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RIP IMC

Having reported in the November edition of FTN that the European Aviation Safety Agency (EASA) were considering introducing a Europe-wide Instrument Meteorological Conditions (IMC) rating, to mimic the existing UK rating, FTN has learnt that at a recent JAA FCL 001 group meeting held at EASA's headquarters in Cologne, every JAA Member State other than the UK voted against the proposal.

This veto of the IMC Rating by the rest of Europe, coupled with a switch to EASA flight crew licensing in the near future, which will see the end of all National licences and ratings, means that the IMC rating may not only be unavailable across Europe, but will also cease within the UK.

The IMC rating has been in existence in the UK for over 30 years. According to those involved in the original IMC rating Working Group, it was designed to provide private pilots with enhanced skills and greater confidence when faced with deteriorating weather conditions, by increasing a pilot's instrument flying knowledge and radio navigation skills, when compared to the limited instrument flying instruction provided under the PPL syllabus.

The rating was originally lobbied for by industry representatives, most notably AOPA, who wanted to see a stepping-stone between the one-hour instrument navigation training provided under the PPL curriculum and the full-blown commercial Instrument rating, used by commercial pilots operating in Class A airspace.

The 15-hour IMC rating course finally settled upon, allows a private pilot to climb through cloud and operate 'VFR on-top' before letting down again through cloud at their destination airport on either an Instrument Landing System (ILS) approach or non-precision let down. The privileges are more limited than those afforded to holders of an Instrument rating, but are nonetheless said to enhance safety and prevent pilots "hedge-hopping" at low-level to remain in sight of the ground. Fundamentally, the IMC rating provides pilots with the skills to get themselves out of trouble when faced with deteriorating weather conditions, and was never designed as a 'cheap' Instrument rating. IMC rated pilots, for example, are not allowed access to airways, or Class A airspace and for flights within Class D airspace, which includes the airspace around many of the UK's airports, Minimum Descent Heights (MDHs) allowed for instrument approaches as well as minimum horizontal visibility distances are much more restricted than they are for IR qualified pilots.

Nonetheless, renowned UK aviator, display pilot and ex CAA employee, Barry Tempest, who was involved in the original IMC consultations back in the 1970s, told FTN that the rating originally came up against heavy criticism from the professional pilot unions, who saw it as little more than a budget Instrument rating which could compromise the safety of their operations. And according to those present at the recent JAA FCL 001 group meeting in Cologne, the same negative reaction by professional pilot unions would appear to have occurred again, albeit this time by unions outside of the UK.

The debate was won the first time round as the UK GA community argued convincingly that the increased safety benefit far outweighed any unsubstantiated claims by the airline lobby that their operations would be compromised. And history would appear to have corroborated these claims, with little or no evidence of commercial operators being adversely affected by IMC rated pilots sharing some of their airspace.

Second time round however, and the news is less encouraging. One UK GA representative who was present at the JAA FCL 001 group meeting, said that out of the 12 countries represented, only the UK representatives voted in favour of introducing a Europe-wide IMC rating. The other countries, many of whom were represented by individuals from professional pilot unions, did not want a European IMC and it was met with fierce opposition. Despite the fact that industry experts have said that the rating offers a direct safety enhancement, and the remit of EASA is, above all, aviation safety, the general consensus would appear to be that the IMC will not be adopted under EASA after all.

At the time of writing a consultation is underway, but FTN has learnt that the removal of the IMC rating appears to be pretty-much decided, unless that is, the UK manages to convince its fellow JAA member states to endorse the rating. But given the better weather conditions in much of Europe which means private pilots can fly VFR virtually all year-round, and also the smaller scale of General Aviation in many European countries, who are often out-voiced by their National airline counterparts, industry experts have told FTN it is unlikely to happen. The UK's closest ally, according to those present at the meeting, is France, where there are similar weather conditions as those found in the UK and where there is a large GA community who could benefit from such a rating. But other countries with less vocal GA communities and better weather will prove more difficult to persuade, they said.

So where does this leave UK pilots who regularly make use of the IFR flight privileges afforded under the IMC rating?

One possible concession that may come about with the removal of the UK IMC is the introduction of a more accessible PPL IR. Back in July, we reported on the possible introduction of a PPL IR 'Lite', and the mood-music at the time was extremely favourable that this would happen. The PPL IR Working Group, set up by Graham Forbes, head of flight crew licensing at the CAA, came about as a result of the CAA's Strategic and Regulatory reviews of GA, which saw, amongst other issues, the need for a less commercially-biased Instrument rating for private pilots.

Eleven recommendations were made during the IR Working Group's consultations, to lessen the training requirement and the CAA reported that they were considering them all. Primarily, the recommendations included a reduction in the theoretical knowledge requirement, which is currently at a level more suited to airline operations and not as relevant for pilots flying single-engine light aircraft. There was also a recommendation for more competency-based training, rather than a minimum hours requirement, as private pilots wishing to upgrade to an IR generally have more flying experience than their commercial counterparts undertaking training for the first time. It was also argued that holders of IMC ratings should be granted a credit in respect of the previous radio navigation and instrument flying training undertaken during their IMC rating course, as well as the subsequent experienced gained in making use of the rating, which in many cases would amount to many hundreds of hours. So called 'Grandfather' rights were sought, which would reduce the training requirement by up to 10 hours.

It is disappointing to report then, that according to industry sources, the current mood-music is less favourable than before and that many of these recommendations may not be adopted after all. The consultations are continuing and it is likely that a Notice of Proposed Amendment (NPA) will be published by EASA early in the New Year, detailing which direction the IMC and the PPL IR will follow.

One long-term IMC rated pilot FTN spoke to, said that it is particularly ironic that this news comes at a time when access to regional airports is becoming increasingly difficult for GA pilots. As more commercial operators choose to operate out of a larger number of regional airports and more controlled airspace is put in place in Europe, the requirement for ratings which would increase the ability of private pilots to mix it with the 'big boys' has never been so high.

FTN will be watching the debate closely and we will report any developments on our website and in future editions.

Mode S

THE LATEST

On Saturday 17 November the Popular Flying Association hosted a meeting between the CAA and GA community representatives, who had met to continue discussions on the equipage of Mode S transponders in aircraft flying in UK airspace.

With apologies to our regular readers, the background to the Mode S debate lies in the CAA's desire for all aircraft operating within UK airspace to have greater interoperability, or in other words, the ability to mix commercial air traffic (CAT) and general aviation in increasingly congested airspace, without compromising safety. The origination of the concept stems from the Government's White Paper on the Future of Air Transport, which recognises that CAT is set to double in size over the next 20 years. The growth in CAT has meant that the UK's smaller regional airports are already dealing with many more commercial flights than previously experienced. Currently, some 42% of CAT operate out of these regional airports, and as a result CAT is likely to come into contact with general aviation more frequently than before.

One solution to the concern that increased traffic leads to an increased risk of accidents, is to introduce a system of interoperability whereby pilots make use of new technology to more easily see and be seen by other flights operating near them. There are various options available and the CAA has decided, currently, that the option that offers the best solution is Mode S.

Mode S is a new design of transponder that offers advantages over traditional Mode A/C reporting transponders. Primarily, Mode S can be 'seen' by aircraft equipped with collision avoidance technology (TCAS), meaning that CAT, which is equipped with such technology, is able to see other aircraft within a specific radius and take avoiding action if their flight path becomes compromised by conflicting traffic. There are additional advantages for air traffic controllers on the ground as well, including the ability to identify the type of aircraft that appears on their screen, by reading the aircraft-specific code that is transmitted when a Mode S transponder is interrogated by radar. And Mode S is also claimed to solve the issue of bandwidth availability, which is becoming an increasing problem with high demand for radio frequencies from emerging technologies such as mobile phones.

So why, if Mode S appears to be such an asset to flight safety, are the CAA having such a tough time of convincing the GA community that they should equip with it? The main argument that one hears when speaking to GA pilots is cost. These are not cheap devices: the least expensive on the market are currently well in excess of £1,000, compared to Mode A/C transponders which are available at nearly half the price. A second argument is that, as this equipment primarily benefits operators equipped with costly TCAS devices, i.e. the airlines, why should GA carry the cost burden of equipping with Mode S when others reap the benefits? Another concern heard from amongst GA pilots is that as certain aircraft types have limited panel space or no onboard power, they are unable to equip with Mode S, and so there is a fear that they will be grounded as a result. Others ask, why should they have to equip with a device that will benefit no one, given they fly in remote areas of the UK that CAT never visits? And most contentiously, if Mode S means that all aircraft flying within the UK can be identified and tracked, is this the beginning of private pilots being charged for flying in open airspace each time they get airborne?

It was apt then, that the CAA's presentation, given jointly by John Banks of the CAA's Directorate of Airspace Policy and Andy Greenwood from Adept ATM Ltd (a consultancy firm employed by the CAA), included statements, not just about what they are proposing, but also about what they are not proposing.

They began by stating that, "Last year's proposals for the Mode S carriage by all aircraft operating in all airspace are not currently being taken any further forward. This is not an initiative to increase the amount of commercial traffic or UAVs using Class G airspace. This is not an initiative to 'ground' all GA aircraft that cannot fit Mode by 31 March 2008. This is not related to airspace charging or radio carriage."

So what is the proposal about?

According to the presentation, it is primarily about replacing out-of-date existing Mode A/C transponders with Mode S, and to increase the number of aircraft that can interact with ATC Secondary Surveillance Radar (SSR) and airborne and ground-based collision avoidance safety nets (ACAS II, TCAS etc). Ultimately, claimed the presentation, it is about improving interoperability to protect freedom of movement and improve safety levels.

In a further attempt to convince the GA audience present that the CAA is working with GA interests in mind, John Banks and Andy Greenwood took the opportunity to dispel some commonly held misconceptions. But FTN has learnt that at least two of the points made during the presentation are, according to our sources, inaccurate. First off, they said that if all of GA equips with transponders it will not saturate ATC systems and TCAS. However, according to Peter Purdie, technical manager of RD Aviation (a specialist avionics supply company), the only tests the CAA consultants are aware of, carried out to check for potential TCAS overloading, was a flight of five Mode S equipped Robin DR400 aircraft operating within a five-mile radius of each other. Hardly, he said, a thorough check, given the size of the UK GA fleet. Military aircraft will not be exempt from equipping with Mode S, according to Mr Banks and Mr Greenwood's presentation, but FTN has learnt that this may not be the case, as while new RAF aircraft may be equipped with a military version of Mode S, there is no finance in place to retrofit the rest of the Air Force's fleet. These questionable statements aside, the two CAA representatives went on to state that, contrary to popular belief, there is no evidence to suggest that transponders are a major radiation hazard; Mode S has not been designed to allow the CAA to charge GA on a pay-per-flight basis; the cost of equipping is nowhere near the £6,000 some have claimed; airlines will not be the only parties to benefit from the equipage of Mode S transponders; and no, the CAA has not made its mind up about Mode S equipage and is just consulting because it is required to do so, but is open to all recommendations on achieving the goal of interoperability of aircraft operating within UK airspace.

What happens next?

Currently, Mode S is required for all IFR flights operating into the London TMA, and legislation is in place to extend this to cover other high-density Terminal and En-route airspace, including Manchester and Scottish TMAs.

The priorities for the short and mid-term include the remit to achieve the technical interoperability between aircraft and ATC surveillance systems within controlled airspace, and to reduce the impact of airspace infringements. The longer-term goal, apparently, is to increase interoperability between all aircraft and ATC surveillance systems within all of UK airspace.

These goals will not happen overnight however, and the CAA, as mentioned in previous reports in FTN, intends to achieve interoperability through a phased approach. The UK Government is currently considering recommendations by the CAA for the first phase of Mode S implementation, due to go live at the end of March 2008. There are three main recommendations. First, those operating aircraft that have to be transponder equipped for the type of flying undertaken, must be Mode S equipped by 31 March 2008. Second, if an aircraft is equipped with a transponder voluntarily, i.e. the airspace used and type of flying undertaken does not mandate for the use of a transponder, then it will not need to be upgraded to Mode S at this stage. Third, pilots installing transponders in their aircraft for the first time, or replacing existing transponders, will have to opt for a Mode S version rather than Mode A/C, after March 31 next year.

The second phase, due to come into effect March 2009, is still being consulted upon, but the CAA envisages making the following recommendations to Government. Mode S equipage will increase to include all aircraft operating in controlled airspace. Mode S will also be mandatory for all international flights conducted in powered aircraft. Gliders will be included within the transponder carriage rules. And a process will be developed for applications to make high-density traffic areas in the UK 'Transponder Mandatory Zones'. It is envisaged, say the CAA, that a transition period will be put in place until March 2012 allowing time for all affected aircraft to equip.

Future additional phases were also mentioned during the presentation and the CAA apparently still considers that something will need to be introduced to improve safety and interoperability throughout UK airspace, and depending on time scales, any additional phases would take new technology into account, such as ADS-B, an autonomous aircraft detection technology which is currently being introduced in the USA.

The CAA have said that they are eager for more affected parties to get involved in the consultation process, and ask that individuals send their views on the proposals to their GA representatives and also ask they attend future consultations. Further information on the proposals and future consultation dates can be found on the CAA's Mode S web pages at www.caa.co.uk/modes

NEWS BRIEFING

Shoreham and Fairoaks Airports up for sale?

FTN understands that the two founders of Erinaceous, the troubled owner of Shoreham and Fairoaks Airports, have quit the company with a £730,000 pay-off.

The news comes as the new board of directors considers putting the business into administration to deal with its crippling debts. Since reporting a drop in share price from 392p at the beginning of the year to 25p last month, the share price has continued to tumble and at the time of writing the latest share value is just 11.5p, giving it a market value of just £16 million, compared to the £400 million valuation at the beginning of the year.

Neil Bellis, deputy chairman, and Lucy Cummings, chief operating officer and Mr Bellis's sister-in-law quit from the board of Erinaceous just as we were going to print, a fortnight after going on "gardening leave."

Mr Bellis and Ms Cummings were paid salaries of £395,000 and £341,000 respectively last year and were employed on notice periods of one year. It is understood their pay-offs will be made in instalments.

Meantime, the Times has reported that the company is in discussion with its banks to discuss the possibility of selling off its assets including Shoreham and Fairoaks Airports, to save it from going under.

New online RT quiz

The Airspace & Safety Initiative, which was established as a joint venture between the CAA, NATS, AOA, GA and the MoD to promote greater safety awareness for pilots operating in UK airspace, has released a new on-line quiz, based on radiotelephony and how it should be used.

The quiz comprises seven multiple-choice questions. After selecting an answer, you are provided with immediate feedback as to whether you've selected the right answer or not, as well as an explanation of the reasoning behind the correct answer. All questions are based on the CAA's CAP 413 Radio Telephony manual.

The quiz will also be made available as a standalone product, for use at flying schools and clubs.

To try the quiz visit the ASI website at www.airspacesafety.com

London Executive Aviation sign up to BBGA Carbon Balancing Scheme

The British Business and General Aviation Association (BBGA) has announced that its Carbon Balancing Scheme has been officially launched with long term BBGA member London Executive Aviation (LEA), the UK's largest executive aircraft charter operator, as the first fully signed up operator. LEA will now offer its clients the opportunity to balance the carbon emissions produced from their flights through the BBGA scheme. The BBGA launched the Carbon Balancing Scheme earlier this year with the unique aim of making the entire business and general aviation industry carbon neutral. Using only independently certified offsetting projects, the BBGA scheme offers operators the chance to counter carbon emissions through the purchase of forestry based, fuel based or technology based offsets. BBGA members can choose to balance the carbon emissions on all flights or on a selected flight by flight basis.

David Antrobus, Chairman of the BBGA, said, "As a sector, the business and general aviation industry is committed to minimising its impact on the environment and we are delighted that LEA has come on board as the first member of our Carbon Balancing Scheme. We are looking to the future of the industry and are putting the scheme forward as an alternative means of compliance to the proposed inclusion of general and business aviation in the EU Emissions Trading Scheme (ETS)."

Patrick Margetson-Rushmore, Chief Executive of London Executive Aviation, commented, "We were very impressed by the BBGA carbon balancing scheme. The flexibility that the scheme offers will suit the needs of our clients perfectly and we are delighted to be supporting the BBGA in its efforts to combat climate change."

Ethiopian Airlines Pilot Training School chooses diesel powered Cessna 172s

Ethiopian Airlines and Africair Inc. - Cessna Aircraft Company's authorised representative for Ethiopia, announced during the recent Dubai Air Show a contract for 10 new turbo diesel Skyhawks.

The Cessna Skyhawk TD (turbo diesel) is a new variant of the 172 Skyhawk. The Skyhawk TD is powered by a 155 horsepower Centurion 2.0 diesel engine manufactured by Germany's Thielert Aircraft Engines Gmbh. The engine burns JetA-1 fuel, making it a popular option in countries where Avgas is scarce, or prohibitively expensive.

The Skyhawk TD was selected by Ethiopian Airlines to replace its current training fleet of 10 Cessna 172XPs due mainly to the lower operating cost provided by the Jet A-1 powered aircraft. Ethiopian Airlines lauded the Skyhawk TD as a more economical aircraft that, along with the Garmin G1000 glass cockpit, made it a logical choice for the modernisation of its fleet.

"These aircraft will be used in ab-initio airline training and represent the first fleet of the new Skyhawk TDs ordered by a major airline training school. We feel that the early acceptance of this aircraft in the training market is the beginning of a trend we are confident will continue to spread throughout the world," said Bob Gibbs, Cessna's director of International Propeller Aircraft Sales.

Established in 1964, Ethiopian Airlines' Pilot Training School, based in Addis Ababa, is one of the largest training organizations in Africa.

Wycombe Airpark operator sold

Just as British Airways Flying Club start preparations to celebrate its 60th anniversary next year, managing director Tim Orchard has told FTN that British Airways Plc has sold its subsidiary Airways Aero Associations Ltd (AAA), operator of Wycombe Air Park where the school is based.

AAA has operated Wycombe Air Park for over forty years. British Airways Flying Club, part of AAA, is one of seventeen businesses based at the airfield.

The share capital of AAA Ltd has been purchased by The Arora Family Trust, of which Surinder Arora and his family are the beneficiaries.

Surinder Arora learned to fly at British Airways Flying Club and gained over 800 flying hours before embarking upon a change in direction. Surinder's career now sees him leading a major property development group, with interests in several sporting venues and in the International Hotel market. He has remained a fan of both general and commercial aviation for many years and retains a particular soft spot for Wycombe Air Park and for BA Flying Club.

Mr Orchard said that British Airways and the Arora Group have cemented a close business relationship over a number of years in several areas and that Arora will embrace the general aviation scene at Booker with a number of exciting expansion plans.

The airfield's current refurbishment programme is planned to continue and the list of recently completed projects (a new Control Tower, a new runway surface, new runway lighting and replacement hangars) will be used as a spring board for future development. Several exciting new ventures are also apparently being discussed, each of which are hoped to bring new life and more growth to the airfield and will be revealed over the coming months as discussions progress.

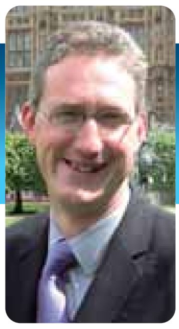
Each of the Directors of AAA Ltd, with the exception of Tim Orchard has resigned, as required by legal protocol. The new AAA Board will comprise Geoff Want as non-executive chairman, Guy Morris (managing director of Arora International Hotels) and Subash Arora (Company Secretary of Arora International Hotels).

"All of AAA's current staff, equipment, tenants and relationships at the airfield will continue in their present form. It's 'business as usual', but with a new lease of life, exciting new goals and new enthusiasm. We now have the ability to invest in a great future for BAFC, for Wycombe Air Park and for general aviation," commented Mr Orchard.

Regional Airport passenger numbers treble

According to a report from the CAA, annual passengers at UK regional airports have exceeded 100 million for the first time, nearly three times the number in 1990.

The CAA has published a study describing the latest developments in regional air services. This updates an earlier study on this subject that the CAA published in February 2005.



Wings Over Westminster

Euro Clouds and Silver Linings

There is a new threat to one of the UK's long established qualificiations – the Instrument Meteorological Conditions Rating. Resident flying Parliamentarian Lembit Öpik asks whether is it cloud flying pilots, or national regulators, who should be prevented from losing visual contact with the ground.

Nothing winds up the UK public more than feeling a sense of unfair play by the State. This one emotion can topple Ministers and Governments, and cause a passive resistance which eventually makes a given law or regulation unworkable. British citizens are slow to fight back. But when they do, they usually win. It is this sense of resistance which I recently observed in the mood of some private pilots over proposed changes to their right to fly in cloud.

As you know, in the UK we have a unique qualification which doesn't exist in other European countries – the IMC Rating. IMC stands for "Instrument Meteorological Conditions." It's a fairly demanding qualification which teaches a private pilot the principles and practice of safely navigating an aircraft when external visual references are absent – in other words, when you can't see a bloody thing out the window.

I did my IMC rating some years ago. I had come to the view that my increasing use of flying to get round the country required more than the ability simply to potter about when the sun's out and the skies are blue. Given the infamous British weather, it's very easy to complete a journey to a distant airfield, only to find out your return flight rained off by the overcast and the lack of space between the clouds and the ground. The IMC appeared a sensible investment in terms of the skills it taught me and the flexibility it gave me to fly myself out of situations which, with the best will in the world, are an ever-present danger in the turbulent atmosphere of the British Isles.

My IMC has massively improved my latitude of airborne operations. As recently as the afternoon I wrote this it enabled me and my fellow Mooney flyer – Dave Tinsley – to successfully complete a three-leg expedition between Welshpool, Birmingham and Leicester despite the bruised and swirling air mass drifting gloomily across the landscape.

The very usefulness of the IMC has made qualified aviators so agitated. It looks like the Europeans might be about to take our beloved IMC away.

As ever, the motivation behind such an apparent robbery of rights is standardisation. There's an established momentum driving the whole of European Aviation towards having the same rules for maintenance, operations and qualifications. Since the IMC is unique to the UK it's become a target of the "standardisers" – who want to do away with this freak rating and banish such deviancy from the European dream of commonality.

In a way, this does make sense. Better for the European Union to operate according to the same terms – as long as those terms are the right ones. There's nothing to be gained if the project leads us away from best practices towards a level playing field of worst practice stretching from the Atlantic Ocean to the Adriatic Sea. I argue therefore that, while I don't oppose common rules and qualifications in principle, it's stupid to reduce our flying rights to the LOWEST common denominator. Yet that's just how the IMC users have been left to feel.

Who's behind the threat? NOT the CAA. They value the success that underpins the IMC Rating, and they certainly aren't behind the move. In fact, it turns out that it's the other EU countries who out-voted the UK by eleven to one to junk the British rating – an act apparently perpetrated at the sinister sounding "EASA FCL001 Core Group Meeting" last October.

So far, then, reasons for gloom. Is there ANY reprieve? Probably not for the IMC. My intuition tells me that it's marked for termination. And that, on the face of it is NOT good. However, there is one possible way ahead here which could make a bad situation into something a lot better than what we've got at present.

