents we then signed the indenture under the supervision of Mr B. Wallington, Superintendent of the Training Centre. After this each apprentice was introduced to Mr W. Alexander OBE with whom everyone exchanged a few words, before receiving a copy of the indentures.

All in all it was a very enjoyable and interesting evening.

## The Signing of My Indentures

by Steven Gray

The evening of Thursday March 28th was an evening long awaited, it was the signing of 1st year apprentice indentures.

For the instructors it was a chance to see their young apprentices smartly attired, and on their best behaviour, acting as tour guides for their parents. But for an apprentice such as I it was viewed with a little more apprehension. The thought of displaying six months work to eager parents and then being presented to Mr W. H. Alexander OBE, Assistant Managing Director of GEC Avionics was indeed a daunting one. But my fears were totally unjustified and the evening turned out to be very informal and even being presented to Mr Alexander turned out to be informative

and pleasurable rather than a daunting task.

Various examples of apprentices' work were displayed throughout the centre allowing parents to see the workings of the centre and what will be involved in the rest of the apprenticeship. The instructors mixed with the parents explaining apprentices' work and giving their views on each trainee which in many cases caused acute embarrassment with stories of left handed screw-drivers and other humorous incidents that happened around the Training Centre.

After being shown around the centre and seeing demonstrations of apprentices' work, coffee and biscuits were provided giving parents a chance to relax and discuss the events of the evening.

This allowed for a good end to an evening that started with apprehension and ended with a feeling of pride in our work and training, and a great deal of relief.

# Pastures New



Chris Gilbert, Production Engineer, who joined the Company as an apprentice in September 1963, left on 15th March to join W & T Avery at Smelthwick to renew a working relationship with Terry Smith. His colleagues wish him well in his new position. The presentation was made by Alex Castle, Production Manager of ATED. (A)



Phil Hodge, Senior Production Engineer, MASD, had a rousing send-off from many friends some of whom are pictured here with 'Pip'. He is now going full time with the ski holiday agency he has been running part time at his home in Frittenden. (A)

# Congratulations

## Births

To Lynne and John Harvey, a daughter Natalie, on March 19. John works in AS&RD Stores.

To Pat and Graham Bicker, on March 8, a daughter Cassandra. A future candidate for Hopewell Drive, where Graham is Instructor?

## Engagements

Kevan Duhig, Development Engineer ADD, and Sandra Brunt, Clerk Typist CACD celebrated their Engagement on April 6. Also Tony Porter, Planning Engineer in CMS, and Caroline Billing, Clerk Typist in CACD, had a double celebration on Caroline's birthday, April 16. Her mum Ann is secretary to the Production Team and others on the Fourth Floor.

## Weddings

Our best wishes to Derek Jackson, Chief Executive, Borehamwood, and Rita Edwards, Administration Officer, ATED on their recent marriage.

Lynn Fosbery (ISD) and Paul Barrett (ATE) met when Lynn was working as a 2nd year apprentice in ATED, where Paul works as a Senior Software Engineer. It was then that they discovered that they both shared a love of sailing, and the sea. They are both now active members of the GAv-BP Club Management Committee.

Lynn now works in ISD as Technical Assistant to the Marketing Group. The marriage took place on March 30 at St. David's Church, Lordswood. The couple were presented with saucers and other gifts by Gordon Walker, Marketing Manager ISD.



Paul Barrett and Lynn Fosbery with Gordon Walker. (A)

The Marketing department in ISD have been busy this month, Carol Haft, Secretary to the department also got married. Carol (23) joined the company in January 1984, after working in an estate agent's. Melvin Goodin, a keen golfer, is an Assistant Manager for Associated Trust Holdings in London.

The couple were married in Rochester Cathedral on April 13. Carol received an iron and a slow cooker/deep fat fryer, which were presented on behalf of the division, by Gordon Walker.

## Future Events



Irvine Gray making the farewell presentation to Julie France. (B)

Julie France left after 7 years in ISD Tech Pubs. Irvine Gray, as Head of the department, gave everyone's best wishes for the forthcoming birth. Husband Andy is Contracts Officer in MASD, having previously been in ISD.

Brenda Hogan, popular Assistant Librarian in MASD for 6 years, left to prepare for her baby, with gifts from her friends and colleagues presented by Engineering Services Manager Gerry Wood.



Brenda Hogan's leaving presentation. (A)

Friday February 8 saw the departure of Beverly Watkins, Project Administration Assistant in ISD, as Beverly and her husband David, also of ISD, decided it was time to start a family. Beverly was a very popular member of ISD and it was with a touch of sadness that her friends and colleague gathered to say farewell and good luck. Beverly was presented with numerous gifts which will assist her and David in their new venture.

