

AIRCRAFT **OWNER** & PILOT

June 2015



The official magazine of the Aircraft Owners and Pilots Association

Kestrel & Eclipse merge

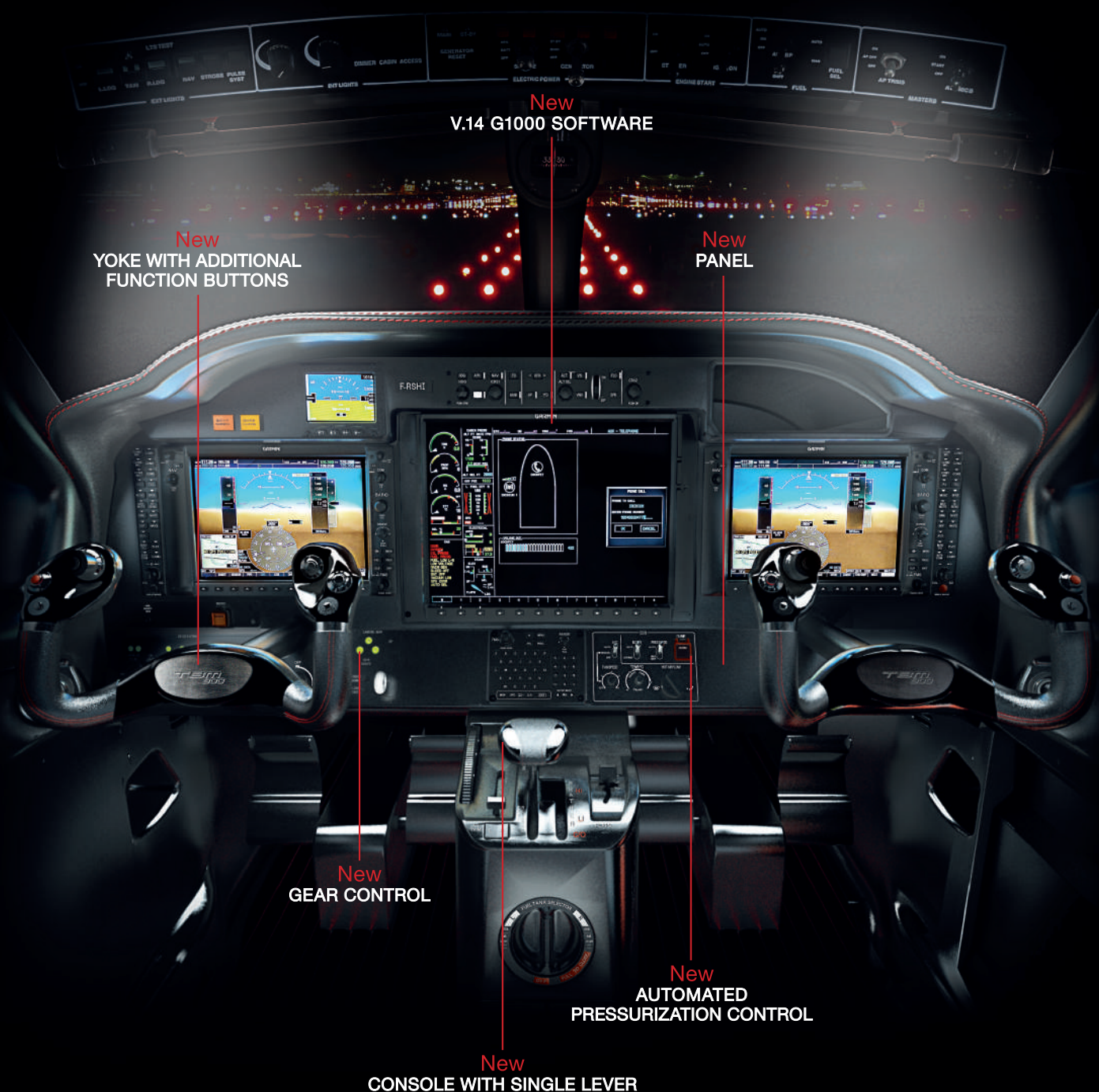


EGNOS trials

AERO & Sun 'n' Fun reports

AOPA Awards

TBM 900



The fastest **New** certified single-engine turboprop

WWW.TBM.AERO — TEL: (954) 893-1414 (AMERICAS) — +33 5 62 41 73 00 (INTERNATIONAL)

AIRCRAFT OWNER & PILOT

June 2015

Editor: Ian Sheppard
ian.sheppard@aopa.co.uk
Tel. +44 (0) 7759 455770

Published by:
First Aerospace Media Ltd
Hangar 9 Redhill Aerodrome
Redhill RH1 5JY
Tel. +44 (0) 1737 821409

Advertising Office:
AOPA UK
The British Light Aviation Centre
50A Cambridge Street
London SW1V 4QQ
Tel. +44 (0) 20 7834 5631

Head of Advertising: David Impey
Tel. +44 (0) 7742 605338

Printing: Holbrooks Printers Ltd

Articles, photographs and news items from AOPA members and other readers are welcomed. Please send to the Editor. Inclusion of material in Aircraft Owner & Pilot cannot be guaranteed, however, and remains at the discretion of the Editor.

Material for consideration for the June 2015 issue should be received no later than 1st May 2015.

© British Light Aviation Centre Ltd

AOPA is a member of the International Council of Aircraft Owner and Pilot Associations.



CONTACT AOPA UK:

CEO: Martin Robinson
E-mail: info@aopa.co.uk



www.aopa.co.uk

Chairman's Message Lighter maintenance rules

By George Done

Those who receive the IAOPA Europe eNews will have welcomed the item "Part M Light – Promising New Maintenance Rules for GA."

The hefty EASA document "Continuing Airworthiness Requirements - Part M" initially appeared in 2003, soon after the establishment of EASA in 2002. It was designed to cover all aircraft, both commercial air transport and general aviation, under a "one size fits all" philosophy. However, it was recognised quite early on that the rules were over-complex for the GA sector and in 2005 Eurosafe, a group of experts representing the European National Aviation Authorities, set about developing more proportionate regulations. EASA soon lost interest though, and the Eurosafe recommendations were abandoned.

There followed a brief skirmish along the same lines with the idea of a so-called "Part M Lite" in 2007 but this didn't get anywhere either. Eventually, in September 2008, Part M became fully established and the financial effects of its complexity started to impact GA aircraft owners. An AOPA UK questionnaire in 2011 indicated the extra annual cost for a typical light aircraft was about £800.

Lobbying by IAOPA Europe and other associations led to the EASA Part M GA Workshop held in Cologne in October 2011. Such was the outspoken criticism of Part M that a task force was set up to address this and produce recommendations. Dan Åkerman from AOPA Sweden represented IAOPA Europe, and Dan's role has now been taken over by Niklas Larsson, also from Sweden.

Although many meetings took place, the end result was not in sight by the time of the EASA Annual Safety Conference in October 2014. At this conference, criticism of Part M was even more vociferous than in 2011, none more so than from



the the ballooning community (as reported in December 2014 *General Aviation*), which has suffered severely as a result of Part M.

That air transport regulations are not necessarily appropriate for GA is recognised by ICAO in its "Annex 6, Part II Operation of Aircraft – International General Aviation – Aeroplanes," which was originally released in 1968. Nevertheless, there seems to be a mind-set among regulators that more regulation equates to better safety. While a stroke of the regulator's pen may improve a particular safety standard, if lacking proper consideration it can restrict activity levels and ultimately lead to lost jobs in the industry.

It is very important that the correct balance is struck and the promised "Part M Light" should help to provide this. It has been a long haul, but persistent and continuous lobbying by AOPA UK and IAOPA Europe continues to be an essential component. Ultimately this will lead to a reduction in the fixed costs of owning and operating an aircraft, and this will benefit both members and non-members of AOPA. So if you know someone in the latter category, please persuade them to invest in AOPA's work by joining up!



AIRCRAFT OWNER & PILOT

Editorial

By Ian Sheppard

To a great extent the British gave up their aircraft industry. It happened at a time when number-crunchers and lawyers were respected far more than engineers. This is the sad truth of a country that became over-reliant on oil and the city of London. Little has changed apart from the influx of money to London property from all over the world. Still the word engineer carries far more respect in the rest of Europe and in the rest of the world for that matter.

Well, at least we can still point to Rolls-Royce!

In the GA world the big news last month was the unexpected merging of Eclipse and Kestrel to form One Aviation. The Kestrel is a rare aircraft, starting with Richard Noble's air taxi project. I flew on the prototype when it still had a PT-6 engine and was based at Redhill. A real pocket rocket. We did a photoshoot and the results were stunning (hence the cover picture, by Mark Wagner of aviation-images.com). Let's hope Alan Klapmeier's Kestrel can go all the way and fulfil its potential.

Contents

Comment	7
Chief Executive's Diary	9
Airfields Update	10
Medical Note	14
Regulatory Update	15
Aero Freidrichshafen Report	21
Airfield Profile: Henstridge (EGHS)	25
EGNOS: Time to do an LPV approach!	29
MATZ penetration: is it D or G?	33
Instruments Rule: the CBM IR	35
What is FASVIG?	39
Aerobatics at White Waltham	43
Sun 'n' Fun Report	46
Sahara Rally	49
IAOPA Regional Meeting in Norway	58
Get your partner flying!	62
Letters	63
Classified Advertisements	64
AOPA Awards	66

Now, Garmin glass makes upgrading easier.
And broad aircraft approval makes it
even more affordable.

For aircraft owners in Europe, no other glass upgrade solution can match the reliability, growth capability, and cockpit integration/connectivity of this versatile all-Garmin combo. It features our dual-screen G500/G600 glass flight displays, teamed with the GTN™ 650/750 series of touchscreen avionics. Offering full EGNOS GPS navigation and LPV approach guidance with SVT™ synthetic vision¹ capability in virtual 3-D, the suite comes ready to fly with Garmin FliteCharts® and SafeTaxi® preloaded². Plus, now that approved model list (AML) validation has been received from the European Aviation Safety Agency, installations for qualifying aircraft can be completed under standard documentation³ – thus saving the expense of EASA type certification and paperwork fees.

To learn more, see your Garmin dealer or visit Garmin.com/avion

GARMIN

G600/GTN750

©2015 Garmin Ltd. or its subsidiaries
SVT™ synthetic vision comes standard on the G600 series; it's optionally available on G500.
Initial FliteCharts™ will disable when data is over 6 months out-of-date. Updates available on single-cycle or annual basis.
Contact your dealer for a full list of EASA-qualifying aircraft on Approved Model List (AML).

GROUND POWER

FOR RELIABLE POWER SUPPLY UNITS...

100 to 220 VAC 7 amps 25 amps @ 28.5v 9 lbs/4.08 kg

Max 105 amps +5% AC input 190-240v 18 lbs/8.18 kg

...THERE IS NO SUBSTITUTE!

LAS AEROSPACE UK DEALER

EMAIL sales@lasaero.com PHONE +44 (0)1837 658081

MADE IN AMERICA

Comment



End of the nanny state?

By Martin Robinson, CEO, AOPA UK

A number of actions need to happen almost simultaneously, however. For example, in amending the Basic Regulation (BR) EASA is discussing amending the rules relating to ATOs – but the BR stipulates that all training is to be conducted through ATOs. So this will need to change.

“There are many competing interests, from individuals to businesses, but what is clear is that there is now official recognition that the ‘old ways’ of regulating general aviation are no longer acceptable.”

Whether other EU States have the same appetite for this level of change remains to be seen, but in the UK the path is now set. The CAA remains committed to having NO gold-plating of EASA rules and, as it moves forward with UK general aviation reform, plans are being developed that may help to reduce certain costs such as the frequency of inspections of aerodromes and maintenance shops.

At the same time those bodies which do not do things the correct way may find civil sanctions being used rather than Court action, although that option will remain of course.

So while Europe is revisiting the BR, the UK is working on amending the national equivalent, the Air Navigation Order (ANO).

As far as I can tell, the ‘nanny state’ approach of the past towards general aviation is disappearing. While on the one hand this may seem to be a good thing, I recall a word of caution from the Commission pointing out that there has to be greater responsibility placed on individuals for their own actions.

There are many competing interests, from individuals to businesses, but what is clear is that there is now official recognition that the ‘old ways’ of regulating general aviation are no longer acceptable. As with any change there are likely to be difficulties, and I have informed the CAA that they must be aware of unintended consequences. The upshot of this era of change has to be more activity, and while that is a good thing it nevertheless needs to be monitored and understood.

CAA Fees & Charges

The other issue under discussion is the CAA’s fees and charges as they apply to general aviation. Clearly, and without going into detail, there is still a large cross subsidy to general aviation – depending on how you ‘cut the cake’. The CAA is keen for certain groups to take on more oversight of activities. One could take the example of the BGA

Make your Cessna a Diesel Aircraft

CENTURION 2.0 AND 2.0S: JET FUEL FOR CESSNA 172, PIPER PA28, ROBIN DR400, DIAMOND DA40 & DA42

WWW.CENTURION.AERO

More than 2,600 CENTURION turbo charged piston engines operated in various aircraft all over the world have accumulated more than 3.75 million flight hours to date. So, benefit from the experience of the market leader: decide for a CENTURION 2.0 or 2.0s piston engine to operate your aircraft with the standard aviation fuel Jet A. Less consumption, less noise and pollutant

emission as well as safe and simple operational handling come with the environmental friendly engine of General Aviation: the Centurion is best choice for your Cessna 172!

Contact: info@centurion.aero
Centurion is a brand of Continental Motors Group:
www.continentalmotors.aero





AOPA NEEDS YOU YOU NEED AOPA

Whatever you fly, you need to join AOPA



The Aircraft Owners and Pilots Association was founded in 1934 and has a worldwide membership of 400,000. Its purpose is to prevent unnecessary restrictions on general aviation and to control its costs, to represent its members' interests, to enhance safety, and to promote the general aviation industry. AOPA provides practical legal help for members and works to resolve licensing, engineering and medical issues and a host of aviation-related disputes. Over the years AOPA has helped hundreds of pilots whose licences and livelihoods were at risk. It stands up for general aviation at EASA, the EC and Eurocontrol, the CAA, the DfT, and in public forums.

It is the only major aviation body that is independent of any regulator.

Our strength is in numbers – so find out more today about how you can help to protect your right to fly. Call AOPA on 020 7834 5631, or join up on our website www.aopa.co.uk.

Membership of AOPA will help us keep working to:

- Protect your right to fly
- Combat increases in your costs
- Fight unnecessary regulation and restriction
- Improve aviation safety
- Protect aerodromes

Membership provides other valuable features:

- Free legal advice
- General Aviation, our high-quality magazine
- Optional international Aircrew Card
- Technical and medical advice
- Discounted insurance
- Car hire discounts
- Competitive finance



Unless you're a balloonist, hot air is not enough to keep you flying. And if you are a balloonist, you need to join AOPA anyway

It's time to stop thinking about it and join AOPA today!

If you're already a member, tell your flying friends about AOPA. Signing up new members benefits you, too.

020 7834 5631

www.aopa.co.uk

which, traditionally, has organised UK gliding. However, if other bodies take on a more 'regulatory' role in the future they, in my honest opinion, run the risk of changing the relationship with their members because the oversight and fees and charges will go through the organisation!

Over many years States have sought to separate the regulator from the service provider, yet in general aviation we tend to be seeing the opposite approach!

So to play Devil's Advocate, it may lower costs but what about the liabilities that comes with it? For some groups which look at the benefits of such a system, they need to put some numbers in spreadsheets because they may find that overall the CAA will, following the new reforms, offer reasonable value for money.

There is also the issue of financial stability for any organisation providing such services. So I think we all need to think carefully about what kind of outcome we really want. In a nutshell, be careful what you ask for!

Core Concern

The fundamental issue that remains is the lower number of pilot licences being issued. Therefore, dealing with the red tape and bureaucracy around flight training is essential. It is our number one priority. The UK's global aviation reputation comes from providing high quality standards across the aviation industry – but what we have not done so well at is controlling the costs associated with flying, with the result that fewer people fly, and that they now fly less.

When we talk of economic sustainability, this comes from having enough activity. But with a 40 percent downturn in the activity since 2005 (as highlighted in the York Report) there is an urgent need to reverse the downward trend, or more businesses with fail.

So while I acknowledge the good work that has been done by and within EASA and elsewhere (due in a large part to lobbying by associations) – for example the introduction of the CBIR [also known as the CMB IR] and moves towards simpler certification standards – all of this has to translate into more pilots and aircraft owners, which may only come about when there is greater public confidence in the economy.

Chief Executive's Diary

By Martin Robinson

April was a busy month with Aero Friedrichshafen (from 14th–18th) which saw AOPAs from Germany, Switzerland and Austria take part. I wore my IAOPA Europe hat and also represented AOPA UK, meeting members and networking generally. I appreciated the kind words and continued support from members that I met there.

Patrick Ky, executive director of EASA, also attended the event and spoke at length about the general aviation Road Map and his commitment to change. We welcome this from EASA, of course, but 'the devil is in the detail' – so we expect real change and not just cosmetics, particularly in areas such as Part M (aircraft maintenance). Maintenance costs for owners have soared since the CAMO environment was established, so correcting this and having proportionate maintenance rules is what we are looking for. IAOPA remains supportive of the proposals and is fully engaged in the process.

On 21st April I attended the ASICG Airborne Collisions (ACAS) meeting where the tremendous amount of effort that is going into improving the safety of UK airspace was very apparent. While there are quite a few airprox reports each year, thankfully most are not of the more serious variety. However, I must emphasise the need to maintain good situational awareness as well as a good scan going at all times, in particular when in the immediate vicinity of an aerodrome or when flying within an ATZ.

On 24th April I met with the new CAA head of ISP, Clare Muir. We discussed the merits of re-establishing the Conspicuity Working Group, which I have agreed to chair again. This way we can continue to build on the good work that has gone before.

The following Tuesday I went to Gatwick to meet with an AOPA member who had an interview with the CAA over an airspace infringement. While the discussion was conducted in a friendly and fair environment, I think that the process of online testing needs to be revived (unless it has been done already).

The next day, April 29th, I attended a meeting of the GBASF finance subgroup. The aim of this group is to look at the relationship between the CAA's fees and overheads as they apply to general aviation, with the main objective being to reduce the cross subsidy, which is in excess of £1 million. This will involve changing how general aviation is regulated as well as having a more proportionate approach to regulatory oversight.

At the end of April I flew out to the IAOPA Regional Meeting in Sandefjord, Norway (20th April – 3rd May), where 15 AOPAs from across Europe were represented. Various issues were discussed (including the GA road map and fuel taxes – see report later in this issue) in what was a very congenial environment, and several members flew their aircraft to the nearby Oslo Torp Airport for the event. Nick Wilcock provided an update on FCL and other matters and other colleagues, including as Michael Erb from AOPA Germany and Jacob Pederson from AOPA Denmark, updated the Assembly on the latest developments at EASA in Cologne.

May began with a very interesting visit to Toulouse, where GSA was holding an event to spread awareness of EGNOS through some flight demonstrations (see article on page 29). On May 12th I attended a "gold plating" meeting at the CAA and on 14th May I attended a GBASF meeting.

Then we started to prepare in earnest for the Sywell event at the end of May, and the AOPA Awards (see page 66).

Airfields Update



Flying to plan...

Preparing the GAAC annual report, presented at the Council's AGM (which was to be held at AeroExpo at Sywell at the end of May) offered me a great opportunity to look back at the past

year's activities surrounding airfields and planning. While there were some dark deeds done, which lost us airfields such as Manston and Hucknall, and the future of others such as Panshanger and Bourn

Stephen Slater looks at airfields under threat. There are exceptions, but all too few...

currently hang in the balance, there was some good news too.

It was particularly noteworthy that of the 56 different flying sites for which planning queries were received by the GAAC (working on behalf of AOPA), seven recent enquiries were with regard to applications for planning permission for existing flying sites, or for the creation of new ones.

While it has to be noted that these are largely for small private strips (and some merely related to the formalisation of planning – after having previously operated without planning permission under the '28-day rule', which allows any site to be used for flying for a maximum of 28 days a year subject to a land-owner's permission), it is a positive sign that both new flying sites and greater use of existing ones is being sought.

At larger airfields there was some good news too. Planning approval has been given by Chatham and Rochester Councils for the redevelopment of Rochester Airport with a lit tarmac runway and parallel grass one, as well

While the likes of Gloucester (left) have had considerably success and won their battles, some have not been so luck (such as Plymouth, right). But there is renewed hope that Plymouth could reopen. Wellesbourne Mountford (below), which recently won the AOPA award for best airfield, continues to make its case and fight the planners - and it is far from alone.



as new hangars and admin buildings, as part of a 25-year plan. There has been an additional delay to the start of work, however, as one small part of land is under the jurisdiction of Tonbridge Council, which has yet to give its approval.

Sandown airfield, which was under threat of closure for redevelopment last year, is prospering under the custodianship of the local aero club, which is in the process of community fund-raising to buy the site. It was great to see the airfield full to bursting point at its recent 80th anniversary fly-in.

Across the Solent, Lee-on-Solent, which was regarded as under threat until quite recently, announced the opening of its newly resurfaced main runway, undertaken by Fareham Borough Council at a cost of £1.5 million as part of a wider Solent Enterprise Zone development.

Plymouth Ho!

Another potential piece of good news regards Plymouth Airport, which was bought from the City Council and subsequently closed by property developer Sutton Harbour Group in late 2011. Since that time there have been many calls to re-open this vital transport link, which came to a head when Sutton Harbour Group suffered a financial collapse earlier this year. Campaigners are now working hard to raise funds so that they can establish a new operating company to re-open the airport.

Meanwhile Blackpool Airport, which was closed in October 2014 after the financial collapse of Balfour Beatty's operations, appears to be thriving



...or planning to fly?

after re-opening in December for GA and helicopter operations under new management. It was noteworthy that this temporary period of closure demonstrated the wider effects of the disruption of the national GA network. The temporary closure created effects on aircraft movements as far afield as Buckinghamshire, Gloucestershire, Hampshire and Oxfordshire as, without a convenient destination for planned business and social flights to the Fylde area, flights were merely cancelled, with those involved resorting to less efficient, more time-consuming alternative means of travel.

This clearly demonstrated the importance of our maintaining a national infrastructure of GA airfields, a cause that has been taken on board in recent months by both the Department of Communities and Local Government and the Department for Transport. However, while the National Planning Policy Framework supports airfields as part of the national transport and economic infrastructure, the overall trend of Government planning policy is still to prioritise on housing.

Not surprisingly, land owners and others see airfield sites, which since 2003 have been classified as 'brownfield', as

New Data on Wind Turbines

Airfields that have been threatened by wind turbine sites will be interested in the publication by the CAA of initial findings research into downwind turbulence from wind turbines. Initiated at the request of GAAC and the Air Safety Initiative Wind Farm Working Group (ASIWWG), the data can be reviewed at <http://www.caa.co.uk/docs/33/InformationNotice2015038.pdf> and <http://www.liv.ac.uk/flight-science/cfd/wake-encounter-aircraft/>.