Consider this. What if the same nations who are seeking to end our cloud flying rights also agree to a new Pan-European rating called something like "Private Pilot's Instrument Rating" – or IR Lite? Such a rating could then codify the skills and knowledge a pilot needs to demonstrate in order to be permitted to fly in Instrument Meteorological Conditions, across not just the UK's airspace but the whole of Europe.

If this IR Lite is simpler than a full Instrument Rating, there would need to be some limitations. For instance, I'd envisage a restriction barring IR Lite pilots from Class "A" Airspace except in exceptional circumstances at the discretion of Air Traffic Control. I wouldn't imagine the Airways could be filled with the likes of me pottering about as the Big Boys fly their precious cargoes of passengers around the European skies. But the advantage of an EASA approved IR Lite would be to legitimately open up the prospect of cloud flying to all of us IMC pilots in the UK beyond our shores in less regulated airspace. Note that at present it's technically not permitted for an IMC pilot to fly across the English Channel in cloud without first either leaving regulated airspace or becoming visual with the ground. So there's a new freedom to be gained if the IMC is replaced with IR Lite.

What this new qualification would require must be a matter for cool consideration. I'd support a discretionary programme allowing existing IMC pilots like me to convert to the IR Lite on reasonable terms which manage the change in a non-punitive way. So-called "Grandfather Rights" are a well established practice in aviation and should apply in this case too. But I don't mind being expected to know the current state of air law across Europe, nor being given a degree of tuition on the particular risk associated with flying in non-UK environments like the Alps. Incidentally, I observe once again that the US IR might be a very helpful model. After all, if it's good enough for Yankee Jumbo Captains, shouldn't it be good enough for the rest of us too?

There is evidence to suggest that the Private Pilot's Instrument Rating is being taken seriously. I will certainly be adding my weight to that debate on behalf of all GA pilots to try and navigate a way from the current situation to a satisfactory future one. As I'm aware the CAA does read this column, I say to them through these pages that I'd be happy to support any work they're doing in this regard, and to visit our EASA fellow travellers if this would be of assistance.

In the meantime, be encouraged that, once again, the increasing accord between the CAA and the General Aviation community, while still imperfect, is nevertheless beginning to generate a sense of common cause which can benefit the whole of GA across Europe. If that's the case, my own dream of One Voice for GA will have come a little closer. That would be a good British silver lining to this particular European cloud.

In Praise of the BHPA

You probably don't know this, but I'm the President of the British Hang Gliding and Paragliding Association. This stems back to my younger days when exuberance and my love for the skies found expression in the form of paragliding. Although it nearly killed me – literally – I continue to harbour a strong and enduring affection for one of the world's most liberating and simple forms of human ascent.

Well, on the 25 November, at their Annual General Meeting at the Sport and Leisure Aviation Show in Birmingham's National Exhibition Centre, I had the honour to present some prizes to the BHPA brethren. It turns out that the UK has produced Bronze, Silver AND Gold medal winners in the world championships associated with the various forms of un-powered and motorised paragliding.

While the England football team appear to have given up and Lewis Hamilton skids his way to second place in Formula One, we should be shouting about our Winners. As with fixed-wing gliding, the UK produces some of the best "soft wing" aviators in the world. So as the rest of British sport focuses on scoring own goals, raise a toast to the quiet heroes of the BHPA. They ARE bringing home the gold. We salute you. Only once before in the field of British aviation has so much been owed by so many to so few.

Lembit Öpik's back catalogue of 'Wings Over Westminster' now available free to read at **www.ftnonline.co.uk**

CAA registers 50,000th aircraft

The Civil Aviation Authority recently assigned its 50,000th UK aircraft registration since the UK register was established in 1919.

The 50,000th registration - G-MITC - was allocated to a brand new Robison R44 Raven II helicopter owned by Heli Air Ltd whose head office is located at Wellesbourne Mountford Airfield in Warwickshire.

According to the CAA, there are currently 19,281 aircraft in the UK fleet, including 10,342 fixed wing aircraft, 4,360 microlights, 1,868 balloons, 1,467 helicopters, 551 gliders and 273 gyroplanes.

The six most popular aircraft types currently on the UK register are:

1. Piper PA-28 (1,048 aircraft)
2. Cessna 172 (400 aircraft)
3. Robinson R44 (330 aircraft)
4. Cessna 152 (291 aircraft)
5. Cessna 150 (276 aircraft)
6. Robinson R22 (235 aircraft)

The CAA have said that in the past 20 years, the size of the UK register has increased by 72 per cent, including a 150 per cent increase in the UK helicopter fleet and a 53 per cent increase in the fixed wing fleet.

The first UK-registered aircraft - G-EAAA - was a de Havilland D.H.9, registered in July 1919.

Pictured with the R44 at Wycombe Air Park are HeliAir Technical Director John Michalakis (left), CAA Airworthiness Surveyors Mike Landry and Paul Johnson, and HeliAir staff.

are you up to date?

Aeronautical Information Circulars (AICs)	
Aeronautical Charts for Civil Aviation	(Green 84) 10/2007
Change to UK Phraseology for Radar Vectored Instrument Landing System (ILS) Approaches	(Yellow 249) 99/2007
Changes to Aerodrome Warnings - Strong Wind Criteria - 1 March 2007	(Yellow 234) 16/2007
Changes to the Airspace Structure over the South Coast of England - 'Hurn Development'	(Yellow 235) 17/2007
Collision Avoidance - Importance of Selection of SSR Mode C	(Pink 112) 15/2007
Emergencies in the United Kingdom Flight Information Regions - Temporary Danger Areas and Restrictions of Flying	(Yellow 231) 12/2007
Exemptions for Flying Training in Aircraft Complying only with Airworthiness Provisions Applicable to Private Flights	(White 133) 18/2007
Helicopter Flight in Degraded Visual Conditions	(Pink 129) 100/2007
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Risks and Factors Associated with Operations on Runways Affects by Snow, Slush or Water	(Pink 126) 86/2007
Use of SSR in the Vicinity of the Aerodrome Traffic Pattern	(Yellow 230) 9/2007
Use Of Student Call Sign Prefix	(Pink 123) 83/2007
VFR Clearances	(Yellow 232) 13/2007

CAA Chart Editions

Chart Edition	Current Edition	New Available
1:500,000 series		
Southern England & Wales	33 (15 March 07)	13 Mar 08 (Ed.34)
Northern England & Wales	30 (10 May 07)	8 May 08 (Ed.31)
Scotland	24 (6 July 06)	20 Dec 07 (Ed.25)
1:250,000 series		
North Scotland West	4 (31 Aug 06)	28 Aug 08 (Ed.5)
North Scotland East	4 (6 July 06)	3 Jul 08 (Ed. 5)
Northern Ireland	5 (7 June 07)	TBC
The Borders	5 (13 Apr 06)	10 Apr 08 (Ed. 6)
Central England & Wales	7 (12 Apr 07)	TBC
England East	7 (8 June 06)	5 Jun 08 (Ed. 8)
West & South Wales	6 (2 Aug 07)	TBC
England South	11 (15 Feb 07)	14 Feb 08 (Ed. 12)
London Heli Routes	12 (23 Nov 06)	20 Nov 08 (Ed. 13)

CAA Publications

Publication	Current Edition/Version
CAP 168 Licencing of Aerodromes	Amdt 1 1/07 (Feb 07)
CAP 393 Air Navigation Order incorporating amendments to 2/2007	**(August 2007)**
CAP 413 Radiotelephony	Ed16 (1 May 06)
CAP 413 Supplement - quick reference guide to UK phraseology for commercial air transport pilots	2007
CAP 601 Multi Engine Piston Aeroplane Class Rating Syllabus	Issue 2 (18 Dec 03)
CAP 637 Visual Aids Handbook	**Issue 2 (May 07)**
LASORS	2007 (Jan 07)
GASIL	**2007/03 (Sept 2007)**

AFE Publications

UK VFR Flight Guide 2008	**(Black cover, Dec 07)**
UK Aeronautical Information Guide 2006	(Green cover, June 06)
UK En-Route Guide 2005	(Blue cover, 25 Nov 04)

FROM THE FLIGHT DECK

The ‘F’ Word. (With apologies to Gordon Ramsay)

They used to say about the Harvard, that the reason why it was considered one of the world’s best training aircraft, was that it “used to kill anybody who couldn’t fly it!” The machine’s unforgiving stall characteristics were the cause of most of the accidents and the moral of the story must be...“Don’t get low and slow in a Harvard”. *With respect to all those young pilots who died at the controls of the Harvard - they were extreme examples of Failures in flying training and that is the ‘F’ word which no-one in our world likes to talk about.

Learning how to do the unnatural

You see much of flying aeroplanes is all about confidence and positive attitudes. In modern parlance, “It’s a head-trip.” When it comes down to it, pilots are responsible for the defeat of gravity and through the use of technology and the employment aerodynamic principles, we regularly achieve what was not possible before the Wright brothers came along. In some ways this makes pilots a bit different because to go so far away from the earth’s surface without visible means of support is not a natural thing to do. Learning how to do the unnatural, implies that certain skills are mastered which permit otherwise ordinary human beings to do extraordinary things.

Although some of the basic skills are not that difficult to acquire – ‘pull the stick back and the houses get smaller’ – combining all of the essential elements together to form one very effective aeroplane operator is the key to the whole thing. Knowledge needs to be mixed with skills and experience through the medium of training to get the end product. That product is a pilot who is honed to perfection and fitted to the task (in theory), but even they are not infallible. The truism here is that if human beings did not make mistakes, they wouldn’t make anything. Even highly qualified, experienced aviators with impeccable training backgrounds fail to achieve the required standard at certain times in their professional lives.

I recall one very senior KLM DC10 Captain who had worked for the company virtually since the end of the Second World War, telling me how he cocked up his very last Simulator Check prior to his retirement. In those days it was called “The Base Check” and was two days in the Sim – replaced now by the Licence Proficiency Check (LPC). When he told me about the event it was with both candour and sheepishness and I got the distinct impression he was not a little ashamed of what he had done. His training department were even more surprised of course and immediately rescheduled another check which he passed with ease. In his case, it wasn’t that he couldn’t perform to the required standard, after all he had done so continuously for many years, but he just let his guard drop towards the end of his career – he took his eye off the ball.

For me the fascinating thing was that he was one of the most careful guys around – he was really sharp and did not take risks when he flew. In fact when he told me about his last flight and the subsequent retirement party, the thing which stuck in my mind was that he actually carried out an autoland for his final landing into Schiphol – incredible. You would have thought that a pilot with 20,000 plus flying hours on everything from Lancaster bombers through DC3s, right up to widebody jet transports would want to have the satisfaction of putting his last aircraft down on the runway with his own hand, but no, not Captain Gerry Gardner. God bless you Gerry, you were an inspiration to many who flew with you, of that I am sure.

The “Chop”

Normally though, pilots fail courses and checks a lot earlier than six months before they are due to retire. Usually the failures come during the early days of flying when the trainee does not appreciate the way the system works. For example, in the military flying training system, everybody lives under the fear of getting “the chop.” There is a whole different language associated with this phenomenon. A final review flight with a very senior flying instructor (perhaps the Chief Instructor or his deputy), is known as a “Thinly Disguised Chop Ride” and sometimes it is blindingly obvious to all around except the poor trainee who is being set up to fail. By that time of course, the evidence is clear that they have not achieved the required standard of piloting and therefore it is necessary for someone to go and do the deed. This instructor/examiner will make every effort to put the student at their ease, such that their own conscience is clear once the axe has fallen – not for nothing are they often known as “the smiling assassin!”

Confidence VS Ability

It is important to realise though that the trainee themselves shoulders most of the responsibility for their own situation. That may sound odd, but when I see some students struggling with their airliner conversion courses, the words “It wasn’t compulsory” come to mind. Each aviator who decides they are going to go ‘professional’ whether it’s military or civil decides his or her own destiny. If it were easy, everybody would do it. One of the major problems which we see in training is people deluding themselves that they are actually better than they are at what they do – in other words there is sometimes a severe mismatch between confidence and ability. This is often noticeable later on when Senior First Officers in the airlines approach the time when they upgrade to Captain. The vast majority of SFOs sincerely believe they are ready to make the transition quite a long time before they really are. Some who push for their Command Course (or are pushed forward by the company) then struggle to make the grade and fail the course. Failing a Command Course is just about the worst thing you can do to your career as a commercial airline pilot. It is a very public situation (everyone at your base knows you went on the course) and to come back to the crew room still in the right-hand seat is ignominious to say the least. My advice to SFOs who feel they are ready, is to listen to their peers and trainers – if there is doubt among them, don’t go for the course. The other Line Skippers with whom you operate will give a good feel for it and if you ask them they will be honest about how they see your prospects.

Failure to meet the standard required can of course occur a lot earlier in the career of a commercial pilot. Prior to the airliner conversion course taking place, there is usually an assessment of an applicant’s abilities in the simulator and the report from that session is always a sound indicator of the trainee’s potential. I know of one trainee who gave just about the worst performance I have seen during his assessment and I wrote the report to reflect this, advising him not to waste his money on a self-funded airliner type rating course. Unfortunately he didn’t seem to want to listen and went ahead with the course anyway, resulting in a catastrophic situation where he had spent a huge amount of money and failed to get the rating. Not only that but all the way through his training, the instructors reported that he wasn’t able to hack it and by the end of it, the company had to say there was nothing else they could do. This particular pilot had bitten off more than he could chew, but if he had taken notice of his initial reports, then he could have made the decision to stop earlier than he did.

Beware of stress

Stress plays an influential part in the way pilots perform during training and the most common stressors are, Bereavement (close relative or friend), Divorce/Separation, Moving House, Long Separation from Family, Illness, Financial problems. If you are experiencing one or more of these top stressors in your life, then you should not be attempting to pass a flying training course where you have to give 100% to get through. The adverse effects of stress are well known and if you just look at the cognitive symptoms you will note immediately that they are incompatible with mastering the necessary skills to defeat gravity. Forgetfulness, preoccupation and difficulty in concentrating, combined with indecisiveness, work mistakes and excessive worry are the primary symptoms, but these are then joined by decrease in creativity and loss of sense of humour, which lead to increased stress related performance errors. Remember the old adage: “Can’t take a joke, shouldn’t have joined!”

The cure is in your own hands. Have a good look at your life and be honest about where you are and what you are doing. Are you stressed, or are you in a situation which could become stressful? If so, then you must either do something to reduce the effects of stress prior to starting an important course, or delay the course until you can sort your life out. Coping strategies include, removing the stressor or changing the way in which you think about it. Perhaps you could seek training in common stress reduction techniques – meditation, yoga, relaxation therapies etc. Most of all, it will help to talk to somebody and that could even be a trained counsellor. Whatever you do, please do something, the problem will not just go away on its own and if you start an intensive flying training course without de-stressing your life, then you have only got one person to blame when you fail.

Deadheading on a B767 somewhere mid-Atlantic.

*It is sad fact that more aircrew were killed in training accidents during WW2 than died in combat with the enemy.

The Dubai Air Show 2007 BUSINESS IS BOOMING

Something one can be assured about when visiting the United Arab Emirates is that they don't do 'small'. In Dubai, the world's fastest growing city, there is the world's tallest building and the world's only 7-star hotel. The burgeoning city has hosted the world's richest horse race; holds the world-record for weddings at a single venue, and even claims the world record for the largest ever display of rice dumplings (23,094, in case you were wondering). It probably even has the world record for world records. It was unsurprising therefore, that the Dubai air show, 10-15 November, kept up the record-breaking tradition with a few world records of its own.

Aircraft orders reached $100bn

The 10th Dubai Air Show commenced with the largest single aircraft order in history. UAE flag-carrier Emirates placed a staggering $35bn order with Airbus Industries and Boeing Company for 70 Airbus A350s (with options for a further 50), 11 Airbus A380 super-jumbos and 12 Boeing 777-300ERs. This order alone outclassed the previous Dubai Air Show held in 2005, which racked up aircraft orders totalling $21bn.

Emirates weren't the only airline on a spending spree either. Qatar Airways ordered 30 Boeing 787s, with options for a further 30, and 27 Boeing 777s, with 5 more as options. DAE ordered 30 Airbus A350s and 70 Boeing 737s plus 787s, 777s and 747s, and signed a letter of intent for 70 Airbus A320s. Budget Gulf carrier Air Arabia confirmed an order for 34 Airbus A320s, with options for 15 others. Saudi Arabian Airlines signed a letter of intent for 2 A320s. NAS also opted for A320s and placed an order for 20 at the show. Yemenia ordered 10 A350s and Oman Air inked an agreement for 5 of them as well. Nile Air ordered 9 A321s and Air Blue closed the Airbus order book with 8 A320s. The total value of aircraft orders amounted to around $100bn – not bad for what is still only the third largest Air Show in the world!

Continued on page 10

The show was certainly well attended, with lengthy (and hot!) queues at the entrance each day to gain access to the 850 (air conditioned) exhibitor stands inside. The large crowds also enjoyed the freedom of the static aircraft park and the ear-thumping air displays, put on by pilots from all corners of the globe.

The Dubai Air Show 2007
BUSINESS IS BOOMING

Continued from page 9

Clear winner of aircraft sales at the show was Airbus Industries, with well in excess of 300 aircraft ordered during the 5-day airline buying spree. Boeing didn't fare too badly either, with a rather more modest, but still impressive 170+ orders on their books to take back from the record-breaking show

Many of the aircraft ordered at the show won't be ready for delivery until 2018 and beyond, prompting awe and disbelief from Boeing and Airbus executives at what amounted to an unprecedented buying display.

"We and Airbus are routinely selling airplanes for delivery out into the end of the next decade," said Scott Carson, Boeing's chief executive for commercial aircraft, in an interview with Gulf News.

"Typically in our history we would sell airplanes for delivery five years forward on average. So when you are selling eight or nine years forward, we've never seen anything like this."

Louis Gallois, chief executive of EADS, the parent company of Airbus, said it could be tough to sustain the high volume of sales made in 2007.

"We know trees don't grow taller forever, and we also know aviation is a cyclical industry," he said.

Carson attributed the heavy orders to the limited number of production slots left for popular jetliner types from Boeing and Airbus, and also the economic boom that has gained momentum in the Gulf.

"The primary thing that has driven this order cycle is global economic development," he said.

"This is a tremendous powerhouse of economic activity here in the Gulf region. If you live here you probably don't sense that the way that we do when you're from outside the region.

"The changes in Dubai over the last few years, the changes in Abu Dhabi, the changes in Doha are so obvious and so significant you can't miss the fact that this is rapidly becoming if not the economic centre, a very key economic centre in the world."

Middle East flight training ramps up

With over 500 hundred new aircraft on Airbus and Boeing's order books (not to mention the other aircraft manufacturers who also reported a successful show), the flight training schools in the region are having to ramp-up their businesses as well, in order to cope with the increased pilot demands emanating from the region's airlines.

DAE Flight Academy

One of the most exciting new flight training ventures in the Gulf region promoted at the show, was the newly established DAE Flight Academy, based in the United Arab Emirate of Ras Al Khaimah, one hour north of Dubai. The academy is a subsidiary of 15-month old DAE University, an institution offering undergraduate and advanced degrees in aviation and aerospace, headed by former Embry-Riddle University president George Ebbs. By next year DAEU aims to have ten programmes offering: flight and aviation management, business administration, aerospace engineering, air traffic management and aviation management on the undergraduate level, as well as MBA courses in aerospace management, air transport management, airport operations and management, and global logistics.

"Training pilots is a very small part of what we're doing," Ebbs said. Nonetheless, DAEU does see a need for some 22,900 pilots in the GCC countries and India by 2015. As a result, in August DAEU started work on the DAE Flight Academy, which is expected to open in March 2008. DAEU will handle approximately 400 ab initio students at a time, all to graduate with commercial pilot licences. Many will attend the Flight Academy as their final year of a university bachelor's programme, with an aim to be ready for immediate airline employment.

What makes the Flight Academy unique among its competitors is its new training regime, which aims to deliver 'oven-ready' pilots to airlines through an ab initio training syllabus lasting just 12 months, using the latest training techniques and ultra-modern aircraft. Graduates from the academy will finish their course with a UAE General Civil Aviation Authority (GCAA) frozen ATPL, type rating for the Eclipse 500 VLJ and type rating for a multi-engine jet transport.

The course will deliver a total of 185 flying hours - 135 in a glass-cockpit equipped Cirrus SR22 and 50 hours in an Eclipse 500 VLJ. To date, the Academy has taken delivery of two avgas-burning SR22s, with a further 38 to be delivered when Cirrus receive certification for a diesel-powered version, expected to happen in the third quarter of 2008. The Academy has also ordered 12 Eclipse 500s for the advanced flight training stage of the curriculum. This effectively makes the academy the only flight training school in the world (outside of the defence environment) to offer their students a multi-engine turbine type rating during their training course. The decision to use these state-of-the-art aircraft is at the core of their training philosophy, said William Roe, director of the academy.

"Our graduates make safer and more effective airline pilots because significant time is spent helping cadets improve critical thinking and judgment skills through the use of scenario-based training," said Roe. "At the Academy, cadets spend a notable part of their training in simulators, thereby learning like airline pilots."

Superior airmanship, judgement, aeronautical decision making, and threat and error management are key qualities that the DAE Flight Academy's new curriculum promises to deliver. Students will undertake training flights in the Eclipse, operating at high altitude, at high speed, with a scenario-based theme. A flight into Iraq for example, will mirror a commercial flight operation, with a non-flying student taking a back seat in the Eclipse handling RT calls and working real life scenarios such as re-plotting for an alternate airfield should their primary alternate fail. The benefit of flying high-speed turbine aircraft at high-altitude will also help student pilots integrate more easily into the cockpit of an airliner, commented Roe.

Students will receive over 800 hours classroom instruction, around 300 hours pre and post flight briefings, 135 training missions, 66

The orders

Airline	Orders	Model	Value
Emirates	70	Airbus A350s (with options for 50 more)	
	11	Airbus A380s	$31bn
	12	Boeing 777-300Ers	$3.2bn
Qatar Airways	30	Boeing 787s (with options for 30 more)	
	27	Boeing 777s (with options for 5 more)	$13.5bn
DAE	70*	Airbus A320s	
	30	Airbus A350s	$13.5bn
	70	Boeing 737s plus 787s 777s and 747s	$13.7bn
Air Arabia	34	Airbus A320s (options for 15 more)	$3.5bn
Saudi Arabian Airlines	2*	AirbusA320s	$1.6bn
NAS	20	Airbus A320s	$2bn
Yemenia	10	Airbus A350s	-
Oman Air	5	Airbus A330s	-
Nile Air	9	Airbus A321s	-
Air Blue	8	Aibus A320s	-

* letter of intent

DAE Flight Academy's basic trainer, the Cirrus SR22

hours on Flight Training Devices and 36 hours in a Level D full motion simulator. An additional unique selling point of the course, according to Richard Morris, head of training and program manager at the academy, is that all training flights will be videoed to allow students to re-live the flights and evaluate their decisions in post-flight briefings.

