# GEC AVIONICS NEWS 

## MISSION PLANNING SYSTEM FOR MALAYSIA

An Export First
GEC Avionics in collaboration with Hunting Engineering has won a competitive tender for the supply of advanced mission planning aids to support the Royal Malaysian Air Force Hawk 100/200 aircraft programme. The contract, for PATHFINDER 2000 systems, was received from British Aerospace ple Warton, who are pric, Warton, who are prime contractors for the programme.
This is the first export order for PATHFINDER 2000, although an earlier order from the UK MoD to Hunting Engineering and Hunting Engineering and GEC Avionics for Mission
Planning Systems was completed in time for use in Operation Granby in the Gulf. This system, known as

CHAMPS, is used by the
RAF to support Hercules RAF to support Hercules PATHFINDER 2000 is based on a twin screen workstation; the Planner's information is shown on one creen -whist a digitized map of the area of operation is displayed on the other. This allows the operator to view the maximum amount of map without it being obscured by text or menu information. Weapon planning and navigation facilities are incorporated in both paper map and data cartridge format. Using the Data Transfer Unit, part of he Data Transfer System DTS), information can be directly fed into the aircraft's navigational system. This DTS is supplied by GEC Avionics for all Hawk 100/200 aircraft.

## MCD's Power Converters on Land and Sea

Monitoring and Control Division have secured their third major production order from the McDonnell Douglas St Louis, Missouri, for power Louis, Missouri, for power uceesters for the highly Missile and its latest variant the



FCD Continues its Pre-Eminence in Fly-By-Wire Computers
Only a few short months after the first flight of the Canadair Regional Jet, equipped with Electronic Control Units, the division has started production deliveries of these boxes. The first production delivery was made in August, and the flight test programme continues well, with aircraft 03 being prepared for flight.
Back in Europe, FCD has been selected to supply the Slat and Flap Control Computer (SFCC for the Airbus Incustrie A321.
The A321 is a stretched A320 cartying 186 passengers in twin class, and the A321 SFCC is an uprated version of the successful A320 box. Outstanding orders for the A320 and A321 total over 400 .
The A321 is a derivative of this A320, which was the first
airliner with fly-by-wire controls and bas been in


The First EFA Order for Test Equipment


#### Abstract

In the first contract for test equipment for the European Fighter Aircraft, Eurofighter have selected their latest High Level Bus Analysers (HLBAs). These systems will be used to assist with the complex task of integrating the EFA's advanced electronic systems into the new airframe The HLBAs will test the performance of the pertormance which will comprise the aircraft's Utilities Control System (UCS). The UCS will connect the aircraft's fuel computers, flight control system, landing gear computers, glareshields, computer symbol generators, and the power generators.


During the complicated systems integration process, the HLBAs will swiftly pinpoint the precise
location of any problem helping to minimise the time spent in resolving technical difficulties. In addition, during flights of the EFA development aircraft, the HLBAs will monitor and test all aspects of the performance of the UCS systems through the EFA databusses
The HLBA is based on our ORION 9000 test equipment which provides MIL-STD-1553 and STANAG 3910 databus testing, both of which will be in use on EFA. In the HLBA, this equipment has been integrated with a powerful computer system which will display the databus
traffic and signals to the operator in formats which

Two HLBA systems will will ease the task of Aerospace in the UK and integrating and analysing a second to Alenia of the various systems. In 1985 Italy. Deliveries will be GAv supplied a similar completed by December system, the BETABOX, for this year and additional use during the integration orders, which will also testing of the Experimental incorporate system en Aircraft Programme, the hancements, are expected EFA testbed aircraft.


The original BETABOX was used on the Experimental Aincraf Programme at Britisb Aerospace, Warton.

# Keeping our Company in WORLD MARKETS 

Introducing our Overseas Representatives

GEC Avionics' exports to
the USA are very important the USA are very important publicised. But in fact, the Company has over fifty countries, some times directly sometimes through aircraft companies and sometimes through multi-national projects.

These export sales require frequent visits to the countries concerned on the part of our UK staff, but it is important to keep the potential customer continuously aware of the Company, its products and capabilities. It is also necessary to have good and up-to-date knowledge of the country to help in devising the best approach to opportunities and requirements there.
One of the ways in which this is done is by maintaining Company offices in countries or areas of interest. In addition currently have five full-time and one part-time office staffed by Regional Marketing Managen who are generally appointed from within the appointed from within the
Company and have a good knowledge of it, which is supplemented by training in special topics before moving to the territory. These are longterm assignments, typically for two or three years:
family assignments and matters of housing, children's education and medical attention have to be carcfully considered. These offices and staff, together with that of other local overseas busines arrangements, are the responsibility of Ron Bristow, Assistant Gencral Manager. They provide local support and follow-up for the Company and its Divisions in the UK and for our US Companies GEC Avionics Inc., Lear Astronics and Developmental South East Indi

The office in singapore is the base for Malaysia, Thailand, Indonesia and Brunei as well as Singapore itself. Martin Bennett is the Regional Manager, based there with his wife and two children since early last year. Martin served an apprenticeship with GEC Avionics, later going to AS\&R Division, now LCSD, and spending long periods at Warton and in Germany on the Tornado, then in Egypt working on the MiG-21 avionics up-date contract. The economy of SE Asia is very active; there are GEC manufacturing companies in Singapore and Malaysia Aviation is seen as a growth they are also


## Corporate Marketing

 in the United Statesarea; Singapore and Indonesia both have aviation industrics Part of Martin's responsibility is to work with these local companies in promoting GAv's interests, for which his previous on-site work has been valuable experience.

## Middle East

There are two GEC Avionics offices in the Middle East, in Bahrain and Cyprus. Brian Ashley is the Regional Manager in Cyprus, and lan Hunter is Re Regional Manager in Bahrain where he lives with his wife and two children.

