

NEWSLETTER NUMBER 10 - AUTUMN 2005

Published by The Hawker Association for
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EDITORIAL

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Our meetings continue to be very well supported, the Editor gets appreciative comments about the Newsletter, contributions are gratefully received; so, all appears to be well.

However, there are still a few Members who have not sent in their subscriptions. They are reminded by their names being in bold type in the membership list on the last page. Please **renew**; it's only a fiver! Please send your cheque, payable to The Hawker Association, to Barry Pegram (12 Becket Wood, Parkgate, Newdigate, Surrey, RH5 5AQ). Please include your full name, postal and e-mail addresses, and telephone number as a check on our records. If you **don't** intend to renew would you **please** drop Barry a short note anyway, and let him know why. This is so the Committee can look at the reasons and, if possible, correct things which members don't like. Sadly, for those who do not renew in the next few weeks, this will be their last Newsletter. Can you bear it?

Please continue to send in your memories of working for 'Hawkers' so that the Newsletter becomes a resource for future historians. Already the Imperial War Museum is showing interest.

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PROGRAMME FOR 2005-2006

Wednesday 12th October	The Influence of German R&D in WW2 - Ralph Denning .
Wednesday 9th November	Beyond the Harrier; Kingston's Projected Harrier Successors - Michael Pryce
Wednesday 14th December 2006 (Provisional)	Christmas Lunch. Hawker Centre, 12.30.
Wednesday 11th January	Social/Quiz
Wednesday 8th February	Competition Sailplanes - Afandi Darlington.
Wednesday 8th March	"My Three Jobs in the Front Office" - Chris Roberts.
Wednesday 12th April	AGM

Unless stated otherwise, meetings are at the Hawker Centre, Kingston - the old Sports & Social Club - and start at 2.00 pm. Lunch and drinks are available beforehand, tea afterwards, and there is a large, free car park.

Ralph Denning, on graduating from the University of Wales, worked for the Government on Aircraft Project Assessment before joining Bristol's Engine Division, later part of Rolls-Royce, in 1949. He was closely involved with Harrier, Concorde and other programmes and for twenty years was Chief Engineer (New Projects - Bristol). He was a member of Sir Roy Fedden's mission of aeronautical experts who went to Germany in 1945 to review that country's aeronautical developments. Ralph Denning draws on his experiences as a member of the British scientific staff in this historical review.

Michael Pryce studied the P.1154 project for his MSc at Imperial College and is now a PhD student at the University of Sussex working on the role of conceptual design in military procurement, focusing on supersonic VSTOL projects at Kingston, and Warton, from 1960-88. This work forms the background to his talk.

CHRISTMAS LUNCH

Following the successes of the last two years Percy Collino has arranged another lunch for this year at the Hawker Centre and negotiated the low £15 price. Book and pay for your tickets at the next meeting or 'phone Percy on 020 8337 8143 then send him a cheque payable to The Hawker Association. Seating is limited so again it will have to be a 'no partners' event.

COMMEMORATIVE PHILATELIC COVER - ANOTHER UNIQUE OPPORTUNITY

Trevor Jordan writes that just over 25 years ago, on 31st March 1980, the Royal Navy's first operational Sea Harrier squadron was formed. On the same day the first squadron flight took place carrying some 75 covers. Tim Gedge, who spoke to the Association in May, has checked his log book and confirmed

that he, as CO of 800 Squadron, made that flight.

The covers, cancelled at the RNAS Yeovilton Post Office, are signed by Tim Gedge and contain two insert cards. One tells the story of the Sea Harrier from the P.1127 to the date of the cover, and the other outlines the RN career of Tim Gedge which includes the Falkland War. The colourful cover design depicts the first production Sea Harrier, XZ450, launching from HMS Invincible. These uniquely interesting covers, priced at just £10, are available from Trevor Jordan at Association meetings or by post from him at 26 Alwyn Avenue, Chiswick, London W4 4PB. All proceeds go to the Kingston Aviation Heritage Project (KAHP), to whom cheques should be made payable.

T]As many of you will know, the KAHP aims to erect an imposing memorial to 'Hawkers', to place commemorative plaques at 'Hawker' sites and to install an educational computerised display of 'Hawker' history in the Kingston Museum. The outcome of a Planning Permission submission is eagerly awaited..

CORRECTION

In the last paragraph of the report on Tim Gedge's talk it should have been stated that Sir Sydney was watching the P.1127, not the Harrier because, of course, he died before the Harrier flew. Also, a date of 31st April was quoted in the fourth paragraph; no such date, try 30th. (Apols; Ed.)

HARRIER NEWS

BAE Systems has won a UK MoD contract worth more than £30 million for the provision of Harrier "mechanical support on an availability basis", says the BAES newspaper, 'Response'. Translated into the English we used to write, I think it means the immediate delivery of airframe spares to operational aircraft as and when they are needed. It's nice to see the old Kingston Jump-Jet still earning its crust.