To cope with the initial influx of students, due to commence March 2008, DAE Flight Academy recently went on a recruitment drive in Europe to sign up 16 new instructors. With a shortage of instructors endemic in the industry currently, it was surprising therefore that DAE Flight Academy had little trouble recruiting for their fledgling school. But according to William Roe they had over 150 applicants for the 16 positions. Key to their success, presumably, must be the opportunity afforded to instructors to gain invaluable multi-turbine time and Eclipse type ratings while teaching at the academy, something that makes the academy unique in the industry. William Roe said however, that they are not looking for short-term instructors with an eye on a fast track route to airline employment, but for career instructors, so it did leave us wondering what bonding terms they are putting in place with their new instructors. As the academy ramps-up its business over the coming months they have said that they will be visiting other countries across Europe (including the UK) on instructor recruitment drives, so those interested in a change of lifestyle and a chance to teach at a state-of-the-art facility would do well to keep an eye on the academy's website www.daeflightacademy.com

For individuals outside the UAE wishing to commence flight training, the academy has said that the curriculum has also been adapted to meet European Aviation Safety Agency (EASA) / Joint Aviation Authorities (JAA) training requirements for an approved flight training school.

Alpha Aviation Group

Another FTO exhibiting at the Dubai Air Show was Alpha Aviation Group. Alpha Aviation's remit, according to CEO Mark Pearson, is to become the world's largest provider of qualified pilots, through the creation of a network of 10 International Aviation Academies spanning the globe from Europe through the Middle East to South East Asia. Their first academy, Clark Aviation, based in the Philippines, is already training ab initio airline pilots under the new ICAO Multi Crew Pilot Licence (MPL) who will graduate with an A320 type rating.

CEO Mark Pearson is a keen advocate of the curriculum and has gone as far as to turn down requests to offer traditional ATPL training in addition to the MPL. In a recent interview he said, "The traditional part of the commercial pilot licence would involve anything between 150 and 200 hours in a single light aircraft, focusing on single pilot operation. And yet, those people destined for the airline world will never ever be involved in single pilot operations.

"What is different? The ground school is identical. It's the full ATPL theoretical knowledge. Nothing has changed there. What has changed is the amount of practical flying. We have increased the amount of flying instruction to a minimum of 240 hours of which only 70 hours now focuses on single pilot operation in a light aeroplane. The whole concept, the whole technique of flying a jet aircraft, which is the entry level for the majority of new commercial pilots, is completely different from flying a turboprop. In our 240 hours, the training is more integrated, structured and relevant."

The Alpha boss blames any lack of enthusiasm for MPL on a lack of understanding: "ICAO did a fantastic job in designing the initial concept, then did an awful job in market awareness and selling the concept to the industry," he said.

Graduates are already rolling off the production line at Clark Aviation, who have launched the new curriculum in partnership with Cebu Pacific, one of the fastest growing airlines in the region, who have seen their passenger numbers double in the last two years.

As well as the first FTO in the world to adopt the ICAO MPL curriculum, Clark Aviation will also claim the distinction of graduating the first female MPL-trained pilot in the world - Philippine national Christine Lopez, and we will be bringing you further news on her graduation in the New Year.

Back to Dubai and Alpha Aviation used the show to announce the launch of two new MPL training academies, one based in the United Arab Emirate Sharjah and the other in Kazakhstan.

The Sharjah International Aviation Training Academy is a joint venture with low cost carrier Air Arabia. The school will be modelled on Alpha's existing Clark Aviation academy and the announcement of the new venture coincided with confirmation that Air Arabia has ordered 39 new A320 aircraft to add to its current fleet of 11, clearly indicating the need for additional pilots. Adel Ali, board member and CEO of Air Arabia said, "In light of Air Arabia's strong fleet growth plans, this step comes to ensure that we would have the human resources available to crew the new aircraft when they arrive." The airline also announced that they have plans to open a second hub in Morocco to serve Europe, the Middle East and Africa.

In addition to satisfying Air Arabia's own internal needs for pilots to man its expanding fleet, Mark Pearson said the Academy will also train and supply pilots for other carriers in the region. Training is scheduled to commence early in 2008, with a second phase planned to extend operations to include training for cabin crew, engineering and other aviation operational personnel.

The establishment of a third International Aviation Academy in Kazakhstan was also announced at the show. According to Mr Pearson, the Government of the Republic of Kazakhstan has agreed to enter into formal negotiations with the Alpha Aviation Group to create a new academy which will serve the growing needs of Kazakhstan's own airlines, most notably Air Astana. Operations are scheduled to commence in the second half of 2008.

Azat Bekturov, Vice-Minister of Transport & Communications of the Republic of Kazakhstan said, "Our Government had already recognized the need to establish an aviation academy in Kazakhstan to support the planned growth of our aviation sector and following a review of global training organizations we believe that partnering with Alpha Aviation Group offers us the best technical solution."

Mark Pearson added, "Kazakhstan and its location in Central Asia is strategically very important in our global network plan and we are delighted to be entering into formal negotiations with the Government of the Republic of Kazakhstan."

Horizon International Flight Academy

Horizon International Flight Academy based out of Al Ain Airport in United Arab Emirate Abu Dhabi, were also present at the show. The academy was established in 2002 to train civilian and military pilots and to graduate instructors and technicians. The school was initially focused on providing helicopter training, but has continued to grow and now also offers fixed-wing pilot training, simulator-based instruction and advanced pilot training.

The Academy has been training pilots for many of the regions carriers and recently undertook to train two Emirate women in an Etihad sponsored training scheme, the first Emirate national women ever to undertake commercial pilot training.

Horizon general manager, Mohammed Humaidan Al Zaabi told FTN that they offer an enviable 1:3 instructor/ student training ratio, with a truly international instructor base sourced from 14 countries. The Academy's main news for the show was that they had just reached agreement with Etihad Airways to train up to 300 new pilots for the airline.

With ISO 9001 approval and a JAR-based curriculum, Mohammed also told FTN that they are intending to attract students from outside the region in the near future.

Arab Wings joins forces with the Royal Jordan Aviation Academy

Arab Wings, based in Amman, Jordan, is an executive jet charter company with a difference: it is run alongside a flight training business, which has created some interesting synergies.

Speaking at the show, chairman Ahmad Abu Ghazaleh said, "We have ordered an Embraer Phenom 100 for executive charter, and it will also be used for flight training by the Royal Jordan Aviation Academy.

"Because it is certified for single pilot operation, we can also offer graduate students the right-hand seat to build hours in a glass cockpit while on charter," he explained.

The captain will likely be a senior instructor at the Academy - the passengers get two pilots for the price of one, and the student gets turbine time in his logbook. This is just one way that Abu Ghazaleh says the two companies can work together.

The Air Academy is set to graduate 180 commercial pilots this year and is apparently growing rapidly as pilot demand blossoms in the Middle East.

HeavyLift open Aviation Training Academy

HeavyLift International Airlines, the UAE's specialist all-cargo airline, announced towards the end of the show that they too are entering into the flight training arena, with the opening of RAK-HeavyLift Training Academy at RAS Al Khaimah Airport. The Academy is a joint venture between HeavyLift and RAK Airways.

The facility, containing four simulator bays, classroom facilities and offices, is scheduled for certification soon and will offer the region's fast-growing aviation sector additional pilot training, jet type rating courses and training for ground engineers.

In conclusion

In conclusion, the 2007 Dubai Air Show clearly lived up to the region's reputation for record-breaking achievements, out-shining previous shows by a large margin. Middle East airlines are clearly at the forefront of aviation transport growth and it would appear that the region's flying schools have a major task ahead of them to keep up with pilot demand.

With a large investment in education in the GCC currently underway, there will no doubt be a steady stream of GCC nationals entering pilot training in the near future and the first UAE female pilots entering pilot training is a clear indication of a mood change in traditional philosophies. But it is apparent from the scale of the transport growth in the region that the rest of the world will need to play a major part in providing pilots to crew the region's burgeoning airlines, if the region's goal of becoming one of the world's largest aviation hubs is to be achieved.

Two of Horizon International Flight Academy's rotary workhorses on display in the static park: a Bell Jet Ranger and Robinson R44

Instructor Notes

Helen Krasner

Rotary vs Fixed-wing – which type of pilot do you want to be?

Many years ago, having held a PPL(A) for about a year, I decided to book a trial helicopter lesson. I just wanted to try something different, and I told all my friends that even if I liked it, rotary flying was so expensive that there was no chance at all that I'd take it up. They've never let me forget that statement! The moment I tried hovering I was hooked, and I went back for more, and more, and more. The rest is history, as they say.

Several years later, as an instructor, I took a friend for a trial lesson. He had a PPL(A) and was planning to get a commercial licence. By the end of that half hour he was doing some rapid calculations, working out how much it would cost him to do a PPL(H) instead...followed by a CPL(H) and FI rating. And he was asking me about the job prospects for helicopter pilots.

Helicopter flying gets to you like that! It is tremendous fun, and incredibly addictive. Of course, it doesn't have this effect on everyone, but if you like hands-on flying, then hovering, landing in confined areas, and quickstops are likely to be manoeuvres that you thoroughly enjoy. And you might just feel that you'd rather spend your life doing this type of flying than merely shuttling from one large airport to another in a shiny jet.

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So what are the differences between fixed-wing and rotary flying, in terms of training and job prospects? For both, you have the choice of an integrated course or modular training. The integrated course for either can be done at a very limited number of flight training schools, and it will take you from 'ab-initio' (i.e. knowing nothing about flying), to the point of having all the qualifications you need to apply for a first job. It is an expensive way of doing things, but means that you can qualify quickly – possibly in less than a year. There is evidence that some airlines prefer students who have qualified by this route. However, this is by no means always the case, and depends very much on the state of the job market at the time. And in the rotary world it is never an issue.

Most people choose the modular training route, which means that you acquire your qualifications individually, when and where you choose. You can fit them around other studying or work, and it is a less expensive option than integrated training. The means of gaining these qualifications is very similar for both aeroplanes and helicopters. You start off by gaining a PPL. You then need to get a certain number of flying hours, and then do the CPL or ATPL ground exams. For both the fixed-wing and rotary routes, the CPL exams will only allow you to do either instructing or single-pilot commercial operations, so most people opt for the ATPL exams, which also qualify you for multi-crew operations. Note that this is a recent change as far as helicopters are concerned; you used to be able to do the CPL(H) exams, and your qualification would automatically be upgraded to an ATPL once you had a certain number of flying hours. But no more! It is also worth noting that for both fixed-wing and rotary flying most of the ATPL exams are the same. So if you happen to fly both types of aircraft, and still aren't sure which career path to take, you can quite easily do both sets of exams at this point, putting off the moment of having to make a definite decision. You will then need to do a CPL flying course, either fixed-wing or rotary (or both).

At this point the two routes start to diverge somewhat. Most prospective fixed-wing pilots will now do an IR course, so that they are qualified for something other than purely VFR flying. Once you have your CPL/IR, you are said to have a 'Frozen ATPL'. This unofficial term simply means that you have all the qualifications needed to hold an ATPL, bar the actual flying hours. Your ATPL will become 'unfrozen' when you have 1500 hours, of which a certain number must be pilot in command, and some of which must be multi-crew.

Until recently, few helicopter pilots went for IRs. The reason was largely expense – a rotary IR must be done in a twin-engined helicopter and will cost in the region of £35,000. But it was also due to the nature of commercial helicopter flying, where there are far more positions – charter work, passenger flying and so on – which do not require an IR. The main helicopter employers who require an IR are the North Sea oil companies, and up until a few years ago they would include that in their training for new pilots, who were then bonded to them for a specific number of years. But this has now all changed. The oil companies are no longer paying for IRs for their new employees, instead requiring that pilots fund this themselves, and more and more people are doing so. However, very recently one of these companies again started paying for a few employees' IRs! It is an ever-changing, fluctuating market, and there is no way of telling what will be the case in the future – I'm afraid I don't have a crystal ball.

Whether you go the fixed-wing or rotary route, you will quite possibly decide to do a flying instructor course at some point. Most fixed-wing pilots do this after their CPL/IR, and use instructing as a way of acquiring flying hours towards an ATPL and/or paying the bills while waiting for an airline job. For helicopter pilots, things are a bit different. Many more helicopter pilots look on instructing as a long-term career, since the pay is generally far better than for fixed-wing instructing. However, the current shortage of fixed-wing instructors means that their pay is gradually increasing, with some recent job ads offering an hourly rate or retainer instead of – or as well as – the traditional pay per flying hour. Meanwhile, with the North Sea oil companies actively recruiting, but wanting instrument-rated pilots, some helicopter pilots are opting for an IR instead of an FI rating – a risky option, but one which might well pay dividends in the longer term.

So, as far as job prospects go, things are looking good at present for both types of pilot. The airlines are all looking for pilots and as stated earlier, there is now undeniably a shortage of fixed-wing instructors. However, there are constant rumours of low pay and long flying hours with too many sectors, particularly with some of the budget airlines. Many people within the profession are shaking their heads and saying that airline flying is not what it used to be, although this is a refrain that is constant in many professions, and may say more about people than about aviation.

In the rotary world things are a little different. There is certainly instructing work around, but the only actual shortage seems to be in the more affluent areas of the country – the south-east and southern Ireland. However, there is always work if you are prepared to be flexible and possibly relocate. Also, helicopter instructing work can often be combined with charter flying, since many flying schools also have AOCs and run charter businesses, so once you get established this kind of work becomes a definite possibility. But it is not particularly secure, so for those who want a more stable career, working for the oil companies is more likely to provide a steady income. But you may not like that sort of work! If it was the flexibility and excitement of flying small helicopters that led to your decision to choose a rotary flying career, you may decide quite quickly that this type of flying is not for you. Oil rig flying may sound exciting, but basically, oil company pilots take people out to the rigs and back to the airport. Usually the flying is relatively routine and repetitive – rather

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like airline flying, but without the comfort, snazzy uniform, and high pay. It doesn't suit everyone, and I've heard of several pilots who quickly find it boring. Whether or not it can on lead to other jobs such as flying for the police, Air Ambulance, or HEMS, is difficult to say. I have certainly heard of North Sea pilots moving on to those kinds of jobs. But other people say that the North Sea is a comfortable dead end, with the experience not really qualifying you for other types of helicopter flying.

As with so much in aviation, it is very difficult to be specific about job prospects. The employment situation in the aviation world changes very quickly, and the conditions and prospects now may be completely different from how they will be when you are qualified. Overall it is a fairly risky and expensive industry to train for, with a great deal of competition, whatever area of it you decide to choose. But to summarise, the more comfortable and well-paid jobs are those in the fixed-wing world – flying for the airlines. However, if you want excitement and hands-on flying, you can probably find it somewhere in rotary aviation - although you won't get rich, and may find it difficult to have a job which is secure for any length of time. The choice is yours, and no-one else can make it for you.

In reality, we would probably all be better off, in the normal sense of those words, if we gave up the idea of flying for a career altogether. But there are those of us who can't do that, any more than we can stop breathing. The reason was summed up neatly by someone in a recent post on an Internet forum, as follows: "I was lucky enough to be sharing a glass of wine with a very senior pilot of a well known UK charter airline a couple of months back. I explained that I want to walk away from a safe, sensible career and risk it all to become a commercial pilot, and that by most reasonable standards I must be slightly bonkers. He said, 'There's no sensible answer. We all do it because we love flying; it's as simple as that.'"

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Yes – it's that time of year already! Have you been paying attention? Are you a Total Aviation Person? Do you know your Phenom from your Phantom and your VLJ from your CRJ? If so, its eyes down for...

FLIGHT TRAI CHRISTM

Let's start with a light warm up...

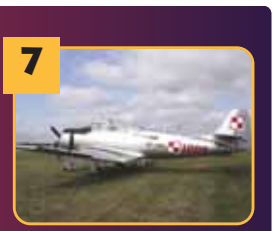
Events of 2007

1. What type of Very Light Jet entered service in Florida with DayJet in October?
2. Which was the first airline to put the A380 into service?
3. From which airfield did Avro Vulcan XH558 make its first post-restoration flight?
4. In April, Bombardier launched a new version of its CRJ airliner. What is it called?
5. Which new Brazilian business jet made its first flight on the 26th July?
6. What is the name of Cessna's new Light Sport two-seater?
7. What new airliner was rolled out by Boeing in July?
8. Which Middle Eastern air force still flies BAC1-11s, but this year ordered Airbus A320s to replace them?

So far, so simple? Let's move on then to some pictures:

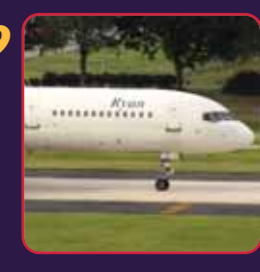
Where are we?

1. Which country might we be in here?
2. What is this interesting airport called – and where is it?
3. An interesting antique – but in what country? For a bonus point, what is it?
4. At which British airport is this DHC Beaver landing?
5. A big airfield seen from a different angle. As a clue, it's in south-east England.
6. Those hangers have been around for a while – where are they?
7. A curious aircraft – but which country does it come from? For an extra point, what is it?
8. A smart looking Cessna 172 – where is it parked?
9. An interesting collection of aircraft – where are they? For a bonus point, what aircraft was this picture taken from?
10. A pretty aircraft taking-off – but in which country was the picture taken? For a bonus point, what type of aircraft?
11. The aircraft is an ATR so no prizes for that – but in which country are these passengers boarding it?
12. A popular airfield in the south of England. But which one?



Still confident of your 'aviator nerd' status? Well, what do you make of these heads and tails? (1 point per picture, type only required)

Airliner Heads and Tails

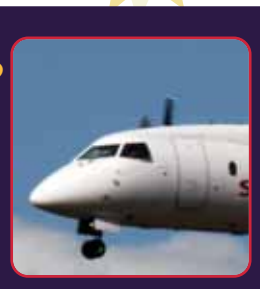


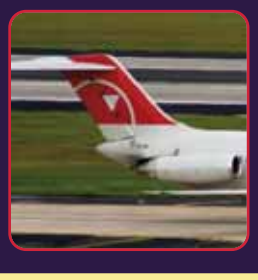
NING NEWS AS QUIZ

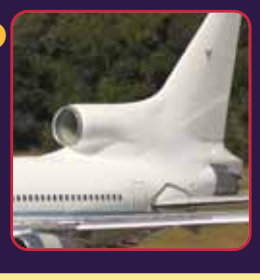
Nearly there now. Let's finish with some toughies to sort out the puddle jumpers from the heavy metal:

Golden – and Olden

1. An easy one to start with – what is this four-engine turboprop airliner?
2. What kind of aircraft was this 1930s Pan Am Clipper?
3. A smart cabin biplane – what is it?
4. A museum piece from the North West Frontier, but can you name it?
5. Looks like a bit like a Chipmunk – or is it? If not, what could it be?
6. A clue - this turboprop transport flew for many years with the Argentine Air Force
7. Aahhh...de Havilland...what are they?
8. Name this famous Beechcraft
9. That's a big bi-plane! What is it and, for a bonus point, where was it manufactured?
10. Seen at a British fly in – but not a British design. What is it and, for a final bonus point, where was it built?







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3 runners-up will each win a copy of Rod Simpson's GA Aircraft Handbook

How to Enter?

The quickest way to enter the FTN Christmas Quiz competition is to e-mail your answers to FTN at: editor@ftnonline.co.uk

The competition is open for entries until 21st January 2008 and the winners will be announced in the February edition of Flight Training News as well as on the ftn website: **www.ftnonline.co.uk**

The editor's decision is final, no correspondence will be entered into. Unless we're bored and you make us laugh. FTN and AFE staff are not allowed to enter because they might cheat - and they should be working anyway. Christmas? Bah Humbug.....

The Pilot Training College Ireland launch new Simulator Centre

On the 19 November FTN was invited to the unveiling of a new flight simulator centre at Pilot Training College Ireland's headquarters located at Waterford Airport on the south east coast of Ireland.

Arriving at Waterford, courtesy of Aer Arran's daily shuttle service from Luton, it quickly became evident that the new simulator centre was only part of a range of developments happening at the school. The school's current location is upstairs in the airport's terminal building where they share the 1st floor with the airport administration office and a business offering deportment courses for cabin crew. While the location is ideal to gain quick access to airside, we were told that the school is rapidly outgrowing their current premises and so they are building a new headquarters in the business park development located on the fringe of the airport. PTC already have their accounts department and the new simulator centre on the business park, so it was a logical move to relocate the rest of the business over there, we were told.

The opening ceremony for the new simulator centre was well attended, with local dignitaries packing out the reception room. Speeches were given by Mike Edgeworth, CEO of PTC, Waterford City Mayor Mary O'Halloran, and Martin Cullen, Minister for Social and Family Affairs, who also conducted the formal ribbon cutting. In addition to FTN, local media had made the journey as well and said they intended to make a big splash on what is clearly a ramping-up of PTC's Waterford operation.

The simulator centre houses a new Mechtronix FNPT II simulator, mimicking a Piper Seminole, the twin-engined piston aircraft that PTC are equipping with to use for multi-engine and multi-engine IR training. PTC are buying five of these aircraft, and when we visited the first of them were just beginning to arrive.

In an interview with Mike Edgeworth, FTN also learnt of a few other changes to PTC's business. The school was launched in 2002 following the introduction of the pan-European JAR professional pilot's licence, and Mike told us that the school has grown since then to capture over 80% of the Irish market, as well as attracting students from over 20 other countries across the globe. Although Ireland is not a cheap place to live these days – a three-bedroom house will set one back in excess of €400,000, for example – one advantage that PTC says it has over its competitors in the UK, for example, is that flight training in Ireland is exempt from VAT. There are rumours however, that VAT may be removed from flight training in the UK in the near future, so a more level playing field may yet occur, but for the time being PTC are better off to the tune of 21 per cent, the current VAT level in Ireland.

PTC's other big news, according to Mike, was that they have signed an agreement with Flight Safety International – the world's largest FTO, who train a staggering 70,000 pilots per year across the globe – to use their Florida base to conduct the basic flying training element for students enrolled on PTC's Airline Program. Mike was clearly excited about the new partnership and said that as well as offering significant savings in operational costs, students would profit from the temperate climate (hurricanes aside), and be able to fly uniterrupted, something that is clearly preferable for students at the early stages of their training.

The tie-in with Flight Safety International and the development of a new simulator centre, said Mike, also gives the school a better footing on which to apply to become approved by the Joint Aviation Authority to provide one-stop, integrated training. Currently, PTC provides modular-based training, although their Airline Program is only a short step away from being fully integrated in its current form. The key difference is that with modular training a student must gain different levels of licences and ratings before being eligible for airline employment. This means the student is required to study for and gain a Private Pilot's Licence (PPL), a Commercial Pilot's Licence (CPL), Multi-engine rating and Instrument rating, as well as completing the ATPL ground exams.