Bahrain is a convenient base for the other countries for nclude Soudi Arabia, Oman and the United Arab Emirates lan is familiar with the region, having spent childhood year there; he joined the Company as an apprentice working in several divisions at Rochester more recently in ATED/SESD's Engineering and then Marketing Departments which involved much foreign business travel. Our products are in service in Saudi Arabia on the Fornado, in Oman on Jagua aircraft, as well as on the F-16 in Bahrain. The Company is under contract to supply equipment for the BAc Haw 100/200 for the United


With Ron Bristow (centre) at their recent briefing at Rochester are Brian Asbley,

Post
Project
Eur

## Europe

An office in Munich, where John Ungoed is the Regional Manager, covers several of the European countries. Germany, Italy, Turkey and France have been receiving special attention and there are active market projects in these and other countries. This is a particularly useful office for our US Companies because of their remoteness from Europe
The Bahrain Air Force has and John is very active on their F-16aircraft with GAv Head-Up behalf.
Displays and other business possibilities exist for the Company

Following the Gulf conflict, there has been a great deal of re-appraisal of equipment and performance in the Gulf countries. The Company will be concentrating its Middle East marketing activities there and, as Brian Ashley retires at the end of the year, the Cyprus office will be run down. Brian has recently been concerned with Egypt Pakistan and Jordan; he joined GEC Avionics on location in Hong Kong where he was Area Manager for GEC-Marconi Electronics. Before joining GEC, Brian served with the Royal Air Force and one of his postings was as Tornado Project Officer in Munich
(2)

John and his wife have been in Munich for several years, having been Combat Aircraft Controls Division's on-site Representative with our German partner MBB on the Tornado programme: prior to that, he was working with CACD in Rochester.

## India

In India, Gp Capt Kapil Bhargava is a full-time Consultant to GEC Avionics, based in Bangalore which is the main centre of aviation activities in the country. The aircraft company Hindustan Aeronautics Limited (HAL) is there together with Government research with development establishments

While serving in the Indian Air Force as a qualified test pilot, Kapil had a number of assignments abroad including some in the UK. He also worked with HAL and with an imports company before joining GEC Avionics to help with marketing in India, This is a difficult market and local knowledge is important. GAv's equipment is on the LAF Jaguars and Sea King helicopters; other projects are ander discussion.

## Australia

The market in Australia also requires local knowledge and

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avolvement and the local GEC company assists GAv there. Fg Cdr Lindsay Bennett of GEC-Marconi Systems allocate part of his time to Giv. he knows the Company well having been assigned to Rochester for two years while erving in the Royal Ausmion Air Force on MASD's AQs901 programme for the P-3 AQs901 This was the Company. regest project in tustralia the market is not lame and as in so many places, there and as in so restrictions but new budget are under discussion there.

## General

The Regional Managers are in frequent touch with the Company and the Divisions, eturning to Rochester when he projects require it. In adition, there is a formal oriefing programme in the UK for all the Regional Managen to make sure they are up-todate in Company products and projects and to brief the Company on matters in their countries. The photograph shows the team in Rochester for the 1991 briefings programme.

Having these locally-based offices is one of the long-term teps taken by the Company in the interests of obtaining uture export business Vacancies sometimes occur in hese positions and Ron sristow is always pleased is hear from people interested in this type of work overseas.

## 1992 Haskett Troply

The 1991 contest and ADD's win have not been forgotten, but already the 1992 Trophy entrants are busy preparing their written submissions. Engineers throughout GAv, whether as individuals or teams, have to complete their for somene when the final winner is selected by the for someone when the final winner is selected by the is already past, and during next Spring it will be known who will receive the prize which can reach $£ 2000$ for a team entry. Participants in all other qualifying entries will receive up to $£ 30$ each.

## The End of an Era?

Di Firth has been at Rochester for over 37 years now she has decided to retire and is going to live on the Costa del Sol. Di and Arthur Colwell, who was Divisional Manager of ATED/SESD and previously of ADD, will be marrying next year and are building a villa in Spain.
At the start of her career, Di had no plans to enter industry at all, but has since become one of the very few who have covered the entire history of aviation with Elliott Bros and the succeeding companies. In 1955 she followed a temporary job here by becoming Rochester's first girl trainee She became a Jig and Tool designer early in the time of Alf Harrison, and Bill Alexander was her first Chief Engineer Then in 1962 her Engineer o AS\&RD's Technical Publications Dept , becoming Section Leader and recoming Section Leader and responsible for training tracers.

A move to ADD in 1975 brought Di into the Sales area, first as Sales Assistant and later as Assistant Marketing Executive; then she was seconded to Exhibition Department and became Manager just in time for Farnborough in 1988.

All those years have brought her into contact with a host of people at all levels in the company, and with customers and colleagues throughout the world during her many travels on company business. She is grateful for the many long standing friendships she has formed.

But all that has been only part Di's busy life. Over the years she has been a highly successful athlete and sportswoman. In her schooldays she excelled in the All England high jump contest, and was competing in athletics with Kent and AAA Junior teams; she played Netball for the county and almost reached the England team. Her Badminton was strong, and her Tennis interest lasts right until today - she has coached many

players over the years. Since 1958, at Elliotts Lewisham Sports day and at a Medway lowns event where she won all he Field events, Di has been a keen athlete. At our own Sports Day which started in 1963 she holds a particular record for winning the Ladies' Victor Ludorum four times. She was also the youngest member of the (Elliott) Social Club committee for well over ten years. All this has given her lots of fun over the years, she says.

Now in her new life and home in Spain, Di won't be quite so busy but plans to keep up her tennis, improve her golf, and continue with her latest interest of windsurfing. At a farewell presentation, Chairman Ron Howard recalled Di's years of service, with some anecdotes she does not want recorded and his thanks on behalf of all her friends and colleagues.