BAES is also working on the Harrier JASS project - Joint Availability Support Solution. This project, says 'Response', has the "goal of designing and delivering an affordable, responsive and flexible partnered aircraft support service until the Harrier out-of-service-date in 2018." "By the end of 2005, a cohesive JASS plan will appear. This plan will bring together and align every milestone, work breakdown structure and process needed to deliver a tangible output-based support solution for Harrier." So now you know!

'Response' also reports that the first Harrier GRMk9, ZG501, has entered service with the RAF and is under test at the Fast Jet and Weapons Operational Evaluation Unit at RAF Coningsby. The first evaluation flight was made by Wing Commander Gary Waterfall, the unit Commanding Officer.

BAES's final clearance for the Harrier GRMk7A was completed at the end of May. This Mark is characterised by an uprated Pegasus delivering an extra 3,000 lb thrust at air temperatures above 30 deg C, as well as having lower maintenance requirements. This DACPA (Design Authority Clearance for Production Aircraft) marks the end of the contractor's GRMk7A development and clearance programme.

On 11th May the first flight of a Harrier carrying Raytheon Paveway IV precision guided bombs took place at Warton. The Paveway IV will provide the RAF with an all-weather precision bombing capability based on GPS aided inertial guidance and laser tracking. These flight trials are part of the Harrier upgrade programme to the GRMk9/9A standard.

HAWK NEWS

BAE Systems has signed a £158.5 million Design and Development contract for the Hawk Mk128 Advanced Jet Trainer with the UK Defence Procurement Agency. The contract covers two development aircraft. Meanwhile BAES has been funding the continuing development of the new generation Hawk's mission systems. Recently, the new 'three layer open architecture' mission computer, a key item, made its first flight. Such a system allows incremental upgrades of hardware and applications software. Importantly, commercial 'off-the-shelf' computer products can be chosen from the market and used, at much reduced cost. The Mk128 also incorporates simulated weapons and a digital video recording system. The radar display and simulated weapons of front-line aircraft are achieved without the costs of expensive hardware and the digital recording system allows the pilot to replay his mission in a debrief facility. Also installed is an autopilot to comply with a future Government regulation requiring all aircraft that use UK commercial airspace to be so equipped.

The Royal Saudi Air Force Hawk Mk65s have achieved 100,000 flying hours since entering service in 1980. The Hawks are used for fast jet pilot training and by the RSAF Saqoor Saudia aerobatic

display team which last year won the international aerobatic display team contest in the United Arab Emirates where they beat sixteen teams from Europe, Asia and the Middle East.

The Royal Australian Air Force's 33 Lead in Fighter (LIF) Hawk Mk127s are being upgraded by the installation of the Tactical Weapon Systems Training System (TWSTS). This system allows the Hawk to emulate the radar signal from a 'hostile' aircraft or missile thus, for instance, allowing two Hawks to simulate an attacking force of a Mirage launching an Exocet, one Hawk assuming the radar identity of the Mirage, the other carrying out a fast low pass of the target vessel. This enables the Navy to exercise all the ship defensive systems. The Hawk radar system can also be programmed so that control and display functions are the same as, for instance, the RAAF F/A-18s allowing pilot radar training at much lower cost than if the F/A-18s were used. The RAAF plan to keep their Hawks in service until 2025 so future upgrades could introduce Joint Strike Fighter simulation

TWSTS is also to be fitted to the South African Air Force's Hawk Mk120 LIFs..

THE FASTEST HUNTER?

Ken Batstone pointed out to the Editor an article in the October 2004 issue of 'Flypast' about a rather special privately owned Hunter. It is an ex-Singapore two seat TMk75A (previously FMk4 WV386) owned by a Steve Appleton of Boise, Idaho. Painted glossy black it is now registered N81827. He also owns a red painted RAF TMk7 and the Peruvian TMk62 (previously 681 and FMk4 WT706).

After a 6 1/2 year, 40,000 man-hour rebuild, N81827 is fitted with a modern 'glass cockpit' and an 11,250 lb thrust Avon 208 from a Sea Vixen FAWMk2 in place of the 10,150 lb thrust Avon 207. The 208 has cooled turbine blades. Also the Avpin starter was replaced with an electric starter, the gun ports were faired over, the 'Sabrinas' were removed and smoke generation equipment was fitted at the wing tips and the jet pipe.

Flight tests to date have revealed outstanding clean aircraft performance: time to 35,000 ft in 4 mins 35 secs at which altitude 0.96 IMN was seen. At 11,000 ft straight and level 0.96 IMN was also seen whilst still accelerating on throttling back. FAA requirements have been satisfied and N81827 is certified.