This industry-leading research, carried out by Professor George Barakas at Liverpool University, created mathematical models which were verified by both laboratory testing and Lidar monitoring of turbulence from the two 45m-diameter wind turbines erected at East Midlands Airport. The results were further verified by flight testing with a mid-size helicopter and a Grob light aircraft.

In summary, the results show that for a turbine with less than a 30m blade diameter, turbulence associated with its wake can be expected within five times the diameter of the turbine, or for up to 150m downwind. For turbines with blade diameters of more than 30m, the current recommended wind turbine wake avoidance guidance of 16 times rotor diameter (as outlined in CAA CAP 764) will continue to stand.

a lucrative assets, and six potentially significant locations have either already been lost or are under direct threat of closure for redevelopment.

At Wellesbourne, an attempt by the owners of the airfield land to force inclusion of their redevelopment proposal in Stratford District Council's core housing strategy was successfully overturned by lawyers acting for the Wellesbourne Matters, a pro-airfield action group. The GAAC has worked with Wellesbourne Matters to create a report highlighting factual errors in the developers' research document. This report has now been submitted to Stratford on Avon District Council.

The GAAC is also continuing to monitor attempts by Wycombe District

Council to 'claw back' around 30 acres of land on the south side of Wycombe Air Park, by rejecting the renewal of the existing airfield lease, which was taken over by Heli-Air. The major effect on aviation activities if this were to go ahead would be the loss of the airfield's N/S runway and the end of gliding operations by Booker Gliding Club.

In relation to Kemble Aerodrome, before the General Election the then-ruling Liberal Democrat council in Gloucestershire gave its support for a proposal by the Commercial Estates Group (CEG) to be included in Cotswold District Council's draft local plan consultation. This could see up to 2000 homes built on Kemble airfield.

A robust GAAC response is being

prepared for when the consultation becomes official, but this is being seen as something of a speculative effort. CEG does not even own the airfield, and there has been no sign that the airport owners wish to sell it.

Is Mixed Development the answer?

The DfT, in a positive move following initiatives established by Grant Shapps MP, is increasingly advocating the consideration of 'mixed use' of airfield sites – retaining flying operations while allowing partial redevelopment of the sites. This has seen some developers, such as the landowner at Panshanger Airfield, agree grudgingly to include such development as part of their proposals, although it is clearly a less lucrative option for them.

There are also concerns that the introduction of new noise-sensitive developments, such as housing in close proximity to long-established noise-generating sites (such as flying sites), may lead to new complaints. GAAC and AOPA are working hard to ensure planning officers are aware of the extent to which certain levels of noise may be an unavoidable consequence of maintaining levels of commercial activity at aerodromes, and that this may constrain options for nearby development.

Concerns in this respect have been raised regarding a mixed use housing development proposed by the owners of Old Sarum airfield, who wish to use land at three locations on the perimeter of the airfield for housing while retaining aviation activities and upgrading facilities. However the plans are being resisted by a local "Save Old Sarum" action group which claims that the proposed developments will alter the character of the location and that noise complaints would ultimately lead to the airfield's closure.

JET A1

AVGAS 100LL

AVGAS UL91

Supplied, all over the British Isles in Bulk and Drums and around the World in ISO Tanks (23,000 litre stainless Steel and Drums (200 litre, Mild Steel Epoxy Lined)

Speedy delivery service
Competitive prices
Quality assurance

We operate a Quality Management System, which complies with the requirements of BS EN ISO 9001:2000 in the Procurement, Importation, Storage and Distribution of Aviation Fuels.

We are DCL registered (Defence Contractors List) and we have recently been awarded, with a further two year contract to supply the Ministry of Defence with Aviation Fuels.

For more information call Damian on
020 8440 0505 or E Mail: sales@cymapetroleum.co.uk



242-248 High Street, Barnet, Hertfordshire EN5 5TD
Telephone: +44(0)20 8440 0505 Telefax: +44(0)20 8440 6444
Email: sales@cymapetroleum.co.uk www.cymapetroleum.co.uk



Say goodbye to sky high insurance

We are confident about **enhancing your cover** and/or **reducing your premium**

Light aircraft and Jets

Helicopters

and Gyrocopters

Gliders and Microlights

Flying Clubs

Contact us for a quote:

UK: +44 (0)1420 88664

info@sydneycharles.co.uk

www.sydneycharles.co.uk

SC
SYDNEY CHARLES
AVIATION SERVICES

Sydney Charles Aviation Services is a trading name of Sydney Charles UK LLP. Sydney Charles UK LLP is authorised and regulated by the Financial Conduct Authority. FCA Firm Reference No. 471046. Sydney Charles UK LLP is a Limited Liability Partnership registered in England and Wales Registration No.: OC320079 Registered Office: Atlantic House, Charmwood Park, Waterton, Bridgend CF31 3PL.

Medical Note

It's your medical. Be ready.

By Dr Chris King

I think that most pilots take the form filling for their aviation medical for granted.

The form med 160, the application form is a legal document. When it is signed at the bottom of the page you are confirming that you have reported any medical issue you may have had either currently or in the past and whether or not you are currently undergoing investigation or treatment for any medical condition.

It is important that all medical issues are disclosed. The CAA legal department is very hot on pursuing any pilot who has failed to disclose any medical issues.

This includes any episodes of illness that you may have suffered from in the past and between medicals. Please see below a recommendation as to how to manage episodes of illness.

When the form med 160 is completed it must be signed in the presence of the AME and signed by him at the same time.

If you have any medical problems, it is worth contacting your AME to discuss how this is to be managed from the aviation perspective and what sort of reports are required. The CAA will now no longer discuss any medical issues with pilots they are always now referred back to the AME.

The CAA website www.caa.co.uk/medical and then "Decrease in medical fitness" gives a list of all medical conditions relating to class 1 and 2 certificate holders.

There you will also find flowcharts on how to manage illnesses such as diabetes, heart problems and high blood pressure etc. It also gives a template for the reports required for the various conditions.

When I speak to pilots about medical issues I usually email the relevant flowchart and template for them to take to their doctor. It is most useful if these reports can be prepared prior to your



Whatever you fly, you should work with your AME on any medical issues.

medical and may save the medical being deferred to the CAA due to lack of information and a delay in receiving the medical certificate.

Please note that the extra administration time for in managing the medical episodes by your AME may incur extra cost to the pilot.

When I see pilots for their medical, I advise them to contact me if there is any change in their health as soon as possible or they have been prescribed any new medication that they are unsure of and whether or not it is relevant to their flying and medical certificate.

It is important that pilots read the front of their medical certificates to see what the EASA regulations are in relation to any change in health and also the prescribing of medication.

Also see Pink AIC 99/2004 (Pink72).

If you are a class 2 medical certificate holder and your AME feels you are unfit to fly he will make a clinical entry on the CAA online medical record system, make you unfit on the system and send you an "unfit letter".

For class 1 medical certificate holder the AME can do the same on the system but has to telephone the CAA for them to make you unfit on the online system and send you an "unfit letter".

At the same time he will advise you to obtain reports from your medical advisors using the flowcharts and report templates on the CAA website.

It is much easier to obtain the reports

from your medical advisors whilst the illness is "current" rather than waiting for months after the event when the doctors cannot recall your case.

Once you have recovered from the episode of illness and satisfactory reports have been received, for class 2 pilots the AME can make you fit on the online system and issue your "fit letter".

For class 1 pilots the AME needs to phone the CAA to discuss on a case by case basis. Either the CAA will say you can be made fit and then issue the "fit letter", or, the CAA may want the reports to be sent to their AMEs who will assess the case and make the necessary decision. The CAA has a range of consultant advisors in cardiology, ophthalmology, neurology, optometry, psychiatry, diabetes, and respiratory medicine who can advise the CAA on the decision making.

Either way, all reports relating to medical issues for class 1 medical certificates need to be sent to the CAA and provided in the format as per the templates and following the relevant flowcharts preferably all together to prevent individual items being processed and assessed.

The bottom line is "as soon as you discuss any medical issue with your AME, the sooner you will be back in the air" and you will also be fulfilling your legal obligations in relation to your medical certificate.

Regulatory Update

No substitute for experience

By Nick Wilcock

Derogations Granted

In my former treatise (in the April issue *Aircraft Owner & Pilot*), I mentioned that the derogations agreed by the EASA Committee last October would by now have come into law. This has indeed happened, with the release of Regulation (EU) 2015/445 on 17 March 2015. This has introduced a few changes for UK-licensed pilots flying EASA aircraft, and I'm glad to say that all are for the better:

- UK PPL holders may now continue to fly EASA aircraft until April 2018, but are restricted to LAPL privileges. This means VFR-only operation of aircraft up to 2000kg MTOW with no more than four PoB. SEP revalidation criteria apply, *not* LAPL 'rolling' validity.
- NPPL holders may continue to fly EASA aircraft until Apr 2018.
- Pilots holding SEP (Land) and SEP (Sea) Class Ratings may now revalidate both ratings through experience achieved on either class, provided that at least 6 take-offs and landings and 1 hour of flight time has been achieved on each class.
- Registered Facilities may now provide LAPL courses without needing specific approval.
- CRI(SPA) may now instruct for the extension of LAPL privileges to another class or variant of single engined aeroplane.
- CRE(SPA) may now examine for the extension of LAPL privileges to another class of single engined aeroplane.
- Instrument flight training time and instrument flight time as PIC on aeroplanes may be credited towards the CBM IR.



Who said regulation wasn't sexy? EASA has changed all that. First, take the cover off, and then go fly!

- Examiners may now conduct skill tests and assessments of competence on pilots to whom they have provided no more than 25% of the *required* flight training for a licence, rating or certificate.
- FCL.945 'Obligations for Instructors' has come into effect - see below.

So, quite a useful number of amendments, all in all.

FCL.945 'Obligation for instructors'

This straightforward easement introduced by EASA seems to be causing a lot of confusion. The idea is that if a pilot has completed all the PIC flying required for revalidation by experience an SEP or TMG Class Rating then, if that pilot then finishes off the training flight requirements with a particular instructor, that instructor is subsequently obliged to sign the Certificate of Revalidation. Which means that the pilot won't need to find an examiner for the purpose. That's all!

But, due to the terms of FCL.945, the instructor needs to have CAA authorisation for the purpose. True to their promise of avoiding aural embellishment, the CAA will routinely issue the authorisation when a FI or CRI revalidates his/her instructor certificate. But if he/she wants the authorisation sooner, a charge will be levied due to the administrative effort required.

Other EASA Member States haven't been quite so generous. Indeed, one representative told me that they wouldn't be introducing it simply because he didn't like it!

Future of the IMCR / IR(R)

Nothing has changed with regard to the IR(R) since my last update, so the 1800m visibility minima remain for take-off and landing. There is a rather a vague proposal in CAP 1271, the GA ANO review, to remove this restriction. However, as the IMCR / IR(R) requires the take-off to be flown visually, would the VFR/SVFR limit of 1500m apply, or something else?

EASA Rule Making Task – Simpler IF requirements

Unlike in the UK, those in continental Europe do not have anything equivalent to the IR(R). However, EASA has now made a clear commitment to the provision of a simpler instrument flying qualification for pilots throughout all the EASA Member States. Together with representatives from the CAA and Europe Air Sports (i.e. PPL/IR) plus others from outside the UK, I have joined the EASA Task Force addressing this issue. A meeting was recently held in Cologne at which I gave a presentation on the IR(R), which I also delivered at the recent EASA Flight Crew Licensing Implementation Forum in Dublin.

Although in Cologne we discussed a wide range of associated topics, such as the availability of simple ‘cloud-break’ and non-precision approaches at minor aerodromes without instrument approach procedures, it is obvious that the highest priority is to provide pilots with a suitable qualification they can actually use! We’re due to meet again in July.

Unfortunately, the lack of standard allocation of airspace categories across Europe makes simple adoption of the IR(R) outside the UK problematic. One approach may be for other Member States to say, “We’ll let you use it where we tell you that you can,” as a general principle?

EASA Rule Making Task ‘Training Outside an ATO’

In the last issue I mentioned that simplified requirements for Registered Facilities to convert to Non-Complex Approved Training Organisations, as proposed under NPA 2014-28, should by now have come into effect. But that hasn’t happened, due to intervention by the EASA Management Board. It blocked most of the proposals of NPA 2014-28 to allow the RMT Task Force to begin its deliberations.

However, sources indicate that the scope of any such training and any associated benefits are likely to be very few. Fortunately, the CAA intends to release an Alternative Means of Compliance which will meet the



When we said you could go fly the Biggin Spitfire, we didn’t promise the sun would come out! But having a trial flight in a small (probably smaller) aircraft is the first step to eventually being able to cope with inclement conditions, or at least learning your limitations.

objectives of simplifying the RF-to-ATO conversion task, so that at least in the UK we’ll have a relatively straightforward system – while the rest of Europe faces three more years of confusion and speculation. delivered a short presentation on the topic at the Dublin FCL-IF meeting and it was quite clear that there is virtually zero interest anyway in ‘Training Outside an ATO’ in most EASA Member States.

PPL/LAPL WG

The CAA has now submitted the AltMoC for updating the PPL and LAPL syllabuses to EASA and, as no comments have been received, the new syllabus should have been released by early June. We have also finalised proposals for making much-needed improvements to the exams, including allocation of level of knowledge indicators and question style specifications for the exam authors to create the new question bank, which will also enable PPL/LAPL exams to move to an online format.

So questions about the local time in Mumbai or ‘Is the correct answer: (a) 1 or 3, (b) 2 and 4, (c) 1 and 3 or (d) 1 and 4’ will disappear! Questions will be aimed

at ensuring that reasonable, practical levels of knowledge are achieved, rather than being designed to trap the unwary. Hopefully I will be able to report further developments in the August issue of Aircraft Owner & Pilot.

Well, that’s the latest thrilling instalment in the convoluted story of licensing regulation. I know that it’s hardly the most riveting subject in the world, but we will continue to do whatever we can to continue to reduce the regulatory burden currently faced by GA pilots across the UK.

NPA 2014-29 ‘Aircrew Regulation amendment’

The release of Regulation (EU) 2015/445 a couple of days after the original closing date for responses to the NPA required me to review and amend the IAOPA (Europe) response, as about five of our proposals had been incorporated into the Aircrew Regulation as a result. I also took the opportunity to include some additional proposals – although I gather that there are now more than 900 proposals awaiting EASA’s attention (32 of which are from us). So the target date of Q4/2015 for the Opinion seems unlikely to be achieved.

GA News Roundup

Eclipse and Kestrel come together to form ONE Aviation

At AERO Friedrichshafen on 15th April Alan Klapmeier, formerly of Cirrus, announced the formation of ONE Aviation, a new company bringing together the Eclipse 550 and Kestrel K350 under one roof. Klapmeier is the CEO of the new company which in a statement said that “ONE Aviation will immediately gain operational and marketing efficiencies by consolidating and leveraging the Eclipse and Kestrel business operations, supply chain, marketing and sales teams all under a single seasoned management team. Former Eclipse CEO Mason Holland becomes chairman of ONE Aviation.

“The Kestrel K350... will redefine the single-engine turboprop market.”

The new company’s statement also read: “The Eclipse Jet is currently in production and is the world’s only twin-engine light jet priced below three million dollars. While flying at 41,000 feet and incorporating auto throttle technology, the Eclipse Jet is not only the most fuel efficient aircraft in its class, but one of the world’s safest aircraft, with over 300,000 incident free fleet hours.

“The Kestrel K350, currently under development, will redefine the industry’s single-engine turboprop market. Like the Eclipse, the Kestrel K350 is designed to make high performance aircraft more accessible to the general aviation customer by reducing complexity and increasing value.

“In addition, ONE Aviation will design, acquire, and build additional aircraft complimentary to its two core products. ONE Aviation also provides engineering, maintenance, service, and support for the Eclipse 500 and Eclipse 550 fleet. For more information, please visit www.ONEaviation.aero.”



The biggest GA show in the calendar apart from NBAA took place in mid-May at Geneva Airport. Some 60 business and light aircraft were present on the static line including the HondaJet (above), Cirrus SR-22T, Quest Kodiak, Cessna Grand Caravan, PC-12NG and a range of jets many of which are certificated for single pilot operations. Pilatus announced the first flight of its new PC-24 twin jet a few days before the show. There was also an example of the new Waco biplane.

Piper unveils new M-odels, 350 & 600

Piper has launched two new M-Class family models, the M600 and M350, having earlier this year revealed a new special edition of its Meridian 500. The \$2.825 M600 is powered by a Pratt & Whitney Canada PT6A-42A flat rated to 600shp, and a Garmin 3000 avionics suite. It will offer a maximum cruise speed of 260 kts and a full payload range of 1,000 nm. Certification is expected in Q4 this year. Meanwhile the M350 is a piston single with a Lycoming TIO-540 engine. It is due to be certificated soon, and is priced at \$1.155 million. It comes with a G1000 cockpit and incorporates a hypoxia-recognition system.

EASA progresses commercial SET-IMC

The European Aviation Safety Agency (EASA) is expected in June to brief member states on its rulemaking permitting commercial single-engine turbine operations in instrument meteorological conditions (SET-IMC),

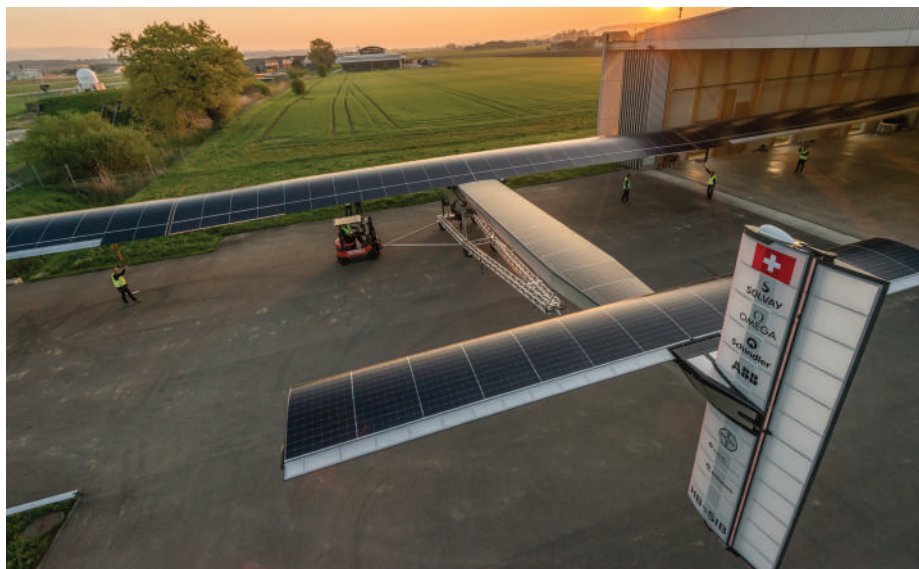
keeping the rule on target for release next year. EASA will in September issue an Opinion on the rulemaking to the European Commission. Jens Hennig, vice president of operations for the General Aviation Manufacturers Association, who participated on the commercial SET-IMC rulemaking committee, said the rule was due to be finalised in the first half of 2016.

The development follows the release by EASA NPA 2014-18 in July 2014, while in March the rulemaking committee finished its review of the 150 comments on the proposal.

Germany, the UK and the Netherlands still have reservations about the rule. However 12 aircraft are already flying under individual exemptions with European operators. Unlike in the U.S., EASA proposes to limit commercial operations to turbine aircraft, and not include single-engine piston aircraft.

The committee debated whether two pilots should be mandated for commercial SET-IMC operations even though the aircraft involved have all been certified for single-pilot operation. This point still has to be resolved.

In the U.S., about 670 single-engine aircraft are used in commercial SE IFR operations.



Solar Impulse continues on its around-the-world voyage. At the end of May it made an unscheduled stop in Nagoya, Japan and was waiting for weather conditions to improve before a Pacific crossing.

On 21st April, Mooney revealed the design of its new M10 at Sun 'n' Fun in Florida (see report, page 46). It presented a full-scale mockup of the new aircraft, after a model aircraft was unveiled last November at the Zhuhai Airshow in China. The company is constructing a proof-of-concept flight test aircraft that will fly later this year. "The new M10 series Mooney will add a new product dimension to the current production lineup which is currently anchored by the popular M20 Ovation and Acclaim aircraft. The M10J and M10T are bringing new technology and innovations to general aviation and Mooney aircraft that have not been seen before," said Mooney CEO, Dr. Jerry Chen. The smaller and less expensive Mooney M10T and the M10J boast innovation at a new level of the fleet mix and these aircraft will provide a stepping stone to Mooney's high performance M20 series. The M10T is a modern fixed gear composite trainer equipped with Continental's CD-135 Diesel engine.

The M10J will provide an upgrade from the M10T with more luxury, amenities and a higher horsepower CD-155 Diesel engine for the owner pilot.

EASA acts on LOC-I

EASA, IATA Move to Reduce Risk of Loss of Control Accidents

Geneva - The European Aviation Safety Agency (EASA) and the International Air Transport Association (IATA) announced the publication of new training requirements for airline pilots to prevent loss of control situations. The "upset prevention and recovery training" (UPRT) requirements aim to improve safety standards by mitigating loss of control in-flight (LOC-I) accidents. The requirements are based on International Civil Aviation Organization (ICAO) standards and recommended practices and have been developed by EASA in consultation with leading industry experts. All European

airlines and commercial business jet operators are required to implement these provisions by April 2016.

CAA update

On 1st May the CAA issued a statement stating that it had made significant progress in making regulation of the UK's general Aviation (GA) sector "more proportionate and evidence-based." In the third regular update to confirm its work in the area the CAA said that in the last 60 days it had:

1. Launched a review of the GA elements in the UK Air Navigation Order covering pilot licensing, operations and airworthiness rules with a view to deregulating or delegating where possible in order to simplify compliance for GA pilots and organisations.
2. Issued the first gyroplane type certificate to the Rotorsport Cavalon Prototype and issued the first certificate of airworthiness to an individual Cavalon Pro gyroplane.
3. Published guidance to enable operators to make the most of the new deregulatory approach and principles outlined in the GA Policy Framework.
4. Submitted a new more appropriate syllabus for the EASA PPL(A) and LAPL(A) to EASA.
5. Allowed paid recurrent flight training or testing in aircraft that have a Permit to Fly and allowed training or testing towards the issue of a new rating on all Permit to Fly aircraft, provided the pilot already holds a private pilot licence
6. Extended introductory flight rules to include type-approved microlights and gyroplanes and extended cost sharing rules to include UK permit aircraft
7. Published the first GA annual report and success measures
8. Enabled instructors to revalidate single engine piston and touring motor glider class ratings.
9. Made repeat applications for air displays easier.

Similar 60 day updates will be published throughout 2015 on 1st July; 1st September; and 2nd November, said the CAA.

Farnborough airspace...

TAG Farnborough Airport is continuing its efforts to reclassify its local airspace to permit more efficient and safer departures for operators. At present, the airport sits in Class G airspace alongside several nearby general aviation fields (Fairoaks, Blackbushe, Lasham) and RAF Odiham. TAG published consultation documents relating to the plans last year and is presently analysing responses. This summer it will outline its response to the feedback. "Hopefully it will achieve all the objectives. Improved environmental performance, more efficient use of airspace and improved safety," says TAG Farnborough chief executive Brandon O'Reilly. "I see why those objections were raised, but we need to refine [our proposal] as best we can in order to achieve our objectives. In the meantime it has performed full-scale development simulations with NATS "to test advanced design, traffic interactions and air traffic control procedures between adjacent units and sectors." "We are also planning further workshop sessions with key aviation stakeholders to discuss feedback as well as clarity on design and operational issues," adds the airport.