Defence important visitors to the GEC-Marconi stand was Defence Minister Tam King, seen bere with the MoD's Head
The Last Exhibition at Whale Island

## The Royal Navy visiting delegations between

Equipment Exhibition (RNEE) was held at Whale Island, Portsmouth in September. Unlike many
other exhibitions RNFE is run in a very military fashion public access is forbidden, This results in uncrowded aisles, no brochure vultures and most importantly easy and most importantly, easy makers amongst the potential customens. The GEC-Marconi customen. The GEC-Marconi
stand was busy throughout, with much co-ordination required to shepherd the
different company areas. The only drawback to a very successful show was the resulting in tempemtures in esulting in temperatures in he exhibition area reaching unbearable levels. Perhaps this will not be a recurring problem at the next RNEE with the British Army Equipment Exhibition quipment Exhibition, held in the Aldershot area. held in the Aldershot area. deep in mud!

Changes in Personnel Department
Personnel Manager Tony Williams has left Rochester to take up an appointment as Personnel Director of GEC Sensors at Basildon.
In a departmental restructuring, Sarah Kenny has been appointed as Manager Personnel Services (Production and Administration) and Peter Services (Engineering). Sarah and Peter report direct to Director of Personnel John Bradley.


Sarab Kenny


Peter Bowyer

There have been a number of mentions in the technical press as well as GAv News' for contracts awarded to GEC Avionics for the supply of Pilot's Control Sticks - but just what do they do?
The next generation of military and civil aircraft will use electrical fly-by-wire (FBW) systems to operate the flight control surfaces. These FBW systems compensate automatically for gusts and disturbances and prevent the aircraft from getting into a dangerous flight condition or dangerous light overstressed. On military combat aircraft this allows the pilot to achieve the maximum agility from his aircraft whilst on civil airliners it controls the rates of manoeuvres so that the drinks don't spill!

For the pilot to fly an FBW aircraft, he needs a Pliot's Control Stick which he can move in pitch and roll to signal to the FBW computer his pitch (nose up or down) demand and roll (left or right) demand. The arrangement of control stick, computer and control surface is shown at 1 .
The demands on the FBW Pilot's Control Stick

## Fly-by-wire Pilot's Control Stick

are high - it must be strong enough to withstand considerable loads which can be applied under stressful flight conditions, yet sensitive enough for accurate flying such as landing and in-flight refuelling. It must be safe, as it forms the only link between pilot and computer, and as with all avionic equipment it must be light, reliable, easy to maintain, and of course cheap!
The FBW control stick consists of the pilot's control grip, a mechanical assembly and electrical position sensors; this is assembly contains springs and dampers which produce 'feel' forces as the pilot moves the stick and centring forces when he releases it. The position of the stick is measured using multiple sensors which can be either electrical or
optical. A separate pitch and roll sensor is used for each lane of the FBW system.

Combat Aircraft Controls Division supplied the centre stick for the highly successful Experimental Aircraft Programme (EAP) and the pilot's controller for the European Fighter Aircraft (EFA) is currently under development.

The YF-22A demonstrator, which won the competition for the US Air orce Advanced Tactical mounted Pilot's Control Stick. This unit has smaller displacements compared with the EFA stick and has full mass balancing so that movement of the aircraft does not affect the position of the stick.

Our associate company Lear Astronics also supplies FBW control
sticks for all variants of he General Dynamics F-16 o supply the stick for the AH-66 Comanche helicopter.

Combat Aircraft Controls Division is arready develop ing control sticks for other applications including electrically back-driven sticks aimed at two-crew aircraft. These sticks use electric motors to provide the feel forces instead of the springs and dampers.

This allows movement of one stick to drive the motor in the other stick, thus allowing the pilots to be aware of each other's inputs.
GEC Avionics' track record on supplying FBW control sticks places it as the world leader in this field, and the development of new products in this area will help to ensure that the company remains in this prominent position.


YF-22A (left) and EAP FBW Control Sticks

## Why Not Join Our Local RAeS Branch?

The Medway Branch of the Royal Aeronautical Society has been associated with the Airport for more than 50 years, having begun in the days when shorts built aircraft at the Airport Works main factory and operated the Flying school at the southern end of temporarily lapsed frer World War 2 but was re-formed by the company in 1975 and has since proved one of the mast since pre in the country and one of the largest

RAeS Branches are open to all with an interest in aviation, whatever their educational background or training. Members of a world-leading avionics company such as GAv have an obvious interest in aviation, as the source of their employment, regardless of their own particular skill or discipline. For them, business and pleasure can come together in the activities of the Branch, since aviation has always been full of excitement and interest.
The main activity of the Medway Branch is a series of illustrated talks by distinguished authorities in aviation. These monthly mectings take place on the third Wednesday in October to April, with the AGM in May. The venue is the Main Canteen, 7 pm to 9 pm . Expert speakers are chosen representing all aspects of general aviation interest - in no way confined to avionics topics.
Fach meeting is attended by a large and friendly audience, often exceeding 250 people, made up of members and their guests from the local community, as well as from every part of the company. In the hall are aviation memorabilia to add to members interest and knowledge. Some of these can be purchased as souvenirs, in aid of aircraft preservation or charity.
Important to Careers It is at the monthly meetings that men and women of every age group come to participate in the very life of aviation, rubbing shoulders with pilots, engineers, aircraft owners, people who work for aviation companies in any number of ways, or whose spouse or partner does. You will meet the captains, lieutenants and privates of industry, all feeling comfortable in one another's company.
In short, membership of the Branch keeps you informed, stimulates public support for aviation, and enables you to share your interests with your friends or family, your colleagues at every level in the company, and your neigh-
bours in the local community These factors are as important o the company's business a. they are to your own career.
The Royal Aeronautical Society (RAeS) is, of course, a member of the Chartered Engineering Institution. This erves the professional interests of qualified engincers, and our professionally qualified staff should seriously consider the RAeS as their primary Learned Society. So although Branch membership does not imply joining the Royal Aeronautical Society itself, and you will not be put under any pressure to do so, it is an excellent way of gaining some insight into the activities of the Society as a whole, prior to taking any steps to join the Society as a professional body.
There are many grades of membership of the R AeS and it is a worthy qualification to belong to such a prestigious organisation. By joining the Branch, you will have access o advice about Society membership and, as many of your colleagues are already members, you will have no difficulty in finding sponsors Branch Membership
No qualifications are asked of Branch members, except a genuine interest in aviation Income is no barrier to membership. The annual subscription is deliberately kept as low as possible, roughly the equivalent of a couple of pints of ale, a bottle of wine or a gallon or two of petrol, representing outstanding value for money currently \&3 pa for 1991/92).
Your Division will have a representative who can enrol jou or, if you prefer, you can meeting (a subscription is charged) and then join fterwards, the choice is yours.