JSF PROTOTYPE X-35B TO AIR AND SPACE MUSEUM

The Joint Strike Fighter STOVL prototype, the Lockheed-Martin X-35B, is now in the Air and Space Museum's Steven F. Udvar-Hazy Center, Chantilly, Virginia near Washinton-Dulles International Airport. The X-35B made its last flight on August 6th, 2001, from Edwards Air Force Base, after which it was retired and soon was deemed no longer airworthy, consequently it was not possible to fly the aircraft to Washington DC. It would not fit in a C-5 or C-17 as it stood and it was too wide for road transportation. The wing is built in unit with the fuselage and could not be removed so specialists, with advice from Lockheed-Martin's design department, chose the best place for cutting off the wings so that they could most easily be reattached at the museum. With wings and tailplanes removed the aircraft components were loaded on a flat-bed tractor-trailer and driven 3,000 miles for reassembly at the museum using specially fabricated wing splices.

THE WIT AND WISDOM OF SYDNEY CAMM

Contributed by Ralph Hooper. Can any readers add to this compilation? The only thing he ever said to me, when I was a trainee at a drawing board with Charlie Cray was: "What are you doing?", followed by "Hmmm" when I had explained. I'm sure some of you can do better. Ed.

1. "Those at the back cried forward and those at the front cried back." A comment on indecision, usually by Ministries, and a quotation from Horatius on the bridge over the Tiber.
2. "There's only one way to do a job and that's as quickly as you can!" Urging the troops to hasten.
3. "The race is to the swift." A quotation, I believe; purpose as (2).
4. "They can't see our arses for dust." Reference to our competitors.
5. "I am never wrong except when persuaded against my better judgement!" Boasting; sometimes with an element of humour.
6. "It looks like mother done it!" An unfavourable comment on a component or a whole aeroplane.
7. "It looks like mother done it - all pots and pans." A very unfavourable comment on a component or whole aeroplane.

8. "We could design bombers but they couldn't design fighters!" A reference to any of our competitors.
9. "I'm only interested in designing fighters, there's no finesse in anything else." An opinion.
10. "I don't suffer fools gladly - and heaven save me from the share pushers and costicians of this world!" A reference to the commercial and accountancy functions.
11. "When you have designed aeroplanes as long as I have you can see the airflow." Boasting again.
12. "All my aeroplanes are pilots' aeroplanes, but then all my pilots are designer's pilots." Wish it was that simple.
13. "There's no such thing as a good aircraft engine." Opening gambit to keep 'powerplanters' in their place.
14. "Complication is ruination!" Other things being equal, few would disagree.
15. "Yesterday I told you to do that; today I'm telling you to do this; and tomorrow I'll tell you to do something else!!" Assertion of the Chief Designer's absolute right to change his mind.
16. "I hope you're working with a proper sense of guilt and shame!" Widely used internally or externally at times when the industry was under criticism by the Government and/or the Press.
17. "Just another bloody Drawing Office aeroplane." Great encouragement for the staff faced with a new prototype about to fly! (If it turned out all right then such remarks would soon be forgotten.)
18. "Every mod. begets a mod." General comment on the tendency for hastily introduced modifications to introduce problems of their own.
19. "You've got to have an 'eye for a line'." An aeroplane should look good.
20. "We've got to 'strike a line'!" Sometimes similar to (19) but also meaning "we've got to find a way ahead" - usually in unclear circumstances.
21. "The evil Air Marshalls...!" Any members of the Air Board who were failing to favour his products.
22. "He's only a journeyman draughtsman!" Don't expect too much from him.
23. "He's only an old sweat!" Don't expect anything from him.
24. "The Navy always treats us as though we were gentlemen!" Occasional approval of the Dark Blues.
25. "Life is real and life is earnest!" A general admonition to greater effort.
26. "Every day's an 'oliday 'ere!" They are still not working hard enough!
27. "We've tried efficiency - and that doesn't work!" A lack of respect for his fellow directors' latest enthusiasm.

AN OUTSIDER'S VIEW OF CAMM

The following extract is from "Combat Aircraft Designer; the Ed Heinemann Story", by E Heinemann and R Rausa, published by Jane's in 1980. Ed Heinemann was, of course, the respected Douglas El Segundo designer of many famous and successful attack aircraft including the Dauntless, Havoc, Invader, Skyraider, Skynight, Skyray, Skywarrior and Skyhawk as well as the Skystreak and Skyrocket research types.

In Chapter 20 Heinemann says...It was 1952 when I had a chat with Sir Sidney (sic) Camm of Hawker Ltd. (sic). A giant in the aviation business, it was his Hurricane which played a vital role in the Battle of Britain. He later developed the Hunters and was instrumental in developing the prototype of the vertical-short-take-off- and-landing aircraft which became the US Marine Corps' first operational V/STOL plane, the Harrier. Sir Sidney was a cantankerous gent but I loved him. He was a brilliant man, a real contributor to aviation progress. Try as I did I couldn't get him to visit us in America, but I thoroughly enjoyed my conversations with him in England.

I had described to him the computers we were using at the time. A group of them, I explained, placed side by side, stretched a distance of 160 feet. "What are yours like?" I asked.