Anne Ede joined the Company in 1981 as a Time Clerk, transferring to the Bought Ledger Section as a Senior Accounts Clerk in 1983. Anne left Accounts in April to prepare for the arrival of her baby in July, and received a number of presents and good wishes from her many friends. Anne is married to Barry Ede who is an Inspector in PSD, and Accounts wish them luck in their forthcoming happy event.

## Suggestion Scheme

Did you know that a member of ASRD has just been awarded £138 for a suggestion which saves time in the testing of NIMROD tape recorders?

## SPRING IS SPRUNG

let your ideas germinate...

use the suggestion boxes...

and harvest the rewards!



## 'NEJOR' — SPAIN

New Holiday Villa for Rent.

Sited on a cliff top overlooking the Mediterranean Sea. 5 Minutes from Beach and Shops.

Minimum of 4 persons, maximum of 6. £50 per person per week, all inclusive.

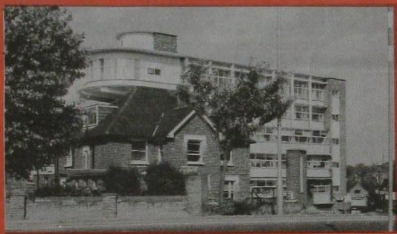
PHONE M. RUDCE (ASRD)  
Int. 2244/2040 or 01-4609726



# Flight Automation Research Laboratory

Invents new products for other Divisions to sell, and solves Optical, Mechanical, Control, Electronic and Computing problems

FARL invited its customers and GEC Management to its Annual Presentation in March. Some of the projects shown this year are described in this feature so that you can see what the Laboratory is involved in.



FARL is situated at New Road Avenue, Chatham.

## 'FLY-BY-LIGHT' GOES LIGHTER THAN AIR

### Flight Control System for an Airship

It may seem ironic, but very soon one of the oldest forms of air travel will be using some of the most advanced technologies. The latest airship (the Skyship 600) from Airship Industries Ltd will be using a flight control system (FCS) developed within FARL. The novel feature of the FCS is the use of fibre optics, a technology in which the Laboratory has considerable expertise.

FARL were approached by Airship Industries following a demonstration, at Farnborough Airshow, of a "Fly-by-Light" (FBL) system in which fibre optic cables are used instead of wires to pass signals between aircraft electronics boxes. They were attempting to enter the military market for which an airship is ideally suited for early warning, coastal surveillance and other long duration roles, but did have a slight problem in that their original control mechanism consisted of cables and pulleys and meant that there was a considerable pilot workload. Having realized that some form of electronic flight control system was required, they then encountered another obstacle in that the Skyship 600 is made, almost entirely, out of non-conducting material and any form of electrical cabling on the airship made an excellent lightning conductor. It was at this point that FARL came to the rescue with the use of fibre optics, as in the FBL system, to provide a non-conducting medium for sending data along the airship.

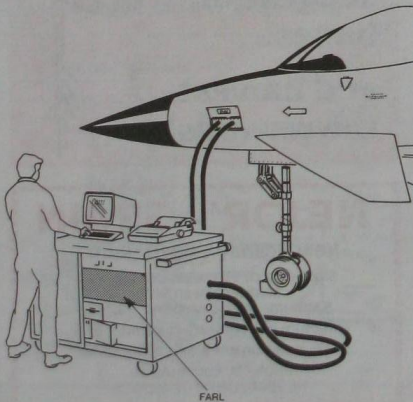
The FARL development of the Airship FCS involved not only the development of the fibre optics but also the overall system concept, the development of the Flight Control Computer and the electronics to control the surfaces. It was the control of the surface which resulted in some more innovation in that a high efficiency lightweight electrical actuator was developed which could generate in excess of 80 lb ft of torque. This development called upon the services of the GEC Avionics Design Consultants Staff Ellis and Peter Key and its detailed design and manufacture was the responsibility of the Mechanical Design Team of FARL.



The programme kept the FARL team on its toes the initial timescales being described politely a "tight". They managed to get the complete system (consisting of ten units) built in about twelve months. The system also had to go through the necessary environmental tests in order to clear it for the flight trials, which will take place at Cardington where the airship is housed in the same hangar that kept the R101, the fate of which in 1930 ended development of the first generation of airships.

The new generation of helium-filled airships, developed by Airship Industries, uses some advanced forms of technology and has great potential in numerous roles. It is very satisfying to see GEC Avionics playing a very important part

## ELECTRONIC STETHOSCOPE



### Data Bus Test Facility

New aircraft have complex avionics which are linked together by a two-wire screened cable called a data bus which allows information and messages to pass between the boxes. When an aircraft is being built or tested it is important to be able to "listen-in" to this to check that all the systems are operating properly. However, these data messages are transmitted at high rates in code, so there is a requirement for an "electronic stethoscope" which plugs into the aircraft and can interpret these messages to ascertain the "health" of the systems on board.