Why not come along to one of our meetings - we will be delighted to see you.

## Branch Activities

Apart from the monthly lecture meetings, there are the following activities available to you:

- NEWSLETTER - A fourmonthly publication to keep you in touch with the year's ctivities
VISITS - Regular outing are made to places of aeronautical interest, such as he Imperial War Museum, Duxford. This enables you to hare your interest with family $r$ friends and have a rest from driving!
- AIRPORT HISTORY Members with an interest in history and industrial archacology keep archives on surrounding Airport Works.

- atrcraft preservation Branch members are qualified to apply for membership of Medway Aircraft Preservation Society Ltd (MAPSL), a nonprofit company which has restored many historic aircraft at the Airport. Numbers of members are limited but it is worth applying and attending MAPSE's special events

Chairman of MAPSL is Malcolm Moulton, a former Chairman and now Vice Pemident of the Branch. He President, Peter the Branch President, Peter Hearne, is to prestigious Wright Brothen Memorial lecture arothen Memorial lecture at Hamiton Hace on 12 December Knowing Peter, he says, it will be about the latest dvances in avionics, and horoughly recommend colleagues to go along in trength that evening.

## Lecture Programme 1991/92

| 20 November | 'The Victor' <br> by G Lee, the retired chief <br> designer of Handley Page. |
| :--- | :--- |
| 18 December | 'Advanced Materials in <br> Military Aircraft' <br> by Tom Stratton of British <br> Aerospace. |
| 15 January | 'Eagle Squadron' <br> by Lt Col James Goodson, <br> USAF (retd.). |
| 19 February | 'Vulcan operations in the <br> Falklands <br> by Wg Cor Jim Montgomery, <br> RAF. |
| 15 March | 'Civil Cockpits ancient and <br> modern - an airline pilot's <br> viewpoint' <br> by Harry Hopkins. |
| 15 April | 'Phoenix' <br> by Peter Jones, Marketing <br> Manager of CACD. |
| AGM plus films. |  |

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The GEC Avionics Company Newspaper has a circulation of 6000 and is issued six times a year. Every employee of the company and many of their families and friends will read it. The readership is spread right across the North Kent area and beyond so advertising in GEC Avionics News lets you talk to a large audience.
Many local companies offer their products and services to GEC employees, often at discount rates. Currently these are advertised on divisional notice boards. Obviously the success of this type of advert is limited by the number of people who actually stop to read the notice boards. Advertising in GEC Avionics News is your chance to reach a much larger audience for your products and services.

For more information please contact :
Peter Royall
Publications Liaison Officer, Logistic and Customer Services Division
GEC Avionics Limited, Tel: (0634) 844400 Ext. 4166

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Childs (Girls) Bicycle, suit age $5-10$, reasonable condition, $£ 12.00$ ono. Alan Briggs Ext 4238 or (0634) 862497

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Vauxhall Cavalier 1.3L 'E' reg. MOT to Jan 92, VGC inside and out, Nordic blue, Phillips Stereo, $£ 3250$ ono. (0634) 362008 or M. Phipps Ext 3254
Rover 216 Vanden Plas ' $E$ ' reg - blue, low mileage, VGC, new exhaust. $£ 4450$ ono. (0634) 686063
Honda 90 1984. New battery, chain and sprockett set. No MOT, £40. Les Wells Ext 3920
MG Metro Turbo 'Y' reg, silver \& black, sun roof, alarm, spot lights, $£ 1200$ ono. Steve Small Ext 4731

Ford Escort MkIII, black, 1.3L, 1981 reg, sun roof, alloy wheels, XR3i interior, remote alarm, spoilers, For months MOT, 2 months tax, bargain at
(0634) 847578

Nissan Sunny 1.5GL Vissan Sunny 1.5GL Coupe, April 1983, 84,000 $\ddagger 705$, Me Penfold Exi 3740 or (0634) 669862

Fiesta 1.65 G Reg, 12,000 miles, Matisse Blue, extended warranty, many extras, $£ 6,300$. Anne Heyworth Ext 4213 or (0634) 360129

Metro City 1.0 L ' C ' reg, White with Metro motif, 10 months MOT, 50,000 miles, VGC, £1,850, (0634) 571326

## CLOTHES

Sheepskin Coat, 10/12, Dr Zhivago style, good condition, £10 ono, Trouser and Cape Suit, size 12, Welsh Tapestry (good material for reuse) \&8.00 ono. Pat Pilbrow Exi £8.00 ono. Pat Pilbrow Exi 4010
eather Jacket, ladies size 12/14, black modern style