"Oh well," he said softly, "we use the Certa." Whereupon he sent his assistant, John T Frassard, (sic) to get one to show me.

"Wow!" is all I could say when John laid the Curta on the table. It was about two inches wide and five and a half inches long. No wonder the British were doing so well keeping their costs and number of engineers down. And Sir Sidney Camm knew how to put men and Curtas to the fullest use.

AN AVIATION DOUBLE

On March 9th David Lockspeiser gave a two-part talk to the Association covering Singapore air force Hunter flight testing and the design and development of his own 'Boxer' multi-purpose utility light aircraft. After starting his aviation career with Miles and Armstrong Whitworth, David joined the RAF

becoming a Pilot Attack Instructor (PAI) and Instrument Rating Examiner (IRE). On leaving the RAF he joined Hawker Aircraft Ltd at Dunsfold as a production and development test pilot on Hunters, leaving the Company, now HSA, in 1968. David has flown 100 types; 160 counting Mks.

Whilst at Hawkers in 1962 David had designed a scheme for mounting a pair of AIM-9 Sidewinder air-to-air infrared homing missiles on the Hunter gun pack in place of two of the four 30 mm Aden guns, the other two being retained, with an extra 20 rounds. This installation was lighter than the standard 4 Aden pack. A mock-up was made at Dunsfold and the idea was received favourably by the RAF but the MoD maintained that the Hunter would be phased out of RAF service in four years! HSA were unwilling to pursue the idea in case it damaged potential P.1127 sales so this idea, to modernise the Hunter weapons fit, lapsed.

However, in 1976 David met Bill Weetman, recently back from Singapore where he had been working on new armament installations for the Singapore Ministry of Defence Hunters, including Sidewinders, but this time underwing. Bill said they needed a test pilot and David jumped at the chance. After a quick trip with the RAF on the Hunter TMk7 he moved to Singapore in 1977 where the air force operated single-seat FGAMk74 Hunters in the fighter/ground attack role and FRMk74A/Bs in the fighter reconnaissance role. For training there were TMk75/A two-seaters.

Lockheed Aircraft Services Singapore (LASS) had the contract to enhance the weapon capability of the Hunter. This included the fitting a US 'triple ejector rack' (TER) under the Hunter fuselage for bombs up to 1000 lb, an additional pair of underwing pylons inboard of the drop tanks for Sidewinders, a Ferranti Isis gun-sight, a Decca TANS navigation system and three alternative reconnaissance packs, in lieu of the gun pack, containing different camera and IR linescan arrays. AIM-9 Sidewinders on LAU-7 launchers, LAU-10 Zuni rocket launchers, 1000 lb bombs, BL755 cluster weapons and US Mk82 500 lb streamlined bombs were to be carried in various combinations, with and without drop tanks. TERs would also be fitted to the outboard pylons for twin carriage of rocket launchers, 500 lb bombs and BL755s. The heaviest combination to be cleared was 6 BL755s plus 2 AIM-9s with 230 gal drop tanks, giving a take-off weight of 27,400 lb. David wrote the flight test programmes to clear these equipments and configurations, conducted all the test flights and wrote all the reports and the Pilots' Notes.

LASS had no flight test experience at all. Their managing director even asked why it was necessary to do all this flying; didn't David trust their engineers?! There was no test instrumentation fitted so David requested a voice recorder; LASS put it under the ejector seat, so David bought a commercial mini tape recorder and got it fitted in an accessible position. King non-Milspec light aircraft instruments, including an attitude indicator with a 60 degree bank limit, had also been fitted by LASS. Clearly, these had to be changed so David had to redesign the instrument panel. Eventually the flying got under way over the South China Sea in high humidity and 30 deg C temperatures, with a chase Hunter. The programme was successful and the Singaporeans operated their Hunters until the early 1990s. Eventually they were sold to private owners in Australia, New Zealand and the USA.

The 'Boxer', or Land Development Aircraft (LDA) had its roots in the idea of a Design Liaison Engineer at Dunsfold, David Carter, who thought that an inexpensive utility and crop spraying aircraft should be designed for use in the countries of the less developed world; an "aerial Land Rover". David (L) believed that a large cg range would be necessary for maximum flexibility of loading and this led him to the tandem wing layout, as experimented with by George Miles with his M35 Libellula and twin engined M39B aircraft in the mid 1940s. Besides the larger cg range the tandem wing offered safe stalling and excellent pilot vision. To test his idea David made a number of tissue covered balsa models with different wing layouts. He settled on a parallel flat sided, rectangular cross section fuselage with a nose cockpit and low mounted adjustable foreplane with flap. At the rear was a high mounted, strut braced, wing, with outboard ailerons/elevators and inboard flaps/elevators, with fins and rudders inset from the tips. Twin undercarriage legs were fitted, fore and aft, the front wheels being steerable through an Ackerman steering geometry derived from the Lotus 7, so that the aircraft could be manoeuvred over a detachable payload container to be winched up into the centre fuselage. The parallel chord, constant section wing panels and foreplane were the same, as were the control surfaces and flaps. The whole design sacrificed visual and aerodynamic elegance for functional practicality. It was designed for easy manufacture in the 'third world'. With the aid of Roger Dabbs, who did the stressing and Type Record, John Quinn and Alan Daffey, a 70% proof-of-concept aircraft was designed and then, with the agreement of John Lidbury, built in a Nissen hut at Dunsfold by David and George Smith from Dunsfold's Production Department.