Tecnam prepares for Traveller

Tecnam announced on 2 June that the production of the first TECNAM P2012 "Traveller" is progressing well on its Experimental Assembly Line in Capua, Italy, with roll-out scheduled for Q4 2015.

The Tecnam P2012 Traveller is an 11-seat next generation piston twin, designed to comply with both FAR part 23 and EASA CS-23. First verification tests of the preliminary P2012 design on the main aircraft elements such as the fuselage and tail planes has confirmed the excellent parameter declared on the initial production program, underscoring the Tecnam leadership team's confidence in an on-time development, production, flight test and delivery programme.

Correction: Air First Ltd.

In the April issue there was an error in the 'Where to Fly Guide' relating to Air First Ltd, a training school at Blackbushe Airport. Air First is not a Redair Flight Centre so we apologise for this error. Air First Ltd trades as the Blackbushe School of Flying. See www.airfirst.co.uk, e-mail blackbushe@airfirst.co.uk. Available courses are NPPL, PPL, IMC and Night Ratings. The school has three PA28s, two Cessna 152s and one glass cockpit PA28 Cruiser.

GROUND POWER

100 to 220 VAC
7 amps
25 amps @ 28.5v
9 lbs/4.08 kg

FOR RELIABLE POWER SUPPLY UNITS...

...THERE IS NO SUBSTITUTE!

Max 105 amps +5%
AC input 190-240v
18 lbs/8.18 kg

LAS AEROSPACE UK DEALER

EMAIL sales@lasaero.com PHONE +44 (0)1837 658081

MADE IN AMERICA

IFR

Elevate your flying.

CAVOK or LIFR, we've got you covered with our mobile apps.

Mobile FliteDeck

- Europe IFR coverage now only 535,50€/year. (Single install navigation services for iPad®)

Mobile FliteDeck VFR

- New v2.0 includes innovative graphical weather forecasting.

Visit jeppesen.com/mobile84 for more information.

VFR

MENDELSSOHN PILOT SUPPLIES

EUROPE'S LARGEST STOCKIST OF QUALITY NEW, USED & OVERHAULED AVIONICS



As our inventory changes daily, please call to discuss your requirements

t. 0131 447 7777 f. 0131 452 9004 w. WWW.GPS.CO.UK

GARMIN



G3X Touch Screen Systems
7" Single system with EIS £3700
10" Single system with EIS £4350
7" and 10" Dual system with EIS £6350
10" Dual system with EIS £6675
GTR225A Com 8.33 kHz £1895
GNC255A Nav/Com £2820
GNS430 (recertified) from £3995
GTX328 Mode S transponder £1895
GMA340 Audio panel £950



GARMIN D2 Pilot watch £325

Virb Elite Action Camera

With GPS Aviation Bundle £287
With D2 Aviation Bundle £499



AERA 500 touch screen GPS ... £429
AERA 795 touch screen GPS ... £1225
GPSMAP 695 GPS £1095

Portable ADS-B with Attitude

GDL393D unit only £525
GDL393D with DC cable £555
GDL393D w/cable and battery £595
Interface cable £40

DYNON AVIONICS

EUROPEAN DISTRIBUTOR FOR DYNON AVIONICS



SKYVIEW Touch



SKYVIEW



D2 Pocket Panel

The latest touch screen display
SV-D1000T/B 10" display £2675
SV-AP-PANEL A/Pilot control £375
SV-KNOB-PANEL £175
SV-INTERCOM-2S £200
NEW SV-COM-X83 VHF 8.33 £1375
NEW Video Input adaptor £130

SV-D700 7" display £1800
SV-D1000 10" display £2400
SV-ADAHS-200 £800
SV-EMS-220/A £400
SV-XNPDR-262 Mode S £1200
SV-GPS-250 GPS receiver £140
SV-32 Auto Pilot servo £500

D2 Pocket Panel .. £995
Portable attitude indicator. The perfect emergency flight display.
EFIS-D6 £1075
EFIS-D10A £1475
EFIS-D100 £1750
EMS-D120 £1480
FlightDEK-D180 £2175

iPad GPS



Bad Elf Pro+ GPS £199
Bad Elf Pro GPS £135
Bad Elf 1000 GPS £89
Bad Elf 1008 GPS £95
Garmin GLO GPS £80
Garmin GLO Aviation £90
GNS 2000 GPS £65
DUAL XGPS150E GPS £89
DUAL XGPS160 GPS £125

TRAFFIC SYSTEM

MONROY Traffic Watch + Traffic Avoidance System

ATD-300 Traffic Watch+ ... £ 595
ATD-300 with ANT300 £ 795
ATD-300 w/ ARINC & ANT £ 995

PLB's and ELT's

Prices include programming
AMERI-KING AK-451-21 ELT JTSO approved 406 MHz ELT £599
AMERI-KING AK-451-15 ELT JTSO HELICOPTER version £795
FASTFIND 220 PLB £189
GME MT410G PLB £249

VERTICAL POWER

Electronic Circuit Breaker VP-X SPORT £950
VP-X PRO £1330

AVMAP

EKP-V EFIS System £1895
ULTRA EFIS GPS £ 825

BENDIX/KING

KX165A-02 Nav/Com 8.33 kHz £3795
KRA10A Rad Alt (recertified) from £3500
KT74 Mode S transponder £1895
KR87 ADF (OHC) system £1595
KN64 DME (OHC) £1195
KA44B ADF antenna £1350
KX155 Nav/Com 28v (OHC) £995
KI209 CDI (recertified) £595

BECKER

AR6201 VHF Com 8.33 kHz £1325
BXP6401 class2 xpndr £1495
BXP6401 class1 xpndr £1750
BE6400 encoder £199

TRIG

TT21 Mode S transponder .. £1495
TT22 Mode S transponder .. £1675
TT31 Mode S transponder .. £1695
TY91 VHF Com 8.33 kHz £1175

F.U.N.K.E.

ATR833 transceiver £1000
ATR833 with LCD display .. £900
TRT800H transponder £1615

TRANSCIVERS

Icom
IC-A6E Sports pk .. £208
IC-A6E Pro pack .. £308
IC-A24E Sports pk .. £275
IC-A24E Pro pack .. £375
IC-A110 £625
We stock a full range of Icom Accessories
IC-A6E and **IC-A24E** transceivers now have 8.33 kHz channel spacing

Receivers

Intek AR109 £ 58
Icom IC-R6 £179
Icom IC-RX20 £339

LIGHTSPEED



The revolution continues with **ZULU PFX**
Improved comfort and noise attenuation
blue tooth connectivity and auto shut off
NEW ZULU PFX ANR Headset £765
ZULU.2 ANR GA version £600
ZULU.2 ANR Helicopter £600
ZULU.2 ANR Lemo panel version £600
Sierra ANR GA version £475
with blue tooth and music input

HEADSETS

HM51 child headset £ 89
Peltor 8006 GA headset £199
Peltor Helicopter headset .. £225
David Clark H10-30 £204
David Clark H10-13.4 £242
David Clark H10-13H £259
David Clark H10-60 £279
NEW David Clark ProX ENC £495
Sennheiser HME110 £204
Sennheiser HMEC250 £330
Sennheiser HMEC26BK-2 .. £495
Sennheiser S1 passive £249
Sennheiser S1 noise guard £465
Sennheiser S1 Digital ANR £665

BOSE



A20 GA twin plug £642
A20 GA twin plug w/bluetooth £708
A20 Helicopter w/bluetooth £708
A20 Lemo installed version £642
A20 Lemo w/bluetooth £708
Installed wiring harness £ 40

HARRY'S HM40



STAR BUY
Harry's HM40 £99
NEW HM40 ANR £259

AIR GIZMO

Panel dock **AERA 500** £99
Panel dock **AERA 795** £149
Panel dock **GPS 695** £149
Panel dock **296/495** £75
iPad knee dock £99

GO PRO VIDEO CAMERAS

Hero 4 Black £299
Hero 4 Silver £240
All accessories available on line

INTERCOMS

HM2 place portable £99
HM2 place for Icom w/PTT £119
HM4 place portable £119
Sigtronics SPA400 £169
PS Engineering
PM 500EX panel mount 4 place £199
PM 1000 4 place prices from .. £249
PM 3000 stereo 4 place £329
PMA 4000 Audio Panel £549

INSTRUMENTS



RC ALLEN
(TSO approved)
RCA2600-3 electric horizon £1975
RCA2600-2 electric horizon £1975
RCA22-7 vacuum horizon £595
RCA15 series from £1595
RCA11A-8 vacuum D.G. £595
RCA82A electric turn coordinator £575
JP INSTRUMENTS (TSO approved)
FS450 fuel flow £495
EDM 700 series engine management system for most engines from £1195

PRECISION
MD90-1 Quartz Clock £199
MD90L Quartz Clock lighted £240
TA102 dual USB charging port £250
7000C.31 Vertical Speed Indicator £530
1394T100-3Z Turn Coordinator £699
5934PM-3A.84 Altimeter 20k £949
MD200-306 CDI £1350

ENCODERS

Ameri-King AK350-30 £149
ACK-A30 £199

NON TSO INSTRUMENTS

MINGDA
GH030 vacuum horizon £375
GH025 electric horizon 14volt £850
GD031 D.G. vacuum £375
GD023 D.G. electric £850
BC2A Vertical Speed Indicator £129
BZW-4B Turn Coordinator £295
BG-3E Altimeter 20,000' 3 pointer £250
BG-15 A.S.I. 20-160 knots £119
BK13A A.S.I. 20-100 knots £119
For other A.S.I. please see our web site
MC022 Vertical card compass £149

SURVIVAL EQUIPMENT

Survival Products



4-6 Person Rafts
The Lightest most compact raft in the World
Raft with canopy £1299
Raft with equipment £1499
HM Survivor Slim line lifejacket with whistle and light £65

REVERE



Aero Compact Raft
2 Person Rafts
Raft £799
Raft with canopy £899
4 Person Rafts
Raft with canopy £999
Raft with std equipment £1099
Raft with deluxe equip. .. £1595



AERO adventure!

The VL-3 Evolution.

Dave Calderwood was on hand at Aero Friedrichshafen to cover the news at what could become Europe's answer to AirVenture Oshkosh.

How many five-seat aircraft does a manufacturer need in its range? In Diamond Aircraft's case, two.

The Austrian company received the European type certificate for its DA62 piston twin (pictured below) at the annual AERO general aviation show held in April at Friedrichshafen, Germany while showing off its DA50-JP-7 single-engine turboprop which made its maiden flight in January.

The two aircraft share a common fuselage and many other components but are aimed at different markets. The DA62 is pitched at the Beech Baron light twin, used by owners and operators alike for business flights.

The DA62 has better performance and is more economical on fuel thanks to its two 180hp AE330 turbodiesel engines, said company boss Christian Dries. Price for a typically equipped aircraft is €1.05 million and 12 aircraft have been sold.

The DA50-JP-7 (JP stands for Jet Prop) will be available in two versions, one purely for speed while the other, Dries believes, has a big and growing market: it will come with tundra tyres, reinforced undercarriage and a double-slot flap system. This will be a utility aircraft, useful in areas where the strips are dirt or grass, with difficult approaches and where short takeoffs and landings are often required.

Sounds like a Cessna Caravan or Pilatus Porter? Yes, but this aircraft will be cheaper than either of those aircraft, and faster – a 200kt cruise, said Dries, making it more appealing in remote areas. The DA50 is fitted with a Motorsich AI-450 turboprop delivering 465hp – with an extra 100hp available via a 'panic button' when really necessary. The AI-450 also has a cleverly positioned air intake and filter system to avoid ingesting damaging materials, such as a bird strike on the prop.

Dries also revealed a host of other projects Diamond is working on. He showed off two new turbodiesel all-aluminium engines at AERO, developed with Chinese partner WDAE and made in China. The three-cylinder 85Kw (114hp) AE200 will be fitted to the two-seat DA20. The awkwardly named AE1,9l weighs 185kg, produces 114Kw (153hp), and is a straight drop-in replacement for older DA42s and DA40s equipped with the original Thielert turbodiesel.

China figures high in Diamond's priorities. It has a successful joint venture already and by 2017 all DA42 twins



FAMILY RUN BUSINESS FOR OVER 25 YEARS

ADD 20% VAT - UK & EU ONLY

OPEN MON-FRI 9am-5.30pm – BULK ORDERS AND TRADE ENQUIRIES WELCOME
If you are not completely satisfied with your purchase, please return the goods in original condition within 28 days for replacement, exchange or a full no quibble refund.
All prices subject to change.

CAA/EASA APPROVED
RUN BY PILOTS FOR PILOTS



49-51 Colinton Road • Edinburgh EH10 5DH



and DA20/Katana two-seaters will be manufactured there. Carbon fibre is being manufactured in China now and is at least as good as European standards – important, Dies said, to avoid future shortages as Airbus and Boeing build more airliners using the material.

If all that wasn't enough, Dries revealed a project to create a tiltrotor aircraft powered by two 250kW electric motors and based on the DA42 airframe (the first flight will probably be unmanned, said Dries). There's also the DART-450, a single-engine turboprop reconnaissance trainer with a Mach 0.6 dive speed. It will be designed to EASA certification standards but first versions will be for the military. Expect to see the -450 at Farnborough 2016, said Dries.

Not many aviation industrialists have as much drive and vision as Christian Dries but one who has is Alan

Klapmeier, co-founder and former boss of Cirrus Aircraft, who is now leading the Kestrel 350 single-engine turboprop project. When Klapmeier strode onto the Eclipse stand at AERO, where journalists were waiting for a press conference, we all wondered why.

Turns out that Sikorsky is stepping away from its investment in Eclipse, as United Technologies. Mason Holland, the man who brought Eclipse back from bankruptcy and put the upgraded 550 into production with the help of Sikorsky, has brought in Klapmeier to lead a new company, called ONE Aviation, which will have both the Eclipse and Kestrel in its product line-up.

Meanwhile, over at Piper, British-born boss Simon Caldecott announced a new top-of-the-range aircraft, the M600. Based on the Meridian single-engine turboprop, it has a completely new wing

giving more fuel capacity. The Pratt & Whitney PT6 upfront has been turned up by another 100hp to 600hp. Result: more range with a max of 1300nm, and more payload up to 1200lb (544kg).

The M600 is also fitted with Garmin's latest G3000 avionics – the first turboprop to be fitted with the touch-screen system. It comes with Garmin's flight protection, which guards against accidental stall and overbank, and also has a hypoxia recognition system with emergency descent mode. In other words, the G3000 gives the pilot a wakeup call if he's made no inputs for a while, then automatically descends to an altitude where more oxygen is available.



Piper said it is aiming for FAA type certification for the M600 by Q4 this year when it will go on sale at US\$2.82 million.

The existing 500hp Meridian is rebranded as the M500 and gets an upgrade to its Garmin G1000 avionics including the flight protection system. The piston engine version of Piper's M-Class is now the M350 with a similar handful of upgrades and priced at US\$1.15 million.

Cessna's new piston aircraft boss, Doug May, stonewalled all questions about progress with the 182 JT-A and when type certification would occur. The 182 JT-A is equipped with the SMA 230hp turbodiesel and Cessna has admitted to one in-flight engine failure. Might Cessna reintroduce the 182 with an avgas engine? No comment.

However, May did confirm Cessna is pushing ahead to introduce into Europe the 172 fitted with Continental's CD-155 turbodiesel. This is effectively a conversion fitted under an existing STC.

Cirrus was at pains to emphasise how fatal accident figures for its SR-series piston aircraft were now well below the overall general aviation accident rate in the U.S. It puts this down to a comprehensive set of training aids,

known as Cirrus Approach, introduced after a peak of accidents in 2011, focusing in particular on use of the emergency parachute system.

Cirrus's latest SR-22, the Accelero, was on display at AERO and is just drop-dead gorgeous, finished in red and black with every option. It's all-digital, said Cirrus, meaning that the standby analogue gauges have been replaced with a mini Primary Flight Display that mirrors what's on the main PFD. Like the Piper M-Class, the SR-22 has Garmin's flight protection system.

The Vision SF50 single-engine jet is progressing at a rate, Cirrus also said, with four test aircraft, three of which



are 'conforming' and thus count towards type certification. That's expected in late 2015 with the first delivery by the end of this year. Production will ramp up to 50 aircraft in 2016 and 100 a year after that. There's a backlog of more than 500 orders for the US\$1.69 million jet.

Of course, the real stars of AERO are the weird and wonderful, innovative and eccentric aircraft that appear every year. The British designed, built and themed BJJR Bulldog fitted the bill perfectly (see above top left and box, next page).

There was also the Blackwing, an all-carbon fibre (hence 'Black') two-seat aerobatic Light Sport Aircraft from Sweden, claimed to have load limits of +12/-7.5g and a Vne of 450km/h (250mph). Then there was the Atol Avion, an amphibian from Finland with the low-tech approach of all-wood construction (above). Various people over the past 25 years have tried to put this aircraft into production but now a revised LSA version has just had its first flight and appears to be on track.

Stemme launched a new motorglider, the Twin Voyager S12, which flew for the first time recently. It has a foldaway prop, is powered by a Rotax 912 turbo, and has side-by-side seating, an autopilot and a top speed of 140kt.



The Diamond DA50-JP-7 had its first flight in January

Lightwing AC4 is a new LSA from a group of engineers based at the same airfield as Pilatus Aircraft, Stans in Switzerland. In fact, some are former Pilatus employees. The Lightwing received its EASA type certificate last year and you can buy one for €150,000.

SEA Risen, also from Switzerland. Another carbon fibre aircraft (below), this time a motorglider ultralight with a large cockpit and nice vee-tail.

For several years, AERO has been the showplace for electric aircraft projects which finally seem to be getting somewhere. Pipistrel launched its Electro, powered by a 60kW (80hp) electric motor and based on its existing Alpha two-seat

trainer (below). Like the very similar Chinese RX1E, also on display at AERO (see picture, second left), the Electro has an endurance of 1 hour, which should concentrate the minds of flight instructors, although an extra 30 min reserve is also claimed. Cruise range is 81nm, cruise speed 108kt and payload 441lb (200kg).

German electronics company Siemens is leading the way on electric motors for light aircraft, working with many companies, including Diamond and Airbus Group.

Soon to have its first flight is an electric powered AutoGyro Cavalon, the side-by-side seating autogyro.



First flight for Flight Design C4

Just a few days before AERO opened, German LSA manufacturer Flight Design made the maiden flight of its first four-seat aircraft, the C4.



Then they packed up the flying prototype and headed south for Friedrichshafen and put the actual test aircraft on their stand. It was a bold move because like most prototypes, it's not an immaculate aircraft.

The C4 is noteworthy in several respects. First, it's an all-carbon fibre airframe. Second, it's powered by Continental's recently certified 'Alternative Fuels' engine, the IO-360-AF. Third, the avionics are Garmin's non-certified G3X Touch system, with analogue standby instruments. Fourth, if all goes to plan, the C4 will be the first aircraft to be certified through EASA's currently being revised Certification Standards.

Apparently the first flight went very well, with the aircraft handling nicely and performing to plan. Manufacturers rarely say anything different about first flights but Flight Design did admit to an engine cooling issue. Oh, and the headroom. Apparently test pilot Damian Hischer is almost 6ft 4in (1.92 metres) tall and was wearing the usual crash helmet but still fitted inside the aircraft without having to crane his neck!



Barn Storming Bulldog

Barry Jones and James Robb are two former British Army helicopter pilots with a passion for autogyros. They have set up BJJR to design, develop and build the Bulldog, an autogyro with attitude. It looks like a 1930s barnstormer thanks to the Rotec radial engine upfront and big, round section fuselage finished immaculately inside and out. At first glance it looks as though it's missing a pair of biplane wings but then you spot the two-blade rotor on top.

The Bulldog is heavily British themed throughout, hence the name. It's also finished in British Racing Green and Barry and James wore traditional tweeds at the show. They're not being jingoistic - the pair are equally passionate about promoting a British light aviation industry.

Despite the retro looks, BJJR has brought in a thoroughly modern British engineering company, EPM Technology, who specialise in carbon fibre components for Formula One cars. Carbon fibre is used extensively throughout the Bulldog including the main spar which supports the rotor. It's a straight spar inside that spectacular curved arch, which protects the pilot in event of a roll-over.

The rotor head comes with equal provenance. Martin Deady is Rotor System Designer for BJJR and previously worked for AgustaWestland on the EH101 Merlin helicopter used by the British military and others.

Bulldog is due for its first flight soon with a program of test flights through the summer. If all goes well, it'll go on sale in 2016 for GBP130,000.

The electric motor installation where a Rotax 912 is usually located was so neat and tidy it could have been originally designed that way.

German manufacturer AutoGyro, closely allied with British agent Gerry Speich of Rotorsport, is celebrating its 2,000th aircraft since the company was founded in 1999. Most of its aircraft are used for recreational flying but at the show, the UK CAA presented AutoGyro with full ICAO Type Certification for the Cavalon Pro. This is a big step forwards because it allows commercial use of the autogyro and also VFR night flight - full IFR privileges are to follow, said AutoGyro.

Jeppesen Warning!

AERO is as much about new equipment as aircraft. Jeppesen and headphone maker Sennheiser announced a tie-up to give pilots an audio warning of upcoming airspace or waypoint while in-flight. It's based on Jeppesen's Mobile FliteDeck VFR app for the Apple iPad - no Android version is available.

Pilots fly with the iPad mounted conveniently and the app tracks the aircraft using built-in mapping and GPS. When you approach airspace or a pilot defined waypoint, a 'ping' sounds in the headset followed by a terse warning, "Airspace". It is designed to work with Sennheiser's digital S1 headset and 'may' work with other headsets, Jeppesen said when pushed. However, it's optimised for the S1.

Many British companies exhibit at AERO and one, Solutions4GA, launched its certified runway lighting system, lightBOX. It's an 'all-in-one' system which can be remotely activated by radio or mobile phone. Each light is self-contained, with its own battery and the possibility of solar-charging for zero-cost operation.

AERO is a must-see event at least once, every year if you're in the industry. Its location at Friedrichshafen, close to Bodensee (Lake Constance), is spectacular and usually the weather is warm, sunny and dry. The exhibition halls are adjacent to the airport so you can fly in and take a shuttle bus to the show, or stay at the on-field Ibis hotel. Next year's event is 20-23 April 2016.

Airfield Profile: Henstridge



Henstridge has come a long way since it was acquired by Geoff Jarvis and it is now a thriving airfield with wide-ranging plans. This friendly airfield has far more to offer the visiting pilot than you might expect.

Henstridge airfield is a surprisingly busy aerodrome with even bigger plans to turn itself into the best general aviation facility in the south-west of England. Aircraft Owner & Pilot went to see what's happening to make the owner's dream into a reality.