Ł18. Anne Heyworth Ext 4213 or (0634) 360129

## COMPUTER EQUIPMENT

## PC Compatible Computer

 Elonex TM PC 88C + Star 24 PIN Printer + Colour VGA, 20MB hard disk ( $3^{1 / 2^{\prime \prime}}$ ) and $5 \frac{1}{4}{ }^{\prime \prime}$ Disk Drives). 102 key keyboard and mouse. Serial parallel games port, DOS 4.01 \& 3.30, GW Basic, MS Works, other software £750 ono. Russ Howard Ext. 4647Amstrad 2086 Computer, 14 inch colour monitor 30MB hard disk. Lotus Symphony and Windows software, $£ 600$ ono. Andrew Whiteley Ext. 3981

## ELECTRICAL EQUIPMIENT

Stereo Cassette Recorder Model HRD - MD16 LW-MW-FM CTV Ipeaker MW-FM. C/W speakers, perfect working order, a DanielsExt 3601 or (0634) Daniels Ext 3601 or (0634) 389977
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Gate-Leg Table (Teak (inish) $32 \times 13^{\prime \prime}$ with boun
flaps up, seats $6, £ 35$ ono, James Young Ext. 3461

## Wooden Playpen VGC

 $£ 25.00$, Mothercare Viall carrycot with stand £20.00. Cot mobile, kiddieraft, $£ 8.00$. Xpelair, window mounting, $£ 8.00$ Fire grate \& fron Firemaster 16 ", $£ 5.00$. Tim Smith Ext. 4248 or 0634 372855Small Upright Freezer $£ 25.00$, Amstrad Video Recorder, $£ 90.00 .5$ shade Chandalier, $£ 15.00$. All items in good working order (0634) 811904
Velda Sofabed (green), excellent condition new, cost $£ 700$ - selling £170. Buyer collects Steve Pointer Ext 3528

Mothercare Via Pushchair \& carrycot (forms pram) with rain covers, duvet, 2 duvet covers, sunshade and cosytoes (Navy/white trip), cost $£ 300$, selling 150 , also clothing from 0 3 years of age. Lynn Shaw Ext. 3460 or (0227) 830781 (Evening)
Gas Cooker, Parkinson Cowan Sheerline, glass top, VGC, £80. D. Moore Ext. 3287
Child's car seat, Kangol Dreamseat, suits, 9 month 4 yrs. Plus extra straps for - 4 yrs .

If you would like to advertise in the GEC Avionics News Advertiser, write your Advertisement in block letters in the grid below and send to Peter Royall LCSD (Publications) Ext 4166
Advertising up to 25 words is free to GEC Employees, their families and people who have retired from the Company (additional words 50p per word). Non GEC Avionics employees 50p per word, cheques payable to GEC Avionics Limited.

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## EUROPEAN POLICE OII PATROL

As part of the Kent Police 'Into Europe' Programme, representatives of the Belgian, Dutch, French and German Police visited GAv at the end of July, together with their hosts from the Kent force.
The 'Into Europe' Programme is part of the Kent Police moves to promote close links between our police forces and their European counterparts. With 1992 approaching, followed by the ppening of the Channel Tunnel in 1993, Britain's commercial and cultural ties with Europe must grow. Kent's critical geographical position means that the region's role in this process will be particularly important.
GEC Avionics has a well established international trading record and has been European companies for over European companies for over more than happy to be involved with this important initiative by the Kent Police initiative by the Kent Police understanding between ourselves and our European ourselves

During their visit, the party saw a demonstraton of Ground Owl night vision goggles with ADD's Marketing Executive John White.


The German Police car with its driver Herr Polizeiobermeister Hermann-Josef Bougé, GAt Quality Director Ray Reese, and PC Keith Hawkins who bas for some years been involved in Bromley and more of the guests.

## GAv Central Charity Fund helps Mum

The Tomorrow's Child Kim Grindley of GAy Trust Fund was set up by Accounts who is expecting local midwives to raise her first baby in December money to buy essential Don't forget, your equipment that is not subsin provided by the Health will be matched by the Authority. company: Applications fo
The Central Charity Fund payroll deductions can be has donated $£ 200$ for the obtained from Personnel purchase of a Sonic Aid Records. which enables the midwife Other recent donations: hear the baby's heartbeat $£ 200$ to the Kent during pre-natal checkups, Learning Centre for Using it in this picture are Disabled Children
Val Cooper, a midwife at the $\$ 200$ to All Saints Delce Health Centre, and Hospital

Bike Race Time Again



Keitb Wardle, Ann Foster:
Colin skellett steve Wallace

The APD team tries to pull the division into the 90 s .
that of 'exhausted fielder' at weighed down by beer an rounders practices! Their main hiking boots, This team carrie responsibility on the day was the day and, together with a win the rounders tournament in the volleyball tournament which required a knock-out put GEC Avionics at the top of competition among the six the score board. teams to be packed into one Several pleasant summer hour. This was done by the use of a special set of rules known only to Applied Physics Division.

The final event of the day was the tug-of-war and APD fielded a fierce team of robust (but beautiful) women and large men volleyball and this outcome more than compensated for the hardships of the 'Knockout' team (who ultimately suffered total immersion) and rounded-
off a very enjoyable day.

The ADD Bike Race was held on Gtb August and was subsequenty won by the much improved Dayne Reast Dayne's improvement wa purchase of a super new racing bike and bis interest in triatblon. Ray Brogan wa not as fit as when be won the event last year; but be stiv managed to finish 2nd with a creditable time and Joh Crennell was 3rd. 5. Kevin Patrickson 32.02 6. Alan Houlgraves 32.34 7. Will Humber 33.57 8. John Scabrook $\quad 34.23$ 9. Tim Baker 35.19 10. Geoff Harvey $\quad 39.14$ 11. Charlie Oliver 39.18 12. Chris Dardry $\quad 40.31$ 13. Alan Ward $\quad 43.21$ 14. Chris Woodrow 51.29 went off course (apparently)

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## GAv News

# Eyes Over AFRICA 

The GEC Young Employees Expedition 1991/92

In our April issue, Paul Everson of APD told of his experience in Nepal. Nou Engineer in MASD, hasbeen selected to join the next GEC eded lo join the next GE Expedition.