The LDA 01 aircraft, registered G-AVOR was moved to BAC Wisley and made its first flight,

powered by an 85 hp Continental C85, on August 24th, 1971. David found that his creation was fine longitudinally but there was no rudder feel, turn entry was difficult and low speed directional stability was weak. Adding bungee and aerodynamic balances to the rudders helped. Support from BAC included wind tunnel tests and development to ensure that the foreplane stalled first. This also showed that vortices from the foreplane disturbed the wing flow leading to the fitting of wing fences. Wing tip mounted fins were also found to be better and were to be a feature of the full scale aircraft.

Flight testing continued at Hurn where, when ballasted to forward and aft cg positions, the wide range proved to be even better than expected; four times greater than a conventional aircraft. The LDA 01 also proved to be highly manoeuvrable. In 1975, with a 160 hp Lycoming engine installed, David took it to the Paris Air Show where, painted half in camouflage and half in civil livery, its performance was interrupted by a swarm of bees settling on the cockpit requiring the attention of the airfield fire brigade! In 1976 the aircraft appeared at the SBAC Show at Farnborough.

The full scale production aircraft was to have wing-tip fins and rudders, a tricycle undercarriage and large, side loading doors. However, this was not to be; the project was killed when the LDA 01 was destroyed when the Optica hangar at Old Sarum, housing the aircraft, was attacked by an arsonist.

After a short film the vote of thanks was given by Roger Dabbs who said that it was David's drive, enthusiasm, charm and character that led to the successful design and flight testing of this unique aircraft. The audience responded with hearty applause.

"ONCE UPON A TIME I WAS A REGIONAL EXECUTIVE"

This was the title of Peter Boxer's July 13th talk which was instructive in content, loaded with anecdotes and witty in delivery; and hence difficult to report. However...

In the Hawker Siddeley Group, Regional Executives (REs) were senior people positioned in their regions, in Sir Arnold Hall's day as the Chairman's representative. They were responsible for moving in the right circles, and occasionally deliberately in some of the 'wrong' ones too, throughout their region, and for giving the impression at least, that they spoke for the highest levels in the Company. In the aerospace business only Roll-Royce had a similar system; a small network of senior representatives around the world who were there to prepare the ground for business and to assist in closing the deal when the time was right. BAC tended to open offices overseas to administer contracts once obtained.

The main characteristic of the Hawker Siddeley marketing approach was that REs were cross-divisional, or even cross-company, and this applied to both civil and military products. This enabled the 'best bang for the buck' in what was usually a HQ expense. When based at Kingston as part of the Aircraft Group the REs were administered by two executives and a small staff, in contrast to the Government Defence Marketing Organisation which became a £30 million-a-year hydra, not unlike the system in operation in a later era of our Company's history!

Peter's launch into the world of the RE happened in the States when working with the HS125 team, having set up a direct marketing organisation to take over from the previous fairly unsuccessful liaison with Beech Aircraft. (The 400th 125 sale in N.America was made while he was there). Eric Rubython and his wife Joan 'happened' to appear in Los Angeles, where Peter was by then based, as part of a wider tour of N and S America. Having been tipped the wink on the impending visit Peter and his secretary spent the best part of a day ensuring that the Rubythons' suite, the flowers and the scotch were all just right for their check-in. Peter was detailed to take Mrs Rubython to the Queen Mary, in Long Beach, for lunch while her husband followed a separate programme. Eric Rubython and Peter then had an apparently casual conversation at the end of which Rubython said that, in the event of Peter being appointed as an RE, he wasn't to look upon any such move as a quick career stepping-stone back to the UK, but rather as the first of up to three such postings beforehand. In the event, two of the three never happened.

There it was, Peter, feeling pretty chuffed as the post held considerable stature and responsibility, was about to become one of 'those' REs. However, he was slightly alarmed to hear that he was going to take over, from Stuart Ides, francophone North and West Africa; not a part of the world he knew much about, and A-level French was the last time he'd actually used that language. There was quite a lot going on in the region although, owing to the nature of the economies, the potential aircraft sales were small in number. As part of a six month transition from the States to West Africa, including language training, Peter and Stuart did a thorough briefing tour. Soon it became obvious that there was one principal exception to the small number expectation; Algeria, whose economy was burgeoning as a result of the laying of oil and natural gas

pipelines under the Mediterranean into Europe.