PTC's new Mechtronix FNPT II simulator, with Waterford City Mayor Mary O'Halloran receiving an impromptu lesson from PTC CEO Mike Edgeworth

PTC's current 14-month, modular Airline Program, involves a six-month Distance Learning course, during which students sit their JAA ATPL ground exams, after which they head out to Florida to undertake a PPL, before returning to Waterford to complete the CPL, Multi-engine rating and Instrument rating. Advantages of an Integrated program would be that the ground school would become residential, and that, although the students would still be required to pass the JAA ATPL ground exams and the dreaded multi-engine Instrument Rating, they would not have to pass separate PPL and CPL flight tests. The disadvantage of such a program however, is that should the individual have a change of heart during the course as to what their ultimate goal in a flying career is, they would have to complete the course first to graduate with any form of standalone licence. If the student had decided to become an instructor, for instance, then they would only need to pass the CPL and not the multi-engine Instrument Rating, so the extra work could be seen as a waste of additional training and cost.

Talking of instructors, PTC, like the majority of flight training schools across Europe, need instructors. As a result, Mike told FTN that they are launching a new Instructor Cadet Program in association with Aer Arran. The program offers pilots the opportunity to gain invaluable flying experience as instructors with PTC before moving on to a career with Aer Arran. Mike said that PTC are ideally looking for individuals in their late twenties, who have some maturity and experience about them. PTC will pay for the individuals' CPL and instructor ratings, and then move them further up the instructor ladder after they have become unrestricted, and pay for them to upgrade to become multi-engine instructors and ultimately multi-engine IR instructors. The cost of the training will be covered by PTC, with the instructor being bonded to the school for 2-3 years. Having worked with PTC for 2-3 years, Aer Arran will then employ them as First Officers. According to Mike, two individuals have already signed up to this program and are due to start training in January.

Waterford Airport

Goatie gets his PPL

FTN is delighted to announce that Gautam Lewis, affectionately known as 'Goatie', realised a dream of a lifetime when he gained his PPL wings earlier this year. Only able to walk with the aid of crutches after contracting Polio as a baby, Goatie has weathered and survived more storms than most. And thanks to the encouragement and top class training provided by Cranfield Flight Training under their new Disabled Pilot training programme, of which Goatie was the first student, he is now not only a fully-fledged pilot, but has told FTN that he plans to become the UK's first disabled flying instructor, offering flight training to other disadvantaged individuals in the UK.

Goatie's story started in Kolkata, India where abandoned by his mother as a baby after contracting Polio he was taken to Mother Theresa's Missionaries of Charity where he stayed for two years before having a further two years of operations at the Rehabilitation Centres for Children just outside the city. There he met Patricia Lewis, his 25-year old mother to be. Goatie became Patrica's ward and was taken to Auckland, New Zealand where he was adopted. At the age of nine, mother and son arrived in London. Here, schooling began at Hill House, followed by Bedales - a stark contrast for the boy who had once boarded with, and was one of India's poorest children. Goatie's education progressed on to the Southampton Institute, where after graduating he was involved in a start-up night club and then gradually moved into the music industry, working with new high-profile bands. Following a move away from the music arena Goatie decided to fulfil his life-long dream of becoming a pilot. Receiving encouragement and advice from many of UK aviation's top people, including the CAA, the British Disabled Flying Association and Flying Scholarships for the Disabled, amongst others, Goatie managed to track down a school at Cranfield that had an aircraft fitted with a rudder hand control. The school, Cranfield Flight Training, agreed to teach Goatie and took him through his PPL course that culminated in late September with him passing his final flight test and gaining his licence.

Shortly after gaining his PPL Goatie was contacted by Rotary International, one of the world's largest non-profit humanitarian organisations dedicated, amongst other projects, to eradicating Polio worldwide. They have invited Goatie to travel to his birthplace of India to help promote a project aimed at immunising some 75 million children under the age of five against Polio – a crippling and potentially fatal disease that is still endemic in Afghanistan, India, Nigeria and Pakistan. At the time of writing Goatie is just about to set off to India and has high hopes of helping get the immunisation message across to as wide an audience as possible.

"Paired with a powerful vaccine and medical science, Rotary's steadfast commitment is the key to eradicating polio," said Goatie. "Through my personal experience, I have a deep understanding of how important voluntary organisations are in the world today. As a result of Rotary's efforts, many will go on to live happy and productive lives having been spared the cruel, life-long consequences of polio."

Being in a strong position to sympathise and fight the disease, Goatie says he hopes to inspire those who have been working in the trenches for years by highlighting with dignity some of the achievements that are possible in the face of adversity. "It is vital that everyone remain committed to ending this disease. I hope to show, through my example, that anything is possible – the sky is the limit."

And talking of the sky, Goatie's ultimate aim is to become a flying instructor and inspire future generations of disadvantaged children to reach for the skies. Current plans, Goatie told FTN, are to hours build to gain further flying experience and undertake a CPL before progressing on to a flight instructor course. If successful, Goatie says he would then like to team up with Cranfield Flight Training on their Disabled Pilot programme to teach others with disabilities. He told FTN that if he had known a few years ago that a flying career was possible for him and others with similar disabilities, then he would have embarked on this journey much earlier. But the idea of being able to inspire others through teaching them to fly is something that he is passionate about achieving and judging by Goatie's enthusiasm and dedication it is hard to see him failing.

The flight test – by Gautam Lewis

One year ago I was very dazed and confused. I like having options and yet I found myself at a dead end. Having spent many years working closely with Alan McGee (the driving force behind Oasis) at Creation, I was managing highly successful bands such as the Libertines. I experienced the roller-coaster 'bona fide' rock-and-roll lifestyle. When my time in the UK music industry ended I found myself looking for fresh possibilities and experiences. I always knew that I wanted to fly aeroplanes and it was important for me to finally pursue my dream. I knew that it would not be easy but I would find a way. Six months ago, I was one plane ticket away from going to San Diego to fly with Martin Lloyd at Anglo-American Aviation International.

Living the dream!

Luck, or something else, gave me the chance to fly in the UK through the British Disabled Flying Association. I started my JAR PPL on 14 April from Lasham. Having started my training in Hampshire, I moved to Anglian Air Centre in Norwich where I did another 10hrs and eventually found an aeroplane with hand control and team of passionate instructors at Cranfield flight training where I completed the majority of my training.

During the last 24 hrs, I have been unsettled because I have been thinking about my General Flight test which was today, 18 September. Worry, mental strain and doubt about how I would do went round my mind. I have spent the last six months, 7 days a week, completely engrossed with pilot training and learning about general aviation and in particular how a person with disabilities can participate in general aviation. In such a short period I have learnt a lot. I have had an unbelievable amount of support from so many people that I didn't want to let anyone down, including me.

I arrived at Cranfield just before 2pm local, and the weather was sublime, a wonderful British autumnal day. The setting was just right for my flight test. I was fairly silent at the flying school, said little and took the cover off the plane, did the A check, got all the paperwork ready for the examiner to check and waited to be told where I would have to plan the flight for. At about 3pm, the flight ops man told me to plan a flight to Woolfox Lodge, "where?" I said. Woolfox Lodge is just on the boundary of Cottesmore.

Once VFR flight plan was completed, I went through all my emergency drills, engine fire at altitude, cabin fire, engine fire after take off, brake failure - then I double-checked all the radio frequencies I would need, I confirmed London information frequency in case Cottesmore was closed. As the time got closer to the start of the test, I began to get more nervous. The examiner asked me if I was ready and gave me a kind smile as if to say, "Cheer up lad!"

Once on the parking Apron, I saw a twin Diamond Star blocking my PA28 from taxing which caused a few minutes delay before the ground crew moved it and I could start my checks. Those words "clear prop" and then the splutter of the prop. Got my information from ATIS, called the tower for taxi clearance and gently released brakes and taxied along A to A1 cross runway 18 for runway 21.

My Navex would be to Woolfox lodge and I would start the leg from Olney VRP and my planned altitude was 2500ft. 'Aviate, Navigate and Communicate' I said to myself as the

Continued on page 18

Sabena Flight Academy to Set-Up International Aviation Academy in India

Sabena Flight Academy based in Brussels, Belgium and GMR Group, a fast-growing Indian infrastructure group, have signed a Memorandum of Understanding to set up a joint venture limited company to establish an aviation academy at the Rajiv Gandhi International Airport, Hyderabad, by January 2009.

The aviation academy will offer not just pilot training but also complete training packages for aviation related activities including cabin crew training, engine engineers, technicians, and aviation consultants. Training for airport operations staff such as passengers and ramp services agents will also be provided.

The academy will be established with an investment of more than 80 million Euros over the next three years, covering infrastructure including accommodation for more than 200 trainees per year, six full flight simulators, cabin trainers and engineering tooling. Jack Waldeyer, President and CEO of Sabena Flight Academy, said,

"We are extremely proud of being selected by GMR Group for establishing jointly the most modern aviation cluster in India at the new International Airport at Hyderabad. We are looking forward to provide high standard training with a strong accent on flight safety based on more than sixty years experience".

The academy will be established with an investment of more than 80 million Euros over the next three years

He went on,

"Actually we are training more than 200 Indian pilots in our facilities in Arizona USA and we provide Full Flight Simulator training for several Indian Airlines in Brussels. As from 2009 an important part of the pilot's training will be provided in this new Aviation Academy. Together with our partners CFM, Sabena Technics, Sabena Flight Academy Consulting and Flight Care will provide a one stop training facility to all Indian and foreign commercial airlines at the new International Airport at Hyderabad".

In particular, Sabena Flight Academy (SFA) currently train pilots for the fast-growing Indian airline Kingfisher Airlines. SFA have developed a 28 week FAA CPL IR ME course including Indian DGCA specifications with the training done at Falcon Field, in Mesa (Phoenix) Arizona (USA), continued by a Full Type Rating Course organized by Kingfisher Airlines on ATR72 or Airbus A320.

Sabena Flight Academy train up to 200 pilots per year for Indian airlines including Kingfisher

SFA currently operate their ab-initio flight training in Phoenix, Arizona

Sabena Flight Academy claims to be one of Europe's oldest pilot training academies, and became a privately owned company after a management buy-out in October 2004. SFA currently train around 300 pilot cadets per year. Their Arizona-based Flight Training Centre currently operates a fleet of 38 aircraft. In addition SFA have a simulator Training Center at Brussels Airport with Airbus 320, 330, 340 and Boeing 737CG & NG Full Flight Simulators for more than 60 airlines. Brussels Airport is also the location for the theoretical part of their JAA ab-initio training.

for your diary

December 2007

1	**Cabair Career Pilot Seminar** Cranfield Management and Development Centre 01234 751243 www.cabair.com	
3	**CAA Safety Evening** Derby Aerodrome 01283 733803	
3-6	**JAR-FCL Examinations ATPL (A), (H)** Gatwick, Oxford, Shuttleworth College & Glasgow www.caa.co.uk	
4	**CAA Safety Evening** Lydd Airport Restaurant, Kent 01797 320734	
5-6	**Crew Management Conference 2007** Sheraton Brussels Hotel http://crew07.hcuk.net	
6	**CAA Safety Evening** Sheffield Aero Club, Netherthorpe 01909 475233	
6	**GAPAN Aptitude Testing** Cranwell 0207 4044032 www.gapan.org	
8	**Oxford Aviation Training seminar APP First Officer** Oxford Airport www.oxfordaviation.net	
10-11	**JAR-FCL CPL Examinations (A), (H)** Gatwick www.caa.co.uk	
27-28	**Air Sports Live** Lake Wanaka, New Zealand www.airsportslive.com	

January 2007

7-10	**UK JAR-FCL Examinations ATPL (A), (H)** Gatwick, Oxford, Shuttleworth College & Glasgow www.caa.co.uk	
11	**ROI PPL Examinations** The Gresham Hotel, Dublin www.iaa.ie	
14-15	**UK JAR-FCL Examinations CPL (A)** Gatwick www.caa.co.uk	
16-17	**UK JAR-FCL Examinations CPL (H)** Gatwick www.caa.co.uk	
19	**Oxford Aviation Training seminar APP First Officer** Oxford Airport www.oxfordaviation.net	
24	**CAA Safety Evening** Belfast Civil Service Club, Stormont David Hodgkinson - 02891 813327	

Goatie gets his PPL

Continued from page 17

wheels left the ground. After five minutes I was on track and everything was looking good. The examiner asked me various questions which I answered correctly. Once I was cleared for MATZ crossing, I arrived at the turning point which was bang on the nose. Part one over and successful.

From Woolfox, the examiner looked at my map and after 10 seconds or so said, "Right, I would like to go to St Neots." I could see roughly from the corner of my eye where he was pointing to when he had the map and after a few looks, I found it and it is a tiny place to divert to.

Wind was 350/10, and after a few minutes of working out a dead reckoning and mental calculations for cross-wind and headwind element, I did a U-turn and made a heading change to 180 towards St Neots from 004, which would be 40nm away. As I crossed Wittering, my examiner told me some interesting history of the RAF and the bombers they used to keep there. Flew past Conington and I knew I was on track and my timing was good, which to be honest surprised me as I hate dead reckoning! Over Grantham water and I was feeling OK and knew that the destination for the diversion was straight ahead and I could see it on the nose as it has a railway line running North-South.

At St Neots we climbed to 4000ft where the rest of the flight test would be undertaken. This included general handling, steep turns to the right and left at 45 degrees, recovery from full stall at the heavy buffet and practice force landings. Once they were completed, we flew to Stewartby VRP avoiding the Bedford danger zone. We overtook a Cessna that was doing a strange joining pattern. Once in the Cranfield circuit we flew a few circuits, made landings with flaps and without flaps and finally ended the session with a glide approach to land. Taxied and brakes on at 19.10 local. My brain felt dead, and my examiner told me that I had PASSED.

I did not know how to react. I was completely surprised and I had somehow got it into my head that I wouldn't pass the skills test the first time. I felt very exhausted but very, very happy. I did want to give the examiner a big hug to say thank you but thought that would not be the proper thing to do, so instead I shook his hand and sort of bowed.

I have my skill test report and I can't believe that I have done. It is still sinking in. It is probably one of the greatest feelings I have ever had and I am lost for the right word to describe the feeling. The past six months have taught me a lot and has got the best out of me, I feel. The ups and downs, the challenges, the euphoria, the dilemmas, the arguments, the stress, the annoyances, the nervous feeling before each written exam, making new friends, the interviews, discovering my own potential, leaning about compassion and integrity and the conflicts - it has all been worth it.

"You can do no great things, but only small things with great love" - Mother Teresa

My written exam results - All taken between May and August 2007.

Air Law and Procedure **75%**
Meteorology **80%**
Human Performance and limitations **100%**
Aircraft General and principles of flight **86%**
Flight planning and performance **84%**
RT Theory **96%**
Navigation **80%**

Goatie has told FTN that his trip to India with Rotary International is being filmed by the BBC and will be available to watch in the near future. In the meantime, to learn more about the work of Rotary International log-on to www.rotary.org

ftn review

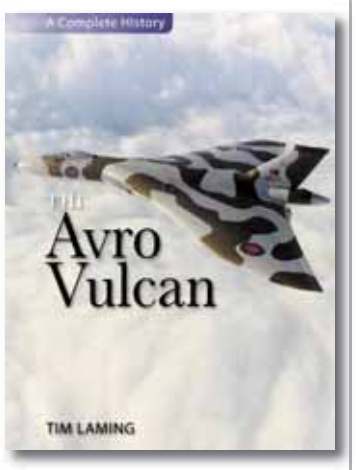
The Avro Vulcan, A Complete History

Well, they finally did it, after months of breathless anticipation, the restored Vulcan XH558 flew again on 18th October and by one of those weird coincidences marketing departments like to claim as 'planning', this book came out in the very same week.

It is hard to write about the Vulcan without using superlatives. This is probably the aircraft which epitomises the post-WW2, early cold-war era when Britain was still a genuine superpower. Conceived, astonishingly, in the late 1940s when the jet engine was still in its first decade of operation, the Vulcan entered service in 1956 and was to remain until 1984, its swan song raid to the Falklands in 1982 perhaps a fitting way to end a distinguished, but largely conflict-free service life.

Crécy Publishing's "Complete History" books are beginning to get an enviable reputation for solid, reliable and in-depth coverage of their chosen aircraft, and this one is no exception. All the types covered hitherto have been WW2 types, the subject here is by some margin the most modern aircraft covered in the series. That the charismatic Vulcan has been chosen for this book is perhaps fitting, possibly no other post-war aircraft has earned the admiration, even love, of crews and public alike to the extent that the "Triangle" did.

This book is 360-odd pages of meticulous research, the text densely packed on some pages, liberally scattered with photographs on others, the overall, and overwhelming impression is indeed of completeness. Disappointingly, perhaps, no detailed performance figures are given, although anecdotal reports hint at astonishing performance, remarkable even today but without doubt at the very forefront of technology for a 1950s aircraft. For enthusiasts and historians, however, this book provides a wealth of material, this is no casual "Gosh, whizz-bang!" coffee-table treatment, but a proper, mature and considered volume by one of the acknowledged experts on the type. For pilots, the inclusion of a full chapter of accounts from crews of what operating this remarkable aircraft was really like, and an appendix containing almost 90 pages of the aircrew manual, gives us a glimpse into the world of the Vulcan crews whose privilege it was to work with this astonishing machine. Highly recommended.



The Avro Vulcan, A Complete History, by Tim McLelland.
Published by Crécy Publishing, www.crecy.co.uk
ISBN978-0-85979-127-4 £29.99 Hardback.

Sennheiser HME95 and HMEC250 lightweight headsets

Sennheiser's range of headsets have their detractors (though not us, as it happens). Mostly, people who find them either too tight, or too bulky, (obviously people who've never spent time wearing a 1970s-vintage David Clark) but it would also be fair to say that modern headsets are tending to become lighter and hence more comfortable for extended wear. Sennheiser's response comes in 2 forms, the passive-only HME95 and the HMEC250 with the latest-generation (NoiseGard 2.0™) ANR.

These new headsets share the same construction as the critically-acclaimed PXC350 and PXC450 hi-fi headphones. The PXC (listen-only) versions are both equipped with the NoiseGard ANR technology, and are commonly sold to people who use them on long-haul scheduled flights. Being based on their HiFi headphone technology, sound quality is outstanding, and they are indeed extremely comfortable for extended wear. The Aviation versions come as a passive-only HME95, and an ANR HMEC250.

The aviation versions are fitted with a high-quality electret microphone on a lightweight, flexible boom. The boom is free to rotate through about 350 degrees, so the headset can be worn left- or right-handed, although the earcups are marked "L" and "R" on the swivel. This is a carry-over from the hi-fi version, and is partly to do with correct stereo imaging. That said, the geometry of the headsets means they are more comfortable, and seal better, when worn "as directed" so unless you have a compelling reason to wear them back to front, or have a very strange shaped head, I'd recommend adopting the conventional boom-on-the-left setup. Both headsets also have input sockets for MP3 players and mobile phones. This is, apparently, viewed as important in the US market, though rather less so over here.

As far as passive attenuation of external noise goes, I'd have to say that these are not in the same league as the regular Sennheiser HME100 series. There is most definitely an element of compromise here, in favour of overall comfort. Understand, though, that this is no different to any other lightweight headset design. You simply can't block out all that din with cobwebs and Scotch mist. Bearing that in mind, the headset is still effective, so I'd have no hesitation in recommending the HME95 if your aircraft is at the quieter end of the spectrum. And if that's the case, you get all sorts of other benefits from these headsets. There's the outstanding sound quality (you could easily use these as hi-fi headphones when not flying, for example), the excellent 'am I still wearing them' levels of comfort, and the modern styling. There's also the very neat way they pack flat into a smart and unobtrusive carry-case. And if your aeroplane tends towards the noisier end, consider the ANR-equipped HMEC250.

The HMEC250 is the first of Sennheiser's aviation headsets to come with the second-generation "NoiseGard2™" ANR. This offers better performance than the previous NoiseGard, it goes a little higher up the frequency spectrum, and is a useful 5dB quieter as well. It also features "talk-through" which allows a selective defeat of the ANR to allow conversation off-intercom without removing the headset. In an intercom-equipped aircraft, this might be seen as a gimmick. In truth, it is a feature of the NoiseGard2 technology, as fitted to the listen-only PXC450, where it can be a real boon in an airliner cabin. It may come in handy once in a while, if your rear-seat pax don't have an intercom, so that's fair enough, I think. However, because of the reduced passive noise cancelling performance, the HMEC250 is not as quiet, all things considered, as the excellent HMEC350/450/460 models, so if your aircraft is really raucous, I would have to advise you to look there for a solution, not here. It's also, unfortunately, not so good if your aircraft doesn't seal too well. If you fly a C42, or a Cub, or anything with an open window, you'll already know that ANR headsets are easily confused and upset by gross pressure fluctuations and NoiseGard2, for all its technical brilliance, is still subject to this. There are some nice touches: the battery-powered ANR is fed from 2 small AAA cells which sit unobtrusively one in each earcup, so there's no need for a clunky battery box, and battery life seems to be acceptable. They look great, and they fold down really small and flat into a rather smart, supplied, carry-case.

On balance, I think Sennheiser have done a good job with these headsets. They answer effectively some of their critics of the older designs and they are most definitely among the most comfortable headsets I've tried. But, the downside is that they are not the quietest. As with the previous generation of Sennheisers (which continue in production) these will not suit everybody, (although now there's a good chance that if you don't like one type, you'll love the other) and the fact that there are now matching listen-only variants (PXC350 and PXC450) may also be a consideration for fashion conscious 4- or 6-seater fliers who believe that passengers, like children, should be seen but not heard.

✓ We like:
- ✓ The comfort
- ✓ The good looks
- ✓ The superb sound quality
- ✓ The neat carry case
- ✓ The neat battery storage (HMEC250)

✗ We don't like:
- ✗ The unremarkable passive sound attenuation, though in fairness this is no worse than the competition.

We're ambivalent about:
- The Mobile phone and iPod inputs
- The "Talk-through" facility (HMEC250)

Sennheiser HME95 lightweight, passive, aviation headset, typically £150

Sennheiser HMEC250 lightweight aviation headset with NoiseGard2™ANR, typically £400

Sennheiser PXC350 listen-only headphones with ANR, typically £230

Sennheiser PXC450 listen-only headphones with NoiseGard2™ ANR, typically £300

ftn review

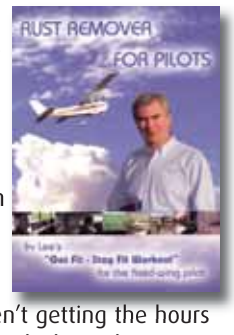
CHRISTMAS STOCKING FILLER SPECIAL

'Tiz the season when a pilot's thoughts naturally turn to what his or her loved ones are going to buy them for Christmas. There's no need to be shy, you just know that huge sums of money are burning a hole in your loved one's pockets and after-all, as those annoying adverts say, you're worth it.

So, as a service to all you who carry the heavy burden of handing out heavy hints and present buying lists, we've teamed up with pilot shop AFE to bring you some ideas for goodies you might want to find under your tree this Christmas...