In February, Lee will travel o Kenya with 24 young people from a wide range or professions, selected from companies within the GEC group, to undertake a community project in Northern Kenya. They were chosen at a rigorous weekend organised by the GEC Management College Dunchurch.
The project is self funding, in that each team member must raise $£ 1,100$ towards the overall target of $£ 34,000$, the rest being made up of a twoweeks wages contribution from each of them. So, Lee has been fund raising like mad.

His major event to date has been a Sponsored Walk of the fifteen 3000 ft peaks of the Snowdonia National Park (affectionCHALLENGE 3000 ). The walk took place in midAugust and lee with the help of seven colleague and friends managed to raise $£ 700$ towards his personal target, from just this event. All of the intrepid trekkers said it was the hardest thing they have ever done, especially as the wind was blowing a force 8 gale which made the hailgale which made the hail-
stones feel like bullets. But although it was hard and they openly admit

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## 25 Years Service

to a few moments of blubbering while climbing Tryfan, they all want to do it again next year. (Mad!)
As Lee is chairperson of the publicity team for EYES OVER AFRICA, which involves approaches to Newspapers, TV and Radio companies, we hope he will keep us informed also; we wish him the best of luck, and hope that after the 13 vaccinations he needs to go, he does not become the one team member statistically expected to contract malaria while in Kenya



John Duffett has been in IND/GSD since finishing his Technical Apprenticeship, except for 3 years in Gyro until their amalgamation with IND formed the present division. At various times, inside and outside the superclean areas, he has worked on projects such as Jaguar Nimrod, and NCS1 becoming a gyro expert; he is currently on the MLRS project. Family life with his project. Family life with his
wife Lesley and a young boy and girl still gives him time for his hobby of football.

## Progress for Young Enterprise

Following up on the item apprentices; Leslie is from
in the last issue, Don Short tells us that six newly formed 'companies' have got off to a good start in their schools, sood start in their schools,
with the help of their volunteer advisers.

This year the North Kent Area Board, chaired by Site Services Manager Chris Frost, is particularly pleased to welcome two new advisers, readers of GAv News. They are leslie Friend News. They are Lestie Friend (ISD) and Bernard Arlington (LCSD). Both are ex-


1982 and she is now a engineer working on air data computer development Bernard is from 1975 , he Bernard is from 1975, he joined AS\&RD/LCSD and

They join the team from GAv who have already been advising YE for varying numbers of years; Mick Porter (ISD), Doug Harris (GSD), Gary Moss (ICSD), Pip Huckstepp (ISD) Brian ip Huckstepp (ISD), Brian Parrott (CACD), and lan

 spent two years as a Tester in IND, but has been in his present division since 1973, firstly as Instrument Technician and then in Quality Assurance. He was promoted to Quality became Leading Hand in 1987 and QA Engineer a year later. At home, Simon has become the envy of his motorcycling friends by rebuilding a brace of BSAs.


Dave Young is Project Manager in CACD,
charge of the Tornado project with which he has been working since 1972 Then, he was a Devel opment Engineer in TACD/FCD, having joined them 3 years previously after completing his Student Apprenticeship and gaining his HND. Dave has a young family and is a Councillor for Tonbridge and Malling $B C$


After his apprenticeship, Brian Pearce, Project Admin Officer in ADD, started out as Lab Steward before joining the A-7 team who were then in a hotel in Chatham Many other contracts have come and gone since then, and 18 months ago Brian moved to the F-16 project. Outside interests include country walks and motorbikes, and he helps in the upkeep of a Scout camp.


Eric Jennings, Product on Foreman in GSD distinguished himself while an apprentice Fitter Turner by winning a 2nd year Apprentice Prize of the Year and then a Craft Skill competition run by the Engineering Employers Federation. The years in IND, Gyro and now GSD have included periods working outside Rochester in 1987 Eric went to New York and Michigan for 13 weeks to learn the build of MLRS gyros. Promoted to Leading Hand in 1986 and Foreman in 1989, he now upervises two clean rooms.
*****

There were, of course many other apprentices in that year-about 30. But most have gone their own ways outside the company at different times.

## Retirements

## Harry Cruttenden of CMS retired on 1 August. He writes: <br> in LCSD Cost \& Budget and 6 years in MCD. Gwen before joining GAv.

Tam grateful to bave this opportunity to say thank you and farewell to the many people who bave been so belpfiul and friendly in the 38 years that I have been with the Company. Work bas always been interesting, in MER, Aviation, FID, Training, MASD and CMS. As a Senior Shop Steward I bad to answer for the Staff Manual Workers agreement and bonus for Testers and Inspectors, and for Rochester 9 Branch of the $A E U$ and introducing the Blood Transfusion Service into the Company! As a Supervisor I was privileged to receive the BEM on bebalf of Production Departments and atso to chair the Rochester Foremen's Association. My 5 years in the Training Department were most interesting and rewarding.

May I wish you all as much success in the future as we have had in the past.'

Gwyneth (Gwen) Abnett retired from Monitoring \& Control Division in July after 11 years

Arthur Halstead has retired from GAv Stationery Stores after 8 years as Chief Storekeeper.
Ron Benjamin, Senior Design Engineer, was in MACD, then in IND/GSD for the last 24 years of his 29

Bernard Woolgar of SD's Model Shop originally joined Aviation Division 32 years ago, and in 1966 after various moves he started in FID Model Shop. Successively Bernard was Chargehand and Foreman, and since 1987 has been Superintendent.