A joint project team was formed between ATE and FARL to develop this data bus test facility for BAe Warton for their new Advanced Combat Aircraft. In the course of the development, several ATE engineers were located within FARL working closely with the FARL Data Transmission Team who used their intimate knowledge of the 1553 data bus chip set, which was originally designed by FARL engineers, to exploit its in-built features in novel and unique ways in the bus tester.

The tester is brought up to the aircraft on the ground and plugs into a connector in the fuselage side, as shown. An operator at the console can control the data flow between the various on-board systems and, on the VDU screen, can easily view the information and warnings that are being passed around. These warnings are further accentuated by sound signals.

Not only does the facility act in a monitoring role but it can act as a bus controller and also simulate systems which are not yet fitted to the aircraft, thus providing the means to continue integration testing of the total system. For long term testing, fuel flow checks for example, data logging direct to disc file is also provided, for later study and analysis.

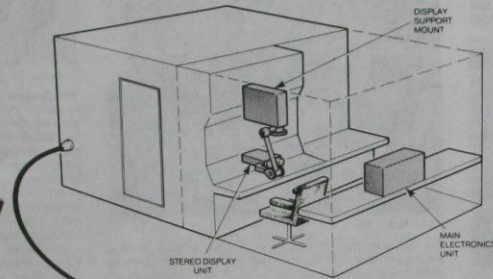
Equipment such as this greatly helps the aircraft manufacturer (or operator) to check out the total aircraft system at vital stages in the integration, development and production of new aircraft and their systems.



# FLIGHT AUTOMATION - UNDERWATER!



The photograph above shows four members of the 'Airship' design team with one set of the autopilot and control equipment. Left to right are Paul Buckingham, Trevor Hall, Dave Lamer and Phil Lamb. Paul and Dave are former company apprentices. Phil was a company student apprentice and Trevor, seen holding the actuator that moves one of the "Barn Door" control surfaces, was a graduate entry.



This drawing shows the control cabin of the underwater viewing system connected to the submersible by a cable carrying signals to and from the cameras. The submersible is guided to the site by a 'pilot', also on the surface.

## Underwater Stereo Viewing System

When the legs of an oil rig need to be inspected 200 feet under the North Sea a diver, however experienced, is inevitably exposed to risk as the accident figures show. An alternative is to use a TV camera mounted on a remotely controlled miniature submarine. This lets the expert on the surface see a picture of a crack, for example, as you would see it on your TV at home.

As an improvement on this, FARL have designed and made a prototype system which gives high quality "3D" pictures by mounting two TV cameras on gimbals on the submersible and displaying two separate pictures, one for each eye, on a binocular viewer. This means that the man on the surface can, by looking at one picture with each eye, see a single picture as "real" as 3D cinema and can judge distances and see how deep a crack is. More importantly, it lets him accurately control manipulators on the submarine which can have a variety of tools fitted to them. The viewer is moved sideways or tilted by the expert and the underwater camera follows his movements exactly, giving him the impression of being down at the site, so that he knows which way to move.

In fact, he is sitting in a control cabin on the deck of a ship and communicating with the gimbal drive electronics by means of multiplexed digital signals sent along an umbilical cable to the submarine.

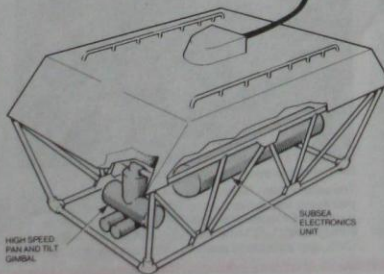
Like most good projects, this has been made possible by the combined effort of FARL's optical, mechanical, control and electronics design teams, and proving trials are planned for August this year.



Mark Stimson (ATE) on the left and Nick Milas (FARL) work together as part of a team commissioning the test console for the Data Bus Highway. Mark joined the company as a TA, and Nick was a company apprentice and was recently awarded the GEC Avionics prize at Mid-Kent College for his HTC results. The drawing shows how the tester will be used by the customer.



Mike Bradley operates the controls of the underwater camera while Nick Mellor (seated) looks into the binocular stereo viewer. Mike is a former company apprentice who was later sponsored to an Engineering degree and Nick was a company sponsored student in Electrical Engineering. They are both keeping well clear of the two cameras on their right as the gimbal carrying them can swing as quickly as your head!





# Retirements

**Maurice Needham** received from **Bill Alexander** a potted version of his career as part of his presentation when he retired. Maurice was thus able to look back on his years of service since 1947 when he joined Elliott Bros. (London) Ltd. in the Research Laboratory at Borehamwood; promotion to Leading Scientific Staff status in 1951 was but one milestone on the path to his appointment as Nuclear Division Manager, in 1956 following a move to Lewisham. By 1961 he was General Manager, and in 1965 became a Director of Elliott Process Automation. Maurice came to Rochester in 1970 in Elliott Flight Automation days, and since 1974 has held the Post of Market Development Executive.