As with many UK airports, the field was originally commissioned in 1941 as a training facility for the Fleet Air Arm. Since then, Henstridge has enjoyed a history of flying activities spanning almost three quarters of a century. Back in its halcyon days as a military aerodrome, the location operated no fewer than five runways.

While an airborne inspection clearly shows the general original shape of the old airfield, today there is just one active runway - 07/25, a tarmac strip in good condition, 26m wide by 750m long.

Henstridge is easily recognisable from the air - and from quite a distance. Looking down from overhead the airfield, the level of industrial activity fringed around the perimeter is clear to see. It has taken the place once occupied

by Spitfires and Seafires in the dark old days of war. A distinctive feature of the runway is a concrete 'dummy deck' in the centre, which was used to train pilots to land on an aircraft carrier. It's a little piece of history which still lives on in Henstridge. Visitors are encouraged to use the whole of the runway to land, rather than just the dummy deck! In one part of the former apron, massive numbers of parked cars make the airport look as if it has long term parking to rival Heathrow or Gatwick.

Henstridge Airfield owner/chef, Geoff Jarvis.



Other firms are tightly packed along the Western side of the airport, with modern hangars more to the centre of the field. The circuit is always to the south of the airfield, at 800 feet agl, and the approach contains no bear traps east or west, with an absence of high ground anywhere nearby. It's worth looking at the simple and logical noise abatement guidance, the main element of which is a slightly off-centre approach when landing on Runway 07 to avoid overflying Henstridge village.

Upon landing, you'll have no trouble finding somewhere to park your plane. You'll also discover modest looking facilities at the clubhouse. However, the atmosphere is consistently welcoming and the kitchen highly active. On a regular weekend, the aerodrome's owner, Geoff Jarvis, is frequently engaged in the task of cooking, a pastime he regards more as a hobby than a duty. "We do a standard breakfast, as well as just about anything with chips." Geoff also takes his links to local suppliers very seriously. "We use local butchers Pullins, or Dikes local supermarket - they've been the



independent retailer of the year many times over. Also, we try to do something special on Sunday,” says Geoff. And it’s true. A visit to Henstridge on the Sabbath is easily justified for the quality of the fayre alone.

That hangar space, very much in evidence once in the circuit, is the result of intensive investment by the airport’s owner. Geoff has evidently been busy. He took possession of the facility in 2000, and over the past seven years he has initiated a building programme

which amounts to a renaissance for the aerodrome, with 18 hangars constructed in that time. “I run it the way I want it,” he says assertively, and correctly; his ambition explains the remarkable pace of growth at this airfield.

Among the dozens of aircraft on the site many are on the American ‘N’ register. It’s no coincidence that FAA maintenance operator, Justin Cox, is running a thriving operation. Cox is a much-respected engineer and ATPL-rated pilot – you may have read some of

his flight test articles which have featured in *Flyer* magazine in the past. His maintenance business is widely regarded as one of the top engineering outfits in the country.

There’s a notable collection of aerobatic aircraft at the field. Kevin Crumplin’s Tiger Moth School has three flying aircraft, with two more undergoing restoration. As well as performing air displays, they run air experience flights and conduct type conversions. And that’s not all. A nearly full scale replica of a Spitfire Mk26 is under construction. A Jungman and Jungmeister are resident, as is a Pitts Special. But the jewel in the crown must surely be the Yakovlevs formation display team – the brainchild of turbocharged entrepreneur Jez Hopkinson. His flair and diligence have created the largest privately owned piston engine aerobatic team on Earth.

“We’re doing well,” says Jez, who is a permanent fixture of the airfield when he’s not away with the display team. “In 2012, 1.1 billion people saw our team perform and we’re on track to beat it this year, following a recent trip to Aero India in February and a return visit to China in September, alongside our UK commitments.” For perspective, that means since 2012 the team will have been seen by roughly one quarter of the world’s population. “I’m always open to sponsorship offers,” adds wily Jez. He also has plans for further expansion of the display team. Jez and his colleague Jeremy Diack revealed that they’re in talks to buy two Mk9 Spitfires – which would make Henstridge a very significant location for warbirds.

Located in hangars to the western edge of the airfield is a microlight training school, Learn to Fly, specialising in flex-wing microlight and hangglider training. They’re welcoming and professional, reflecting the overall impression of an airfield at peace with itself, and clear about its identity as a GA-focussed environment.

With this level of activity going on, it’s not surprising that there have been exploratory investigations into the feasibility of adding a manufacturer to the ranks of aviation firms based here, including the possibility that the unique ‘Optica’ observing aircraft may return to production on the field, together with a light sports plane.

“The airfield’s location in the heart of the Blackmore Vale is certainly picturesque enough to justify the journey.”

Geoff is taking a holistic view of the future. He’s considering opening the field to motorcycle events, too. “The bikers have been here before,” says Geoff. “They’re very decent and respectful of the conditions which I set in terms of noise and safety. In fact, it’s a pleasure to have them here. I’m talking with the Motorcycle Action Group to see about marshalling the events properly, and perhaps opening the runway for bike use. I think this will add a new strand of spectator-friendly events to the area.”

Motocross already occurs occasionally in a neighbouring field, and no problems have been reported. “It matters to me that riders who visit take a responsible attitude when they’re riding to and from the airport. As long as that happens, there’s lots we can do to open the field up, maybe even for camping events, which I know the bikers are keen on.”

As Henstridge begins to fulfil its potential as a vibrant, modern focus for general aviation, plans to upgrade the clubhouse into more permanent accommodation – plus building work around the site generally – suggests a serious intent when it comes to expanding this destination for touring pilots. The only limitation to the realisation of these plans, it would seem, is financial capital – but even that appears to be flowing at a sufficiently healthy



Military helicopters are a common sight.

rate to enable progressive investment to occur. The owner has been sufficiently confident of the future to gift a 25-year lease to the local Air Ambulance, which operates daily from the field. He also talks of possibly creating log cabin-style accommodation for pilots who fancy a couple of days away from home. The airfield’s location in the heart of the Blackmore Vale is certainly picturesque enough to justify the journey.

With the aerobatic teams, the multitude of resident aircraft and the diversity of activities, it is easy to see this as a future magnet for General Aviation pilots. The relatively uncluttered airspace in the region is a further draw, with little

risk of infringement, as long as one is mindful of the military aerodromes in the area.

At a practical level, Henstridge is a good place to fill your tanks. It offers all three fuels: UL91, 100LL and Jet A1. Their prices are extremely competitive. Geoff Jarvis explains: “We have a very good arrangement with the fuel company, meaning I can sell at good rates. I do this on purpose, to attract visitors and also because I’m not greedy for big profits from the fuel. I like to see the airport doing well across the board. It’s pleasing to observe a large amount of visiting aircraft. Essentially, I think that’s what flying should be about.”

This Mooney is just one of the home-based aircraft at Henstridge.





To underline the point Geoff, who isn't a pilot himself, purchased a Rallye Commodore and a TB10, creating two syndicates to operate them as part of the home fleet. And Geoff's emphasis on inclusion also extends to charities. As well as fly-ins – the next of which is 'Wings and Wheels' on 29th August, he is hosting an event for 'CLIC Sargent' on 31st July. "This is for children suffering cancer. It's locally focussed, but we have youngsters from as far as Truro attending. I'm glad to be doing something for young people who have to deal with this condition. It's a good use of the site." Geoff also runs aviation weekends for the Scouts, underlining his community spirit, which serves him well as an ambassador for the aviation community.

Newly elected local MP David Warburton is also an ally of Henstridge Airfield. He is planning to visit soon, having been invited to open the new premises being built for The Yakovlevs. David himself comments: "Economically, the airfield really matters to the area. As long as the expansion is conducted responsibly, this is a great asset to us here. I'm impressed with Mr Jarvis's vision. There's so much going on that the future looks bright indeed."

David has also eagerly accepted the offer of a flight over his constituency, and looks forward to discussing the growing number of aviation-related businesses now based at the airfield.

Putting it all together, it is obvious this site is ripe for expansion in terms of general aviation activity. What's already

in place, and what's coming, makes it a fascinating place to explore. Aircraft parking space is never a problem and the landing rates are as reasonable as the fuel prices. You may even be treated to a visit from an RAF Merlin helicopter, Navy Wildcat or Army Gazelle, all of which frequently use the strip when out on exercise. There's always something going on at the airfield, and the relaxed air/ground radio keeps everything moving with little fuss and no self-serving officialdom.

Visiting Henstridge may not be something you've considered doing before. But this is an airfield which carries with it a sort of intriguing sense of expansion, which makes the whole

experience positive, whether you're there on a weekday or weekend. One is left with the sense that the sector, at least in this part of the UK, is in good health. Developments here – from the aerobatic teams to the potential production of aeroplanes – could make Henstridge a natural home for GA commercial growth, as is already the case for those based at the airfield now.

If Henstridge hasn't been on your target list previously, it's certainly worth adding it. Judging by the pace of development from when Geoff Jarvis first took control of the airfield, his stated aim of turning Henstridge into "the best GA airfield in the southwest" may indeed be something that comes to fruition.

Airfield Information for EGHS

Height: 184ft
Location: 5nm SSE of Wincanton
N5059.30 W00221.52
LARS: Yeovilton, 127.350
Henstridge A/G: 130.250
Runway: 07/25
Asphalt/concrete
750 x 26 metres
Lighting: none
Operating hours: 0900-1700 or
Sunrise-Sunset, whichever is earlier/
later.
Circuits: To South, 800ft QFE
Landing fee: £9
Microlight & gyro: £4.50

Maintenance: available
Fuel: Avgas, Jet A1
Restaurant: snacks and drinks. Open
weekdays, 0900-1400, Sat/Sun.
Operator: EGHS Ltd.
Tel. 01963 364231
PPR: at least one hour before arrival
to ensure radio is manned.
Notes: 20ft agl power cables 230
metres from 07 threshold. Fence 50
metres from 07 threshold.
Please avoid overflying local villages
and dwellings.
Website:
www.henstridgeairfield.com

The 'Sky-ILS' approach... by Egnos!



Nick Klenske attended a series of flight demonstrations of EGNOS, as the agency responsible attempts to encourage pilots to adopt LPV.

The aviation sector remains a key market segment for EGNOS. In fact, EGNOS was designed for aviation and with nearly a quarter of all airports in the target market being EGNOS-enabled, the European GNSS Agency (GSA) says it is seeing great results. According to demonstrations and testimonials provided at a recent EGNOS Flight Day in Toulouse, due to the Agency's work across all airspace user segments, European airports and OEMS, EGNOS is providing very clear benefits to all.

At the top of this list of benefits is RNP down to LPV approaches, which enable all weather near-precision approaches without the need for expensive ground equipment. As this significantly increases the operator's real operational capability and safety, today there are over 200 EGNOS enabled approaches available in Europe.

Another advantage of EGNOS is its interoperability with other SBAS systems – without the need for different avionics equipment. "As a result, most manufacturers in the general and business aviation sectors are already putting EGNOS-ready equipment on-board new models," says GSA Executive Director Carlo des Dorides. "At the same

time, the commercial manufacturers are taking notice, with some OEMS, such as Airbus, installing EGNOS equipment into their latest models."

Member States ANSPs and civil aviation authorities are also seeing an increase in demand for EGNOS enabled approaches. In the UK, for example, the push is coming from operators. Business and General Aviation users see the advantages created by EGNOS enabled procedures, and the UK CAA developed specific guidelines to enable EGNOS based operation implementation to increase accessibility to small airfields and even non-instrumental runways in bad weather conditions.



The first EGNOS LPV approach was published at Pau Pyrénées airport, southwest France, and was first flown in 2011 by a Dassault Falcon 900LX business jet.

"In other words, for both operators and airports, EGNOS is a win-win: with little need for on-board equipment and no need for a ground infrastructure, EGNOS offers all users increased accessibility and safety," says des Dorides.

According to the GSA, more and more airports are being added to the list of those offering EGNOS-based LPV approach procedures every day. Today, over 150 LPV procedures are already in use in well over 140 airports across Europe, providing a cost effective alternative equivalent to conventional ILS CAT I instrument landing procedures. In addition, 86 RNP approaches down to LNAV VNAV minima can be flown with EGNOS vertical guidance in Germany and the Czech Republic. The GSA also noted they have more than 440 EGNOS-based LPV procedures planned by 2018.

Reaping the benefits

With LPV procedures implemented, these airports are reaping numerous benefits. First and foremost, EGNOS increases accessibility and safety. In addition, it must be remembered that EGNOS is free of charge. For no additional costs, the EGNOS satellite

Be Aware:

Accident statistics show that pilots making wrong decisions during a flight is a major factor. *Being unaware of controlled airspace is one example of a poor decision which could have dangerous (fatal) consequences.

A polite notice to all pilots...

BE AWARE OF
CONTROLLED
AIRSPACE

Know where you are, while you're flying!

GASCO
General Aviation Safety Council

HAYWARD AVIATION LIMITED
INSURANCE BROKERS



Your aviation
insurance partner



HAYWARD AVIATION LIMITED
INSURANCE BROKERS

To download
this poster



www.haywards.net

Hayward Aviation Limited Harling House 47/51 Great Suffolk St London SE1 0BS
Email: info@haywards.net Web: www.haywards.net Tel: +44 (0)20 7902 7800 Fax: +44 (0)20 7928 8040

HAL/0514/1030

Authorised and regulated by the Financial Conduct Authority

*Visit www.caa.co.uk/docs/978/CAA_Safety_Plan_2011.pdf

signal allows aircraft to more accurately determine position, reduce errors in GPS data, and allow for almost precision landing approaches. The result is an improvement of the decision height, from an average of 450ft for GPS to 250ft minima using EGNOS.

EGNOS also brings many economic benefits to the airports. For example, it reduces the need for costly maintenance of ground infrastructure. It also reduces the occurrence of delays, diversions and cancellations at airports with an SBAS approach procedure. These benefits will be further enhanced with the next version of EGNOS, which will allow LPV200 and CAT1 operations as well as a substantial extension in coverage area.

To put this in the frame of figures, an independent cost-benefit analysis commissioned by the GSA indicated that the benefits for Europe's aviation sector will total €2.4bn by 2030. Of this total savings, about €1.2bn is due to reduced flight delays, diversions and cancellations. Another €900m in savings is the result of the reduction of Controlled Flight into Terrain (CFIT) accidents, and €300m due to the phase out of infrastructure nav aids.

Martin Robinson of AOPA UK spoke at the event, before taking part in the trials. AOPA has been heavily involved with the program for many years.



The operator perspective

Both business and general aviation are key market segments for EGNOS. Business aviation operators require getting to a meeting as quickly and efficiently as possible, often requiring landing at smaller airports where ILS or other expensive navigation aids are simply not feasible. Implementation of EGNOS-based procedures at these airports significantly improves accessibility. Today, most business aviation manufacturers already forward fit EGNOS capability into their aircraft. To support this, last year the GSA and the European Business

Aviation Association (EBAA) signed a Memorandum of Understanding to promote wider use of EGNOS at regional airports in Europe.

In the General Aviation sector, a GSA survey confirmed the vast majority of the European GA IFR community (85%) is either interested in installing and using SBAS or, at the very least, have considered using it. Approximately 48% of participants indicated that their aircraft are already SBAS capable, although this does not necessarily mean they are allowed to perform LPV approach procedures. The GSA is supporting the development of

Encouraging use of LPV approaches

As of the date of the demonstrations in Toulouse, EGNOS was enabling 142 airports to have localizer performance with vertical guidance (LPV) approaches – precision approaches equivalent to ILS Cat 1 but without the need for ground equipment at the airport. The number of aircraft so far using EGNOS is small, at just a few dozen, according to Carlo des Dorides, executive director of GSA.

A solution may come from air navigation service providers, such as France's DSNA, which is withdrawing ILS investment at 50 airports in the country, leaving it to the airports themselves to decide whether they want to pay for their ILSs or to decommission them. DSNA is offering to pay for the design of LPV procedures. The annual maintenance cost of an ILS is estimated to €50,000-70,000 (\$56,000-78,000), which is also the amount needed for establishing an equivalent LPV approach.

To accelerate adoption, the GSA has recently started offering grants for operators to equip and aerodromes to publish LPV approaches. An annual €6 million (\$6.7 million), during three years, has been allocated to the project.

Since 2011, France has been at the forefront of the expansion of LPV use in Europe. "As of early May, there are 90 [GNSS approaches] and we publish about 30 per year, targeting 200 in 2017 – virtually all of France's IFR approaches [are now LPV]," DSNA's Roturier said. Expansion beyond Europe is on the horizon, as Asecna—a joint ATM organization with 17 member states in Africa—is negotiating with the European Commission. An agreement is expected to be reached next year.

EGNOS promoters say accuracy is in the 1-3 meter range (3-10 ft), far better than the usual 5-10 meters (16-32 ft) with GPS alone. Availability is calculated at more than 99.9 percent across the European Union region.

From 2023, a second civil frequency should be available from the GPS satellite constellation such that a dual-frequency receiver will be able to make ionospheric corrections on board. The network of ground stations will be maintained only for legacy single-frequency users, but will be phased out in the long term.

From 2025, EGNOS will augment Europe's future GPS counterpart, Galileo, which will be available with two frequencies from day one. A dual-frequency receiver equipped for GPS and Galileo will ensure more robust guidance (thanks to a greater number of usable satellites) and will improve the performance of LPV approaches, Piéplu said.



Redhill is working to establish LPV approaches. The airfield is half within Gatwick Class D airspace and also has two parallel runways, 08-26 L&R.

cost efficient avionics solutions, such as an AML STC for GNS 430W/530W equipment – the most commonly used avionics in EU GA fleet – to significantly reduce the certification costs to enable LPV operations.

On the commercial aviation side, the main focus is on the regional sector. “The GSA regularly offers support to regional airlines and airports to implement EGNOS-based operations,” says des Dorides. “A relevant initiative in this field is the open call for proposals published by the GSA to co-fund EGNOS operational implementation in civil aviation.”

Another important sector is rotorcraft, where EGNOS provides helicopter operators a clear advantage by enhancing vertical precision and integrity to improve safety, accessibility and efficiency for operators, pilots and helipads across Europe. EGNOS leads to a substantial reduction in the decision height, making helipads accessible in poor weather conditions and thus enhancing safety – of particular importance to medical and emergency operations.

Furthermore, the GSA has signed a cooperative agreement with Eurocontrol,

the aim of which is to jointly contribute to the implementation of EU GNSS policies as they apply to the field of aviation. Both Eurocontrol and the GSA have a shared objective of developing and exploiting European GNSS technology to improve accessibility, efficiency and safety in Europe.

“As we know, the full deployment of GNSS offers unprecedented opportunities to further improve air traffic management safety and capacity while reducing costs at a pan-European level,” notes des Dorides. “Eurocontrol’s activities in this field will complement those of the GSA to ensure that the development and implementation of satellite-based navigation provides an optimal solution for European airspace users.”

Looking ahead

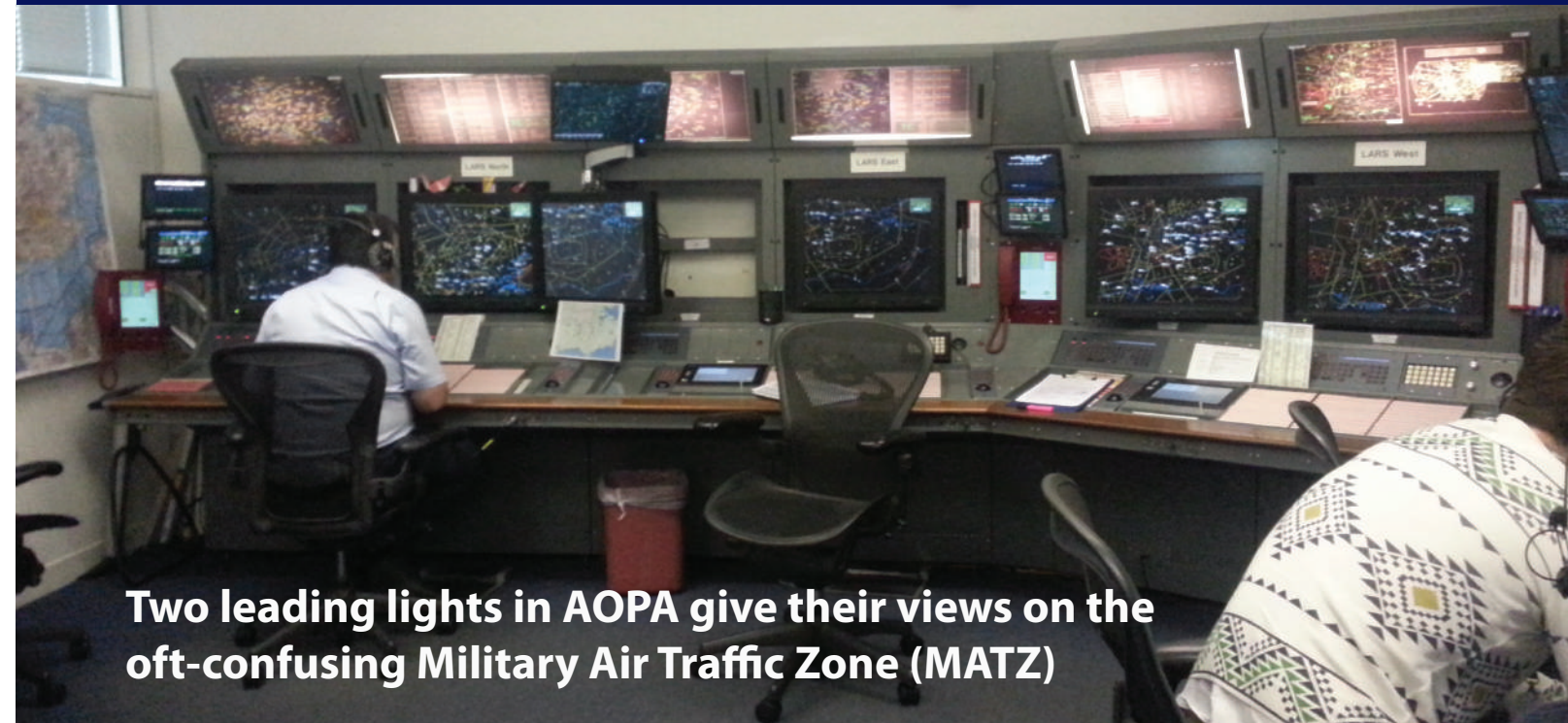
Today’s GNSS penetration in the global aviation market is over 80%, and GNSS is expected to reach over 90% penetration by 2022 as an enabler of Performance Based Navigation. The shipments of EGNOS enabled devices are expected to dominate the entire market, including the regional, business and general

aviation segments. The penetration of SBAS enabled units in equipped aircraft is expected to increase from some 20% in 2012 to 60% in 2020.

“To support this growing market, the GSA is committed to ensuring the continued adoption throughout the segment,” says des Dorides. “To accomplish this, the GSA will continue to take steps to facilitate EGNOS adoption through enablers/ tools/methodologies to facilitate LPV implementation. This includes increasing the availability of cost efficient avionics solutions, supporting operators in getting both equipped and certified with EGNOS avionics and facilitating crew training for such operations.”