Gliders are beautiful things to look at any time, and this **Gliding Calendar** really does show them off to their very best on fine art paper (48 x 29cm) and descriptive text in three languages. **One for any glider pilot at just £19.00**

If warbirds are more your thing, the photography of John Dibbs should need no introduction. The title 'Flying Legends' is borrowed from a book of John's images that first popularised his wonderful air-to-air photography. Every rivet and every wire really is pin sharp in the **Flying Legends Calendar** and there are some wonderful backgrounds and cloudscapes. Printed on high quality gloss art paper with images reproduced to the highest standards, the pictures are ideal for framing. **A snip at £9.95.**

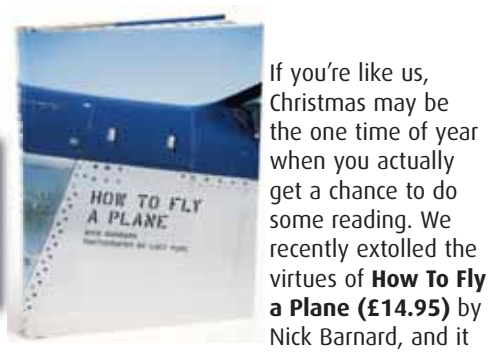


Winter is traditionally the time of year when flying is 'out-of-season' – although its difficult to imagine the UK winter weather being very much worse than what passed for the summer! In any case, keeping your flying skills sharp when you aren't getting the hours in can be a real problem, which is where Irv Lee's **Rust Remover for Pilots DVD** comes in. Described as a get "fit workout" for the fixed-wing pilot, the "Rust remover" DVD isn't a training programme, but every scene is full of good advice, neat mnemonics or aide-memoires, or maybe just new ways of looking at old problems. It tackles a variety of subjects, from pre-flight planning, navigation and checks, to handling, using GPS and more advanced flying techniques and is highly recommended. AFE are currently running a **special offer price on this DVD of £22.95.**

It's a golden oldie for sure but the **What Goes Up... Might Come Down CD** still makes us laugh, even after all these years. The legendary after-dinner speech by Air Traffic Controller David Gunson spawned dozens of flying catch-phrases and jokes that are still around today – if you haven't heard this before, treat yourself and be in on the joke! **£14.95**

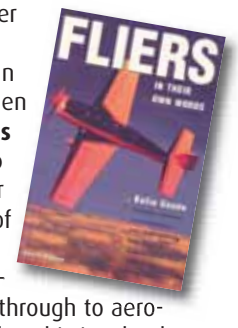
Also on the DVD front is **ITVV's 'In The Cockpit' DVD** series, a selection of DVDs ideal for anybody with an interest in what goes on at the sharp end of an airliner during its route flying. Some are quite contemporary and give a very useful insight into the operation of a modern airliner (Virgin Atlantic 747-400 Heathrow to San Francisco, A320 Birmingham to Zalinthos), others are more historical (Debonair 146 Luton to Rome, BA Concorde Heathrow to New York JFK and return). In all cases the multiple in cockpit camera angles and technical descriptions from the operating crew are the nearest you'll get nowadays to a 'jump seat' ride. **Prices start at £23.95**

If something a bit less educational appeals to you, how about this range of **coasters, wall clocks, alarm clocks and fridge magnets** all modelled on aircraft instruments ('clockwork' style and EFIS)? Some pilots are a bit po-faced about them, but we think they're fun and a nice way to remind yourself that you'd rather be flying. **Prices from £12.95.**



If you're like us, Christmas may be the one time of year when you actually get a chance to do some reading. We recently extolled the virtues of **How To Fly a Plane (£14.95)** by Nick Barnard, and it looks to be shaping up as a Christmas best-seller for all the right reasons – a must have for anybody interested in learning to fly. Alternatively, try leaving it casually lying on the seat next time you take some passengers flying and see if they spot it!

If you're looking to improve your flying, and maybe open up some new avenues and possibilities, **Beyond The PPL (£15.95)** by Nigel Everett is sub-titled 'putting the fun and skill into flying' and does exactly what it says on the tin. Written in a friendly and accessible style, it covers in detail many of the challenges awaiting a newly qualified pilot, but is equally worth reading for an experienced pilot looking to spread his or her wings a bit further.



If you're more interested in what makes pilots tick, then **Fliers in Their Own Words (reduced from £10.95 to £4.95)** may be more your style. Set out as a series of interviews with pilots ranging from air force, airliner and instructor pilots through to aerobatic, display and bush pilot, this is a book about the essence of a pilot and the mystery of what makes us want to fly.

If you're starting a flying course soon, or maybe celebrating achieving a licence or rating, one of **AFE's leather logbook or licence covers** could be just the thing you need. Handmade with brass corners and button enclosures, and available in dark blue, black and burgundy, they have a variety of styles of fit PPL and Professional licences and logbooks. **Prices from £13.95**

And finally these are, we think, the ultimate Christmas stocking filler. Lucky charm, mascot or just company for the solo pilot, who could possibly be without their **Biggles bear**? Choose from the mini-bear – **13cm high (£3.95)** or splash out on the grown-up article – **20cm high (£10.95)**. In either case, they can be your inspiration for next year's flying season!

letters to the editor

We look forward to receiving all letters concerning your thoughts on the future of the flight training industry, aviation legislation, comments on our articles, and anything else to do with our publication and the flying world at large. We reserve the right to edit your correspondence before publishing.

Dear Sir,

Thank you for Rod Simpson's excellent article on SE-IMC. Some of the figures included in the article were provided by our company, published in reports produced by SETA (Single Engine Turbine Alliance). Data is also available at www.singleturbine.org.uk

Perhaps Rod thought that by mentioning my name it would taint the article, my having accused the CAA of being Luddites. However, the facts about the CAA 'Experts' never having seen or flown in any of the SET aircraft was dragged out of the CAA by us using the Freedom of Information Act.

In regard to the article on the Caravan, I should mention that the reference to Lombard sourcing an aircraft for the Army Parachute Association is not actually correct. We have had the pleasure of supplying both Cessna Caravans to the APA and both of these were ordered by our company as 'stock' aircraft without having any deposit or order from the APA.

To date we have delivered 23 Cessna Caravans and intend to deliver a similar number again over the next few years.

We are also extremely busy selling the Reims F406 Caravan II and have four ready for delivery over the next few months, but perhaps that's another story!

Regards
Bob Crowe
Chairman, Bob Crowe Aircraft Sales

Dear Mr Crowe,

Many thanks for your letter, and for the correction on Jeremy M Pratt's article on the Cessna Caravan. We hope to publish more news on single-engine commercial IR operations in the future, as we understand from FTN spies in the corridors of power, that a derogation may yet be put in place to allow commercial operators to fly IMC in single-engine aircraft in the UK.

Dear Sir,

I am a British Army officer serving out in Helmand Province, Afghanistan. I am currently planning a career change for next year and hope to attend an integrated ATPL course next year. Being out here it has been difficult to try and gain the latest flight training news and was wondering if you could be so kind and send me some of the recent issues of your excellent FTN.

I have read it in the past and found it very informative but have not been able to read it over the past several months.

Thank you very much for your support.
Yours faithfully,
Name and Address supplied

Dear Sir,

We were pleased to receive your letter and glad to hear that you are considering embarking on a professional flying career. You should now be receiving copies of FTN out in Helmand Province, and we would like to extend the offer of free copies to all Servicemen and women operating abroad. Please drop us a line at editor@ftnonline.co.uk and we' ll add you to the list.

Embraer and CAE form VLJ Training Joint Venture

Embraer and CAE have signed a joint venture agreement to provide comprehensive pilot training to Embraer customers of the Phenom 100 very light and Phenom 300 light jets. The new company has been named Embraer CAE Training Services, LLC (ECTS).

The joint venture will provide both initial and recurrent training for pilots. The initial training program for the Embraer Phenom family is on schedule to begin at CAE SimuFlite in Dallas, Texas, in the third quarter of calendar 2008, and at CAE's Burgess Hill training center in the UK in the first quarter of calendar 2009.

"CAE's training expertise, combined with Embraer's product knowledge, will provide our Phenom customers the best training solution in the market," said Simon Newitt, Embraer's Director, Customer Training. "We believe that the Phenom training program will set the bar for training within the very light and light jet markets."

CAE and Embraer are working together to provide a team of instructors and to ensure that the courseware meets the program needs. To support the Phenom program, CAE has agreed to manufacture two Phenom full-flight simulators for deployment at CAE SimuFlite in Dallas, Texas, and the CAE's Burgess Hill training center. CAE will also combine CAE Simfinity technology and devices into the Phenom training program.

Meantime Embraer have signed a contract to sell 18 Phenom 100 and two Phenom 300 executive jets to India's Invision Projects Pvt. Ltd. The total value of the deal, at list price, is US$69.4 million, and deliveries will begin in August 2010. This is the largest business jet fleet order in India to date and the aircraft will be used to start-up Invision's branded charter and air taxi operations.

Vulcan to the Sky

By Andy Donovan

part 1

On 23rd March 1993 the world of British military aviation lost one of its shining stars as Avro Vulcan XH558 touched-down at Bruntingthorpe Airfield in Leicestershire for the final time. Having completed its transit from RAF Waddington in Lincolnshire the engines were simply run-down and the airframe stowed in the hangar with the doors pulled shut. This may well have been the end of an era had the Vulcan to the Sky Trust not been formed three years later, populated by a relatively small group of true visionaries who were prepared to nurture mutual ambition for as long as it took to turn theories in to reality. With this quiet determination from a dedicated few came a whisper of a chance for XH558 as it became the central focus of a dream which could well shatter at any minute.

With details of the tremendously successful post-restoration flight on 18th October 2007 to follow in the next issue of FTN, we examine some of XH558's history and the rollercoaster ride that has brought it to this point.

On Her Majesty's Service

Deservedly considered to be a very charismatic aeroplane, the Vulcan has always had a unique claim to being one of the best loved aircraft ever to have served with the Royal Air Force. Following the Vickers Valiant in to service, the early B.1 variants began to populate the flight lines in July 1956 when they were placed on charge with 230 OCU at RAF Waddington. Over 60 of the aircraft were purchased initially before production shifted to the B.2 variant of which almost 90 were procured.

Avro Type 698, XH558 was the first Avro Vulcan B.2 delivered to the Royal Air Force having been ordered by the MoD on 30th September 1954 and had been fully assembled in the company's factory at Woodford by early 1960 ready for its first flight on 21st May of that year. It entered operational service with the RAF on 1st July when it was delivered to 230 Operational Conversion Unit, 'B' Flight.

After a significant stint training new pilots, XH558 was sent to Bitteswell in Leicestershire where Hawker-Siddeley Aviation undertook its conversion to B.2(MRR) standard so that it could be deployed by 27 Squadron in a maritime radar reconnaissance role which saw it operating in various environments but often at low-level over the North Sea. Subsequent to this, the aircraft was one of six called upon to support Operation Corporate as an air-to-air refuelling platform and it was ferried to Woodford in June 1982 so that it could be converted in to a tanker and hence designated an Avro Vulcan K.2, assigned to 50 Squadron.

When the conflict in the South Atlantic was over, XH558 faced very uncertain times. Indeed the same inevitable fate as faces any aircraft at this point in their life looked as if it may befall this very aeroplane if other regular ground-uses could not be found for it. In mid-September 1984 this particular Vulcan K.2 departed the Waddington runway and banked on to a south-easterly heading in preparation for its final ever landing at RAF Marham in Norfolk where she would find herself either fulfilling a far from glamorous role as a crash rescue training airframe, or perhaps one day staring deep in to the dark, cold eyes of the scrap man. 558 remained in a forlorn state at Marham; for the time-being escaping the gradual demise of the RAF Vulcan fleet as one by one her sister aircraft were broken up.

A New Life

As XH558 sat, dishevelled at Marham, another more active colleague was pounding the air show circuit with the Vulcan Display Flight (VDF). Avro Vulcan B.2, XL426 was constructed just over two years after 558 and saw active service for 24 more, ending its days as the sole aircraft assigned to the VDF. The MoD continued to fund the unit's operation within the defence budget even when XL426 began to run out of flying hours in 1985 so naturally a replacement was sought from the ever-depleting fleet. The aircraft selected to replace 426 was XH560 and many other surviving Vulcans, including XH558 began to be systematically stripped of useful spares in preparation for the transition. However, although events were very much in motion, a significant 'u-turn' was prompted soon after the selection of XH560 when an examination of the aircraft's engineering logs highlighted the need for a major service after only 160 further flying hours. Although it was not laid down in such black and white terms at this stage, the MoD would have been extremely reluctant to finance a major service of an aircraft which was now moving out of front-line service and therefore once the chosen airframe's hours were exhausted, the VDF would be resigned to disbandment.

In an attempt to review the other options, records relating to other recently retired Vulcan airframes were examined. It was soon discovered that the most cost-effective alternative was a replacement of XH560 with XH558 which was residing at Marham with somewhere in the region of 600 flying hours left until its major overhaul would be required. On 14th November 1984 XH558 was returned to its once operational home at RAF Waddington in a move that may never have been expected and XH560, although close to survival initially, was sent to take its place on the tarmac at Marham. The famous XL426 was subsequently retired from service and in late-1986 was saved by a private buyer who made it possible to maintain her in fast-taxi condition to this day. Although looked after by the Vulcan Restoration Trust (VRT) at Southend

XH558 waits patiently inside the hangar as the morning sun rises over Bruntingthorpe on the 18th October 2007.

Aiport she does still suffer from a serious fungal contamination within the fuel tanks which has never quite been rectified.

Hearts and Minds

The new beginning of the XH558 story therefore came to fruition in late-1984 when the conversion of what was currently a Vulcan K.2 began in the winter months. By April it was once again a B.Mk.2 and by November it was re-located to RAF Kinloss in Scotland where it received its wrap-around livery and the trademark Panther's head symbol of No.1 Group on the forward fuselage. In May 1986, Bournemouth was treated to the awe-inspiring first display and the legend of 558 was born. For the next six years the Vulcan Display Flight toured with the aircraft and won the hearts of many an air show crowd; yet in the background the MoD continued to review the level of financial and technical commitment involved and in many respects it was only a matter of time before restructuring elsewhere within the service might bring about the option for such support to be withdrawn.

By 1992 the number of flying hours left before major servicing had diminished to such a level that only one more complete season could be drawn with the possibility of a few, limited displays in 1993. This was always going to be crunch-time for the VDF and despite the sterling efforts of the Vulcan Association which formed five years earlier in 1987, the numerous campaigns to support the aircraft and sway the MoD seemed to have little effect and the Association effectively collapsed. With the withdrawal of the Handley-Page Victor in 1993, the MoD insisted that it would no longer be able to provide adequately-trained personnel for V-Bomber operations and so the VDF came to the end of the line. XH558 conducted it's

The most famous Avro Vulcan in the world sits inside the VTST hangar during May 2006, completely stripped down and in the middle of its major overhaul.

Many miles of cabling have been removed from the now civil-registered G-VLCN, mostly relating to the now redundant military systems.

The cockpit procedural trainer of XM602, kindly loaned by the Avro Heritage Centre at Woodford.

"She's actually in better condition now than she was when she was served operationally with the RAF"

Dr. Robert Pleming, CEO Vulcan Operating Company

Alan Rolfe struggles with the massive hangar doors.

A magnificent and very photogenic aeroplane.

The start of an absolutely perfect day.

The Vulcan is pushed back from outside the hangar – not an easy manoeuvre with a mass of cars in the way!

The cranked-delta wing of the Vulcan is clearly evident in this shot – the modification was made to the wing very early on in the aircraft's history, although early test airframes did fly with straight leading edges.

most famous display at Cranfield on 20th September 1992, flanked by the Royal Air Force Aerobatic Team, The Red Arrows and returned to Waddington with its future, and indeed its very existence, hanging in the balance.

A Man of Vision

After chronic indecisiveness on the MoD's behalf, it was eventually confirmed that the aircraft would be put up for tender on 27th January 1993, despite having been one of the biggest public attractions that the RAF had to offer - perhaps even more so than the Red Arrows. Only two major conditions were set for consideration in the sale – firstly, it should not be exported, and secondly it would not be sold for scrap – but ultimately, it would go to the highest bidder.

Following the disbandment of the Vulcan Display Flight at RAF Waddington on 21st September, 558 was allowed to continue flying circuits at its Lincolnshire home so as to maintain crew currency on the type in anticipation of delivery to a new owner in the relatively near future. Various bids were submitted for the aircraft and a number were rejected in quick succession – presumably because they did not fall in line with the conditions of sale.

The one application that really caught the eye of the MoD came from David Walton, whose family assets included the nearby Bruntingthorpe airfield in Leicestershire, an ex-United States Air Force airbase and now a proving ground for the high-performance motor industry. The fact that the Waltons had good intentions for the aircraft and the presence of an adequate runway at the airfield went a long way and when the bid was finally accepted, XH558 made what was at the time thought to be the last flight she would ever make. On 23rd March 1993 the aircraft's Olympus engines were started and XH558 taxied to the end of Waddington's runway with what is thought to have been about eighteen hours left 'on the clock.' In front of a large crowd outside the fence Squadron Leader David Thomas and Squadron Leader Paul Millikin pushed the throttles forward and she departed via many of the airfields that had played such key roles in her history – Woodford being one of the most significant. With the word "Farewell" stencilled on the inside of her open bomb-bay doors she passed over Waddington one last time before entering the Bruntingthorpe circuit for landing not long after.

From this point onwards David Walton began to acquire every available spare part he could lay his hands on – not only from the Royal Air Force but from various other independent sources as well – one of the spare cockpit windows was even purchased at a car boot sale! However, the real visionary buy was that of four zero-hour Olympus engines which would, should the time ever come, allow the aircraft many more years of operation without the problem of fatigue and temporal wear occurring unevenly across four older units which would be prone to issues of that nature. After 6 tonnes of the estimated 250,000 spare components had been driven in from the stores at RAF Stafford, all that was left to do was to strip-down and restore XH558 whilst also seeking permission to fly her from the CAA – which one was the harder job I hear you say!

The Man from Cisco

It took until 1996 for work to really begin on preparing XH558 for its unclear, yet optimistic future, although at this time the project lacked much of the upper-level co-ordination which would develop later. The late 1990s saw much of the ground-work being carried out "behind the scenes" to build the foundations necessary to complete a project of this size. It was clear that the MoD's affiliation with the aircraft had come to an end and as such, corporate and/or private sponsorship would need to be sought if a return to flight were to be financed. Coupled with such an endeavour would be the requirement to register the airframe as a civil aircraft and beyond that relatively simple task, the CAA would also have to issue a Permit-to-Fly – the first of its kind issued in the "complex" category. BAe Systems were also a key player in exploring the feasibility of the task and in mid-1999 the announcement was made to confirm that all parties involved had agreed to proceed with the restoration and the Vulcan Operating Company was formed in anticipation of one day accepting the serviceable aircraft, now registered as G-VLCN, in to regular operation.

Dr. Robert Pleming was a central figure in negotiations throughout these early stages and until the point where the CAA agreed, in principal, to allow the aircraft to return to the air, he had been "on leave" from his high-paid job with IT technology company, Cisco Systems. In the wake of this development Dr. Pleming took the decision to depart from his well-developed career and move in to the full-time, unpaid role of Project Director for XH558. Under his leadership and guidance the scheme began to gather real pace.

Value for Money?

One of the most significant bids for funding involved an application to the Heritage Lottery Fund in mid-2000. The team was extremely hopeful given the nature of the project and the motivation behind returning XH558 to where she belonged. From the outset, two of the most meaningful intents behind returning the aircraft to flight status was to promote understanding of the Cold War and more importantly, to inspire a new generation of potential pilots. Under this banner the application for funds was submitted but staggeringly, was turned down on 15th November 2001 on the grounds that the operational time span was too short, which would not allow enough of the public to witness the aircraft fly, and as such, the scheme was not considered to be "value for money."

Soon after the HLF bid rejection, the true number of project supporters became clear. Many letters of support, and indeed outrage, were sent to the Vulcan to the Sky Trust and the Lottery Fund itself, conveying a huge amount of discontentment with the decision from about 20,000 supporters across the world. The very forceful combination of all of these supporters culminated in the HLF being backed in to a corner and in mid-March 2003 it was "suggested" that the management team should resubmit their application. Unsurprisingly, this time it turned in to a £2.7 million success!

For the first time since 1981, XH558 began to be stripped down at the beginning of August 2005, in preparation for a full overhaul in-line with the standard procedures developed by the RAF during its service life. Whilst looking specifically at fatigue problems and potential life-extensions, the engineering team would also have to consider what onboard equipment was still necessary and what had become outdated and redundant. In the course of the next two years, many miles of cabling would be stripped out along with major components such as the radar in the nose and the Electronic Counter Measures (ECM) fit at the rear of the airframe. Where necessary, ballast would then have to be carefully added and secured so as to maintain the centre-of-gravity within limits and modern navigation equipment would need to be installed – no one expected it to be a quick and easy job.

Another Sudden Stumble

By the time 2006 came about, it was being estimated that the VTST was in need of at least £500,000 to push the scheme through to the first flight. Robert Pleming's team was however hopeful that engineering work could be concluded and test flights wrapped up in time for 558 to lead a flypast down London's Mall in June as part of the anniversary celebrations commemorating 25 years since the Falklands conflict ended. Worryingly, the financial shortage had escalated to £1.2 million by the start of August 2006 and it was certainly true that the inevitable call for help from the Trust had a very ominous tone behind it. Many private supporters and corporate backers had boosted the fund to date but as with all business endeavours of this nature, the unexpected is always the thing to cripple good progress. Unless that £1.2 million was raised – and quickly – the HLF also pledged to withdraw its funding which would have created a brick wall to success that even Robert Pleming couldn't have guided is team around. For the umpteenth time in its history, time was fast running out for XH558.

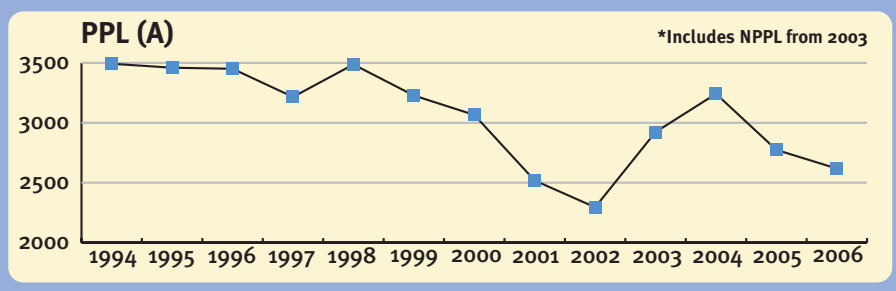
Despite CAA approval seeming likely and the backing of BAe Systems, Marshall Aerospace, and over twenty other major companies assured, the one Avro Vulcan left with a chance of seeing air beneath her wheels again, once more saw its future hanging by a thread. As the dedicated efforts of the Trust's 30 full-time staff and numerous other volunteers ground to a halt, the permanent workforce was issued a month's notice on 1st August – this being the only option left for the Trustees who were faced with impending insolvency as the only other alternative. This genuinely appeared to be the end of a dream.