Maurice Needham receives his presentation from Bill Alexander. (B)

An era has come to a close now that the Company has said Goodbye to **Archie Hutley**, for Archie has retired after serving some 39 years as a Fitter.

Archie joined the Company after serving in the RAF in 1946 with the old company of Swift and Swallow, working on Food Machines.

He was for some time after that an outside service engineer for the same company and returned to work in the factory as a fitter on TAC in 1964 working on VC10, 1-11, Concorde etc. When TAC and MAC became FCD Archie continued in the same role. When once again FCD was split to form CACD, Archie joined CACD and was put in charge of the workshop as

a leading hand, the position he held until his retirement.

It was sad to see him go as he is one of those men who enjoys a good laugh and never has a cross word for anyone. As for his work he is one of the old school, a craftsman to a fault, a skilled engraver and an excellent man to work with. We in CACD always referred to his workshop as "Archie's place", and it seems this name will stick forever.

We wish him and his wife Wyn a very happy long retirement.



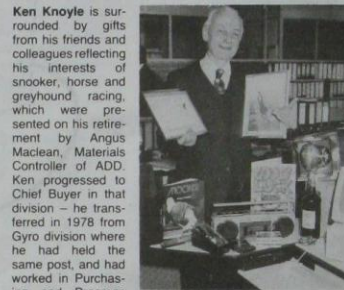
Archie Hutley. (B)

On his sixty-fifth birthday, one of our longest serving employees went into retirement. **Bill Bolton**, Senior Estimator in PSD, was able to recall that 44 years ago when he joined Elliott Bros. as a Turner at Lewisham, the rate was 17/6d per hour plus 28/- per week, giving about £5 for the 49-hour week.

After a break for National Service, Bill remained at Lewisham till 1954, then transferring to Rochester as Tester in Radio and Radar Division, at a wage now over £10. Later he became a Planner, and from 1960 to 1963 was Chief Planner in the same Division at Borehamwood. Back at Rochester and around the time of his 25-year service award Bill was Planning Engineer in ATED and Fuze Division, and in 1969 reached TACD as Estimator – the calling he stayed with through a couple of years in ACD and in his latest post in PSD. Maybe the briefcase presented to Bill by Mick Meakin, Production Manager holds the secret of the last pay packet.



Bill Bolton. (A)



Ken Knoyle. (A)

**Ken Knoyle** is surrounded by gifts from his friends and colleagues reflecting his interests of snooker, horse and greyhound racing, which were presented on his retirement by **Angus Maclean**, Materials Controller of ADD. Ken progressed to Chief Buyer in that division – he transferred in 1978 from Gyro division where he had held the same post, and had worked in Purchasing and Progress areas since joining in IND in 1958. Early days had been in the RAF and in the 'rag trade'.

Ken has in fact only semi-retired, since he rejoined the company after a week's break and is in the 'Pool', working at present in CACD Purchasing dept.

## 25 YEARS' SERVICE

Commercial Director **'Kit' Naylor** received his Long Service award from **Jack Pateman**, at a gathering of many friends and colleagues in the Conference Suite. Kit has in fact only been at Rochester for rather over a year – he first joined the Borehamwood establishment in 1960 as a Commercial Trainee, after leaving the army. After several divisional appointments he became Comptroller of the radar group of divisions, and from 1969 to 1980 was Comptroller successively of Basildon and Borehamwood sites. He then became General Manager of Marconi Avionics Projects Ltd. prior to taking up his current post.

Kit's lighthearted reply to Mr Pateman included comments about the floods at Borehamwood, the huge box files of invoices dumped on him at Basildon and his concern about what awaited him at Rochester. So far only the roof leaks. Seriously however, he was grateful to all his colleagues for their help.



Kit Naylor receives his presentation from Jack Pateman. (B)

Chief Buyer of PSD, **Frank Hogan**, received the Long Service award of a barometer from Divisional Manager **Ian Stitt**. Frank has been in PSD only for a short time; leading up to his present post he has been in several divisions, starting with a couple of years in Fisher Controls, followed by IND for over ten years during which he carried out production liaison duties between Rochester and Borehamwood, and was involved with flight trials on Jaguar and Nimrod programmes, also with outside expediting which involved a lot of travel. Then Frank moved to ATED for two years in Purchasing, next to Procurement duties in FCD travelling Europe on Tornados, Concorde, and WG13 programmes.

In 1978 Frank joined Gyro Division which involved visits even further afield. Hence his career has been a very active one, following on his army service as a PT instructor and a long-standing interest in motor cycle trials as competitor and

liaising between Rochester and Atlanta on head-up display purchasing matters. In 1974 John joined Gyro Division and is now involved with a larger number of projects following the merger with IND.