The GSA is also busy getting ready for LPV-200 capability, followed by exploring E-GNSS potential for other communication, navigation and surveillance operations in all phases of flight. It is also key to exploit advanced operations using GNSS as an enabler (e.g. 4D) as demonstrated in SESAR and other research programmes. Lastly, the sector must continue to get ready for multi-constellation/multi-frequency solutions.

Does anyone need a MATZ?



Two leading lights in AOPA give their views on the oft-confusing Military Air Traffic Zone (MATZ)

Farnborough LARS (above) can help you negotiate the Odiham MATZ, but what a MATZ actually is has not been clearly defined.

Nick Wilcock writes:

As most pilots will know, many military aerodromes are bounded by quite a large chunk of airspace known as a Military Air Traffic Zone. The purpose of a MATZ is to provide protection to military aircraft in the critical stages of take-off, landing and in the circuit.

But at 5nm radius, these are more than twice the diameter of most civil ATZs and extend up to 3000 ft above the aerodrome, with one or more 5 nm ‘stubs’ aligned with the main instrument runway, extending to 2 nm either side of the centreline, from 1000 ft to 3000 ft above the aerodrome. This is quite a significant chunk of airspace, almost 40 times the volume of a civil ATZ.

However, as many will doubtless have noticed, there are far fewer military aircraft around these days compared with when MATZ were first established. These aircraft are also far better-equipped than in earlier times. For example, when I learned to fly the Jet Provost in the early 1970s, it was UHF only, it had a basic ‘Eureka’ DME system and although we had a Mode A transponder, due to its position in the cockpit we weren’t

permitted to use it except in emergency, ever since a student became disorientated and lost control, parking his perfectly serviceable JP on the main railway line into York whilst he floated to Earth courtesy of Martin-Baker ejection seat.

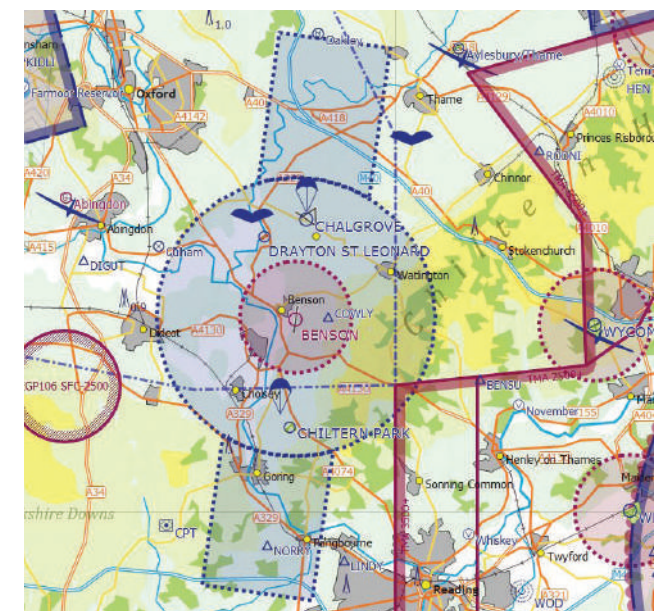
At any one time a veritable swarm of JPs would be airborne from Cranwell, Linton and Leeming and we usually relied on primary radar and GCA for recovery until visual with the ground, meaning that military air traffic control

was kept pretty busy. Nearby, Scampton and Waddington had seven squadrons of Vulcans between them, Binbrook had its Lightnings, with Harriers and Hunters at Wittering and Phantoms at Coningsby. Add a few Chipmunks, Argosies, Hastings and Canberras into the melee and it wasn’t unreasonable for military aerodromes to be protected by the comfort blanket of MATZ airspace.

Today, meanwhile, there’s nothing like the activity there once was, even at



Nick Wilcock, who is on the board of AOPA and is its licencing expert, recalls the days when a MATZ really mattered. Now, with less military activity, few are really necessary.



MATZ... Class D, or Class G?



Timothy Nathan is an experienced instrument rated pilot who flies his Piper Aztec (Right) from Biggin Hill. He is also on the board of AOPA UK.



Timothy Nathan writes:

MATZ have existed my whole flying career, 44 years. All that time they have been an anomaly. Do they apply to civilian traffic, or do they not? Do they operate QNH or QFE? Do they require a clearance? Once inside them, are we obliged to follow the clearances and instructions of the controller?

We, as civilian pilots, may be confused, but the controllers do not appear to be the least bit confused; they seem to be quite confident in their powers. But which is worse, to be confused, or to be certain but wrong?

In the early days of my flying career we were quite used to a mess of confusing rules. Many readers will remember Rule 21 airspace, Rule 36 airspace and the "Open FIR", which contained AIAAs and MATZs. They were peculiarly British institutions and we muddled along.

But then, some 25 years ago, ICAO did a very sensible thing. It determined that all airspace would be classified from A to G, and that the basic rules of who could fly in what airspace, what clearances were required, who should be separated from whom and who had to be in radio contact with the controlling authority were regularised for the whole world.

Whether we were in the UK, Italy, USA, Afghanistan or North Korea, it should be quite clear from looking at a map whether VFR is permissible, whether it needs a clearance and what the lookout responsibilities are.

The air-to-ground (A-G) rules are well thought out and cover all airspace users in all circumstances. Everyone understands them.

So why, oh why, do we have a completely different class of airspace in the UK, where no-one really understands the rules, indeed the rules are not properly documented, and different rules apply to different classes of airspace user (i.e. civilian or military)?

The trouble is that military controllers behave as if MATZ are Class D. Military pilots are effectively told that MATZ are Class D, but civilian pilots are told that they're Class G, but they are sort of like Class D at the same time.

So the UK authorities need to bite the bullet and sort this mess out. Are they Class G, to be treated as Class G, or are they to be treated as Class D and therefore designated Class D? And if they are to be Class D an Airspace Change Proposal needs to go through the normal channels to have them designated as such.

Now, some pilots and representative organisations, like AOPA, are going to suck their teeth and say "No more Class D, never!" But if you think about it, we are currently treating them as Class D anyway, so why would it matter if the situation were regularised and they were designated Class D?

I have no hat in the ring as to whether they are Class G or Class D. To me, it matters not a jot.

But what does matter is that they should either be Class D or Class G, and be properly treated as such, so we all know where we are.

the few remaining military aerodromes. Pilot-interpreted aids are more common, as is VHF compatibility, so military air traffic controllers have much less of a problem than in the past.

Perhaps the bigger issue though is the actual status of the MATZ. Although a civil aircraft needs permission to enter the ATZ part of a MATZ, no such permission is required to transit the rest of it. Pilots needing "MATZ penetration" are requested to call the controlling authority 5 miles or 15 minutes from the zone boundary, whichever is the greater, then pass their details before complying with the controller's instructions.

"But hang on," you might say, "surely I don't have to recognise anything except the actual ATZ and the rest is simply Class G airspace as far as I'm concerned?" Technically correct, but is that particularly good airmanship? By "standing up for your 'rights,'" you might well be causing utter mayhem for a controller trying to recover a formation of military aircraft with low fuel states.

Many civil pilots are reluctant to ask for MATZ penetration and some feel rather over-controlled even when they do so.

In the past, military controllers who were used to issuing instructions to military aircraft used the same style of brevity and speed when communicating with everyday private pilots. Hence tales of "machine gun clearances" (as in rapid RT style, not AA fire!) have tended to make many private pilots rather mic[rophone]-shy in the vicinity of military aerodromes. But if you remember to think what you're going to say before you press the transmit key and are ready with 'who you are, where you are and what you want to happen next,' you shouldn't really have anything to worry about.

But does the UK really need so many MATZ these days? Perhaps Valley and Mona might need them and Scampton clearly needs protected airspace for RAFAT, but do others such as Leeming or Cranwell, with their handful of daily movements? I don't think so. RAF Brize Norton doesn't have a MATZ, it has a Class D CTR. Would a few Class D mini-CTRs around fast-jet aerodromes and normal ATZs elsewhere be sufficient?

The Instruments Rule

Jim Thorpe explains the opportunities and pitfalls involved in getting an IR now that EASA has introduced the CBM (Competency-Based Modular) route.

This article aims to give more experienced pilots a clear idea of the degree to which their existing IMCR will prepare them for instrument rating (IR) training. It will also help those who have more recently gained their PPL who are considering obtaining an IMCR to go about this in a more informed manner.

The competence based modular IR (CBM IR) is so wonderfully flexible and such a great improvement on what went before that it has tended to raise unrealistic aspirations. Pilots read that they can finish an IR with only 10 hours in an Approved Training Organisation (ATO). This is absolutely correct legally but the basis of a competence based qualification is, not surprisingly, competence. Hours are provided as a minimum and a guide while capability is assessed by performing a series of flight manoeuvres to a defined standard.

In addition, by specific questioning and or inference from a candidate's general approach and level of preparation, a judgment is made as to the adequacy of their background knowledge and their ability to apply it to practical flying.

On arriving at an ATO candidates fall broadly into 3 groups:

- **Holders of an FAA or other ICAO IR needing to convert.**
- **Holders of a UK IMCR (Now the IRR but referred to here by its more familiar title).**
- **PPL holders with various level of experience.**

Groups 2 and 3 will have passed or be studying for the CBM IR theoretical Knowledge (TK). While one might argue about the relevance of some of this TK it at least ensures a common core of knowledge. FAA IR holders' TK may be much more variable.



The 'Basic Six' panel. The main Instruments Rule could be said to be that you either are VFR or IFR. On this panel you also have the option of using the glass panel.

All pilots' ability to apply their TK in what might be thought of as 'Applied TK' may or may not be satisfactory. For example, a candidate might be aware of the semi-circular rules and classes of airspace but not really understand what levels to fly and what pressure settings to use when flying outside CAS en route to joining an airway.

What instructors and examiners are looking for in an instrument pilot is an organised way of flying. They should be able to perform routine tasks in such a way that they are left with excess mental capacity to enable them to deal with unexpected events. Examiners want to have some confidence that an occurrence will not distract the pilot to the extent that, to use the jargon, a safe outcome to the flight is in doubt. More colloquially an examiner might wonder if they would be willing to sit in the back seat and read a magazine while this guy was flying!

The easiest people for an ATO to deal with are group 3. They will be receiving approximately 40 hours of instruction and little or no time will be wasted correcting misunderstandings and bad habits. They will be told to use the ATO's standard procedures and checks from day one. They will almost certainly be flying from the airfield at which the skill test will depart. They have done

everything possible to start the race to the skill test finish line from the most effective position.

Candidates in groups 1 and 2 benefit from some level of experience but may also arrive with unhelpful baggage. The standard of their basic instruction varies enormously. Then pilots develop their own set of habits. These can in the most problematic cases be a shaky set of half truths and misconceptions built on foundations that were questionable in the first place. Fortunately this level of problem is rare but a significant disparity between the pilot's current skill set and the skill set needed to pass an EASA IR is almost universal.

The initial conversation between a prospective candidate and the ATO is an early indicator.

It might run along the lines of:

"I obtained my IMCR many years ago but I regularly practice approaches. My instrument flying is pretty good. How quickly can I get the 10 hours done? I want to use my mate's old PA 28 to save money and I will fly up to you each day."

A little probing establishes that the PA 28 has no GPS or autopilot and an ADF that sometimes works. Annual flight time is about 30 hours. The IMC

POOLEY'S
FLIGHT EQUIPMENT

CETEOR
THE BOOST MAKER

Pooleys is the Official Distributor
of the Ceteor Range of
Battery Boosters & Chargers



Prices from £800.00



Prices held for 2015

- Over 110 additional Airfields since 2014
- More than 900 UK Aerodromes
- Over 440 Landing Charts

PRICES HELD FOR 2015



You'll also find our products at over 95% of flying schools throughout the UK

Shops at: Cranfield | Elstree | Lydd | Bournemouth

Freephone: 0800 678 5153

Email: sales@pooleys.com | Web: www.pooleys.com

practice is an occasional flight at the home airfield in benign weather mostly just before the 25 month revalidation. This pilot may still be perfectly capable of getting an IR. However, it might be that nearer to 40 hours training than 10 will be needed. There is a lot of potential for dissatisfaction and disappointment if the ATO bottles out on the difficult task of bridging the gap between a pilot's over-optimistic expectations and reality.

On the other hand it is heartening to hear:

"I have studied your website and other articles carefully and have a few questions. Maybe I could come down and see you. I am worried that my age /work/ family commitments / background experience mean that I will struggle. I want to be sure I can afford what it will cost to make me a good instrument pilot. I have a share in an aircraft but I wonder if the transit flights and booking conflicts will make using it awkward. Might it be best to use the ATO's aircraft?"

With this kind of call I find myself being reassuring in the face of over-pessimistic assumptions and explaining that it is likely that this pilot can achieve what they want with less time and effort than they thought.

The EASA regulations require an ATO to do a pre-course assessment. At Rate One Aviation we started doing this as a single short flight. Flying with someone is the only meaningful way to really pin down how much difficulty, if any, they will have in reaching IR standards. Based on our early experiences Rate One has stopped doing this kind of short assessment. The value to the candidate and the ATO is not proportionate to the effort involved. Its far better to come for a 'full-on' day of training and complete one longer flight or a couple of short ones.

The training is all properly signed off and will be valid anywhere. Pilots leave with a very clear idea of what's involved and if they decide to proceed, they have done the introductory administration, received training material and are well placed to study at home.

This basic administration is not something to take lightly. A significant proportion of candidates don't have adequately prepared licenses and logbook. The last thing anyone needs is to discover at a late stage in their training that they lack some required sign-off or rating. The ATO is required by EASA legislation to examine and substantiate a candidates training records. In reality hardly anyone has any training records at all! In effect the ATO has to examine logbooks and build acceptable records themselves. Sometimes this is not a trivial task.

Those who have passed their PPL recently might reasonably ask if it's a good idea to go straight for an IR and ignore the IMCR. The answer is "no, but..." The IMC TK syllabus is excellent. No study will be wasted if you go on to an IR later. The IMC TK exam is a Mickey Mouse embarrassment and minimal effort



Up to 25 hours of qualifying training can take place in an ATO with an approved FNPT2 simulator. This can be delivered in one very intensive week.

is needed to pass it. From a broader perspective this is slightly worrying but it does mean little effort is wasted if the longer term aim is to pass the CBM IR theoretical knowledge.

Getting value from the flight training is more complicated. Pilots will have to think carefully about personal interests, attitudes and flying ambitions to make a reasoned judgement.

Hardly any knowledgeable instructors would claim that it was possible to become an instrument pilot without something approaching 40 hours of good quality instruction/focussed experience. The IMCR demands just 10 hours. (Note this is flight by sole reference to instruments, FBSRI, or IMC times, not block time). It must be obvious that the standards achievable could not be the same if the scope and privileges of the ratings are much the same.

In the past, the explanation would have been that different minima applied (although these were mainly only advisory) and that UK classification of airspace effectively restricted the IMCR privileges.

In the evolving European regulatory structure the unusual nature of UK airspace is changing and this argument no longer holds. The old advisory minima seem to have disappeared from CAA documents and the strange 1800 metre visibility restriction is to be aligned with the 1500 metre VFR minima.

In effect 10 hours training will get you almost the same legal privileges within the UK as 40 hours. It is a testament

to the good sense of UK pilots that in reality this has not been a safety issue. As in many aspects of flying pilots discipline themselves to act within their personal capabilities.

I suggest that the real differentiation between a VFR and IFR pilot is mindset. The vast majority of IMC holders have a VFR mindset. There is absolutely nothing wrong with that. They use the IMC rating to make their visual flying more relaxed. I think understanding mindset is absolutely critical and a more useful way of making a distinction than the old 'get out of trouble rating' characterisation. To take an example:

A pilot plans to a flight of a couple of hundred miles in weather which is less than perfect but still VMC. En route it is difficult to maintain VMC and the pilot is perhaps startled to realise that in trying to maintain ground contact he is now a thousand feet lower than his planned altitude. With GPS he knows

exactly where he is but he cannot really see where he is going. He has his IMC rating and is not unduly worried. He climbs back to his planned VFR altitude and continues towards the destination.

Quite likely he is on top of the scud or perhaps between cloud layers. If he decides that the destination weather is VMC he might plan a cloud break but depending on terrain and without prior planning this might not be easy to manage. He knows he has the fall back of reversing course to regain VMC and return home. He has not planned for an IFR arrival at his destination or alternate. One way or another he completes an essentially VFR trip safely using the capabilities gained through his IMC rating. However, he has retained a VFR mindset throughout.

A pilot with an IFR mindset doing the same trip might still depart VFR as a matter of practicality but plan on climbing to an en route IFR level. He

Redbird simulator at Rate One, based at Gloucester Airport. Proprietor Jim Thorpe (author of this article) was instrumental in getting the CBM IR established through the his role in the PPL/IR organisation.





The full gamut of tools in the modern cockpit helps the pilot with situational awareness.

will have done his pre-flight checks and taxi checks with IFR in mind and so will be confident that the necessary instruments are selected and working.

There is nothing intrinsically desirable about flying in cloud and he will avoid this if practical to do so. However, his preparations will have ensured he has approach plates for his destination or, if his destination has no instrument approach, a plan for how to divert or regain VMC via an IAP. He has lines on his chart and iPad that are suitable for an IFR flight. Given that we are looking at marginal VFR conditions and not 'hard' IFR he is confident he can complete the flight well within his level of competence. This pilot is also safe but has an IFR mindset.

"The dangerous way to fly is to be neither truly IFR nor VFR."

If a pilot decides that he or she fundamentally wants to be a VFR pilot then an IMC rating taken anywhere that is convenient and good value will be fine. It will be enjoyable, improve your piloting skills and involve modest efforts entirely proportionate to the enhanced utility and confidence imparted.

If you think that your ambitions are likely to take you toward the IR then you need to think more carefully. If your IMC rating is to be a valuable first step it is best delivered to IR standards and in a fashion that will be compatible

with your future needs. As an absolute minimum your instructor must hold an IR. How can anyone teach to standards that they themselves have not necessarily understood much less attained? This is not intended to denigrate hard working PPL instructors. It's just straightforward horses-for-courses.

You might take this further. Your PPL instructor might be an ex-airline or military pilot and have held a multi-pilot IR. No doubt they attained a very high level of competence but whether that competence and experience is entirely relevant to single crew, private pilot IFR flying is another matter. The best way to do an IMC rating, if your eventual target is an IR, is to fly with an ATO with a CBM IR approval or with an instructor who currently instructs for such an ATO. This IMCR is likely to cost more. Your training will probably be on a better equipped, more complex aircraft so you might need retractable undercarriage or variable pitch prop sign-offs. This will give you more capability but will add to the cost. Your intermediate aim will still be to fly to IMCR standards to pass the IMC skill test but the underlying checks and procedures you learn will be totally relevant to your longer-term aims, and the scope of the course will be broader. There is little point in doing this unless your flying ambitions incline towards using a GA aircraft for purposeful travel. If that is your choice then the IMCR is an excellent stepping stone towards the IR, offering utility at this intermediate stage without any significant downside other than cost and effort.

Don't even consider training in the USA. While it is true that an IR in Europe is still less convenient and more expensive than in the USA, the gap is much narrowed. And if you are based in Europe, from April 2016 you will need to be dual-qualified. If you think you might want to fly an N-registered aircraft it will be better to get an EASA IR first and then piggyback the FAA IR later.

Simulators deserve a mention. They are less relevant to the needs of existing UK pilots because they have the prior experience to meet the regulatory requirement. These pilots tend to need all the remaining hours in the aircraft to polish up their skills. This is not the case for our friends in mainland Europe who have not had the benefit of the IMCR. Neither will it be the case in the UK for a minority of recent PPL holders who are committed to getting an IR as quickly as possible. Up to 25 hours of qualifying training can take place in an ATO with an approved FNPT2 simulator. This can be delivered in one very intensive week irrespective of the weather and the cost is modest by aviation standards.

I have not touched on the en route IR (EIR) because it has little relevance in the UK. My suspicion is that even in mainland Europe the EIR will gain little traction once people realise that one additional week's hard work in a simulator would make the residual requirements for the EIR and the IR identical.

So, to summarise, instrument qualifications for the PPL holder have never been more accessible. The IMCR is very useful both in its own right and as a stepping stone to an IR. Candidates should be realistic about their abilities and, above all, get advice from someone who really knows what's involved.

Jim Thorpe is an active IR / IMCR Instructor and Class Rating Examiner. He is CFI at Rate One Aviation, the first UK ATO to be approved for the CBM IR. He was a member of the EASA expert group that developed the rating and now sits on the EASA review board that will monitor its development. For further information:

e-mail: Info@rateoneaviation.com
Web: www.rateoneaviation.com

What is FASVIG?

Have you volunteered yet to help define our airspace? **Steve Hutt**, FASVIG programme coordinator, explains how pilots can help.

Modernised Airspace Structures

VFR Significant Areas recognised in airspace planning policy
Terminal Airspace integrates VFR operations as part of core traffic
LAMP and NTCA accommodates VFR requirements at planning stage
Design rules for smarter regulated airspace account for VFR requirement
Release of underutilised regulated airspace incentivised
CAP725 revised for transparency

Access to Airspace

Capacity of terminal airspace understood
CTR/CTA structures optimised to accommodate VFR traffic effectively
Under-utilised regulated airspace reclassified
FUA implemented as default in all airspace design
ATZs at closed military units accessible
Class A reclassified where VFR access appropriate
UAS policy compatible with VFR operations

VFR Efficiency Enablers

NOTAMs compatible with graphic display
NOTAMs relevant to time
NOTAMs relevant to route
Depiction of temporary airspace designed for VFR user
ADS-B Out implemented for all system types
Route & activity deconfliction tools implemented
Infringement risk warning tool at planning stage
Use of RTF modernised and simplified
UK FIS naming aligned with ICAO and better understood
Common UK Transition Altitude implemented
Provision of Real-Time In-Flight Weather Data provided
Extend use of Listening Squawks

FASVIG Background

At International, European and National level, civil aviation has grown resulting in the (perceived) need for more regulated airspace or 'capacity'. Within the EU, the Single European Sky ATM Research (SESAR) programme has been established to develop and deploy modern ATM technologies to meet the need for capacity whilst reducing cost, improving safety and mitigating environmental impact. In the UK, the CAA has been an early advocate of the need for change and modernisation, so launched the Future Airspace Strategy (FAS) in 2011.

Following the release of the FAS, Airlines, Airports and ANSPs came together as a FAS Industry Implementation Group (FASIIG) to develop the FAS Deployment Plan aligned largely to the objectives of the European ATM Masterplan.

The FAS Deployment Plan will address issues of significant interest to the VFR operations community such as:

- Performance Based Navigation - PBN
- London Airspace Management Programme (LAMP)
- Flexible Use of Airspace

The FAS Vision is to provide safe, efficient airspace, that:

- Has the capacity to meet reasonable demand.
- Balances the needs of all users.
- Mitigates the impact of aviation on the environment.