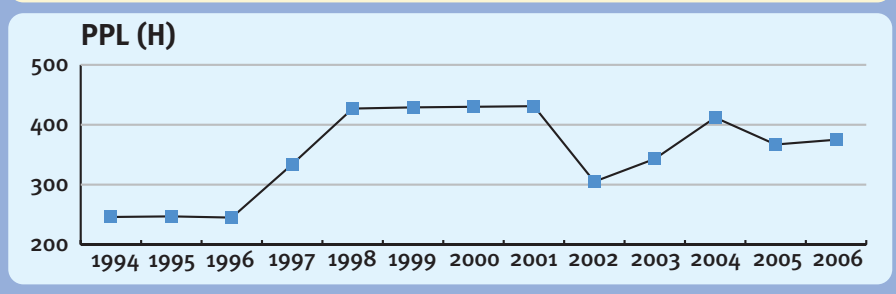
Evidently, this wasn' t the end of XH558, as on the 18 November the world's media announced that she had finally taken to the skies once again.

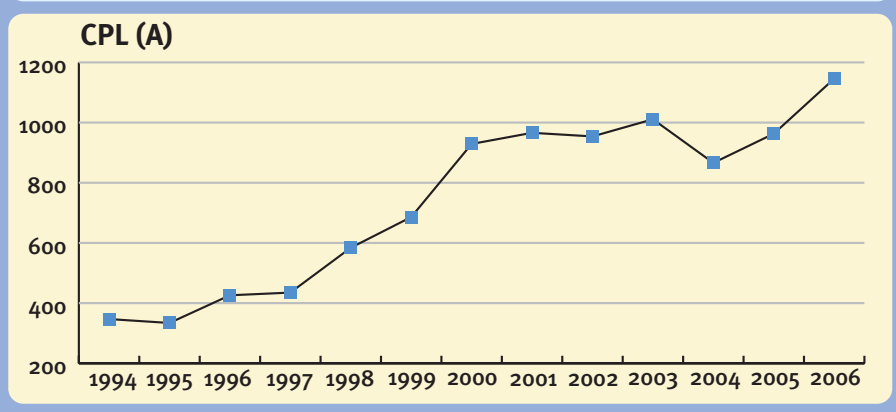
But due to space constraints, you' ll have to wait for the next edition to read the final instalment of Andy's informative biog on XH558 and its return to the skies, where readers will also get the chance to win a copy of Tim McLelland's authoritative history of this legendary aircraft in his book The Avro Vulcan, printed by Crecy Publishing.

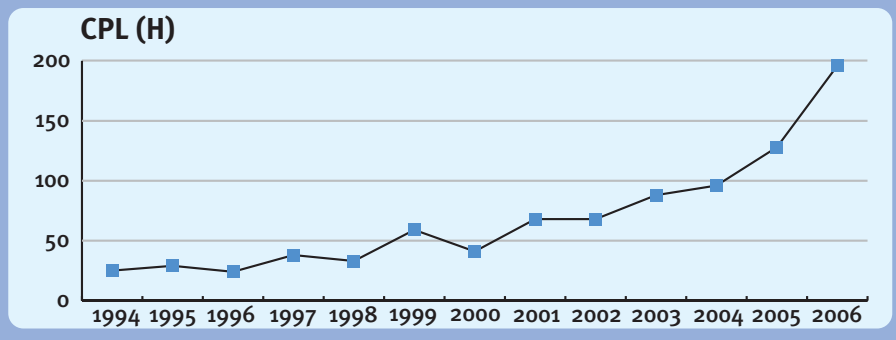
FTN DATA & STATISTICS

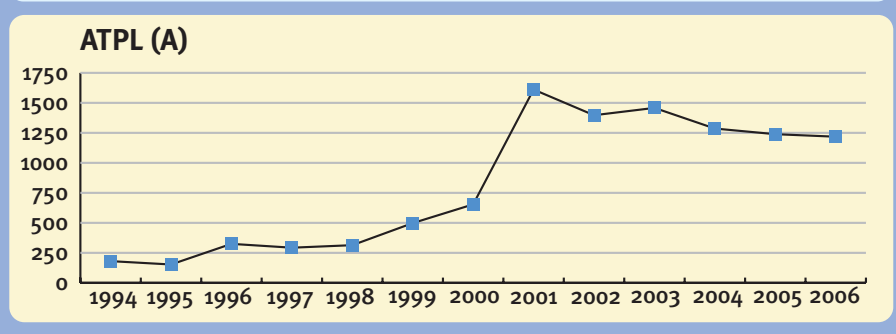
UK Initial Licence Issues

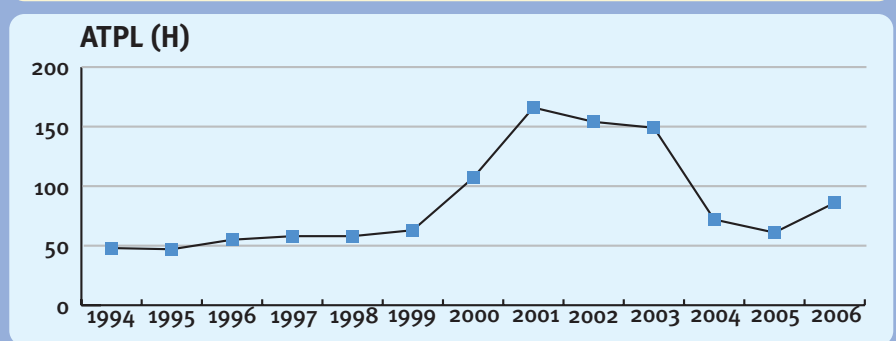




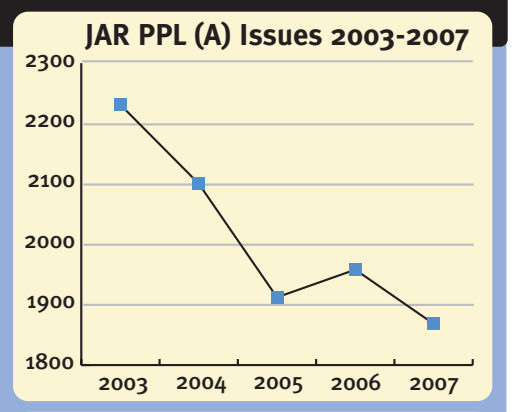


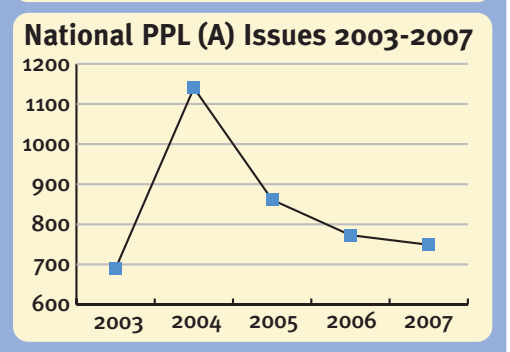


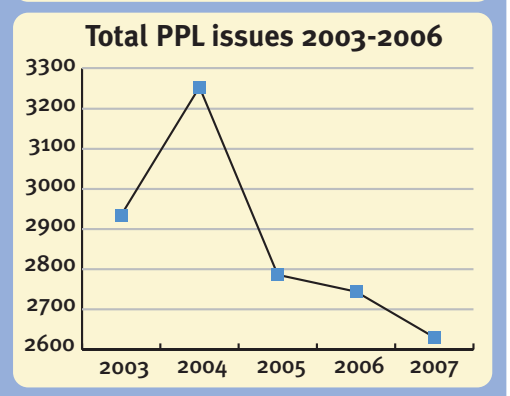




2006	figure	year-on-year change
PPL (A) (includes JAP-PPL and NPPL)	2618	-4%
PPL (H)	375	-
CPL (A)	1146	-1%
ATPL (A)	1218	-
ATPL (H)	86	+11%







How green is aviation?

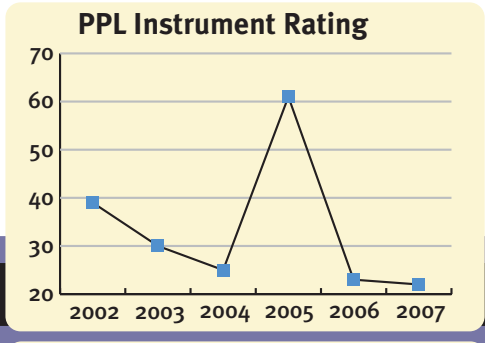
All forms of transport combined account for **14%** of global greenhouse gas (GHG) emissions.

Domestic and international air transport account for **14% of transport-related** global greenhouse gas (GHG) emissions.

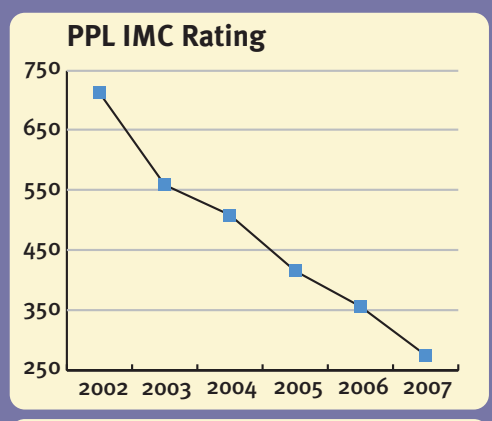
- Water transport is responsible for **1.5%** of global greenhouse gas (GHG) emissions.
- Air transport is responsible for **2%** of global greenhouse gas (GHG) emissions.
- Road transport is responsible for **11%** of global greenhouse gas (GHG) emissions.
- Business and General Aviation uses less than **1%** of the fuel of the airlines and accounts for only **0.016%** of all CO_2 emissions. (Source: BBGA)

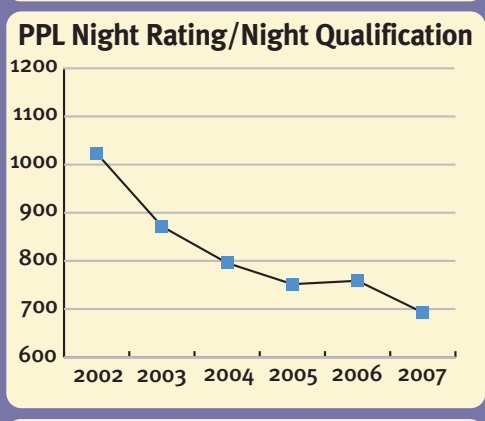
For further environmental data, see **www.enviro.aero**

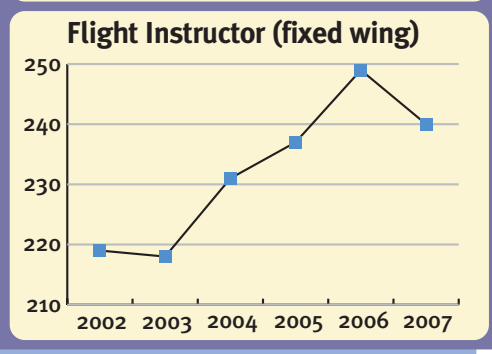
(Source: the Stern Review Report, but see also news report on p5 regarding CO_2 emissions from shipping)

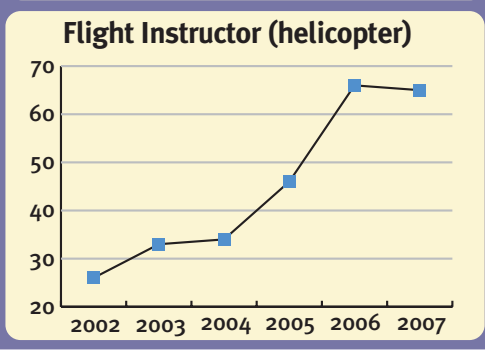


Ratings - six year trend









Number of licenced airfields in the UK *142* (Source: 2007 UK AIP)

Professional Flying Training Organisations UK and ROI *100*

*excluding organisations that are solelyTRTOs.
(Source: Flight Training News)

Microlight Schools UK and ROI *107*

(Source: Flight Training News)

Helicopter Schools UK and Ireland *102* (Source: Flight Training News)

Current Licence Processing Turnaround

As at 30th October 2007, the UK CAA were processing licence applications received:

• Professional Flight Crew	17 Oct 2007
• Private Flight Crew	17 Oct 2007
• Instructors	17 Oct 2007
• NPPL Flight Crew	18 Oct 2007

(Source: CAA)

EUROPEAN GENERAL AVIATION

90,000 pilots engaged in private powered flying
40,000 microlight pilots
90,000 glider pilots
115,000 hang glider and paraglider pilots
5,300 balloon and airship pilots
20,000 General Aviation aircraft
22,000 gliders

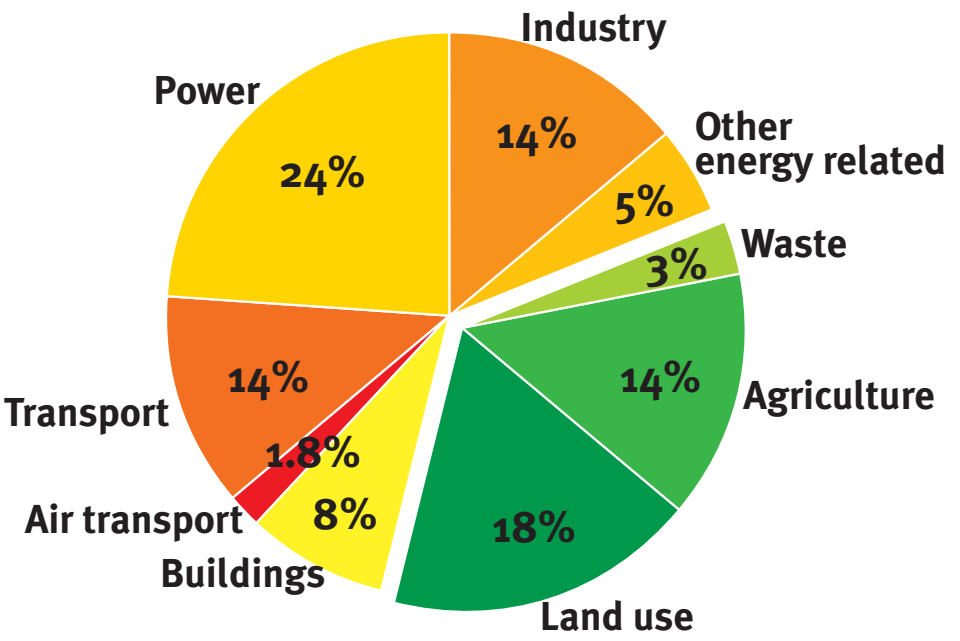
(Source: European Community paper on General Aviation)

Statistic of the month

An incident in which a Boeing 737 flew a Standard Instrument Departure routing at 500ft AGL instead of climbing to 5000ft amsl (see Safety Matters) generated just one noise complaint.

FTN DATA & STATISTICS

Greenhouse-gas emissions



Average fuel prices:

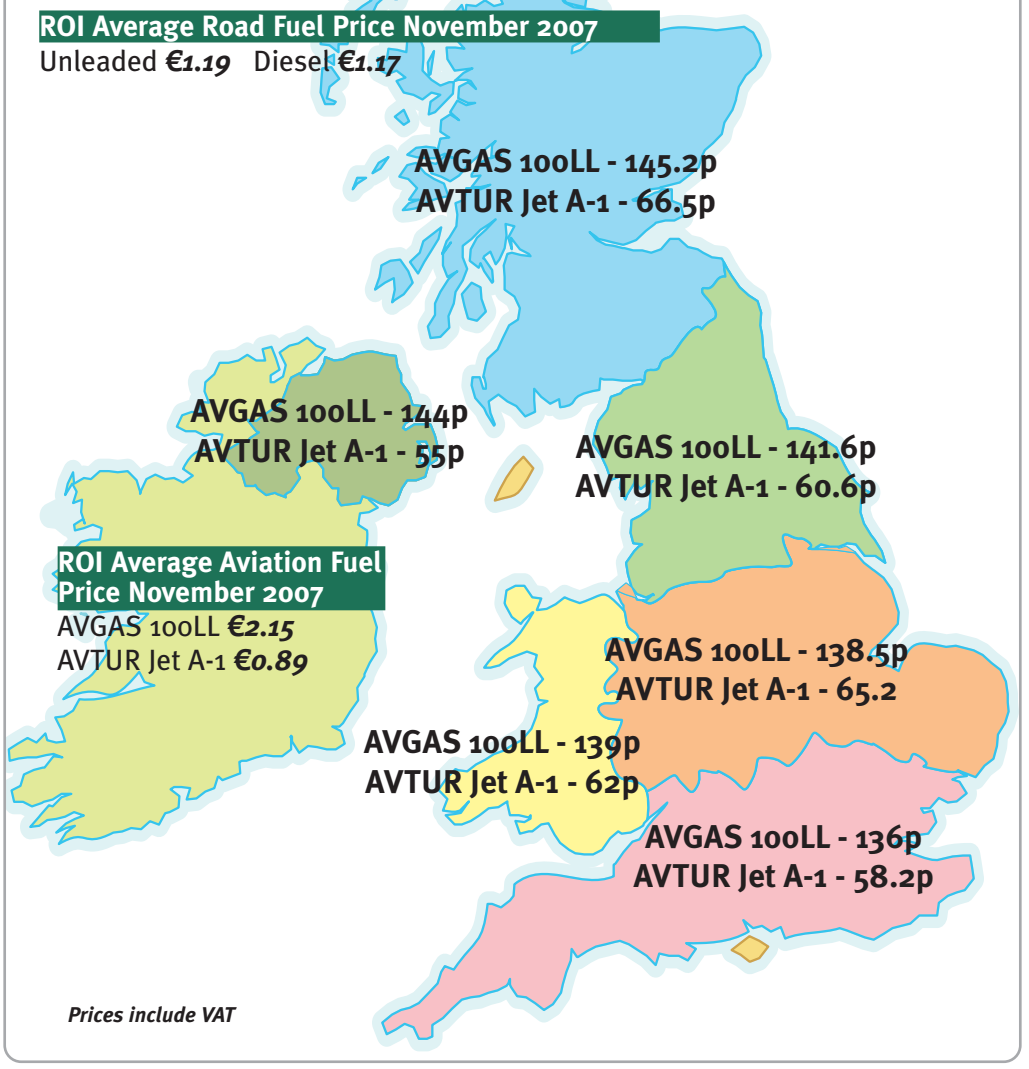
(Source: Flight Training News survey)

UK Average Aviation Fuel Price November 2007
AVGAS 100LL ***140.7p*** AVTUR Jet A-1 ***61.25p***

ROI Average Aviation Fuel Price November 2007
AVGAS 100LL ***€2.15*** AVTUR Jet A-1 ***€0.89***

UK Average Road Fuel Price November 2007
Unleaded ***101.7p (+4.2p)*** Diesel ***105.7p (+5.5p)***

ROI Average Road Fuel Price November 2007
Unleaded ***€1.19*** Diesel ***€1.17***



Prices include VAT

UK CAA Open Consultations

Consultation	Deadline	Details	Link
Letter of Consultation: Proposal to Amend the Air Navigation Order 2005	2nd Oct 2007	Regulatory Impact Assessment for the Amendment of the Air Navigation Order 2005 to reflect the coming into force of provisions of the European Council Regulation (EEC) No. 3922/91 Annex III (EU-OPS)	http://www.caa.co.uk/default.aspx?pageid=7722 (Source, CAA website)

Forthcoming UK and ROI JAR professional licence exam dates

JAR ATPL (A) & (H) ***Exam Centres:*** *Gatwick, Oxford, Silsoe, Glasgow*

Exam Month	Closing date for applications	Subjects	Exam Dates
JANUARY	14/12/07	Principles of Flight, Airframes, Mass and Balance, Performance	Mon 7th Jan
		Instrumentation, Operational Procedures, Flight Planning	Tue 8th Jan
		General Navigation, Radio Navigation, Meteorology	Wed 9th Jan
		Air Law, Human Performance, VFR Communications, IFR Communications	Thurs 10th Jan
FEBRUARY	22/01/08	Principles of Flight, Airframes, Mass and Balance, Performance	Mon 4th Feb
		Instrumentation, Operational Procedures, Flight Planning	Tue 5th Feb
		General Navigation, Radio Navigation, Meteorology	Wed 6th Feb
		Air Law, Human Performance, VFR Communications, IFR Communications	Thurs 7th Feb

JAR CPL (A) ***Exam Centres:*** *Gatwick only*

Exam Month	Closing date for applications	Subjects	Exam Dates
JANUARY	21/12/07	Principles of Flight, Aircraft General, Performance and Planning	Mon 14th Jan
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Tue 15th Jan
MARCH	25/02/08	Principles of Flight, Aircraft General, Performance and Planning	Mon 10th Mar
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Tue 11th Mar

JAR CPL (H) ***Exam Centres:*** *Gatwick only*

Exam Month	Closing date for applications	Subjects	Exam Dates
JANUARY	02/01/08	Principles of Flight, Aircraft General, Performance and Planning	Wed 16th Jan
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Thurs 17th Jan
MARCH	27/02/08	Principles of Flight, Aircraft General, Performance and Planning	Wed 12th Mar
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Thurs 13th Mar

Republic of Ireland Theoretical Knowledge exams

All held at: *The Gresham Hotel, 23 Upper O' Connell Street, Dublin 1*

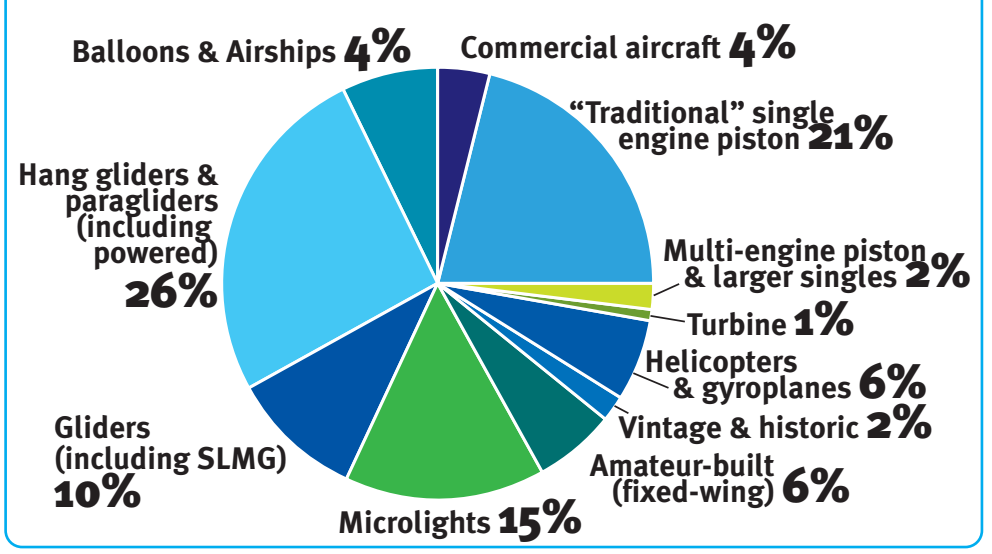
Exam Month	Closing date for applications	Courses	Exam Dates
JANUARY	21/12/07	PPL	Fri 11th Jan
	24/12/07	CPL/ATPL/IR	Mon 28th Jan to Thur 31st Jan