Frank Hogan with Ian Stitt at his presentation. (B)

**Ron Richards**, Senior Ratefixer in GAv Central Production Services has been in that department for well over 15 years, and prior to his move into Ratefixing was a wireman in IND for 3 years, then in MACD became Chargehand and then Assistant Foreman in the wiring shop. Ron, when receiving his presentation wrist-watch from **Alan Teers**, Manager, Production Engineering Services, said how pleased he was that in spite of some of the usual ups and downs, he had always worked with good crews – a comment one feels stems from Ron's earlier days in the Dockyard and Merchant Navy.



Ron Richards receiving his wrist-watch from Alan Teers. (B)

The second **John Smith** – chronologically – to receive his 25 year award was Senior Buyer in GSD, who was presented with a clock by Divisional Manager **Bob Ruggles**. John has moved through MACD, FID later ISD, with short periods in Fuze and CMS, also a couple of years with the company management

John's son **David** is a Development Engineer in MASD and son-in-law **Bernard Stevens** has just moved from CACD to be Chief Production Engineer in ATED. In earlier days, in Navy service and subsequently in local government, John also had a great success as a footballer, having played for two well-known teams in Manchester and become a qualified referee. These days he is less active but still spends plenty of time gardening.



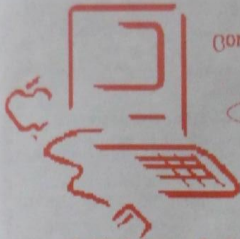
John Smith with his presentation mantle clock. (B)

**John Smith**, Planner in ISD, began his career in Chatham Dockyard and the Royal Engineers, and on joining the company worked as a Fitter in MACD. Specializing on Gyros, he moved to that division in 1965 and progressed as Leading hand and Charge Hand until he became Foreman when ISD was formed – a post he held for over ten years. For the last 2 1/2 years John has been a Planner. Time outside the company has been busy also – John is a Trustee of the Stillwater organization which is concerned with the rehabilitation of drug addicts, also is Kent co-ordinator for the Prison Christian Fellowship.



John Smith receives his brooches from ISD Divisional Manager John Colston. (B)





COMPUTERTALK

by

Emma Dalton

Macintosh, Compaq, BeeBeeCee,  
All connect to your TeeBee.  
Space Invaders, Business accounts,  
Using power in large amounts,  
Micro mad these human brains,  
Tying thoughts in logic chains.

Laser, matrix, squirly, daisy.  
All these printers leave me hozy.  
Keyboards need the gentle touch.  
Input/ output buffers clutch  
At data streaming from the user -  
Ten points to me and you're the loser  
Zip, bang - where's my latest software?  
Database, spreadsheet, word-processor?  
All the rage for integration,  
Keeping pace with chip inflation.

Chip, Rom, Ram and DeeDeeYoo,  
Lefest buzzwords join the queue  
Of language used throughout DeeFEE.  
What nonsense it all sounds to me!  
Still, there is one consolation  
When I'm sitting in MacStation  
And there's Poker on the screen.  
I can play and not be seen  
To lose my temper or my money.  
Father doesn't think it's funny.

From Mary Dalton (ATED). Emma, who wrote the Poem is 13 years old.

## Flying Training Scheme

During the Easter weekend 19 members of the Flying Training Scheme had the opportunity to fly a Stampe or a Chipmunk aircraft. Following the pattern set by a similar programme last October the aircraft plus very experienced training pilots (including a British Caledonian Training Captain and an RAF Tornado Pilot) were brought to Rochester by Three Point Flying from Goodwood.

Most of the members who took part had been trained to fly in fairly recent years on modern aircraft with nosewheel undercarriages. These aircraft are designed to be relatively easy to fly and are not usually cleared for spinning or aerobatics especially those aerobatics involving negative 'g'. Although it is usually quite difficult to put a modern light aircraft into what might be called an unusual attitude it can happen in very rare combinations of circumstances and the purpose of the training was to give members of the Scheme the experience and the confidence to recover safely should they ever find themselves in such trouble. Aerobatic flying is an ideal way to increase a pilot's ability and confidence in handling his aircraft. Both the Chipmunk and the Stampe are fully aerobatic aircraft designed in the 1940's with 'classic' handling characteristics. By the end of their 40 minute flights most of the pilots were able to execute (with only a little help) an aerobatic sequence of a loop, a stall turn and slow roll — they also said that they enjoyed doing so.

All of the pilots also had the opportunity to take off and land the aircraft. Tailwheel aircraft are less tolerant of inaccurate pilots than are nosewheel aircraft but after a thorough briefing and a bit of practice most pilots were able to stay down after the second bounce.

The 19 pilots flew for a total of 12 hours and some have already booked for a more extensive aerobatic and tailwheel conversion course to be held at Goodwood during the summer.

The operation of unusual aircraft on an intensive training programme requires a great deal of planning and assistance. The programme with the two aircraft required 4 instructors and two support staff from Three Point Flying and a lot of help from many people in GEC Avionics. In particular I would like to thank the Airport Engineering and ATC staff, the Transport Dept. and ADD Engineering Services for their willing co-operation. If they can stand it I hope that there will be a similar training weekend next October.