March 28th this year was a big day for FASVIG. The Future Airspace Strategy VFR Implementation Group, or FASVIG for short, reached a major milestone on that day with the publication of Version 1 of its FAS VFR Implementation Programme. On the same day it achieved what we suspect is another first – the launch of an Airspace Change Proposal (ACP) in fact two ACPs, sponsored by a General Aviation association to make changes to controlled airspace for the benefit of the GA community. These two events took place

at the Government/DfT/CAA/FASVIG GA Event at Duxford.

Airspace is a significant problem area for the GA VFR flying community. How airspace is managed – both operationally and strategically, how accessible airspace is to VFR users and the tools and facilities available to VFR users to make best use of airspace, are all aspects that need attention. And these are matters FASVIG is hoping to address as it seeks to "establish a sustainable future for VFR operations." But FASVIG needs your active support to make this happen!



But, FAS only addressed Commercial Air Transport in its first iteration.

Airspace has increasingly become an issue for UK VFR users because:

- Regulated Airspace in the UK has developed in a piecemeal way with legacies from military and civil aviation that are no longer fit for purpose.
- Changes in airspace can compromise the access for VFR operations into it.
- Information and communication do not serve the VFR community well.

So, the CAA needed a way to deliver the FAS vision beyond Commercial Air Transport and thus the FAS VFR Implementation Group (FASVIG) was formed in December 2013, with the objectives of delivering tangible benefits for VFR airspace users from 2015 to 2020 and establishing a sustainable future for VFR operations in the UK, as a collaboration between:

- Business and general aviation
- The flight training industry
- Sporting and recreational aviation
- NATS
- Airlines
- Airports
- MOD
- CAA

In a written statement to Parliament on 6 November 2013 the Minister for Transport said:

“General Aviation can and should contribute to the UK’s economic success, whilst providing a safe environment for participants and the public. The Government’s aim is therefore to make the UK the best country in the world for general aviation.”

40

FASVIG is part of this government policy and is referenced in the DfT General Aviation Strategy also published on 28th March 2015. Further, the delivery of the FAS VFR Implementation Programme is one of the CAA GA Unit’s defined measures of success.

The FAS VFR Implementation Programme (FASVIP)

The FASVIP outlines changes in these three package groupings:

- Modernising Airspace Structure.
- Access to Airspace.
- VFR Efficiency Enablers.

Which will provide the following benefits:

- More robust and consultative airspace change process.
- Reduced risks of zone infringements.
- Minimised disruption to CAT schedules.
- Controlled airspace fit for purpose
- Direct routings
- Fuel Savings
- Lessened environmental impact
- Flexible use of (regulated) airspace
- ‘See and be seen’
- Reinforces the concept of a “Known Traffic Environment”

The FAS VFR Implementation Programme can be read in full on the new FASVIG website – see:

www.fasvig.org/fasvip

The FASVIG Organisation

Since its inception FASVIG has been run by two Joint Chairmen, Tim Hardy and John Brady, assisted by the programme coordinator and supported by the Members and Associates (see www.fasvig.org/members).

Now that the FAS VFR Implementation Programme has been published the next stage is to develop each of the Packages of Change to create the FAS VFR Deployment Plan.

This development will be undertaken by teams of volunteers (now known as **FASVIG Champions**). FASVIG Members, Associates and Champions make up the FASVIG Network. The role of FASVIG Members and Associates will now change to that of a consultation body overseeing the process.

Each of the Implementation Programme Packages of Change will have its own National Policy Team, with the following exceptions:

- MAS.3 LAMP and NTCA will be separated into two policy teams.

VEE1-4 will be one team running related projects for:

- VEE.1 NOTAM Compatibility with Graphical Display
- VEE.2 NOTAMs Relevant to Time.
- VEE.3 NOTAMs Relevant to Route.
- VEE.4 Temporary Reserved Airspace Depiction for VFR Airspace User.

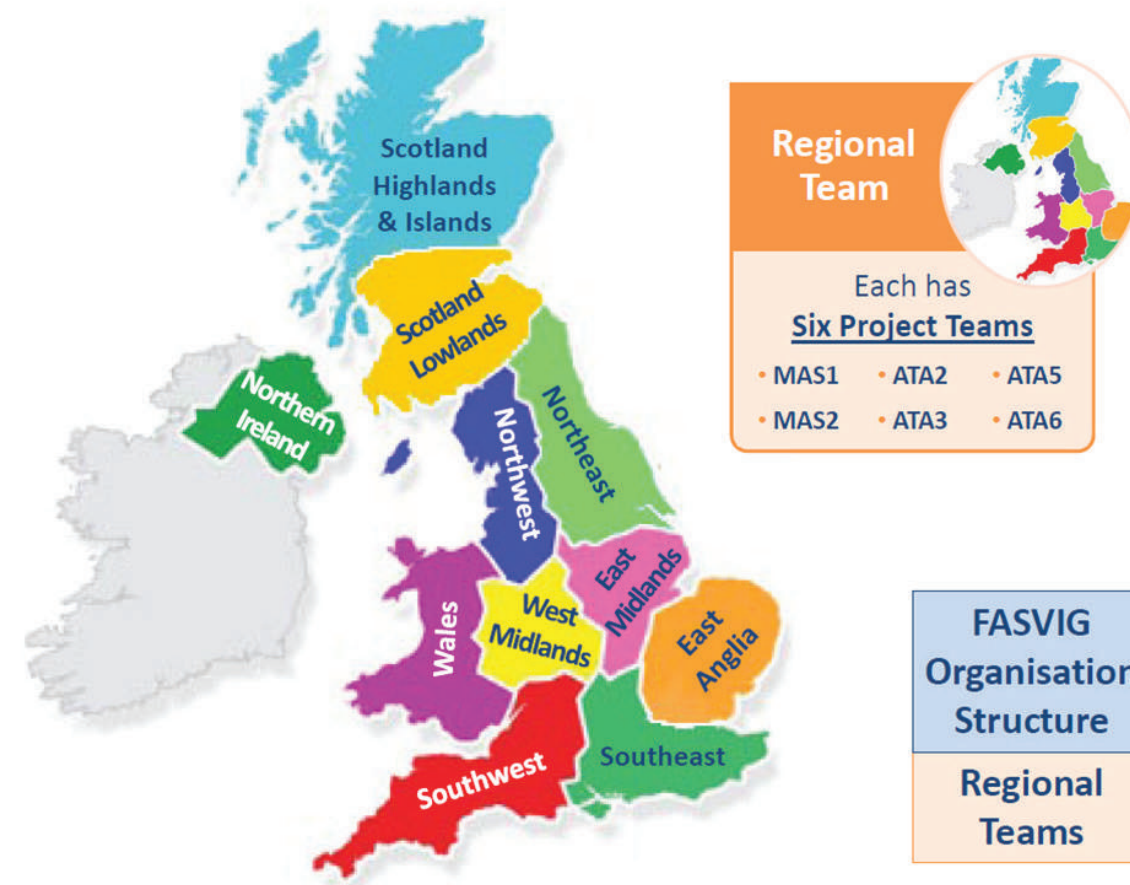
VEE6-7 will be one team running projects for:

- VEE.6 Route & Activity Deconfliction Tools.
- VEE.7 Infringement Risk Warning Tool.

VEE8-9 will be one team running projects for:

- VEE.8 Modernise UK RTF.
- VEE.9 Standardise UK FIS.

In addition there will be one team for each region which will run projects



addressing deployment in their geographic area for each of the following:

- MAS.1 VFR Significant Areas (VSA)
- MAS.2 Terminal Airspace Structures
- ATA.2 Optimise CTR/CTA Structures for VFR Traffic
- ATA.3 Reclassify Under-Utilised Regulated Airspace
- ATA.5 Release ATZs at Closed Airfields
- ATA.6 Reclassify Class A Airspace For VFR Access

The Policy Teams for the above six Packages of Change will each have one or more Regional Liaison Officers to support the regional teams. Likewise, the Regional Teams will have a Project Leader for each project who will be responsible for liaison with the Policy Team.

The FASVIG Network

FASVIG needs aviators to help develop the 25 ‘Packages of Change’ outlined in the FAS VFR Implementation Programme and turn them into real benefits for all of us. We can’t do this without you.

Those that step up to this challenge will become **FASVIG Champions** and

join like-minded groups of people to use their knowledge and experience of flying to drive the project through to completion. If you can fly an aircraft then you can definitely help. It doesn’t need full time commitment either, just enthusiasm and motivation. Most activities can be worked remotely by email and internet conferencing so travel would be minimal.

Before volunteering, please ensure you have taken a look at the FASVIP Packages of Change. We will need to match volunteers to the Changes so we can create a Team to take each Change forward, both nationally and where applicable in each region.

To become a FASVIG Champion go to www.fasvig.org/volunteer and complete the form. We will then get in touch with you in due course to identify how best we can work together.

WWW.FASVIG.NET

The FASVIG Network Private Website

A dedicated private website is in the process of being created to support the efforts of the FASVIG Champions, Members and Associates. Users will be given their own private login credentials and will then have access to the facilities provided on www.fasvig.net.

The facilities are yet to be finalised but will include features such as:

- FASVIG Member/Associate/Champion/Team Directory.
- Online discussion forums.
- Online team chatrooms.
- Shared Document repository/ Datastore.

Example FASVIG Champion Projects

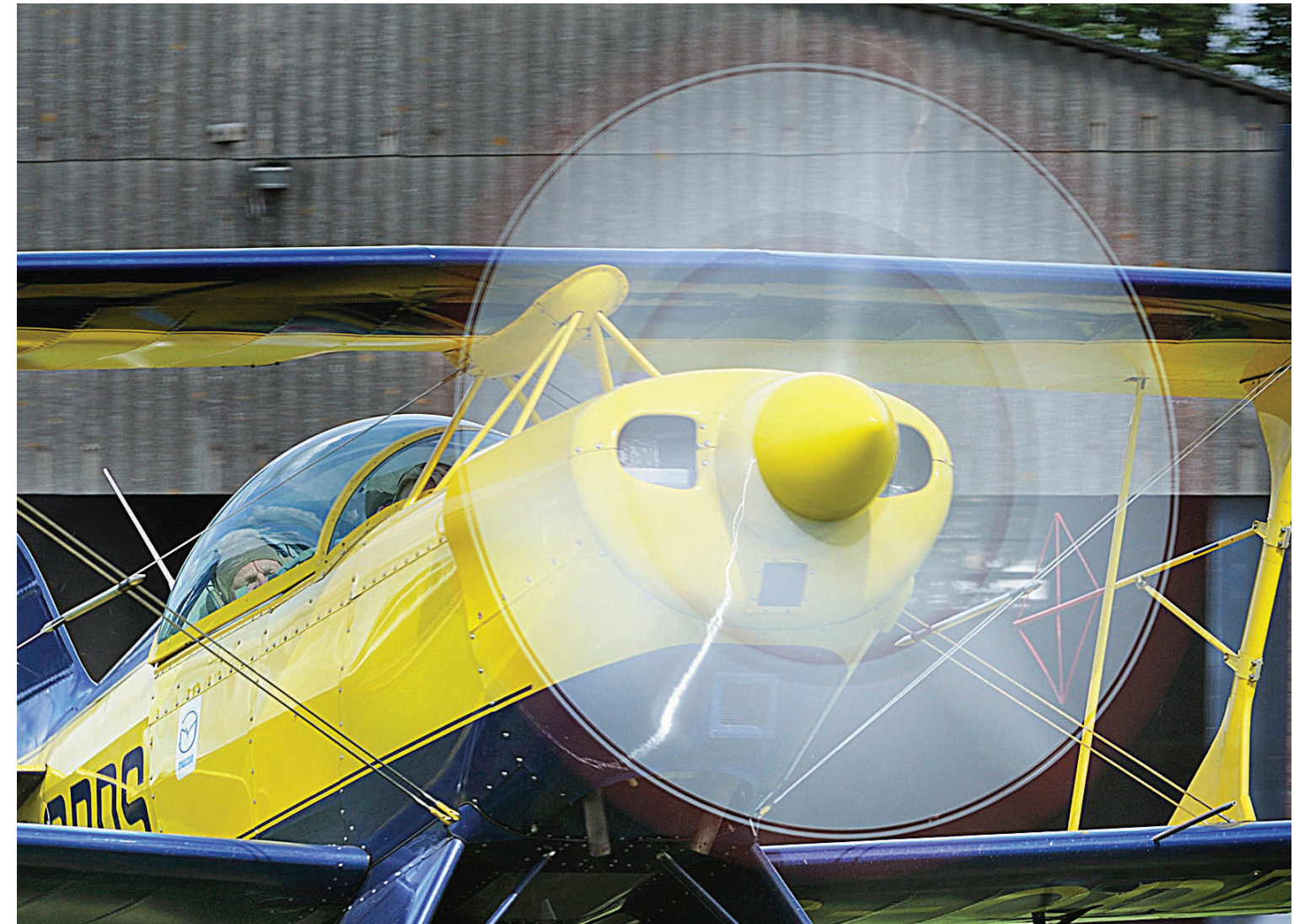
The two recent Airspace Change Proposals (ACP) sponsored under the FASVIG banner by the General Aviation Alliance are illustrations of some of the types of deliverables that the FASVIG Champions will produce.

These two ACPs have been developed by volunteers with expert guidance. ACPs are a good example where a standard template can be applied that can be adjusted to meet the specific requirements of each new ACP.



Aerobatic Marvel

Alan Cassidy can take your flying skills to a whole new level.



Gambling with her life, or having a heavenly experience on God's own aircraft (G-ODDS)? Liz Moscrop joined Alan Cassidy for her first aeros lesson...

"You've always been told stalling is dangerous and you mustn't do it. That's boll*cks. Ignore that." This radical advice comes from Alan Cassidy, four times British aerobatic champion, Cambridge University engineering graduate, RAF engineer – and aeros instructor with decades of experience. He has invited me to Freestyle Aviation, his school at White Waltham, to experience some aeros in G-ODDS, his Pitts S-2A Special.

"Stalling is not dangerous if it's part

of the plan," he continues. Naturally, it is the plan in several aerobatic manoeuvres.

I'm excited, but have some trepidation. My number one thought is I don't want to disgrace myself by throwing up. Alan explains that problems occur because we have gravity sensors in our ears to stop us falling over. The part of the brain that interprets balance believes that lack of equilibrium must be because of something we ate, drank or smoked, so it empties the stomach. It's the same thing with moving in three dimensions. Your ears conflict with what your eyes see. Part of aerobatics training is to learn how to deal with this.

But on to the fun part...

The difference between the Pitts and normal club aircraft is like dragging an untrained mutt around, rather than handling a well-trained dog. The S-2A will do exactly what you want – instantly.

Alan is about to help me expand my personal flight envelope. I sit in the front seat, which has a simple familiar instrument panel, plus a throttle, stick and rudder pedals. The major difference is an accelerometer (G meter). Not that I'm to pay any notice for this flight. I'm to look to port, at the horizon, when looping and forwards for rolls, so I can always see the centre of rotation. He briefs me to imagine I'm in a living video game, use my eyes, and enjoy.



ATA.3 Reclassify Under-Utilised Regulated Airspace

The Solent CTA-6 ACP would raise the base of Solent CTA-6 by 500ft to 3000ft amsl to match the base of CTA-7 on its northern boundary. This would improve safety by opening the narrow slot of Class G airspace above the Fleetlands ATZ and reducing the need for aircraft flying VFR to avoid the Class D by overflying Portsmouth.

ATA.6 Reclassify Class A Airspace For VFR Access

The Airway Q41 proposal would change the classification of the airway to Class D below FL80 to allow use by VFR aircraft. This would improve safety by removing the need for aircraft flying VFR to fly below FL35 during a long over-sea transit. It would also reduce the need for such aircraft to cross D-036 which carries the risk that entry may be refused resulting in the need to reroute.

The consultation period for both of these ACPs started on 28 March 2015 and runs for 12 weeks closing on 20 June 2015. Please see www.fasvig.org/acp for full details of both ACPs and for instructions on how to send your comments and responses. Do please support these proposals. They are an important first step for FASVIG in delivering change for the good of the VFR flying community.

MAS.1 VFR Significant Areas (VSA)

Within the UK FIR there are areas that are significant to VFR flight, either because they are important for military or civil training, provide VFR routes joining or around centres of population or they provide the conditions needed for recreational flying or air sports, some to World Championship standard. These areas also connect airfields used for VFR operations and provide international VFR connectivity; they are mainly over

the UK landmass including the inshore waters and islands with connections to Ireland and the near continent.

Presently there is no categorisation of these areas and when an increase in regulated airspace is proposed by a sponsor, they have no means to reference the present function or value of areas they propose to change or have an impact on. This package would propose to address that by developing a non-statutory register of VFR significant areas (VSA) that would be recognised by authority. It would mirror the existing process set up by Sport England and which performs a similar and proven function related to sports facilities and land development. This proposal would see airspace user groups develop national dossiers of such areas which would be subject to scrutiny by the CAA and where agreed, be made publicly available by authority to inform the change process. Sponsors of airspace change would be expected to take these dossiers into account and identify the impact of their proposal on existing airspace usage and offer mitigation during the consultation phase of the ACP process.

In addition, this would provide a framework against which other airspace users would be able to comment effectively on proposals for change and the decision making process would have more complete and balanced information available to it.

Much work still to do

FASVIG has come a long way but there is still much work to do if we are collectively to deliver the promise that FASVIG offers. We have the support of Government, the DfT and the CAA but they are not going to do the work for us. It is time for the GA VFR community itself to step forward, get involved and make things happen. We have a great starting platform in the FAS VFR Implementation Programme but making the changes become reality is what we now need to do. And we need to ensure progress is made throughout the whole of the UK, not just in the southeast of England where the majority of the early FASVIG Champions are based. Please check out www.fasvig.org and sign-up as a FASVIG Champion! I look forward to working with you.

Freestyle Aerobatics

It can be one hell of a workout, the main issue being the G loading on the cardiovascular system. The Pitts is also a narrow squeeze to get in and out of. To clamber in you put one foot on the lower wing, reach up to the handhold at the top, heft your legs one at a time onto the seat then slide down into the cockpit. You then strap into a seven-point harness, which includes a negative-G strap coming up from the floor. Also be empty pocketed. You really don't want detritus flying around while you're hurtling about inverted!

We took off from runway 29. There was no chance of me seeing over the nose, so I watched out the side as we bumped hard along the grass, and were rapidly airborne. We climbed swiftly, and Alan flew a couple of circuits, getting me to turn the aircraft left and right, and climb to 2,000ft (minimum height for early aerobatics students), to familiarise me with the scenery for orientation. As it was my first aerobatics lesson the idea was to acquaint me with what the aircraft could do, so he took care of power, speeds and trim. I performed a couple of loops and rolls and a quarter roll, and he added a few other manoeuvres.



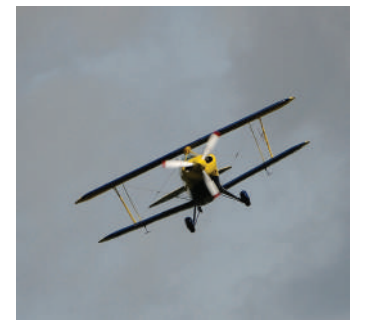
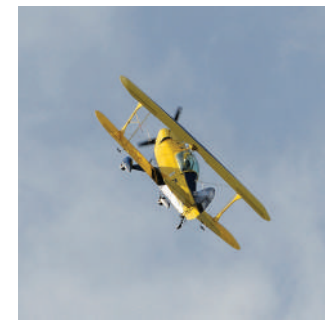
Although my experience of influencing the loops was Alan telling me to pull harder or relax, we would have entered them flying at least 140 mph. At this speed the wing will stall at 5.44G. As the speed reduces you have to make sure you are not pulling the stick back too hard, or you would almost certainly enter heavy buffet. Too cautious, however, and the aircraft would slow down too much before the apex and you would run out of aileron control to manage



the torque, even if you did not stall. His recommendation is that, initially, it is better to fly at around 150 mph, so that you can pull 4G initially and still have adequate stall margin. Starting this way and keeping the pitch rate reasonably quick for about 160° of pitch will get you to the top with good control. It's very obvious when you need to release the back pressure a little as the aircraft starts to feel heavier when you reach the corner of the radius.



Pictures by Mark Wagner, aviation-images.com



After the loops, we flew to the Thames at Henley and Alan flew me straight up at 90 degrees until the aircraft stopped – though did not stall. The wing had nothing to do, all there was left was thrust against drag. At that point the vertical stabiliser is completely defeated. This means you can turn the aircraft around with the rudder and start coming down again, then change heading by rolling a bit to come out in any direction you want. I was rather sad when we had to return to the runway, where he did some airshow style flying for our photographer to get some good pictures.

On the ground I'm waxing lyrical about the fabulous skills demonstrated by aerobatic pilots and what "they" do. Alan chides me, "There is no 'us and them' here. There is no reason why you shouldn't continue to have personal development in your own flying."

His mission is to get 2D pilots flying

"There is no reason why you shouldn't continue to have personal development in your own flying"

in 3D to keep us interested and make us safer. He adds, "We are training people to fly aerobatics and how to avoid killing themselves. Pilots who might get outside their personal flight envelope need to know how to get back inside it, without over-stressing themselves of the aeroplane."

Those who can do, and those who can't teach. That's not true in Alan's case. If you want to take a gamble and fly with him on G-ODDS, he's only officially a "Restricted" instructor, despite 4,000 plus hours of instructing on high performance taildraggers and sending students solo on his own aircraft. According to the CAA,

the only way to remove the 'restriction' is to supervise solo students during their PPL courses. So officially another instructor 'supervises' his work. Having

learned more about flying in a few hours in his company than I have in years elsewhere, I say it's well worth taking a punt – see www.freestyleaviation.co.uk



Below: White Waltham Aerodrome lies beneath the London Heathrow flight path and so you need to head out towards Henley-on-Thames or elsewhere for training.



Sun 'n' Fun



Photos courtesy of Jim Koepnick and Jessica Voruda.

James Wynbrandt flew his Mooney from St. Augustine to Lakeland in Florida for the annual Sun 'n' Fun fly-in/airshow.

The Sun 'n' Fun International Fly-in Expo (SnF) brought record crowds along with new products and airplanes to Florida's Lakeland-Linder Regional Airport (KLAL) April 21-26, reasserting the event's place in the air show firmament.

Sun 'n' Fun occupies a hallowed position on the U.S. air show circuit as the first major fly-in of the season and second largest of general aviation

gatherings, behind only Oshkosh's AirVenture in scale and attendance. It's the venue where OEM's traditionally launch the year's first new products. But Sun 'n' Fun's premier status has been under assault.

The U.S. Sport Aviation Expo, held in January in Sebring (KSEF), less than 50 nm to the southeast, marked its first decade last year, and has expanded its focus beyond LSAs to "affordable" aircraft-the primary interest of SnF's core constituency.

Across the Pond, April's now-annual Aero Friedrichshafen has usurped some of SnF's thunder. This year Aero, not SnF, was the site where Cirrus Aircraft co-founder Alan Klapmeier and Mason Holland announced combining, respectively, Kestrel Aircraft, developer of the K-350 composite turboprop single (the former Farnborough Aircraft F1)

and Eclipse Aerospace, manufacturer of the Eclipse 550 VLJ, as ONE Aviation (an announcement dutifully reprised at SnF). Meanwhile, companies are beginning to bypass traditional tradeshow roll-outs altogether, as Piper proved when it introduced its updated M-class aircraft - the M350, M500, and in-certification M600 - at its Vero Beach, Fla. headquarters a week before SnF.