Downing Street Petitions and Campaigns

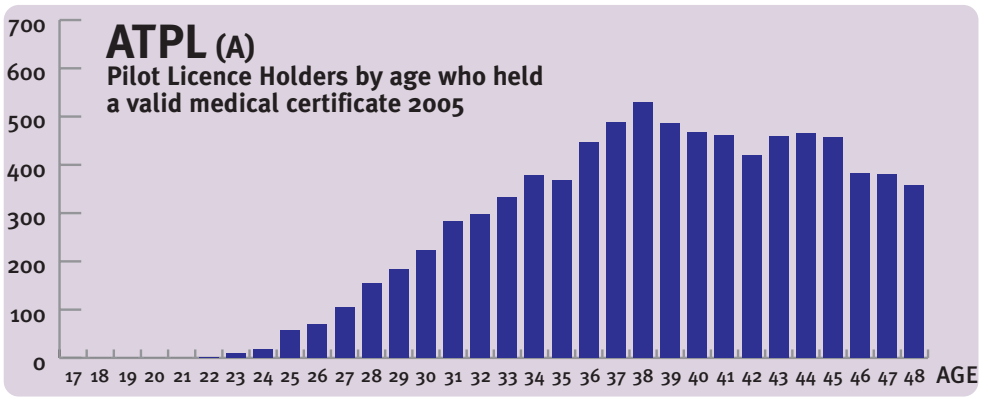
Campaign	Deadline	Current Signatures	Sign up
Relax the restraints on airside pass holders carrying liquids	8th May 2008	2,810	http://petitions.pm.gov.uk/airside/
To allow the Red Arrows to fly at the 2012 Olympics	17th Sept 2008	235,334	http://petitions.pm.gov.uk/RedArrows2012*
Relax restrictions on the flying of historically important ex-military jets	22nd June 2008	30	http://petitions.pm.gov.uk/Jetstotheskies/

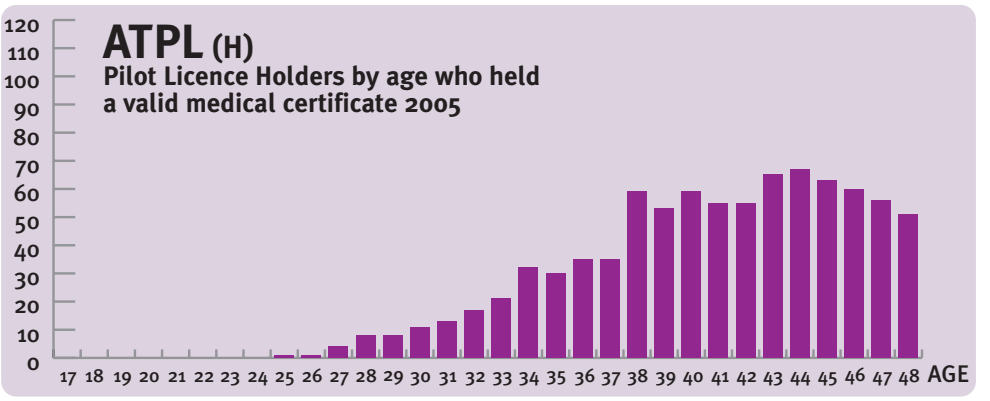
** According to the Downing Street website: "This allegation is not true. The Government has not banned the Red Arrows from the London 2012 Olympic Games. The organising committee of London 2012 will decide what to include in the Opening Ceremony and other celebrations - but with almost five years to go, decisions are yet to be made on what these will look like. And of course the Red Arrows played a memorable role in the celebrations for 2012, when they flew over Trafalgar Square to mark London winning the Games." (Source, Downing Street website). Nevertheless, the petition has continued to attract signatures and is currently the number one petition on the Downing Street website by a considerable margin. On that basis alone, we suspect that the Red Arrows will play a memorable role in the Opening Ceremony of the 2012 Olympics too. (FTN)*

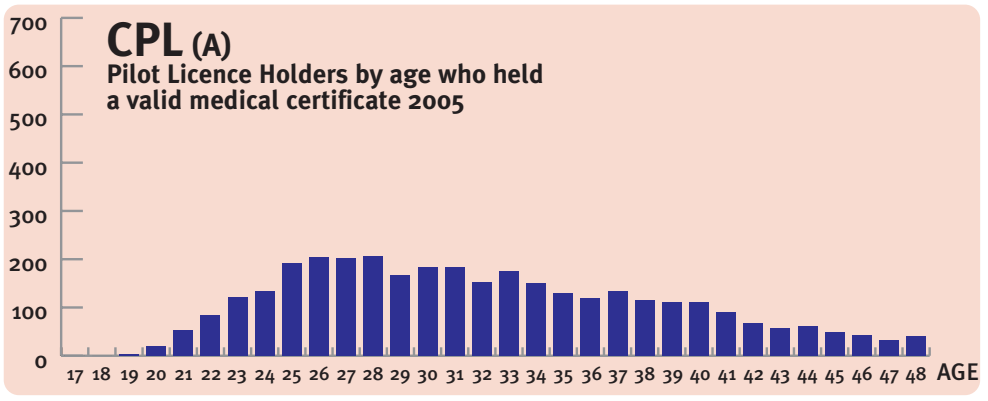
UK-registered aircraft by category

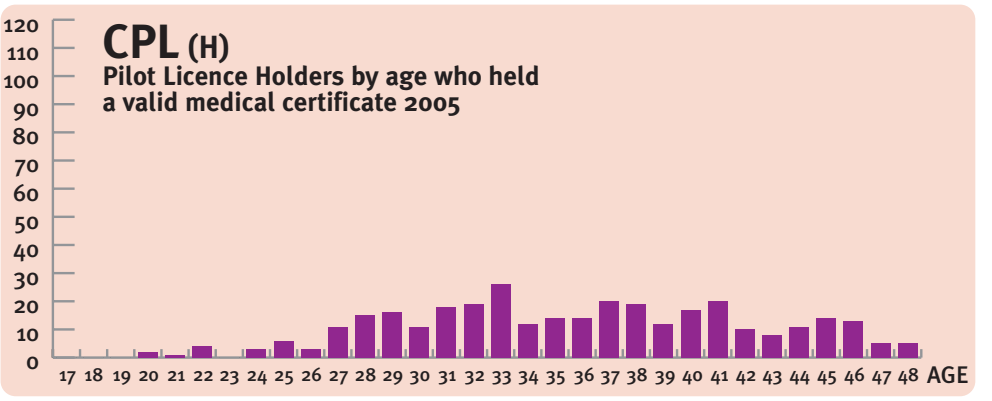


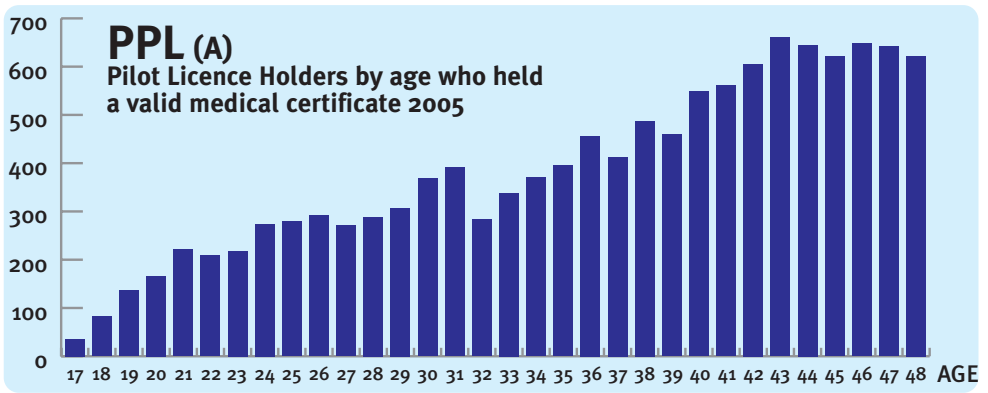
FTN DATA & STATISTICS

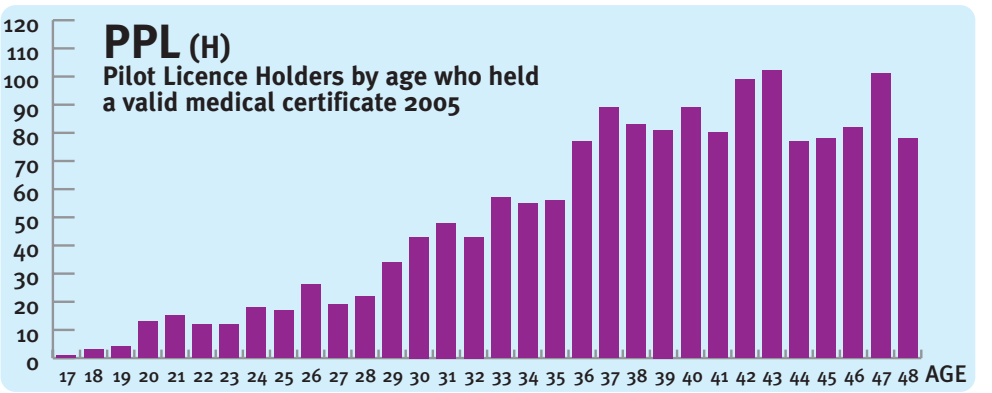












Pilot Demand to Support Fleet Growth & Pilot Retirements (2006-2026)

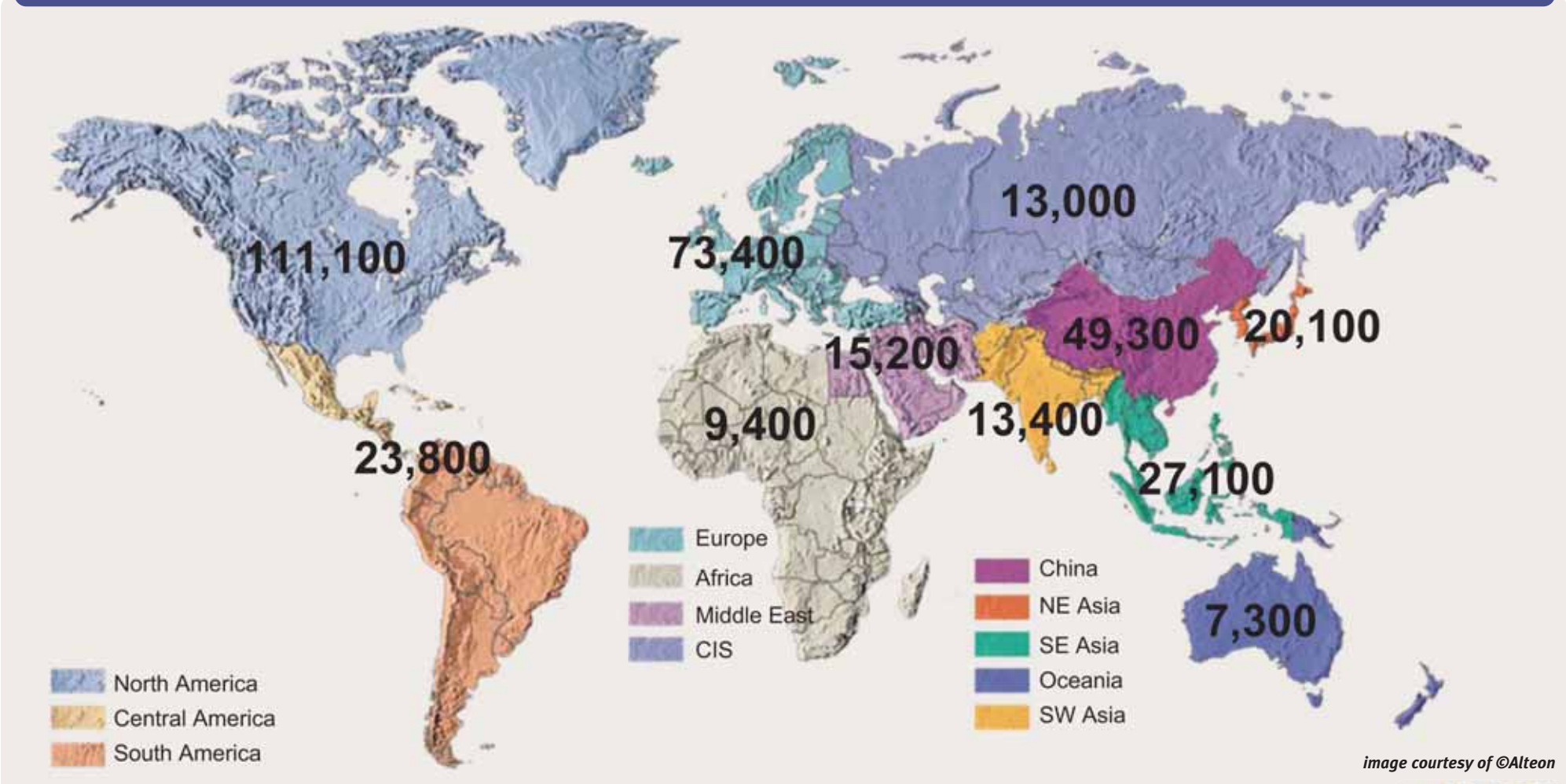


image courtesy of ©Alteon

ALTEON
A BOEING COMPANY

Numbers represent the total pilots needed to support fleet growth & pilot retirements between 2006-2026

SAFETY MATTERS

Crew Resource Management (CRM) a Factor in Airliners's Low Level Departure

The operating crew of a Boeing 737 reported at 0630 hrs for a two-sector day from an airport in continental Europe to a UK airport and return. The first sector to the UK airport was uneventful.

Prior to pushing back from stand, the crew received clearance from ATC to depart from on a 'Standard Instrument Departure' (SID). The co-pilot was the pilot flying for this sector and briefed the commander on the departure. The co-pilot had previously operated without incident from this airport, as well as two other major UK airports. The commander had not previously operated from this airport, but had operated from two other major UK airports on "numerous" occasions without incident.

After an uneventful pushback and taxi out the aircraft was transferred from the Ground Controller to the Tower Controller. The Tower Controller cleared the incident aircraft to "line up and wait" after a landing Airbus A319. Once the A319 had vacated the runway the incident aircraft was cleared to take-off. Shortly after take-off the incident aircraft was transferred to the London Air Traffic Control Centre (LATCC).

Approximately one minute after the incident aircraft was cleared to take-off, the crew of the A319 transmitted on the ground frequency.

"SEE THE AIRCRAFT ON CLIMB OUT? THE 737 ON CLIMB OUT JUST RAPIDLY LOST HEIGHT, JUST CLIMBING AWAY NOW."

The A319 crew later reported having seen the B737 flying almost level at approximately 500 feet half a mile beyond the threshold of the runway. The aircraft then appeared to pitch down markedly before levelling again. The A319 crew thought the aircraft must have suffered an engine failure, due to its lack of climb performance.

The B737 then proceeded to turn right in accordance with the SID, with a shallow bank angle. The aircraft was still level and this was confirmed by the indications of '+05ffl' on the A319's TCAS (Traffic alert and Collision Avoidance System), ie 500ft above the A319. The aircraft was visible just above the horizon as it tracked the departure route. The co-pilot informed the Ground Controller and the commander alerted the Tower Controller on the other radio. At this point the TCAS target changed to '+05ffl '; the down arrow indicated that the incident aircraft had a rate of descent of 500 feet per minute or greater.

Shortly after that, the TCAS target disappeared from the Navigation Display. The crew continued taxiing and as they parked on stand they were then informed that the aircraft was now *"climbing normally to the south."* The commander of the A319 estimated that the B737 flew for three to five track miles before climbing. During this time the lowest TCAS indication was 400ft and the highest 600ft. For the majority of the time the TCAS was indicating 500ft.

Having been alerted by the taxiing A319, the Ground Controller saw the B737 and noted that it was unusually low and leveling off from a descent about one mile from the end of Runway 05. The Ground Controller drew it to the attention of the Tower controller and the Duty Watch Manager. The B737 was observed to make a slightly wider than normal turn to a point approximately due east of the airfield, where it started to climb. It had flown 5 or 6 track miles before initiating a climb.

Upon being made aware of the incident, by the Ground Controller, the Tower Controller observed that the aircraft was at 900ft Above Mean Sea Level (AMSL) on the Aerodrome Traffic Monitor (ATM). The ATM is a radar relay display that allows the Tower Controller to view the radar display remotely. The Tower Controller was unable to contact the aircraft (having already transferred it to the en-route frequency) but observed the B737 in level flight at 900ft AMSL, on or close to the SID track, for about 5nm before it resumed a normal climb. The departure airfield and its surrounding terrain have an elevation of around 350ft, so 900ft AMSL is approximately equivalent to 500ft above ground level.

The Minimum Safe Altitude (MSA) in this area is 1800ft AMSL.

After an initial delay, due to congestion on the frequency, the crew of the incident aircraft made an initial call to the en-route frequency with their callsign only. Having been made aware of the situation via the departure airfield, the controller asked the crew,

"JUST CONFIRM YOUR ALTITUDE?"

The crew replied,

"900FT"

to which the controller replied,

"CLIMB NOW IMMEDIATELY TO ALTITUDE 5,000FT [AMSL]"

which the crew acknowledged. At this point, due to its altitude, the crew of the incident aircraft were advised that they were outside controlled airspace. When the controller positively identified the aircraft on his radar screen he gave it further clearance to climb to FL70, which the crew acknowledged. The controller asked the incident aircraft,

"WHY DID YOU LEVEL OFF AT 900FT? DID YOU HAVE A PROBLEM OR WAS IT A PROBLEM WITH YOUR FMS [FLIGHT MANAGEMENT SYSTEM]?"

They replied,

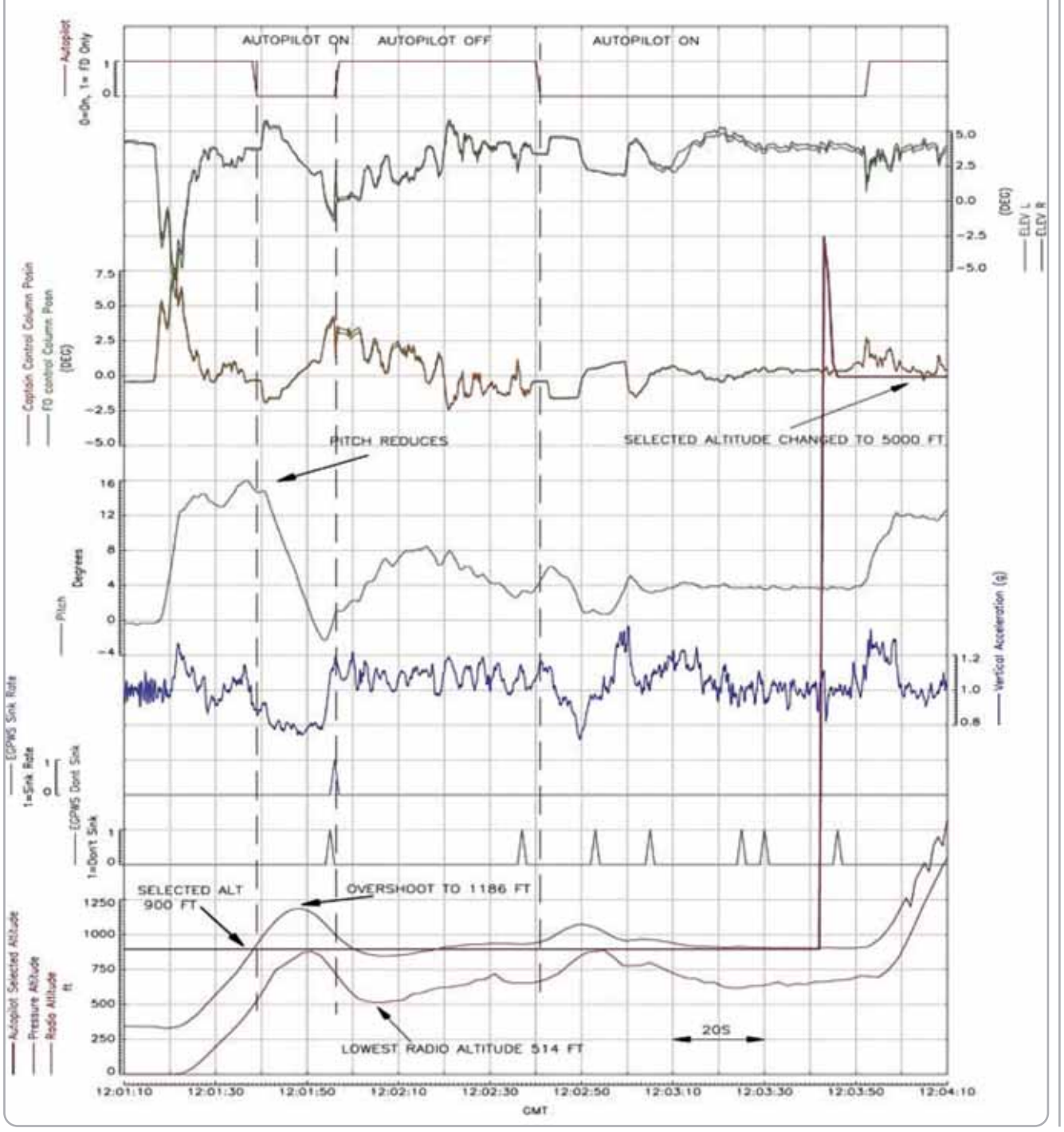
"WE COULD NOT CONTACT YOU AND ALSO THE FMS."

Having been given further climb clearances, the aircraft subsequently reached its cruising level and later landed at its destination without further incident.

The Flight Data Recorder (FDR) showed that take-off occurred at 11:01:23 and around 16 seconds later, at a pressure altitude of around 882ft, the autopilot was selected on (see Figure 3). The autopilot selected altitude was 900ft and 'Altitude Acquire' was

Continued on page 28

Figure 3 – Flight Data Recorder read-out



SAFETY MATTERS

Continued from page 27

immediately engaged. A pitch-down command was signalled by the autopilot but, due to the rate of climb and late acquire, the aircraft overshot the selected altitude. It climbed to a maximum of 1,186ft before descending towards 900ft. The pilot then commanded a nose-down attitude, selected autopilot off and flew the aircraft manually, from around 974ft.

At this point, the first Enhanced Ground Proximity Warning System (EGPWS) *"Don't Sink"* alert was triggered. This alert is triggered when a significant altitude loss is detected with the landing gear or flaps not set in a landing configuration. The alert includes an audio message and EGPWS warning lights. The amount of altitude loss permitted is dependent on the height above the terrain (radio altitude). Data downloaded by the EGPWS manufacturer indicated a recorded altitude of 737ft radio altitude at the time of the alert. From the FDR, this constitutes a 143ft altitude decrease from the peak of 880ft recorded just after take-off.