Of his three years as an RE, the Algerian campaign took up the majority of his time. There was even a Hawk sales tour to Tunisia and Algeria, the latter wanting to use some of their emerging wealth to establish a flagship aerospace industry, using the Hawk as its basis, with technology transfer on the lines of the Finnish Hawk programme. There was a long series of visits, some of which seemed to go absolutely nowhere and whose 'tea-leaves' were impossible to read, so inscrutable were the hosts. The Algerians had an Arab mentality mixed with French attitudes towards bureaucracy and a Russian trained attitude towards military thinking...and secrecy.

Slowly it emerged that as a precursor to getting Hawk they wanted refurbishment, first, of their MiG 21s and then, it emerged even more slowly, their MiG 23s also. As a result Peter took teams of other suppliers - Rolls, Smiths, Ferranti and so on - as well as the usual Kingston project management, design and production people. Government representatives and specialists were always present and even Warton civil engineering types got involved when the project had come to include factory and airfield construction. The situation had constantly to be checked with people closer to the powers-that-be for advice on reading those same 'tea-leaves'. Sometimes even the nature of the reception committee and the types of official cars used in and around Algiers were reported. If the team was collected in a government fleet of rather elderly oil-burning-fuel-lubricated, over-revved BMWs, and piloted to the hotel with sirens, flashing lights and frequent use of the pavements, then the campaign was probably going pretty well. At the other extreme there would not even be an escort officer at the airport; so it was taxis into town. Eventually, the drop in energy prices undermined the economic support for the programme, which had grown to over £400 million in its ambitions. The whole thing went, and stayed, quiet: Peter's team never quite 'got there'.

Not all the campaigns in Peter's region were on such a scale. For example he tried to get rid of the last six new Strikemasters which had been lying around in crates for some years. He reckoned he could make them sufficiently lucrative for BAe to include a Jetstream 31 as an apparent British Government 'gift' to the Senegambian Federation, a hot concept in the early 80s for increasing co-operation between Senegal and Gambia. In spite of close liaison with the Foreign Office and the British Embassy in Dakar the plan was foiled when Warton reassigned the Strikemasters to Ethiopia, who never got them either, by which time the appeal of Peter's package had collapsed.

Another small campaign was to provide the Mali government with a BAe146 to shuttle rich tourists arriving in their 747s to internal destinations, like Timbuctu, in jet comfort. The early 146 was ideal for both the tourism role and a little government VIP work as well. However, the prospect had never been taken seriously because of the apparent lack of finance. Surprisingly, it turned out that sufficient Export Credit Guarantee cover was available in the UK. So, the aircraft was sold, the contract was signed in England and the delivery flight departed for Nioro, in honour of which the aircraft had been named. On arrival the extremely shiny new jet found itself in the middle of nowhere, parked on a small apron in the midst of flat scrubland, beside a small mud-hutted village...from which creaked and groaned every serviceable vehicle (about 6), each loaded with its share of village elders. Respective lines were formed, solemn greetings were given and the British Ambassador rose splendidly to the occasion with duly formed words. Then he was ushered to a small commotion at the front of the aircraft to discover the nose-cone being liberally smeared with the blood of a just- slaughtered sheep. His Excellency rapidly recovered his poise and the naming ceremony was duly completed after he had managed yet more appropriate words in response to the invocations for the future well being of the aircraft.

This is but a small part of Peter's most entertaining talk but suffice it to say that, after questions and a vote of thanks from Chris Farara, who had been one of the Algerian team, the audience responded with loud applause.

HUNTER DELIVERY FLIGHT

Duncan Simpson recalls the first Hunter deliveries to the Royal Air Force...

In the past fifty years the RAF has taken delivery of three completely new aircraft from the Kingston design and manufacturing organisation. On checking my log book I find that I have participated in all three of these events; the Hunter in 1954, the Harrier in 1969 and the Hawk in 1976 - simply by being in the right place at the right time.

First the Hunter. At the Central Fighter Establishment I was busy clearing and securing secret papers in the office of my CO, Wg Cdr Bird-Wilson, late one January evening in 1954 when the Boss

suddenly looked up and said, "Duncan, we should get the Swift next month and the Hunter in July, provided Hawkers sort out the air-brake. I propose to divide the Squadron into two groups, four pilots on the Swift and four on the Hunter. Which would you prefer to do?" "The Hunter, Sir, and I don't mind waiting!" (I knew I would fly the Swift Mk 1 anyway).

And so it came to pass. We were told that three Mk 1 Hunters would be ready for the CFE on July 5th. Three pilots were detailed to collect these eagerly awaited aeroplanes: Sqn Ldr Tom Seaton, Flt Lt Mike Calvey, and me. We were conveyed by Anson to Dunsfold and treated to a splendid lunch in the Mess, prepared by the redoubtable Mrs Reid. After lunch we collected our flying kit and went out to find the three gleaming, new Hunters. We had briefed on the conduct of the flight beforehand and now were given a cockpit check by Messrs Bedford, Murphy and Bullen. The delightful looking Hunter was no problem as we were all current on Swift, Sabre, Venom, Meteor and Vampire.