John Campbell



# Sports and Social Club round up

## GA v A.C. 1985 Summer Fixture List

MAY			
18/19	Kent AAA Championships (S-J-Y Men & S-I-J Women)	Crystal Palace	
25	Southern League Division 1 (v Portsmouth, Old Gaytonians, Haringey B, Met Police)	Hoo (Double)	
	Southern League Division 6 (v Sevenoaks, Epsom & Ewell C, Camberley)	Hoo Double	
25/26	UK Closed Championships	Antrim	
26	Kent Colts & Boys Championships	Hoo	
27	New Zealand Namesake Men's Trophy (All men's ages & Junior/senior women)	Hastings	
JUNE			
2	Dunlop Young Athletes League	Hoo	
8	Kent Schools Championships	Hoo	
9	Colts & Boys League of Kent LBH 3 x 2.75 miles Road Relay	Erith	
14/15	SCAAA Senior Championships (Including Youth & Boys 4 x 100m)	Beckenham (7:30) Crystal Palace Championships	
16	Colts & Boys League of Kent	Southwark Park	
21	AAA Junior/Youth 4 x 100m Championships	Birmingham	
22/23	SCAAA Under-20 (J-Y-B) Championships	Crystal Palace	
23	GRE Cup 2nd Round Kent Womens League	Tooting Bec Bromley	
26	City Charity Contest Crawley Open Meeting	Motspur Park (6:30) Crawley	
29	Lensbury Road Relay Southern League Division 1 (v TVH B, Norfolk, Blackheath B, Southern League Division 6 (v Hounslow B, East Kent B, Taunton)	Bridges (6:30) Bromley? (Single) Hercules-Wimbledon) Feltham (Single)	
30	Dunlop Young Athletes League	Hornchurch	
JULY			
3	Kent AAA 10000m Championship	Bromley	
7	Young Athletes League	Enfield	
10	LBH Main Championships	Battersea Park (6:30)	
12/13	English Schools Championships	Hull	
13/14	AAA Championships	Crystal Palace	
20	Southern League Division 1 (v Bracknell, Cambridge H, Highgate, Ipswich)	Bracknell (Single)	
	Southern League Division 6 (v Woking B, Sittingbourne, Croydon C)	Woking (Double)	
20/21	AAA Senior/Junior Decathlon	TBA	
21	GEC AVIONICS SPORTS DAY Colts & Boys League of Kent	Hoo	
26/27	WAAA Championships	Bromley	
28	Dunlop Young Athletes League CAU Championships	Birmingham Newham	
31	Crawley Open Meeting	Birmingham Crawley	
AUGUST			
3	Southern League Division 1 (v Bedford, Hounslow, Croydon, Havering)	Bedford (Double) Erith (Single)	
	Southern League Division 6 (v Waverley, Sutton & Cheam B, Ealing & Southall B)		
3/4	AAA Under-20 (J-Y-B) Championships	Birmingham Brighton	
4	GRE Cup Semi-Final Kent Womens League	Hoo	
9	AAA Youth 3000m Championship (Standard 8:45)	Gateshead	
11	AAA Half-Marathon	Birmingham	
17	Southern League Division 1 (v Shaftesbury B, Woking, Sutton & Cheam, Peterborough)	Hendon (Double)	
26	Southern League Division 6 AAA Junior 3000m Championship (Standard 8:25)	Spare Date Crystal Palace	
31	GRE Plate Final?	Hendon	
SEPTEMBER			
1	GRE Cup Final?	Hendon	
4	Kent Womens League LBH Medley Relays (1600m/3200m)	Bromley West London	
7/8	Kent AAA Decathlon/Youths Octathlon/Boys Pentathlon (In conjunction with Southern Championships)	Crystal Palace	
8	Dunlop Young Athletes League Finals		
11	Southern Senior 10000m Championship	Crystal Palace	
15	Kent AAA Relay Championships (Including Youth & Junior 3000m)	Bromley	
21	AAA 10 Mile Road Championships	Reading	
25	Crawley Young Athletes Trophy	Crawley	
29	LBH 4 x 3 1/2 mile Road Relay	Kenton	

**TO BE ARRANGED:**  
LBH 5000m & Long, Triple Jump West London Southern League September Shield

**GEC Avionics AC Training Nights**  
Tuesday & Thursday: At Vintners Park (6:30)  
Wednesday: At Oldborough Manor (6:00)

## 'REAPER' Club (Retired Personnel)

Founded 1965

The atrocious weather at the start of the year caused the cancellation of the January meeting, and the AGM was held at the start of the February meeting. Reports were presented, and accepted, by the depleted attendees. The Committee was re-elected to serve for a further term. The entertainment was cancelled because the company had been prevented by the bad weather in January from rehearsing and preparing a programme.