Even Mother Nature has shown little respect for the institution, unleashing a tornado on the event in 2011. (Perhaps you remember the post-twister photo of a Rans sport aircraft in amorous embrace of an Eclipse 500 VLJ.)

Then there was Sequestration in 2013, the mandated Federal spending cuts that resulted in SnF agreeing to pay the Federal Aviation Administration (FAA) some \$250,000 for Air Traffic Control (ATC) services, provided gratis in years past. That precedent-setting capitulation drew the ire of other air show sponsors and GA groups (as did the FAA's blackmail, of course).

So it was reassuring to see Sun 'n' Fun regain its mojo this year, thanks to an improving GA economy, great weather, and debuts and roll outs that created a constant buzz heard even above the roar of the daily (and two twilight) air shows.



Left: The Piper M500 impresses show-goers, who await the M600 (page 48). Soon after the Sun 'n' Fun show the author tested the M350 (see next issue, and picture on page 48).

New Performers, New Planes

This year's air show line-up featured two jet teams, headlined by the U.S. Air Force Thunderbirds flying their F-16C Fighting Falcons (pictured right).

An appearance by the Thunderbirds (or the U.S. Navy's equivalent, the Blue Angels) adds an imprimatur of official recognition to any aviation event's significance and draws large crowds of locals, both adding to the show's pulse. (While final numbers haven't been published, SnF president and CEO John "Lites" Leenhouts said at mid-point that attendance was running about 11% ahead of 2014, itself a record year.) Meanwhile, Switzerland's Brietling Jet team made its North American debut at Lakeland, performing its signature Ocean Master Wave and Blackbird formations in their L-39C Albatros jet trainers.

One barometer GA's health is the volume of new aircraft introduced at SnF. An upward pace continued this year with Piper showing off in public for the first time its aforementioned M-Class lineup. Mooney International, which announced at SnF '14 the return to production of M20R/S (Ovation/Acclaim) aircraft, this year introduced the M10, a diesel powered, two-place composite aircraft, available in trainer (M10T) and sport (M10J) versions. (The "J" is an homage to the company's legendary M20J "201.") The M10J, powered by a 155-hp Continental CD-155 diesel, will cruise at 160 kts., burning five to six gph. Certification is anticipated in late 2017. Prices have not been set.



Alternative powerplants and ADS-B Out solutions have become hot button issues in recent years, and significant product news was unveiled here in both categories. Superior Air Parts announced plans for a family of diesel engines, under the Gemini name, ranging from 100 to 600 horsepower. Powerplants in the 100 to 125-hp range for LSA applications are now in development, with pre-production engines expected before the end of July. The Geminis' cylinders each have two opposed pistons, with combustion occurring between them as the pistons simultaneously move toward the center of the cylinder. Superior is in discussions with OEMs of experimental aircraft and LSAs, who would likely first offer Gemini engines as a powerplant option. No word on pricing in the UK, but U.S. target in this power range is L15,815 (\$24,900). Development of diesels in the 300-hp range, the next goal, is "down the road," the company said.

With FAA and EASA 2020 ADS-B mandates looming, requiring aircraft operating in the U.S. to be equipped with approved ADS-B Out transmitters in airspace currently requiring a transponder, pilots are searching for a practical, affordable solution. Appareo Systems, which makes the Status portable ADS-B In receiver supporting the popular ForeFlight app for IOS, showcased its first ADS-B Out solution, Stratus ESG. The company's first panel-mounted product, it's designed to replace an aircraft's current transponder.

The Stratus ESG can use the same antenna and includes a certified WAAS GPS. Utilizing a 1090-MHz Extended Squitter (rather than 978-MHz, the U.S. standard below 18,000 feet), the unit can be used at all altitudes in airspace worldwide. The traffic information that ADS-B provides will be displayed along with weather and other real time data on mobile devices running ForeFlight.

Mooney announced the M10 (right), a diesel powered, two-place composite aircraft, available in trainer (M10T) and sport (M10J) versions. Shown too is the Mooney's new cockpit (below).





Above: The Piper M350.

Roots are Showing

Sun 'n' Fun's strong roots in the ultralight aircraft arena continue to generate new growth at Paradise City, SnF's headquarters for ultralights and LSA activity. Located several hundred yards east of the main exhibition area, Paradise City's centerpiece is a 1,400-foot turf runway where OEMs showcase their aircraft in fly-bys and flight demos for prospective customers throughout the day. A pioneering spirit infuses the area, manifest in the ever-evolving designs one finds at the OEM displays here.

At Rans Aircraft, company founder and chief designer Randy Schlitter introduced the S7S Courier, latest version of its two-place tandem bush plane. A header tank and larger cowl allow installation of injected engines in the new Courier, though Schlitter said he personally prefers carbureted powerplants for their economy and simplicity. We went for a flight with Schlitter in the new model, outfitted with a carbureted Rotax 912, and didn't feel like we needed an injected engine boost at all.

Just Aircraft debuted its SuperSTOL Stretch XL, the new version of its SuperSTOL bush plane. The Stretch adds six inches to the cowl to accommodate Lycoming O-320-series and UL Power 520-series engines of 150-160 hp range, while the fuselage is lengthened two feet to make use of the aircraft's additional potential lifting capacity.

Sun 'n' Fun activity spreads far beyond LAL. Plant City Airport (KPCM),

about 8 nm west, is the staging area for many demo and photo flights. Cirrus, which introduced its 2015 model SR22 aircraft at the show, based a top-of-the-line turbocharged Cirrus SR22T GTS Platinum edition at Plant City for demo flights. The most obvious change in the new model year: an expanded spectrum of exterior colors from Sherwin-Williams. Among interior enhancements are software upgrades that increase the protection features of the Envelope Safety Protection (ESP) in its Cirrus Perspective by Garmin G1000 panel.

South Lakeland Airport (X49), a turf field just 3.6 nm to LAL's south, hosted several demonstration/display aircraft, including CubCrafters' new Carbon Cub EX2. This updated model of the company's modern interpretation of the Piper Cub features lightened lateral control forces, so pilots won't feel after landing like they've been through an extended arm wrestling contest, unlike the predecessor Carbon Cub EX. Back-to-back flights in the two models demonstrated the big improvement the EX2 represents.

An example of VANS' popular RV-1 Homebuilt.



Also here was a Husky that OEM Aviat Aircraft claims as the first piston powered, reversible propeller certificated aircraft. Created via a hydraulic/electric propeller hub, the system allows the pitch to be changed to a reverse configuration within a preset manifold pressure and RPM range, greatly improving maneuverability on water and stopping distance on land. Aviat has received a Supplemental Type Certificate (STC) for the installation.

One Big Theme Park

Lakeland has no lock on aviation activity or exciting attractions within Florida. Just up the road are the Disney World and Universal theme parks, and in Kissimmee, Stallion 51, the premier facility in the U.S. for P-51 Mustang transition training and bucket list flights. Chief pilot Lee Lauderback is a perennial performer at SnF, and Stallion 51 had a party at its SnF display area on the warbird ramp, co-hosted by "Experience Kissimmee," a local booster group, during the twilight air show on Wednesday. Kissimmee's message: Bring the family to Florida and let them enjoy the theme parks when you come to Sun 'n' Fun, and everyone will be happy. A useful strategy for prospective attendees from afar trying to get the family onboard for a trip. But watching the planes silhouetted against the stars-Matt Younkin's B-18, Manfred Radius in his H 101 Salto sailplane and the Aeroshell Aerobatic Team's T-6 Texans- shooting off pyrotechnics and filling the air with smoke and the sweet sound of aircraft in flight, it was difficult to imagine a better theme park than this.



On short finals at the rally's ultimate destination, St. Louis in Senegal.

David Vale & Glynn Wright joined French pilots for their annual pilgrimage on an historic trans-Saharan postal route, following "dans les sillages des pionniers." (in the wake of the pioneers).

This is the tale of two 60+ year olds wishing to join our French brethren on their annual pilgrimage following the original French early 1900's aviation pioneers of l'Aéropostale.

The Toulouse to St. Louis, Senegal rally has been run for the past 32 years. It involves about 5,000 nm of flying in some stark, unoccupied terrain and obviously in rather hot weather.

Glynn thought that it was now or never to take his Cessna Cardinal, G-OSFS, on this adventure. I, also being a C177 owner, was persuaded (couple of pints) that I should come along as well.

During the summer Ebola was becoming a problem and the biggest fear was not contracting Ebola but borders being closed with the thought of being trapped in West Africa.

Pre Day Zero

We were presented early with numerous French documents we had to reply to (thank you Google translate) and a start date, so we had several months to prepare and G-OSFS (FOXSI) underwent more than the usual routine maintenance during the summer.

Spares and tools were accumulated and W&B was constantly calculated and recalculated. I live in France for some of the year, so the plan was for us to take FOXSI down to Lézignan-Corbières (LFMZ) in advance of the Rally to make sure we didn't fall at the first hurdle because of English weather!

The adventure of a lifetime beckons... with a quick photo call before crossing the Mediterranean Sea.

Our Facebook Story:

facebook.com/pechecardinal

Rally website: www.rtsl.fr

Positioning

The Rally was due to start from Toulouse Lasbordes on 28/9/2014 and the week before a few Derby chaps visited us in France for a fly-boys holiday. Glynn and I were busy watching the weather forecasts for an opportune moment to leave the UK. The TAF on the day gave us improving visibility but as usual it was only partly correct, the visibility improved slightly and then went back down again. No horizon whatsoever over the Channel but managed Derby to La Rochelle without mishap, except we had a somewhat visible streak of oil down the starboard side of the cowl.





Breguet XIV. One of the aircraft types that pioneered the postal routes of West Africa.

So we decided to investigate in the comfort of a hangar at Lezignan. Seafood consumed, we then visited a bar any aviator must go to in La Rochelle – “Les Têtes Brulées” (The Head Bangers), owned and kitted out by an ex-Armée de l’Air pilot.

The next morning was bright and sunny, and involved a gentle flight down to Lezignan. All we had to do was make sun screens for FOXSI and sort out the oil leak.

Off came the crows only to find the oil was coming from a badly positioned seal. Job done. Glynn had in his possession two Go-Pro cameras (CAA skip this paragraph please) and we spent time positioning these for videoing and taking lots of stills. A short flying session with one camera on FOXSI and one in my Falco was not a great photographic success.

Our Rally package was a fat wallet of documents and charts for our route down to Senegal. We noticed that an aviation chart does not exist for Mauritania – there is a simple tourist road map that shows an occasional road. Never mind, follow the coast and look for a runway!

Day Zero

The French Meteo forecast was doom and gloom for our 30-minute trip from Lezignan to Toulouse during the week. Then miraculously, or typically, it all got better and we arrived at Toulouse Lasbordes. A very untypical French lunch of burgers and a slight panic when the Kyriad Hotel had allocated Glynn and I a double bed to share!

We collected a Medical Aid package for a hospital in St. Louis. In addition we were given two heavy boxes that were our lunches for the next two weeks.

We know the French are fairly obsessive about lunch and the box contained preserved meals of tuna, Mediterranean pasta etc. but this threw our Weight and Balance into total disarray. It did the same for everyone and we witnessed boxes being stuffed into Robins and a look of ‘we will pretend it weighs nothing.’

The evening saw an introduction to all our fellow travellers and various instructions on what we should and should not do; don’t eat salad, ice cubes with your whisky or ice cream was about the level of my understanding.

Day 1

It’s dark outside and we are getting ready for the regular morning briefing from Daniel – all in French of course, albeit Daniel’s English was fairly proficient so we generally had a ½ minute executive summary. Meteo for our flight from Toulouse to Muchamiel is not good. Our first stage down the Aude valley is showing frequent lightning strikes between Carcassonne and Beziers.

Order of takeoff is fastest aircraft first to avoid us all ending up in a heap. First off however is the scout aircraft, a TB20 with Jean-Jacques who is responsible for informing everyone in French on Unicom of any impending problems. We are in the middle of the pack with similar speeds to the Mooney and the Piper Arrow. Everyone is responsible for their own routes so as you can imagine there is some variance in waypoints. We decide to route over the Pyrenees at La Jonqueira as the high stuff is fairly well soaked in.

All goes well for 30 minutes and we pass by Carcassonne with towering cumulus (with some very black centres) giving the Aude valley severe flooding. We are still VFR and skipping over some very turbulent scattered cumuli over the Pyrenees and eventually descend to smoother air from Girona to Barcelona. Visibility is deteriorating and by Reus on the coast we are getting rain. If we had listened out on Unicom we would have known that most aircraft had diverted into Reus. Luckily in Spain ATC is in English, and the friendly ATC told us that all our friends had diverted to him. Within minutes of landing it is raining heavily and within an hour even a Ryanair has had a missed approach.

In this part of the world the weather soon clears and we are off again to Muchamiel down the coast past Valencia. Inland there is loads of bad weather



Keeping on the level at Tarfaya, the Cessna Cardinal.

surrounding solid lumps of granite. Passing Benidorm the sun is beginning to shine and we land at Muchamiel on what is designated a 950 metre tarmac microlight runway.

We are on our way!

Day 2

Glynn and I are prompt in the morning while it seems some of our French colleagues are not. The airfield is all locked up; Spanish punctuality. There is a mass of CB’s accumulating off the coast and we spend time kicking our heels waiting for the storm to go east.

We have our first box lunch, but somewhere from the back of a Robin extra food goodies are produced. The Intention is to fly to Tangier today but time is running out, with lots of thunderstorms around Malaga. The scout TB20 sets off before we all take our turn. Our alternative is Almeria and we soon discover the TB20 has got little

further than Almeria, so we divert again.

Each evening there is a ‘conference’ and tonight it is the Bonanza team. We discover that the conference usually consists of pastis and saucisson. Oblivious to airport regulations the pastis is served out on the tail plane of the Bonanza and cigarettes are lit and refuelling carries on uninterrupted.

Last minute hotel in Almeria via running streams as the thunderstorms have started again.

We are now at least half a day behind schedule, the forecast is better for tomorrow. The intention is to catch up; this means Almeria to Agadir in a day!

Day 3

Up early again! Arrive at an empty airport; Glynn and I somehow get airspace through all security without seeing anyone. The rest of the gang get totally messed up but eventually we take off to Tangier, following the Spanish coast and

routing via Malaga. Many of the French chicken out speaking English for transit through Malaga’s airspace. We ask Seville to QSY to an en-route frequency. “NO, you stay with me until Tangier!” We thought it would have been polite to say hello to Gibraltar...

The wind is blowing a hooly in the straights of Gibraltar and on top of this the Tangier controller has obviously never experienced such a traffic rush. So we spend some time over a holding point out to sea.

Lunch, preserved tinned pasta, not good... and more fuel for FOXSI, but it’s getting warmer.

Now, ATC really does get its knickers in a twist. We are bled out very slowly and he seems to think five minutes separation for wake turbulence is required. He then spends huge amounts of radio time demanding estimates for numerous waypoints en-route to Agadir. Some of the tail-enders are waiting 45 minutes at the hold. Maybe someone should offer him a bit of experience at the LAA rally.

Our flight to Agadir is a 520 nm leg, mostly inland avoiding Rabat and Casablanca. We have a dozen reporting points that are mere villages so a bit of hurried basic map principles come into play. The interior of Morocco gets more barren the further south you go. It is also getting warmer, and the visibility is hazy. We route around Casablanca without even seeing it and eventually pop out on the coast to follow it down to Agadir.

Because of the long leg we have flown and the need for some of the Robins to refuel en-route, it is sunset before we all arrive. We all pile into a coach and are transported 40 minutes inland to a delightful hotel with our own spacious bungalows, and excellent food; and luckily we are now back on schedule.

We don’t have to leave the hotel until late next morning. The relief is obvious, and by now we are all gelling as a group



Final approach, Layoune.





Short final, Almeria.

and feeling camaraderie between us, as tomorrow we are really desert-bound.

Hans the engineer is beginning to get busy, one aircraft has got an ASI failure, on another both radios failed - one with not much electricity and another lacking power. We just borrowed some lubricant to stop a door squeaking.

Day 4

Luxury this morning, a breakfast at a civilised hour with our flying suits donned for departure. Many of us have Rally flying suits because getting hot all day means the suits are easily washed overnight.

We get airborne for a 245 nm flight down to Tarfaya (Cap Juby - a staging post for the aviation pioneers) which only has an airfield for one day a year.

We are more or less in formation with the Mooney and the Arrow and gently overhaul them along the coast before we turn inland to Tan Tan. This is the first of our competition questions and we have to fly low over the airfield and ascertain the heading of an arrow on the ground. This may sound easy, especially with a runway to give some indication

but everyone is looking for pinpoint accuracy and we don't do too well.

Tarfaya dirt strip has been marked out with some white paint for the centre line, but not central at all so the instruction is to land to the right of it. To confuse even further the military, expecting an invasion, have erected some tall radio masts on final so there is a dog-leg final onto a dirt strip with bad markings.

On landing we are besieged by locals, various officials and numerous children rushing about all over the runway when aircraft are on finals. Since we arrived a military Twin Otter has been circling overhead and we are not sure whether they are here to see us or the locals.

Our accommodation is tented with hole in the ground facilities and a couple of camp fires plus two army trucks and a platoon of armed guards for us and the aircraft. A French hostage was beheaded in Algeria recently and I think it would have caused a major diplomatic problem if one of us had met a similar fate. An enormous meal of couscous and tagine lamb is served to us before we all retire for a night of an open snoring competition! Glynn should have won.

Day 5

We awake to mist with Western Sahara coffee (not good) and then wander into Tarfaya and visit the Musée Saint-Exupéry. It tells the story simply but well of the airmail service's founder, Pierre-Georges Latécoère, and the incredible service itself, which eventually became part of Air France. Rush hour in Tarfaya consisted of one 4 x 4 going down the main street.

We are presented with more competition; multi-choice material on the history of French aviation with a final one of 'Qui est le designer de la Spitfire' a) De Havilland b) Mitchell c) Bloch - we could hardly fail to get that one right at least.

Our destination today is 300 nm to Dakhla but we all need fuel so our first stop is 50 nm to Layoune, which has two runways, one for the military while the other is for us lot, the UN and occasional flights to the Canaries.

The faster aircraft depart first but they need the whole of the 750 metres of dirt to get airborne from this strip - the Cirrus is no exception. Good old FOXSI is off before the halfway mark and we land at Layoune to go through the re-fuelling rigmarole again.

All fuel is hand pumped slowly but enough is available to get to Dakhla. It is now hot, and while flying suits may be good protection, FOXSI proves a popular place due to the shade under the high wings. Warm Mexican pasta salad today washed down with warm water - yum!

Next stop Dakhla, and we are tasked with identifying the location of a photo from the air. The next 250 nm are sand, sand and sea so this really shouldn't be too hard. But we must have been mesmerised by the scenery as we completely miss it!

Dakhla is a small town sitting on a promontory sticking out into the Atlantic. We land to find a modern terminal and we are to be the only arrivals today. Again we fill in numerous forms, file flight plans for tomorrow and of course get fuel, yet again. All we want is a beer or three.

An hour before dusk we get to the Hotel Calipau; it looks like a prison and we are concerned that this may be a rough night but we are entirely taken aback by our room, which is large with a balcony, a view over the sea and a walk-in shower - and we have Wi-Fi!

Even better is that the beer is cold and our dinner was a seafood delight; well prepared plates full of razor clams and clams followed by a very aggressive-looking fish, which tasted great.

Tomorrow our 1:1,000,000 aviation charts run out and all we will have is a road map for Mauritania. SkyDemon also runs out so waypoints are added which appear in a mass of blue as there are no terrain data. There are few roads in Mauritania and two towns of significance for us, Nouakchott and Nouadibou. There are no hotels in Nouakchott as no one wants to visit; it is as hot as hell and seems unfriendly.

The option for us is not to land in Mauritania, and to that end FOXSI is fueled to the brim with a relaxed view of our W&B being taken - well, the runway is very long. We are going to fly 510 nm direct to St. Louis and are hoping we will not have a strong headwind. For others there is no option, land at Nouakchott and get fuel at some undisclosed price with cash only.



A Robin at Cap Juby

Day 6

We all arrive at the airport for the process of putting our possessions through the scanners. No-one looks at the X-Rays and no-one cares about the metal detectors.

The temperature is climbing and today we experience our first real problem. The Cardinal is not best known for its ability to cool oil with an undersized oil cooler even with cowl flaps open. Climbing soon results in the oil temp climbing and we have to climb in a series of short steps. We are comfortable at 3000 feet where the OAT is around 30C - until we cross the border into Mauritania and ATC request a climb to 7000 feet!

This is not going to be easy but we realise that radar has not come to Mauritania, so ATC has no idea where we are or at what altitude. We lie a bit and he is happy. ATC spends an inordinate amount of time requesting estimates for various locations that in a few cases we can only guess from the road map. We soon realise that everyone

else is just making up estimates to satisfy the bureaucratic process on the ground.

We have passed south through the Tropic of Cancer and nearly all across Mauritania when suddenly the desert is gone and we can see green vegetation and fresh water, but the OAT is now 32C at 3000 ft and there is humidity - and we can see CB's forming, so it is a quick join overhead and landing as loads of rain is approaching fast. Wow!! We have reached our destination; all we have to do is get back home again!

Within minutes we have a tremendous downpour which we hope has washed all the sand off FOXSI. All I can really say about St. Louis is that it really is Africa; diesel fumes, loads of people, bad smells, goats and more goats and endless rubbish strewn everywhere.

Our Hotel has history, though. At Hôtel de la Poste, the overriding obsession is with the 1920s, when St. Louis was the most important town in French colonial Africa and a company



Tetouan in northern Morocco.

LX Avionics Ltd

Fast, efficient and friendly advice and service

Ten Years of Service to
the Recreational Aviation
Community



8.33 TRANSCEIVERS



GLIDING FLIGHT COMPUTERS



COLLISION WARNING SYSTEMS



FLIGHT RECORDERS



PRIMARY FLIGHT DISPLAY (KANARDIA)



BALLOON 8.33 TRANSCEIVER & TRANSPONDER PORTABLES

For advice and service call John Delafield on 07850 950349

email: johnd@lxavionics.co.uk
mike.pettican@lxavionics.co.uk
www.lxavionics.co.uk



Our friends in Tarfaya.

called Aeropostale launched a mail service from Toulouse to Dakar. The hotel is full of aviation memorabilia and paintings, and all the rooms (not changed a lot since the 1920s!) are named after aviators. However, electricity has been introduced and each room has aircon, albeit noisy, but an absence of hot water which is not relevant as the cold water is quite warm enough.

Hot and thirsty, a few beers are consumed for re-hydration and we cross the road to a restaurant by the river for dinner. Tomorrow is a day off so no flying but a serious effort to get laundry done as all our clothing consists of sand and sweat!

Day 7

A late breakfast, well 9ish, and we get a taxi to make sure FOXSI gets as much fuel as possible. The fuel this time had been trucked in especially for us by Warter and was in nice shiny new barrels. Luckily there was enough for us to fill up, phew!