Ron Richards, Senior Ratefixer, joined us after service in the Army and Merchant Navy. Ron has now retired after 31 years here firstly on the shop floor but Ratefixing finally in CACD Ratefixing, finally in CACD and GSD.
Senior QA Engineer Gerry Bryant of SESD travelled extensively for the company in Germany and laly during support of the ATEs for the Tornado. For over 12 years in the division
he has worked on that equipment, particularly the

Alan 'Scotty' Scott was Estimating at many place world-wide before coming othis company 21 years ago. He was in IND for a time and has now retired from CACD as Senior Estimator

Frank Hunt's 43 years at Rochester have been largel pent as storeman and Progress Chaser in Gyro and ND/GSD; he has now retired as Section Leader
Fred Howell, Senior Systems Engineer in FCD spent a large part of his 32 ean' service away from Rochester on trials work. Originally from Elliots Borehamwood, Fred came to ND and later spent some time with MASD and ADD before moving to FCD where he has been involved in the Phoenix project and its fligh testing.

Les Smee has clocked up 39 years service; his early days were in MER, then IND and when CMS was formed he took his skills as jig-borer later to operate the first NC machine in the company. Les became a Foreman and more recently has been in Planning and a Production Engineer

## Brian Sails to Victory <br> In glorious sunshine and

Leader in LCSD Production Project Dept., has had a great success
sailing.
Brian sails a Pacer class (about 14 ft ) dinghy and has son the National Sailing Championships class event, held at Lancing on the Channel coast near Brighton at the
September.

GEC Avionics Club Forthcoming ATTRACTIONS
moderate winds, and despite a late arrival owing to a (ear) puncture, he showed his sailing skills by straight away leading the first race of the series of four right through to the finish.

Although fighting off a bad cold and loss of vocal chords, Brian went on to


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OLD TMME MUSIC HALL

ANNUAL GENERAL MEETING The GAv Club's Tenth Annual General Meeting will take place in February. The Constitution requires a number of Management Committee representatives to seek re-election after two years in office.
At the AGM, three vacancies exist and nominations should be in the Secretary's hands by 31 December 1991. Nomination forms are available
Crossword No. 106 (For amusement only)

finish best in three out of
four races, thus winning the National Master Trophy.

Brian was chosen to compete in the National by his performance in the Team Trophy in his 'home' club Trophy in his home club Mo Maidstone Sailing Club a Mote Park; he also sails at the Medway Yacht Club, Upnor Brian Wells with the Masters Cup be bas won at the Pacer Class Dinghy Nationa Salling Cbampionships. On be table and the wall are more tropbies won during a bighly successful summer season.

## CRICKET CLIMAX

The 1991 Inter-divisional Cricket tournament has been won by ADD. Their Final match on 22 August with MASD was closefought, with an interruption by rain (again!) and the final overs played with an increasing run with an increasing run
rate in rapidly decreasing rate in

MASD won the toss and opted to field, and the end of the first over quickly saw Dave Stratton bowled with a peach of a delivery rom Tariq Mahmood MASD celebrated ADD's 1 for 1 , not knowing what was to come. In the next five overs only 7 runs were scored, but then Paul Jenkins crashed 17 in one over. After Richard one over. After Richard Atkinson trapped captain and in his LBW for 18, and in his next over removed two more 88-4. Then it rained hard. Then it rained, hard.

But ADD were eager to esume and a partnership of Paul Jenkins deadly


Left to Rigbt:- Ken Difford, Maurice Wooldridge, Ken Webber, Eric Jennings, Kevin Talor, Brian Crumbie, Tony Rye, Barry

## THEY WON 8 OF 9 GAMES

Once again GSD's Bat and Trap team have come up trumps! The 1990 winners of the inter-divisional tournament cantered home to a comfortable win this year in even better form than last year.

Their Captain, Barry Hodge, is modest enough to believe that it was down to his masterly leadership. Other team members think, in spite of it.
But the whole team agrees that a 'hat trick' in 1992 would go down very well.
stroke play and Daniel Patterson, Geoff Johnson, Bishop (18 not out) put on Alan Ward, Brian Hanson.
47. So ADD closed at 135-4. MASD's team: Malcolm

In sunshine, Tariq started Burt (Capt.); Tariq MASD's innings with a Mahmood, Stuart Gray, splendid 38 in 6 overs. Andy Hedge, Mike Captain Malcolm Burt Gwynne, Paul Oliver, departed, run out by Stuart Richard Atkinson, Phil Flack's inspirational Stancliff, Mark Hadfield, fielding. The match sizzled Mike Dando, Mike James. fielding. The match sizzled and Tariq was caught at 42 by Jenkins on the boundary, who in the next over bowled Stuart Gray another wicket needed but could ADD win?

The wicket duly fell; Dave Patterson delivered a tremendous throw to run out Andy Hedge, and then another fell. Finally, in what seemed like the gathering dusk, ADD clinched their victory with 103 for 8 wickets.

ADD's team: Steve Rous (Capt.); Dave Stratton, Paul Jenkins, Darren Dorrel, Andy Lucas, Daniel Bishop, Stuart Flack, Dave

The other teams in the tournament this year were LCSD GSD SESD/TSRL, FCD, CACD (Production), Training, Accounts and MCD From among and new competition among new competion among resulted in a win of the Maurice Finch Trophy for GSD, who beat CACD (Production).

This plate was donated by Keith Washington, organiser of the interdivisional tournament, and is a tribute to Maurice for his support of the cricket during his years as GAv Club Secretary.