However, the March meeting got back to the normal, with a good attendance who thoroughly enjoyed the programme provided by Strood Handbell Ringers, 'The Corum Ringers'. April brought with it the promise of brighter days, and our meeting held after Easter provided the spur for our Annual Easter Bonnet Parade, to which was added a Bow Tie Competition for the men.

The judges had a difficult task in deciding the winners, the standard was so high. Awards were made to (1) Mrs Marsh, (2) Mrs Boorman and (3) Mrs Pavitt for the Bonnets, and for Bow Ties to (1) Mr J. Butler, (2) Mr Len Pavitt and (3) Mr Griffiths. The entertainment for the evening was provided by the Mary Underwood Stage School of Maidstone. The young performers acquitted themselves well.

At each of the three meetings, new members were welcomed and Birthday and Wedding Anniversaries reported. Games of Bingo filled the evenings, with the winners being spread over the range of membership.

The Outing Programme was presented in March, consisting of May 31, Visit to Worthing, then mid-afternoon to visit Bramber - 'House of Pipes' - and after visiting the museum to take tea. July 24, Visit the Thames Barrier, and then on to North London for a Boat Trip on the Regent's Canal.

August 28, Portsmouth and Southsea, with opportunity to visit the 'Mary Rose'.

## For 'MABCUB' read 'COMUS'!

At its EGM on April 15 MABCUB changed its name to conform with the Company name change. It is now known as the GA v/BP Kent Computer Users Section, COMUS for short.

### Notice of Meeting

Monday June 10 at Hoo, 7.30pm

We are holding a 'PROBLEM EVENING'. Bring along your problems - we will try to solve them!  
Also SPECTRUM owners will be able to see Richard Putley of EDP demonstrating the HiSoft PASCAL Compiler on his 48K.

For the following offers please write to Mr Derek Raymont, ATED Engineering.

### For SPECTRUM Owners

#### OPUS DISCOVERY 1 for SPECTRUM

- Disc Drive & Interface
- Also provides 2 Joystick Ports & Printer Interface
- Club Price £179.95 inc VAT
- RRP £199.95 inc. VAT

### For BBC Owners • Special Club Deal

#### OPUS 5401 Single Side 40 Track 100K Disc Drive (power taken from BBC)

- Plus the OPUS Double Density Disc Interface
- Supplied complete with all Leads, Manual & Utilities Disc

Price (including delivery) £126.16  
RRP £230.00

### 3 inch DISC DRIVES

(Hitachi) - ONLY £57.50  
100k single sided  
Uses double sided discs (you can store 200k each)

Also, 3" discs £4.60 each

Power supplies - £11.50

(only required if you've got two drives and expansion boards)





# Sports and Social Club round up

## Five-a-side Football

The Zombie Flesh Eaters (CACD Software) won the Elliotts five-a-side shield by beating the team from FARL on penalties after drawing the final, 2-2. They owed a lot to their goalkeeper, Pete Fowler, who made some inspired saves to keep the Zombies in contention in a hard fought match. Simon Jones (PEN) and Gary Pells were



The Zombie Flesh Eaters', L-R: Gary Pells, Daryl Harman, Pete Fowler, Dave Thomas, Dave Evans and Simon Jones.

the goalscorers for the Zombies who came from behind twice to draw level.

This was the first time a team outside MASD had won the shield and the first time the Zombies had beaten FARL.

## GAV-BP Sub-Aqua Club Charity Air Share Competition

The members of GAV-BP sub-aqua club are planning to stage their annual air share competition for charity on May 20th. 75% of the proceeds will go to the RNLI, which is a worthwhile cause.

Details of the competition are thus; A single diver consumes 1 cubic foot of air per minute at rest. How long would it take 3 divers to consume all the air from a single 60 cubic foot air cylinder. The divers will be submerged in ten feet of water and all breathing from the same air supply.

Each entry costs 25p, and a £10 prize will be given to the entrant submitting the nearest time, minutes and seconds. Multiple entries are permitted, and entry forms are available through the section's committee and members.

Contact:		
Brian Endersby	2416	ISD
Ray Newman	2244	AS&R
Barry Dibble	2244	AS&R
Tony Oxenham	2247	GSD
Tim Hall	2327	FCD
Doug Wylie	2656	FCD
Vic Haywood	2575	FCD

or any section member.

## Sailing Section — Blackwater '85

The annual visit to the Marconi Sailing Club at Stone on the Blackwater has been arranged for the week-end June 8-9, with the dinghy races on June 8 starting at 12.00 hrs.

Once again we will be competing for the Colwyn Stone Challenge Trophy which we have won for the last four years. It would be nice to keep our unbeaten record.

However, as those who have been will know, it is not the result that is important but the enjoyment that is had by meeting old friends and by the superb sailing that we have had on every visit.

Will those dinghy sailors who would like to visit the Blackwater this year, please contact Gordon Belcher, GAV, on internal extension 2620, external extension 212.