After take-off we turned starboard on a direct course for West Raynham. Our first snag was no less than four red undercarriage up-lock warning lights. (Sir Sydney was right - microswitches were "the curse of the industry".) This resolved we went into close formation to cross London at 2,000 ft then onwards to our base. After one or two formation flypasts, we landed off a break from echelon starboard and taxied in to be met by the Commandant and various members of the CFE Staff. Air Commodore Geoffrey Stephenson looked somewhat stern and held an ominous looking piece of paper in his hand. This turned out not to be an admonishment for the 2,000 ft overflight, but a congratulatory message from the Air Ministry, who had observed our overflight, for getting three Hunters in the air at one time!

The Hunter had at last arrived at the Air Fighting Development Squadron and we had a few days to get to know the aircraft before being pitched into Fighter Command's Exercise Dividend on July 18th. I had only done eight flights before flying in that summer exercise, in foul weather, as No.2 to my gallant leader, the CO. We had quite a few problems: hydraulic failure, canopy misting, radio and electrics, but at least we had an airbrake!. The FMk1 was fast, strong and forgiving and it enabled us to intercept the incoming force of RAF Canberras and USAF B-45s over the North Sea. Nothing, with a bit more thrust from the big Avon, could prevent the Hunter becoming one of the truly great fighters in the RAF...and everybody's favourite. But that is another story.

SEA HARRIER BOOK REVIEW

Timed to coincide with the disbandment of the 'Shar' squadrons, "Sea Harrier - the Last all-British Fighter" by Jamie Hunter has just been published by Midland at £17.99. This impressive all-colour book tells with commendable accuracy the story of the Sea Harrier, with particular emphasis on its operational life. It is very well illustrated with pin-sharp photographs from many sources, including the author himself, a skilled air-to-air photographer. Amongst the useful appendices is a listing of all the aircraft with a potted history of each, and a list of all 68 Royal Navy Sea Harrier Training Courses and the pilots on them. Highly recommended.

HAWKER ASSOCIATION MEMBERS - AUGUST 2005

Members with their names in **bold** type have not yet paid their subscriptions - please see the Editorial on page 1.

Apologies to any who have renewed since this list was prepared.

A: Mike Adams (A), Ken Alexander, Peter Alexander, John Allen, Terry Ansty, Alma Apted, **Steve Apted**, **John Arthur**, Alan Auld, Bryan Austin. **B:** **Colin Balchin**, Ambrose Barber, Ray Barber, Derek Barden, Peter Barker, Geoff Barratt, Graham Bass, Ken Batstone, Dennis Baxter, Colin Bedford, Jim Berryman, Anne Beer, Guy Black (A), **Keith Bollands**, Paul Boon, Cliff Bore, Steve Bott, Pat Bott, Bob Bounden, Alan Boyd, Pat Boyden, Phil Boyden, Roy Braybrook, Clive Brewer, Laurie Bridges, Ian Brine, Doug Britton, Peter Brown, Christopher Budgen, **Roy Budgen**, **George Bunt**, Reg Burrell, Robin Burton, Ron Bryan, **C:** **Bert Callan**, Richard Cannon, Maurice Carlile, Chris Carter, **Bob Catterson**, Ken Causer, Jeremy Cawthorne, John Chacksfield, Colin Chandler, Jenny Chandler, Keith Chapman, Gerry Clapp, JF Clarke, John Cockerill, Bob Coles, Percy Collino, Brian Coombes, David Cooper, Paul Cope, Patricia Cosgrove, Ron Cosgrove, George Cotterell, Nick Cox, Eric Crabbe, Shirley Craig, John Crampton, **Russ**