## Athletics Club's

 fine recordGEC Avionics AC produced a superb performance in the final match of the British League Div. 5 at Cannock on September 7th. With GAv having to beat Strefford to remain in the League next season it was going to be no easy task, but the Club pulled together showing great team spirit and by the end of the match were 30 points clear of Stretford.
With so many excellent performances it is difficult to say what the highlight was, but in the triple jump of 15.27 m would take some beating. Nigel Stickings ran well in the $100 / 200 \mathrm{~m}$ taking maximum points with 10.6 and 21.4, while Steve Baggaley was his usual consistent self in the 400 m .
The middle distance races proved to be very exciting with the standard higher than any other division in the League. In the 800 m Martin honours in the 'A' race 1:52.6, while Graeme Saker had an easier ride in the ' $\mathbf{B}$ ' and hung on to win with a season's best of $1: 54.1$. However in the 1500 m Forder ran his best race which was just an hour after the 800 m . In a tactical race Forder man the World Student Games 800 m silver medallist Curtis Robb very close, just 0.4 seconds behind on the line after a quick last lap. Spencer Barden revised his best in the 5000 m with an excellent time of $14: 21.3$. All these performances have enabled the Club to stay up in the British League next season, but a lot of the credit must go to team manager Len Murphy who has put so much time and hard work into organising the team. To put this result into perspective, there are between
two and three thousand Clubs two and three thousand Clubs British League covers just the British League covers just the top 32. GEC Avionics AC Division of the League in 1989; they finished 3 rd inst
1989 year and 4th this rime 3rd las being subject to relegarion.
being subject to relegation

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The Summer Draw finally raised \&14,542.119 lucky Prizewinners were quickly told of their good are pictured bere are pictured here.
Some recent results.
Boot Fair - GAv Club, Hoo
Boot Fair - Towers Car Park
Karaoke Evening - Canteen
CACD Disco
GAv/Hospital Barn Dance $£ 450$ to GAv $£ 500$ to Hospital ISD Pontoon has already raised $£ 1200$ and has now started the new season
and many more - thanks to all.

One of the prizes was a Chauffeur driven ride to work and back. Tracy Coster Froduction Operative in ADD, duly arrived one morning in Silver wraith sedanca de ville silver Wrath sedanca de Vile

Awaiting her in the Towen car park in the afternoon was burgundy and black convertible Rolls-Royce Silver Ghost, almost 70 years old Practising a regal hand-wave to her colleagues, Tracy set off for her home in Wainscott, in grander style than her own Escort. Neighbours cheered as he arrived
Her chauffeur was the wellknown Ivan Odds, who brought the cars from his hire company and donated his services for the journeys.

Tracy's comment after wards: 'Brilliant'

## Gliding is great!

TOTAL COLLECTED TO DATE £61,975 OVERALL APPEAL FUND TOTAL £270,900 (29/10/91)

Martin Price of GSD QA won the prize of a Gliding Kent Gliding Club Challock Ashford) will not be forgotten Ashford) will not be forgotten watched half a dozen winch watched half a dozen winch apid climb which made his previous hearty pub lunch rather less of a good idea Then, his instructor Bob saic and now it's you!
'Parachute on and strapped into a very small cockpit, the learner goes up-front by the way, I was trying to remember what I had been told about the instrumentation in front of me and the emergency procedure for baling out which ended with something like 'I shall only say this oncel' only say this on
Then we were off acceler ating on the ground for abou thirty feet I guess, standing start to flat out in less than with is quike frigheng tight closed, the sound of the


## Markin ties the gidier for siz

grass under the fuselage is all I was conscious of, and then all went quiet and the airfield fell gently away beneath, this was now going to be superb.
After a loud bang as the tow cable was released, we were free. I can only describe it as like floating in a small perspex bubble, at 1100 ft and all very quiet. Suddenly Bob spoke, remember to stick and degrees nose down we're going left look first' remember thinking how remember thinking how
strange to look first, surcly we were the only people in the world right then.
All too soon we were coming in to land, very gently, with airbrakes up and touchdown made. Absolutely brilliant, about fifteen minutes worth of sheer excitement. be coming back to do it again' I answer, and I will.

Many thanks to all at the club, and behind the scenes there and at GAv, who were so friendly and encouraging. For a fuller description of the
actual flying, try it yourself. A super prize not to be forgotten.
Swimmers are on Target Over the past few months the swimming Section has been organising what has now become its annual sponsored swim. This year it has been in aid of the GAv Scanner Appeal. Cyril Moffett, section chairman, has been the prime
motivator in the event and his catch phrase has been 'get sponsored and get swimming -in the nicest possible way.


## APD Fast 'Assault' in Aid of MENCAP

## (1)

A 200 metre course was

A leam of four engineers from Applied Physics clocked the second fastest time of the day over an assault course in Harpenden (fifteen miles distant from Borehamwood) on 29th September. The speedy team were Steve Wallace, Paul Everson, Danny Morbey and Nick Mumby from the Laser Engineering Group.

The event was 'FUNCAP', organised by the Harpenden MENCAP society to raise funds for their local residential and short-stay home for the mentally handicapped. set up in Rothamsted Park Harpenden, consisting of obstacles including over-and-under poles, net bridges, gate, high scaffold wall and suspended tyres Each member of a team ran the full course as a relay leg and four teams raced ogether in each heat. Over 30 teams were entered in various classes and all raced against the clock.
The local men's hockey club set the best time of 3 minutes 4 seconds and the Applied Physics Division APhyDs' were a close second at 3 minutes 10 seconds.


Harry Staff particularly wants to thank all the people who have belped at bis Boot Fair and otber events.


The object has been to swim wonderful, with over 60 far as possible in 30 minutes. is usual the response has been
swimmers aged from 4 to 50 years taking pare. The wimmers set their own targe distances. These have varied wid 90 lenghs and cach ordividual tried their hardest oreach their target - most did.
*****

Seen above at a presentation evening in October, Personnel Director Jobn Bradley, Chairman of the GAv Scanner Appeal Fund, received a cheque for 51200 from Cyril Moffett. They are seen bere with the cheque, togetber with Alison O Connell, Secretary of the Medway Scanner Appeal, and some of the fund. The total raised fame to around $£ 1,300$.