## Amateur Radio Club Programme

May 22 CW Activity

June 3 Video "Two Pioneers + VU7 Expedition"

The Club Shack is available to members at any time during Clubhouse open hours.

In addition to the above dates, regular meetings are held on the first working Monday of every month

### 1985/86 Committee

Chairman	J. Burton.	O. Member	J. Jenkinson.
Treasurer	W. Wilson.	O. Member	P. Carey.
Secretary	A. Ralph.		

For further information contact Alan Ralph (44400x436 or 2972). All meetings are 8.00pm start at Hoo.



# CLUB-HOUSE ATTRACTIONS

## DARTS EXHIBITION and PRESENTATION OF TROPHIES

Friday 17 May 8.00-11.00pm

Guest: **Cliff Lazarenko**

Tickets £1 from Gary Cordier (2284) Bob Stevenson (2849) or Club Bar

## BANK HOLIDAY DANCE with 'SPIRAL'

Saturday 25 May 7.45-11.45pm

Admission Free

## 'ALL STARS' SWIMMING COMPETITION

Friday 24 May

8.00-11.00pm

Tickets from M. Martin, CMS (2242)

(Pool closes at 6.30pm for general use)

## DANCE with 'KINGS RANSOM'

Saturday 18 May 7.45-11.45pm

Admission Free

## POOL OPENING TIMES BANK HOLIDAY MONDAY 27 MAY

11.00am-1.00pm & 3.00-8.00pm

## SOCIAL EVENING with BEST BITTER DUO

Saturday 1 June 7.45-11.45pm

Admission Free

## Children's Disco

Friday 7 June 7.00-10.00pm

Admission 25p

## CHRIS & MICK ON TWO GUITARS

Saturday 8 June 8.00-11.00pm

Admission Free

## SUMMER DANCE with 'MISTY'

Friday 14 June 8.00pm-Midnight

Admission Free

## NOTICE POOL RESERVED FOR GALA

Saturday 29 June 2.00-6.00pm

## 'AN EVENING AT THE RACES'

Saturday 22 June 8.00pm

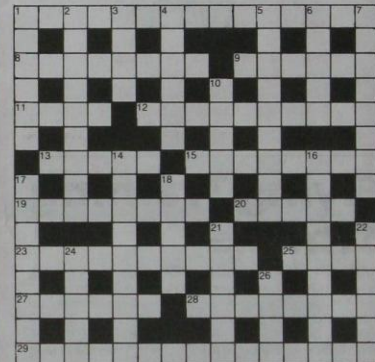
EIGHT FILMED RACES Betting Units 20p

## 'JEZREELS' BARN DANCE

Saturday 29 June 7.45-11.45pm

Admission Free

## Crossword No. 70



### ACROSS

- Makes life pleasantly satisfactory in topics. (3-12)
- Co-runner with chemist. (8)
- In the sunshine put hand to shield eyes. (6)
- Morse in fact. (4)
- Beyond ones attainment. (3-2-5)
- A swimming stroke. (5)
- Taking everything into account. (3-2-3)
- Predestines enjoyment of meal. (8)
- A burglars friendly tool. (5)
- The prize of Atlantic crossing. (4-6)
- Three in concert. (4)
- Tyrant maybe. (6)
- The lady of the ..... singular. (8)
- By Royal Appointment star gazing. (10-5)

### DOWN

- Compulsive victim, it's a vice. (6)
- There and back, where, does not matter. (5-4)
- Whoopel of unsavoury kind. (4)
- Get together and thrash it out, by throwing. (6)
- Another point of view, or alternative. (9)
- Great sub-continent. (5)
- Through supporting parents at baptism. (3-5)
- Thwarted without fencing. (5)
- A bath sport but no "chucker". (5-4)
- The rule the rulers of the waves. (9)
- New Campuchea. (8)
- Fag ends, yet toes get a knock. (5)
- Institutional resident. (6)
- The umpire pocketed it and forgot, no play. (2-4)
- Stomach rebels at wrong diet. (5)
- The power factor, in four or five. (4)

### Solution to Crossword No. 69

#### ACROSS

- China wedding. 10. Orbit. 11. Gyroscope. 12. Day dreams. 13. Denim. 14. Easels. 16. Coersion. 19-20. A perfect fright. 23. Lydia. 24. Tradesmen. 26. Sheltered. 27. Eat up. 28. Landed gentry.

#### DOWN

- Hobby. 3. Natural. 4. Wiywam. 5. Denison. 6. Insider. 7. Grounding. 8. Gold medalist. 9. Leamington Spa. 15. Speeswell. 17. Scot free. 19. Flatten. 21. Roodean. 22. Madi dog. 25. Motor.

Photographs taken by the Staff Photographers will be acknowledged in the following way: (A) Alan Keats; (B) Ian Douglas

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