One second after the *"Don't Sink"* alert, an EGPWS *"Sink Rate"* alert was triggered. Unlike *"Don't Sink"*, this alert monitors for excessive descent rates with respect to radio altitude, in all phases of flight. At the time of the alert, the EGPWS recorded a descent rate of 2,029 feet per minute at an altitude of 694ft agl.

After disconnecting the autopilot, the pilot flew the aircraft manually and descended to a minimum altitude of 514ft agl. A steady increase in altitude to 719ft agl (938 ft pressure altitude) ensued, followed by an additional altitude decay, triggering a second *"Don't Sink"* alert at 655ft agl (932 ft pressure altitude). Pitch attitude was increased to 6° and the aircraft began to climb again.

Following this alert, the autopilot was re-engaged and, following an overshoot to 1,070ft pressure altitude, the selected altitude of 900ft was achieved. However, due to this overshoot and subsequent reduction to the selected altitude, five more *"Don't Sink"* alerts were recorded by the EGPWS. At 11:03:42, the selected altitude was changed to 5,000ft and 11 seconds later the aircraft began to climb. The remainder of the flight was uneventful.

When interviewed after the incident, the co-pilot said that while he did not level off at 900ft on previous departures from this airport, he believed that they would be given further clearance to climb above 900ft from the en-route controller. The co-pilot was not aware of the items to be mentioned in the initial call to the en-route controller.

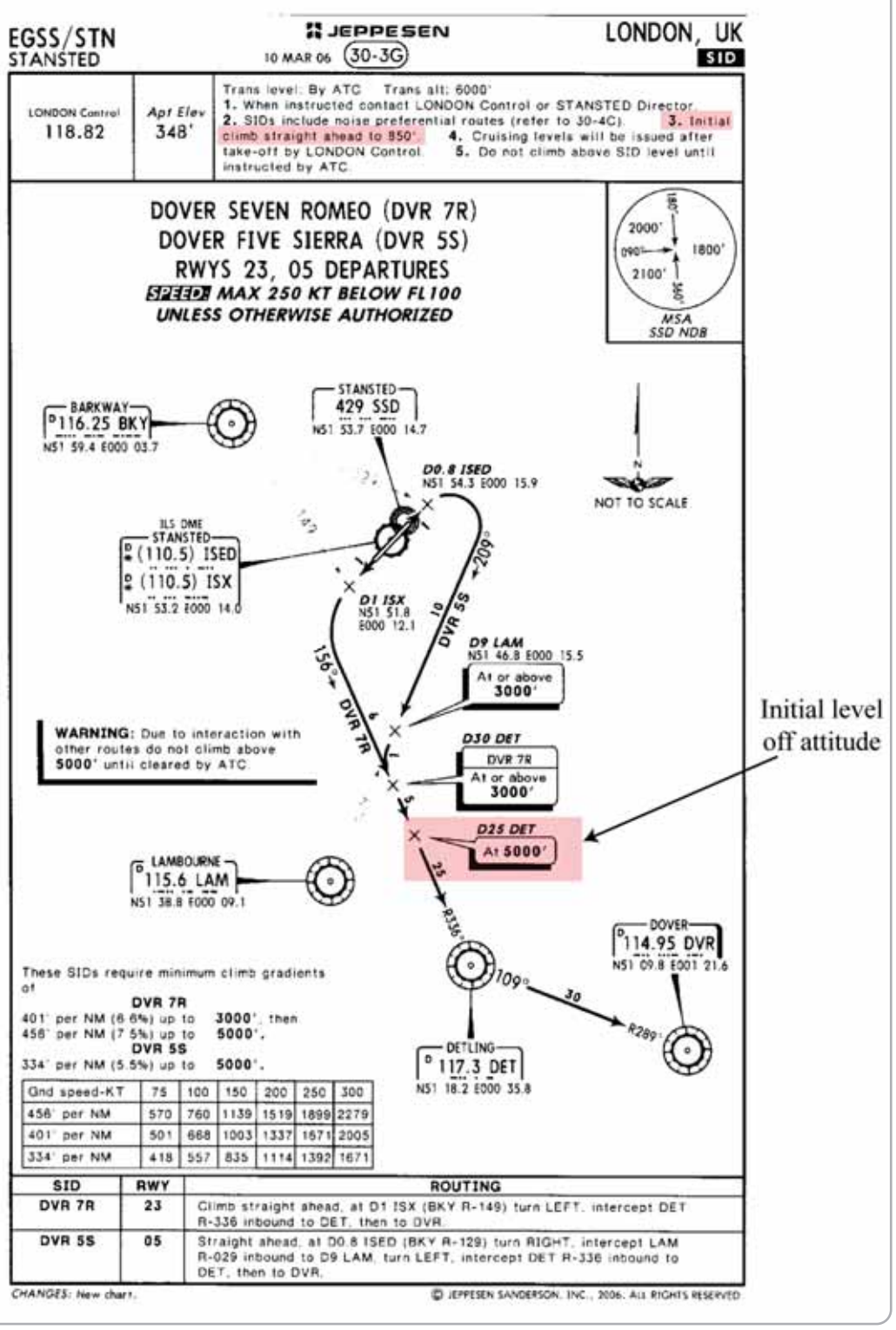
The Captain said that, even though the initial level-off altitude seemed "unusual", he believed that the vertical profile of the 'DVR 5S' SID did not allow for an unrestricted climb to 5,000ft amsl due to the note on the plate of 'Initial climb straight ahead to 850' [500ft aal]' as highlighted on Figure 1. The Captain thus believed that the initial level-off altitude was 900ft amsl, as briefed by the co-pilot prior to departure. The Captain additionally believed that they would be given further clearance to climb from the en-route controller.

After take-off the autopilot failed to capture the pre-selected altitude of 900ft. As a result, the commander took control of the aircraft manually and, having flown above 900ft, descended back to 900ft. Once level at 900ft amsl, the commander was "slightly alarmed" at the height and realised something was wrong. Even though the Captain realised the aircraft was below the Minimum Safe Altitude (MSA) of 1,800ft amsl, the Captain was not overly concerned as the flight was in Visual Meteorological Conditions (VMC). At this point, the commander said, workload was very high.

After the incident the commander realised that he and the co-pilot had not registered the exact meaning of the 'Initial climb' note on the SID plate and thought this might have been due to a language issue. The commander added that the format of the plate was also "unsuitable" compared to those of the other major European airports into which the commander operates, where the initial level-off altitude is displayed more conspicuously.

In hindsight, the Captain believed that an opportunity to clarify the initial level-off altitude with ATC was missed due to a breakdown in Crew Resource Management (CRM) during the briefing stage.

Figure 1 - The 'DVR 5S' SID plate used by the crew.



Initial climb note on UK SID plates

Major UK airports with a published SID in the UK AIP, include the note '*Initial climb straight ahead to 848ft* [in the case of the incident airport] *QNH (500ft QFE)*' or '*No turns below 500ft QFE*' on their SID plates.

This note was added after the accident involving a Trident aircraft departing London Heathrow on 18 June 1972. After this accident the CAA conducted an investigation into the safety aspects of noise abatement departures. Consequently they issued a report titled '*Safety Aspects of Terminal Area Procedures*', in August 1974. One of the recommendations made in the report was for departing aircraft to climb straight ahead to 500ft aal before initiating the first turn. As a result the initial climb note was added to the SID plates for all major UK airports. The CAA commented that while this report was published in 1974 their policy is still extant.

Initial call to en-route ATS unit

The UK AIP section, Gen 3-3-3, paragraph 9, 'Initial Call' states the following:

9 Initial Call

9.1 Pilots of aircraft flying Instrument Departures (including those outside controlled airspace) shall include the following information on initial contact with the first en-route ATS Unit:

a) Callsign;

b) SID or Standard Departure Route Designator (where appropriate);

c) Current or passing level; PLUS

d) Initial climb level (ie the first level at which the aircraft will level off unless otherwise cleared.

For example, on a Standard Instrument Departure that involves a stepped climb profile, the initial climb level will be the first level specified in the profile).

Analysis

The co-pilot had operated from this airport before, without incident. It is therefore likely the co-pilot did not notice, on this occasion, anything different or untoward during the departure brief to the commander when the co-pilot set 900ft in the altitude pre-selector.

The commander commented that there might be a language issue with the '*Initial climb*' note on the plate. The initial doubt, during the co-pilot's brief, should have alerted the commander to seek clarification from ATC before take-off.

As the commander had operated out of other major UK airports before on "numerous occasions", the commander either interpreted the meaning of the note correctly or failed to notice it on the previous departures.

The aircraft was operating in VMC. Had it been in IMC and operating from an airport where terrain was more prevalent, this incident could have quickly become more serious. Had this been the case the aircraft's EGPWS might have produced a *"terrain terrain"* and/or *"pull up"* alert. This would have caused the crew to climb, without clearance from ATC, in accordance with Standard Operating Procedures, thus avoiding a more serious outcome.

The en-route controller was aware of the incident when the incident aircraft came onto frequency. If he had not been aware, there would have been a delay in him realising that the aircraft was at a dangerously low altitude. This would have been as a result of the crew not stating the required items in their initial call and the incident aircraft being too low to show on the controller's radar. Subsequently the controller was required to make an extra transmission to ask the crew to clarify the aircraft's altitude.

To ensure the safety of the aircraft, the crew must ensure that they fully understand the meaning of all notes on any airport plate. If there is any doubt, clarification must be sought.

This is the first time this type of incident has been reported in the UK and with the large number of aircraft movements each year using a SID (in 2006 there were a total of 1,058,387 departures from all major UK airfields into the airways system via a SID), this isolated occurrence is deemed not justify a safety recommendation.

Conclusion

As a result of a misunderstanding of the notes on a SID plate and a breakdown in CRM, the crew did not comply with the prescribed altitudes on the SID and flew for several miles below the MSA. Had the MSA been more critical, this could have led to a more serious outcome.

SCHOLARSHIPS & SPONSORSHIPS

Amy Johnson Memorial Trust Scholarship 2008

The Trustees of the Amy Johnson Memorial Trust have announced that they will be offering for open competition a scholarship worth up to £2,000 to assist British women pilots in either of the following categories:

- PPL holders wishing to obtain a CPL/ATPL Candidates must have completed and passed all ground and medical examinations required for the licence by the closing date for applications.
- Holders of CPL/frozen ATPL licences working towards the Instructor Rating, Multi-Engine Instrument Rating, CRM/MCC Rating. Only holders of the CPL/frozen ATPL licences issued on or after 1 June 2007 are eligible to apply.

Candidates must be a British citizen by birth and reside permanently in the UK.

The age of the applicant may be taken into account when deciding whom to interview.

The scholarship will be awarded by a selection committee whose decision will be binding and final.

The closing date for applications is 29 February 2008 with interviews anticipated in early May.

Application forms are available from:
Mrs M E Tucker (Hon. Secretary to the Trust)
12 Church Lane
Merton Park
London
SW19 3PD

Candidates are requested to enclose a stamped, addressed envelope C5 size.

REMINDER

THE AIR LEAGUE

A reminder to all prospective pilots that the Air League Educational Trust's 2008 Scholarship and Bursary Competitions opened on 1 November and will close on 31 January 2008.

For full information on the flying scholarships available and to download an application form visit www.airleague.co.uk

GAPAN Trophies & Awards Banquet

The Guild of Air Pilots and Navigators held their annual Trophies and Awards Banquet on the 20 November.

There were many worthy winners present, but we would like to highlight to our readers one particular individual who, it would appear, has been taking more awards than anyone else this year.

His name is Stephen Robinson, a recent graduate of an Oxford Aviation Training Airline Preparation Program. As is mentioned later in Squawk, Stephen took virtually every prize on offer for his course's graduation at the recent OAT Graduation Ball, and clearly GAPAN have noticed his achievements as well.

Stephen pictured with his Father and the award certificate at the Guild's Trophies and Awards Banquet

At the dinner, Stephen received the Sir Alan Cobham Memorial Award from ACM Sir Glenn Torpy, Chief of the Air Staff, on behalf of GAPAN. This award is made annually by the Guild to the most meritorious student pilot graduating from a major civil flying training establishment in the UK, making Stephen not only remarkable by Oxford Aviation Training standards, but indeed in the training industry as a whole.

Stephen has unsurprisingly been snapped-up by British Airways, where we have learnt he has just finished his simulator training and is due to join BA's B737 fleet. Our congratulations to a worthy winner.

Squawk!

Welcome to Squawk, FTN's page for aviation anecdotes and gossip.

Our roving FTN reporters have attended a number of seminars and conferences over the last year where the vexed question of falling educational standards amongst pilot training candidates has been raised. To judge from the knowing smiles and nodding heads, this is a Europe-wide problem.

However, to judge from these instances of the wider public's general knowledge of, say, physics, today's trainee pilots may actually be MENSA material. What else to make of this superior grasp of physics displayed by a contestant on the UK's National Lottery?

Eamonn Holmes: There are three states of matter: solid, liquid and what?
Contestant: Jelly

Or, how about some advanced mathematics courtesy of BBC Radio Manchester:

Phil Wood: What's 11 squared?
Contestant: I don't know.
Phil Wood: I'll give you a clue. It's two ones with a two in the middle.
Contestant: Is it five?

In any event, most pilots will not be surprised at the following examples of the general public's geographic awareness. Again, from the National Lottery:

Dale Winton: Skegness is a seaside resort on the coast of which sea:
a) Irish Sea; b) English Channel; c) North Sea?
Contestant: Oh, I know that, you can start writing out the cheque now Dale. It's on the east coast, so it must be the Irish Sea.

Or from BBC Radio Bristol:

Chris Searle: In which European country is Mount Etna?
Caller: Japan.
Chris Searle: I did say which European country, so in case you didn't hear that, I can let you try again.
Caller: Er ... Mexico?

BBC Midlands are not to be outdone:

Alex Trelinski: What is the capital of Italy?
Contestant: France.
Trelinski: France is another country. Try again.
Contestant: Oh, um, Benidorm.
Trelinski: Wrong, sorry, let's try another question. In which country is the Parthenon?
Contestant: Sorry, I don't know.
Trelinski: Just guess a country then.
Contestant: Paris.

And our personal favourite from BBC2's Beg, Borrow or Steal:

Jamie Theakston: Where do you think Cambridge University is?
Contestant: Geography isn't my strong point.
Theakston: There's a clue in the title.
Contestant: Leicester?

U 'av got to be kidding!

Whilst wandering around the static park at the Dubai Air Show recently, our FTN camera man came across this interesting take on Unmanned Air Vehicles (UAVs). Pictured is a highbred UAV Sky Arrow, with a souped-up, fuel-injected 914 Rotax engine, capable of attaining 25,00oft. It is dubbed the 'Archimede', to reflect, according to the sales rep present at the time, "The transformation from 'old aviation' to 'modern aviation.'" We're not altogether sure what he meant by that, and judging by his sheepish grin, neither was he. Good sound-bite though.

George Bush eat your heart out!

Poor old George W. Who'd have thought that Air Force 1 would ever become the poor kid on the aircraft ramp?

Well, in a bid to out-do every other private aircraft owner on the planet, HRH Prince Alwaleed bin Talal bin Abdulaziz Alsaud, Chairman of Kingdom Holding company, signed a firm order with Airbus at the Dubai Air Show for an A380 Flying Palace, becoming the first customer for the VIP version of the new double-deck airliner.

Featuring 50 per cent more floor space than the next largest super-jumbo (5,930 square feet to be precise), the Flying Palace will undergo cabin outfitting at a yet to be chosen completion centre. He might want to wait for the New Year sales to kick in first however – that's a lot of floor space to carpet, after all.

"Now where did I park? I remember it was near that nice little two-seater CT SW...Oh, there it is!"

Felipe Massa buys an Avanti

OK, so Felipe didn't win this year's Formula 1 championship, but at least he's got a fighting chance of beating his team mate Kimi Raikkonen to their test track in Modena, in his newly acquired P180 Avanti, the world's fastest turbo-prop. Don't worry Felipe, we understand those rumours of Kimi buying a Javelin VLJ are completely unfounded...

Flybe launch new service to...

Have a look at this map and see if you can work out where Flybe have chosen as their latest flight destination

Edinburgh, did I hear you say? Well, no actually, that's Inverness – at least it is according to the press release sent out to hundreds of Highland homes recently, on a promotion of Fybe's new route that will operate flights to Inverness out of Belfast, London, Jersey and Guernsey. We're led to believe the flight-deck charts are rather more accurate however.

World's first supersonic jet customer

Not to be entirely outdone by HRH Prince Alsaud's purchase of his own personal A380, Dr Tarek bin Laden of Saudi Arabia became the world's first customer to place a deposit on a supersonic business jet when he visited the Dubai Air Show last month. He deposited a modest (by HRH Prince Alsaud's standards, we mean) $250,000 with Aerion vice-chairman Brian Barents, to reserve the first Aerion supersonic biz jet, due to roll off the production line soon following FAA approval.

Mine's a pint of Glider!

Congratulations to bar manager Nigel Chubb at Lasham Gliding Society for his achievement in winning the CAMRA Hampshire Club of the Year award. An FTN spy told us of the celebratory event which took place at the Society's bar recently, and we've almost forgiven him for forgetting to mention the free-bar event until the morning after...almost.

A340-600 ground test accident

On the 16 November an accident occurred involving an A340-600, which was carrying out engine run-ups and was due to be delivered to Etihad Airways over the coming days.

According to a press release there were nine people on board at the time of the accident, two Airbus employees and seven employees of Abu Dhabi Technologies, a service provider to Etihad.

We are pleased to report that of the 5 individuals admitted to hospital after the accident, none received life-threatening injuries and we wish them a speedy recovery.

OAT 2007 Graduation Ball

At the end of last month, on the strict understanding that we would acquit ourselves with a modicum of decorum and wear something that didn't offend too many guests, Oxford Aviation Training granted us access to their annual student graduation bash. The event was held to honour the latest group of graduates from Oxford's Airline Preparation Program and the guest list was chock-full of airline dignitaries from BA, BMI Baby, DHL, Flybe, Netjets and XL Airways, to name but a few.

The redoubtable OAT customer services team, enjoying a rare evening off

OAT managing director Anthony Petteford gave the opening speech of the evening and proceeded to invite Lloyd Cromwell-Griffiths, director of flight operations for BA, to present the awards to those graduates who had distinguished themselves during their training. As ever, the high standard of achievements were impressive, with a special mention going to Stephen Robinson for taking virtually every award on offer for his particular course. You can also read about his other award gained at the recent GAPAN Awards Ceremony dinner on page 29 of this edition.

Our hearty thanks go out to all at OAT for their kind invitation to the Ball, and we assure them that the heckling during the key note speeches was from an entirely different table, nowhere near ours.

CHRISTMAS CAPTION COMPETITIONS

Having blown the majority of our Christmas budget on libel fees, the A380 giveaway is going to have to wait until next year, unfortunately. We did manage to 'pick-a-pocket-or-two' when pilot supplies company Airplan Flight Equipment were looking the other way however, and as a result we are pleased to offer up the following caption competition challenges.

Incredibly, or so we thought, we had no entries to last month's caption competition, and it wasn't until we discovered that our IT Troll had forgotten to put the link on our website, that the truth was revealed. We are extremely embarrassed and can only apologise to our readers for this lapse in professionalism. We have decided therefore, to run last month's caption competition again, alongside this months'.

Anyone who would like to submit entries for either photo should visit our website and follow the caption competition link, shouldn't they Troll? The two winning entries for the captions will each win a pair of Randolph Aviator sunglasses, kindly donated by AFE, and five runners up will each receive a year's free subscription to FTN.

The 'missing' November caption competition, featuring two new Flybe recruits enjoying a brief lunch break in the back of a Q400 after a strenuous morning of circuit training at RAF Brize Norton

Spotted through the FTN lens during November's Dubai Air Show was this Dubai Airport security guard seated at he controls of his rapid-response vehicle

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SITUATIONS VACANT

Westward Airways (Lands End) Ltd require a full time Flying Instructor (unrestricted) to start at earliest convenience in 2007 for PPL instruction. Based at Land's End Airport, St Just, Cornwall. Contact Phil Hughes or Emily Bliss 01736 785227 or email CV to flyingschool@islesofscilly-travel.co.uk

Full time vacancy for a PPL/NPPL flying instructor at one of the UK's most picturesque airfields. Please contact Saul at Compton Abbas Airfield on 01747 811767 or email fly@abbasair.com

Cumberland Flying School Ltd. Established 1999. Full time flying instructors required for immediate start and long term engagements with salaried positions. Please email ted@cumbernauldflyingschool.co.uk or telephone 01236 452525.

West London Aero Club at White Waltham airfield seeks full time instructors for immediate start. Excellent working environment, good conditions and remuneration. Accommodation available. Varied fleet of 16 aircraft. Friendly club atmosphere. Contact CFI David Cole on 01628 823272.

CVs welcomed from high-calibre vocational instructors to join the world's leading distributor of civil helicopters. Please send CV to: Aileen McGovern, Heli Air, Denham Airfield, Denham, UB9 5DF

JAR PPL instructors wanted to work at Cabair Flying Schools. Work with a modern fleet in very professional surroundings. Sponsorship schemes available. Call Derek Edwards on 020 8236 2400 or email derek-edwards@cabair.com

Cleveland Flying School require PPL Instructors full and part time. Very busy school guaranteeing many flying hours. Contact Eddie or Chris on 10325 337572 or by email chris@clevelandflying.co.uk

Full and part-time instructors required for busy long-established flying club at Biggin Hill. Ideal candidate would live locally. Excellent rates of pay. Please send CV to EFG Flying School, Biggin Hill Airport, Kent TN16 3BN. Email anoop@flyefg.co.uk Tel. 01959 540400 / 054

Wanted – microlight or JAR FIs for busy microlight flying school with bases in Oxford and Peterborough, flying the EV97 TeamEurostar. Call FLYCB on 01865 370000 or email office@flycb.com.

Old Sarum Flying Club, the south's most successful flying club always requires flying instructors full time and part time. Contact CFI at info@oldsarumflyingclub.co.uk or call 01722 322525

Full and part time JAA PPL instructors required for busy Oxford airport based flying school. Contact Paul or Louise on 01865 370814 or email info@pilotflighttraining.com

Due to ongoing expansion Stapleford Flight Centre have a requirement for full and part-time instructors for both PPL and commercial training. Email CV to colindobney@flysfc.com

FI/FI(R)s required by TG Aviation at Manston Airport. Flying available 7 days a week. Payment by the hour, brakes off to brakes on. Facilities available ensure a high standard is achieved by student pilots. Tel. 01843 823656.

Western Air at Thruxton Airport has a vacancy for one FI or FI(R). Salary plus flight pay. Please contact Miss Pat Hudson on 01264 773186 or email westernair@thruxtonairport.com

Restricted or unrestricted Instructors required. Join our friendly, professional team at Aeros, dedicated to providing high quality instruction and training. Contact us on 01452 857419. Gloucestershire Airport.

PPL Instructors needed for busy established training organisation Please send CV for the attention of Geoff Manning CFI, Coventry Flying School, Rowley road, Baginton, Coventry CV3 4FR. Recruiting now.

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