Culley, RG Curtis. **D:** Roger Dabbs, Clive Dalley, Andy Dalton, John Danse, Afandi Darlington, Jo Davies, John Davie, Ken Davies, Trevor Davies, **Diana Dean**, Norman Devielli, **Mike Dodd**, Lambert Dopping-Heppenstal, Jack Dowson, Brian Drew, Dick Duffell, Jean Duffell, Peter Drye, Neville Duke, Chris Dunhill, Mike Dyke. **E:** **John Eacott**, **John Eckstein**, Andy Edwards, Dave Edwards, Tony Elliott, Norman Evans, Roy Evans. **F:** Ian Falconer, **Mike Fantham**, Chris Farara, John Farley, **John Farrow**, **Geoff Fieldus**, **Mike Finlay**, Wilf Firth, Ann Fletcher, Richard Fletcher, Colin Flint, Dave Fowler, Mike Frain, Harry Fraser-Mitchell, **Geoff French**, Mike French, Heinz Frick. **G:** Roy Gaff, Mike Gane, John Gardner, Patricia Gardonio, **Peter Gates**, Sandie Gear, Tim Gedge (A), Mark Gerrard, Alan Gettings, Tony Gibbs, John Gilbert, Maurice Gilson, John Glasscock, Pat Goodheart, Eric Goose, John Gough, **Andy Green**, James Griffin, **Barry Grimsey**. **H:** Douglas Halloway, Liz Hargreaves, Simon Hargreaves, Bryan Harman, Dawn Harris, Guy Harris, Thelma Harris, Brian Harvie, David Hastie, Eric Hayward, Bob Head, **Sheila Hemsley**, **Ted Hemsley**, Jock Heron (A), **Tony Herring**, Keith Hertzberg, **Frederick Hewitt**, Merlin Hibbs, Richard Hickey, Peter Hickman, Reg Hippolite, Keith Hobbs, Chris Hodson, Gordon Hodson, **Derek Holden**, Doc Holliday, Ralph Hooper, Linda Hopkins, Paul Hopkins, Mike Hoskins, **Dawn Howes**, **Terry Howes**, Simon Howison, **Gordon Hudson**, Gavin Hukin. **I:** Pete l'Anson, **Len Illston**, Maive Impey, David Ince (A), **Brian Indge**. **J:** **Keith Jackman**, John Janes, Gordon Jefferson, John Johnson, Ian Jordan, Trevor Jordan, Robin Jowit, Alf Justin. **K:** Brian Kent, Dennis Ketcher, Bill King, Dave King, Martin King, Charles Kirk, **Ralph Kuhn**. **L:** Barry Laight, Mike Laker, Charles Lamb, Richard Lane, George Latham, Pam Lawrence, **Valerie Lawrence**, Andrew Lawson, Ron Leader, **Geoff Lee**, Gordon Lewis (A), Mark Lewis, **Vernon Lidstone**, Gary Lillistone, Andrew Lloyd, **Gary Lockley**, David Lockspeiser, Norman Long, **Gordon Lorrimer**, David Lovell. **M:** Albert Magee, Al Mahoon, **Mick Mansell**, **John Marsh**, Bill Marshall, Bob Martin, Dennis Mason, Brian Maton, Don McGovern, June McKeon, Ronald Mears, **Mike Mendoza**, Hugh Merewether, Jim Middleton, Kit Milford, Jack Mills, Brian Monk, Pat Moon, Leslie Moore, Pauline Moore, Nicholas Morland, **Pete Munday**, Carole Murphy, Gloria Murphy. **N:** **Anthea Newman**. **O:** Roger O'Brien-Hill, John O'Sullivan, Robin Owen. **P:** Les Palmer, John I Parker, **John L Parker**, John Partridge, John Pearce, Barry Pegram, **Martin Pennell**, Bill Phillips, **Ted Pincombe**, Dick Poole, Don Pratt, Dave Priddy. **Q:** John Quinn. **R:** Clive Radley, Raharto, **Frank Rainsborough**, Colin Raisey, Brian Ralton, Paul Rash, Diane Raymond, Vanessa Rayner, David Rees, **Peggy Remington**, Francis Rhodes, **Geoff Richards**, Bill Richardson, Chris Roberts, John Rodd, Eric Rubython, Malcolm Ruscoe-Pond, **Peter Ryans**. **S:** Helen Sadler, Roger Samways, Bernie Scott, Alex Seaman, Ray Searle, Arthur Sharpe, Peter Sibbald, Bill Sherwood, Jack Simmonds, Sadie Simmonds, Duncan Simpson, Derek Sims, Gerry Sims, **Charles Smith**, Don Smith, Harold Smith, John Smith, Karl Smith, **Pete Smith**, Selwyn Smith, Roy Sparrow, Peter Spragg, Cora Stanbury, Vivian Stanbury, June Stephens, John Strange, Carroll Stroud, Mike Stroud, Christine Strudwick, Tony Strudwick, Douglas Stubbs, **Bill Swinchatt**. **T:** **David Taylor**, **Stuart Taylor**, **Brian Tei**, **Reginald Thompson**, **Geoff Tomlinson**, Graham Tomlinson, Rod Tribick, Ron Trowell, **Frank Tuck**, Bert Turner, Michael Turvey. **U:** John Underhill. **V:** Herbert Valk. **W:** Brian Walden, **Terry Walker**, David Ward, Harry Webb, Patrick Webb, **Graham Weller**, **Rob Welsh**, AP West, Bryan West, **Judith Westrop**, **Jenny Wheatley**, **Phil Wheatley**, James While, Jan White, Mick White, Roy Whitehead, Annette Williams, Ron Williams, Sally Williams, Colin Wilson, George Wilson, Paul Wilson, Dick Wise, **Helen Woan**, George Woods, **Len Woodward**, Alan Woolley.

ASSOCIATION TIE - orders have been placed for smart red and blue ties with the Association logo in gold. Availability and prices will be announced as soon as possible!