Meanwhile a Robin is having its undercarriage welded as something snapped on landing. The welder is clearly not an approved aircraft welding establishment, more like an old bus and lorry repair shop.

The military are present again as a truckload of bored soldiers appears from across the airfield. Thanks chaps for guarding FOXSI.

Lunch again across the road and the only real option is to shelter in the aircon room and have a siesta until it cools off a bit; the temperature was in the 40s.

Nearly made a disastrous mistake this evening - I ate ice cream. Luckily it must have been OK. A 4 1/2 hour flight in this heat with bad guts would not have been my idea of fun nor very pleasant for Glynn!

Day 8

We are on our way home today. We have got down to a latitude of 16 degrees and now need to climb all the way back up to 52 degrees to be greeted by autumn - oh for the cool air!

The temperature forecast is 48C and high humidity. I have never experienced this sort of temperature and humidity and even when we get to the airfield it is already 38C. The usual morning briefing means a further delay and those who have got to land in Mauritania - Nouadhibou this time, for fuel - depart first. By the time we leave the temperature on the ground is 44C and

yet because of our oil cooling problem it takes us ages to get to 3000' feet, climbing little by little.

Most of our fellow aviators are cruising happily along at 7000' in clear blue skies, but we are struggling to even see the ground at all at 3000' and have absolutely no horizon whatsoever. We descend to 2000' to see if it is any better; it isn't, and we are technically IMC for a good portion of this leg. It is a long and tiring flight today, by far the worst so far.

Back in Dakhla we are approached by Mr. Total who calmly tells us the 2,500 litres of fuel that has been pre-ordered and reserved is barely only 1,200. Now this is going to cause some issues as our next re-fuelling opportunity is 250 nm away. To make matters worse, we now have a headwind of at least 20 knots.

"We are on our way home today, we have got down to a latitude of 16 degrees and now need to climb all the way back up to 52 degrees to be greeted by autumn - oh cool air!"

Everyone calculates very carefully what fuel they need to achieve Layoune with a minimum reserve. We think we can get away with 80 litres which will make it tight.

We had all hoped we would be staying at the Hotel Calipau again but alas we are booked into the Sahara Regency, which is close to the airport and looks quite grand from the outside.

Regrettably it is well past its sell-by date. Our evening conference is on the roof terrace and luckily again Pastis is conjured up (the Bonanza seems to have an inexhaustible supply of it). The temperature though has dropped dramatically and the wind is blowing from the north.

Day 9

It's dark when we get up, and we have to refuel this morning with our meagre rations. Luckily we get our 80 litres and head off again to Layoune to get some more fuel there. We know the ropes now at Layoune and all park up, eat lunch and wait for the fuel bowser.



St. Louis ATC.

It doesn't appear!! Mr. Total has really screwed up this time; he has some fuel but not enough for us to tank up.

We go through the same exercise again - how much do we need to get to Tan Tan, a mere 130 nm away. For us this is about an hour's flight with no headwind, but there is one so we can scrape by on 50 litres.

It seems there is a further problem. Mr. Total does not have a release certificate for the fuel and this has to come from somewhere a zillion miles away. With no sense of urgency, two and a half hours later a fax machine spits out a piece of paper and re-fuelling starts again with the emphasis on speed, as there is a slight problem with 'couche de sol' (sunset). The cloud base is lowering and we make use of the HSI to put us on finals from a distance out before sunset.

It is cool here and now, back in Morocco, we all pile into a bunch of Series II Land Rovers to go to our hotel somewhere in the desert. I do not think our driver has a driving licence and he looks a lot younger than policemen do.

He does not know where we are going and attempts to follow his colleagues but fails totally when he drives straight into a sand dune. One of us has to show him that the marvellous vehicles made in Solihull have the facility to have all four wheels driving simultaneously and also have a low ratio.

In the middle of nowhere with no phone signal we are hoping not to be stuck here all night, but eventually we arrive at the most extraordinary place in the desert, Ksar Tafnidilt.

Tonight it is our turn to host the conference with a supply of Pastis and Scotch, and from somewhere a whole host of nibbles are produced. Glynn was 67 years old a couple of days ago and we have been waiting for a decent location to celebrate - This is it!! Fantastic soup then tagine dinner and off to bed.

Day 10

A spectacular sunrise and good breakfast. Last night's driver is nowhere to be seen; maybe he is at school today.

Today, destination is Essaouira, only



Tarfaya.

200 nm away and apparently the surfing resort of Morocco. We learn that we will all be going via Agadir, as Essaouira is fuel-starved.

Uneventful short flight with poor visibility. In today's competition we had to estimate how much fuel we could take. Easy for Robins – fill it to the top – but Cardinals are not filled to the top or any mark, otherwise precious fuel on a slope will rush out of the vents. We are accurate to 1.5 litres – maybe the fuel flow computer helped a bit here! We leave the Centurion behind as the alternator belt has given up again and will need a spare from Casablanca.

A look of prosperity in Essaouira and our hotel Le Medina is a five star hotel. Moreover, we arrive before dark. Dinner and a comfortable night at the right temperature make us extremely reluctant to climb out of bed in the morning.

Day 11

The wind is calm, the sun is shining and all is well with the world for our single flight of 360 nm to Tetouan. The forecast is good all the way and all we need to do is three hours flying. We have a couple of aerial photos to spot on our flight and note down the Lat/Long of one of them and the town name of the other.

We follow the coast up to Casablanca and enjoy a great view of the city. So much fun are we having that we kind of forget that we have not heard from Casa for a while and continue on our flightplan past the main airport, where there are nice big jets taking off towards us and banking away. Having stuck to an altitude of about 3000 feet I am quite surprised to see before us some tall mountains just before Tetouan (should really have planned a bit better I think). So we climb to clear them and having



A little bit of France – Tarfaya.

had a perfectly smooth day it is now turbulent when we cross the mountains to see Tetouan close to. A lot of rapid descending to join overhead and descend what seems very close to washing lines on roofs of the city sloping up the final approach. The Lancair burst a tyre yet again and with no spare to be had Claude and Claire had to spend the next few days in Tetouan. We are told that Casa lost us on the radio and were trying to get a relay on a different frequency for us to not route as planned, to avoid the main airport.

We arrive at about 14:30 and start the wait for fuel. We have never ever seen such a decrepit hand pump and the re-fuelling process took till it was dark! We grab a taxi to our hotel with the prospect of a cold beer. NO BEER! Hotel is dry! It even takes us considerable effort to get a cup of tea. Dinner is also dry but a few of the old hands order cokes and a hip flask is passed around for surreptitious coke fortification. Not really satisfying though.

There is much talk today of the weather going off severely in Toulouse by Friday when we are supposed to return. It is suggested that we return all the way tomorrow, 715 nm, to get in before it all goes pear-shaped. We will have to land at Almeria for fuel on the way but we all know the ropes there, and the fuel bowser works well.

Day 12

Damn well dark again when we get up; it's even dark on the way to the airport!

Hans our engineer is beginning to look like death warmed up; he has spent numerous night hours over the past couple of weeks fixing aircraft with all sorts of problems. He has done a fantastic job and really is the most essential chap on the rally. The doctor, however, has not had to treat anyone.

We leave Africa with a spectacular view of Gibraltar as we cross directly to Almeria for fuel. There is an air of press-on-it-is today which Glynn and I are not too happy about; there are thunderstorms inland and particularly over the Pyrenees later in the day. A lot of aircraft want to go direct to Toulouse from Almeria which means crossing quite high stuff in the middle of Spain and being at 10,000 feet to be above the cloud and see the thunderstorms. This is really not our cup of tea and anyway getting to this altitude would be difficult with our oil cooling problem.

We are the last to leave Almeria and start the five-hour flight up the coast to Perpignan and Toulouse. When we get to St. Javier we are struggling to climb from the prescribed 1000' to 4500' in a short distance. We explain our problem and given a different squawk, which turns out to have magical properties, because all the way to Girona and past Barcelona we are treated like VIP's and cleared through any airspace we approach before we ask for it. Thank you Spain, it really helped.

"We grab a taxi to our hotel with the prospect of a cold beer. NO BEER! Hotel is dry!"

As we approach the French border the weather ahead is not good and by the time we get to Perpignan we can see Beziers is socked in. Lezignan would be a good alternative for the simple reason it was near my house in Ginestas. As we approach Narbonne the visibility is beginning to look fairly grim and without local knowledge we would have diverted back to Perpignan. However I know the A61 Pégé is downwind of the Lezignan runway. So at 1,200 feet I request Glynn to follow the Pégé precisely and do not lose sight of it under any circumstances. He does, and within a few minutes we are downwind for 08 and soon on the ground. We tuck FOXSI into the hangar with the Falco and really feel like we have done a day's flying today – Tetouan in Africa to Lezignan in France.



Lunch under the wing.

After very nearly two weeks of flying we slept for ages and were extremely chuffed with ourselves for achieving something that was quite a challenge.

Day 13

Today should have been the day we all returned to Toulouse and tonight there is to be a grand presentation at La Cité de l'Espace with various mayors in attendance. We drove up the Pégé we had so carefully followed the day before. Prizes were given, presentations made, speeches were given (the French have a passion for them) and we came seventh overall in the competitions, out of 16. We were also the first British team to enter the event ever in its 32 years.

Back to Blighty

This was not easy, the weather forecast was abysmal for the foreseeable future, We took the easy option and took a Michael O'Leary flight home with the intention of returning when the weather was better. The following Friday the weekend forecast was dire and hurricane

Hotel de la Poste.



Gonzalo was on its way to the UK. Eventually though the following Friday we made it. Glynn was so pleased to be home with FOXSI that he planted her very firmly on arrival at Derby.

Would we do it again? Well, it was a challenge. The flying was not too stressful though... what tired us out was preparing for the next day and the anxiety of getting fuel.

SkyDemon was a godsend, it really did take a lot of effort out of the planning process and navigation. We used an iPad as the primary navigation tool and the Garmin GNS430 as secondary (luddite CFI's now grimacing). For weather though we found that Aeroplus Aviation weather App. was by far the best for overall for met. information.

Our best investment cost us a couple of Euros each and that was a tennis sweatband each. The worst was the Go-Pro cameras that Glynn failed to operate at any time correctly.

The answer to the above question is yes, but maybe not next year – think we should go to South Africa!

FLIGHT INSTRUCTOR REVALIDATION SEMINAR

DON'T LOSE YOUR INSTRUCTOR RATING

You may attend a seminar any time during the validity of your FI rating.

Flight tests can be arranged before or after the Seminar.

Topics covered include

- ♦ New/current rules/regulations, with emphasis on knowledge of EASA-part FCL
- ♦ teaching and learning
- ♦ instructional techniques
- ♦ the role of the instructor
- ♦ national regulations
- ♦ human factors
- ♦ flight safety, incident and accident prevention
- ♦ Airmanship
- ♦ legal aspects and enforcement procedures
- ♦ navigational skills, new/current radio navigation aids
- ♦ teaching instrument flying
- ♦ weather related topics, methods of distribution
- ♦ additional topic selected by the competent authority

Dates for the next AOPA FI Seminar

11/12 May 2015

21/22 September 2015

location

TA Centre - Booker

The cost for two full days seminar is £275.

AOPA members will benefit from a £35 discount.

For further information contact the course administrator on **07754 780335** or to register for the seminar contact the AOPA office on **020 7834 5631** or email **info@aopa.co.uk**

You can also register online at www.aopa.co.uk/thepilotstore.

IAOPA Europe Regional Meeting in Norway prompts calls for closer ties

This report appeared originally in the IAOPA Europe eNews, May 2015.

You can sign up free for the monthly eNews at iaopa.eu.



IAOPA representatives from around Europe met in Sandesfjord, Norway (near Torp Airport, to the south-west of Oslo) on Saturday 2nd May. Martin Robinson, IAOPA Europe senior vice president, said it was a great honour to chair the meeting, which was also attended by IAOPA secretary general Craig Spence.

"We come together to discuss the regulations that are put together in Brussels and enacted in Cologne, and try to come to a common consensus – sometimes this is easy, sometimes it's difficult. But we try to recognise difficulties where they exist." He stressed how important it was to recognize the role IAOPA HQ in Washington played, including through its permanent representation at ICAO. To this end, Frank Hofmann, was also present at the meeting.

Jacob Pedersen of AOPA Denmark reported on dangerous good regulation (see separate story). He said it is just "one thing we're working on in the [EASA] SSCC [Safety Standards Consultancy Committee] working group." Another issue he said is oxygen requirements – these are "very rigid, preventing

flight above 10,000ft for more than 30 minutes and completely bans flying over 13,000ft [without oxygen]." The current proposal is to align with ICAO and "turn hard [European] rules into a recommendation."

Dr. Michael Erb from AOPA Germany discussed the GA Roadmap. He is the chairman of the SSCC's GA Roadmap Group, and Martin Robinson noted its importance and the fact that "The GA Roadmap is the product of an AOPA initiative."

He said that at the WG meeting the day before another column had been added to the Roadmap spreadsheet to show status.



Martin Robinson said that the GA Roadmap would be published on the IAOPA Europe website (www.iaopa.eu) – "and there will be an additional column to show what our aspirations etc are." He urged the various all European AOPAs to publish the GA Roadmap on their websites.

One of the central Roadmap initiatives is to ensure GA's influence on the updated [EASA] Basic Regulation. "The most important changes we need to see in the Basic Regulation is the definition of commercial activities, the definition of a flight school..."



now an ATO – we'd rather go back to registration for RF is sufficient already)," said Erb. The Basic Regulation is expected to be amended in June 2017 "or perhaps a bit later," he added.

He reported that for IFR "a new task force has been started...the discussion with EASA will include the need to make installation of new avionics easier...to help make aircraft IFR certified."

He noted with respect to the En Route IR that it would prove popular in countries such as Spain where the weather tends to be "good for two weeks but you want to fly in Class A airspace," but that it was not great in e.g. Norway where weather is more often IMC.



Above: Michael Erb, AOPA Germany.

Far left: Norwegian Boeing 737 at Torp.

Left Middle: Nick Wilcock of AOPA UK.

Left Lower: Jacob Pedersen of AOPA Denmark.

Martin Robinson noted with respect to the Basic Regulation that, "We've not heard the direction the Commission is going yet." He said that the review has been triggered because "In the Basic Regulation there's an article that requires a five-yearly review of EASA."

The discussion turned to pilot training. EASA has admitted that the ATO structure is too complicated especially for small flight schools, said Erb. "The RF system was after all not so bad and didn't need changes at the lower end of the market."

Discussion also arose about whether flight instructors should be allowed to do certain training outside a flight school structure, e.g. teach mountain ratings in their own (specialized) aircraft – as "bringing the aircraft into the flight school involves lots of paperwork and is very burdensome." This is still open for discussion, he said.

Class M Light was then discussed (see separate story). It was noted that, "We are facing some opposition from the maintenance shops" who have "got used to having the work."

The revision of CS-23 certification standards was welcomed as a good thing, simplifying the rules. "This is one of reasons why our industry has hardly developed any new airframes in recent decades – while the microlight side of industry has... can even get synthetic vision easily on microlight but for e.g. King Airs it's very expensive," he added.

It was noted that the mutual recognition of STCs would be very

important to AOPA members – and that Europe has already said it wants to recognize FAA STCs. However ECOGAS has resisted this as it destroys their members' business case.

Turning to more general points, Martin Robinson said that the various meetings in Brussels/Cologne were "all interconnected."

He said that he recently took part in a debate on occurrence reporting. The European Commission wanted "all kinds of things to be reported" as it would help EASA gather data, to lead EASA to better regulation! "With our input the occurrence reporting for GA will largely remain what it has always been," he noted.

Martin Robinson also sits on the EASA advisory body – "We get to discuss their fees and charges...the Management Board has agreed that there will be no increase in fees and charges to GA – this is a good thing as the body includes airlines, manufacturers etc. – so it was quite an achievement."

Nick Wilcock gave an update on EASA FCL with one key issue at present being the new Competency Based Instrument Rating. He said that you should be able to do the CBIR after a PPL without worrying about minimum hours, "So we're going to try to change the wording to say you don't need previous experience, [such as] minimum hours." He said that there were various



WESTERN AIR
THRUXTON

**Tailwheel
Conversions &
Aerobatic Courses**
**£198 per hour
with an instructor**

Do some real flying in our
Super Decathlon



Call us on 01264 773900



**To find out more
about our courses
or visit our website**
www.westernairthruxton.com

other things that had been uncovered in a one-day review meeting of the relevant EASA working group, on which he represents IAOPA. For example it was discovered that the wrong questions were being used for the CB-IR – the content of which amounts for around 60 percent of the IR syllabus. Other updates from Nick can be found in UK AOPA's Aircraft Owner & Pilot magazine, which is also available on the IAOPA.eu website.

He said that EASA had “started talking about training outside ATOs” but that there was confusion over what “outside an ATO” actually meant – outside a flying club? At a farm with low fees? There has been no real thought put into what an ATO is, [so we need a] definition. He added that the planned approach to non-complex ATO had been “clear” until the relevant initiative was scrapped. “We need to take this very seriously,” he told the IAOPA meeting.

Craig Spence reported on central IAOPA developments such as Estonia becoming the 74th affiliate, and Bulgaria coming back in following a meeting Spence had at Aero Friedrichshafen. He said that the 2016 IAOPA World Assembly would be held in Chicago, 20-23 July 2016. There would be coordination to allow representatives to visit AirVenture Oshkosh after the event. “It may be worth telling your NAAs and saying it would be wonderful if they joined us too,” said Spence.



Martin Robinson, IAOPA vice president for Europe, chaired the meeting. Seated alongside him was IAOPA secretary general, Craig Spence.

Martin Robinson gave an update on SESAR. He said a consultation exercise was taking place on updating the ATM Master Plan. “Both Michael [Erb] and I are concerned that they still leave GA outside that plan. We wrote a letter to SESAR urging them to take GA into account more.” He reported that already SESAR had been in touch to arrange a meeting. This was urgent as “The ATM Master Plan final draft is issued in May and will go for adoption in June!” Their next plan, he said, is called Horizon 2020.

Dr. Erb said, “Our concern is in the past nine years we didn’t achieve a lot – because our business case doesn’t fit in with various big players. E.g. recent 40-page paper from SESAR on ADS-B and only GA mention was only to say FAA had identified the focus on GA as a shortcoming of NextGen!”

Frank Hofmann then updated delegates on activities at ICAO. He said to the gathered AOPA representatives, “You have a chance to provide input through IAOPA – a job that isn’t being done very well by the AOPAs but just to let you know that there is a period of time where your own CAAs make a decision...”

He said that IAOPA is represented on the ICAO Flight Operations Panel and the PBN Subgroup. “We also sit on the RPA [Remotely Piloted Aircraft] panel...the thinking at the moment is that the RPAs do not have adequate

‘see and avoid’ capability but the sector is pushing very hard to have access to airspace. So the only solution for them to integrate into the airspace is for ADS-B to be mandated on our aircraft – ADS-B is a good thing but it only works if everyone has it and the equipment is maintained and reliable.”



Frank Hofmann, IAOPA's ICAO representative.

He added that with ICAO being made up of 192 states worldwide, he was in a very good position to speak with CAA delegations to ICAO from around the world. “The opportunity I have and the reason we need to talk is that I can influence from the other ends the delegates your CAA sends, which they cycle through every three years. So I can ask questions of delegations, what you’re doing and why you’re doing it. Difficult for you to do but easy for me to do on your behalf,” he said.

He noted that 62 percent of ICAO states have a compliance level of less than 50 percent. “So the regulators themselves are not sticking to the conventions they have signed...states are not doing their jobs as they don’t have the competence – so we need to help them more. We are the experts.”

He then noted that “IAOPA is helping to design the training programmes for PBN [Performance Based Navigation]” for GA pilots; and on another matter warned that “The FAA is looking to hand over responsibility for oversight for N-registered aircraft to local NAAs...which is not a good move and will add to the heartache [for



aircraft owners.” He said that he would find out more on this when he returned to Montreal.

Lars Hjelmberg of AOPA Sweden gave a briefing on fuel taxes following a European Court ruling two years ago that fuel taxes should be treated as a production tax, i.e. a tax on what you are using when you use the fuel. That is you have to be carrying out for example the transportation of people, goods or services with an immediate connection between burning the fuel and getting the revenue.

He said that running a flight school did qualify but most companies running their own aircraft for corporate purposes couldn’t satisfy the “immediate connection” test. How to create a connection was the issue, he said, and recent rulings in Germany have confirmed that “If you create a secondary company that does services for first company, then it invoices the first

company at same time as burning the fuel, then it is tax free fuel.”

The aircraft has to be piloted by an employed pilot – but it does not have to be a commercial pilot. There has to be a profit motive however, and it has to be a risk-taking enterprise. However, there does not have to be an actual profit, just a revenue stream. “So it all ends up with new situations that have to be tested by tax courts in the respective countries – as it is down to each company...they just have to follow the principles.”

He said that this would affect a lot of small companies having their own aircraft. “The ECJ has also said you don’t need an AOC to fly on untaxed fuel,” he continued. “So it really ends up in a big mess. If an airline is doing a proficiency check with pilots, does it create a revenue stream? No! But if secondary company, then can have fuel tax-free. So I would assume there will be a lot of secondary companies created.” He predicted that the Tax Directive “will be changed sooner or later.” Jacob Pederson of AOPA Denmark said, “I encourage everyone to use this judgment – we are waiting for confirmation in Denmark.”

Martin Robinson said that the UK has now been given the go-ahead to use the minimum tax specified in the Directive, so he recommended that other countries try to get this too. “Use the European Directive on fuel tax to your advantage,” he said.



Above: Craig Spence, IAOPA secretary general, led one of the focus groups where national AOPA representatives from around Europe “brainstormed” to explore ideas of improving cooperation and effectiveness with IAOPA.

Above left: Lars Hjelmberg of AOPA Sweden discussed fuel tax laws and the European Ground Handling Directive, specifically the right to self-handle at airports.

Lars then discussed the Ground Handling Directive under which airfields are obliged to allow self-handling. “In Sweden we got evicted from our GA airport (Stockholm Bromma) and I sued the Swedish government on behalf of myself and my customers, [claiming] that the airport violated our rights. It took 3 or 4 years but now the Swedish government has accepted that anyone providing fuel [has he does] have certain rights, and so airports can’t do what they like with GA pilots and other airport users. So for the first time states that for the first time we have the same rights as an airline. When request self handling they have to set up a programme for you.”

The Directive is applicable immediately as soon as an airport has any commercial aircraft operations there. Martin Robinson said that this was a landmark case for GA. “Article 7 of the Ground Handling Directive states absolutely clearly the intention of the Directive.”

ABOUT IAOPA

The International Council of Aircraft Owner and Pilot Associations represents the interests of more than 450,000 pilots and aircraft owners in 74 countries. Formed in 1962, IAOPA is dedicated to promoting the peaceful uses of general aviation and aerial work worldwide. For more information visit www.IAOPA.org, and for IAOPA Europe visit IAOPA.eu.

AOPA Norway president Torkel Hasle and (seated left), and Tom Røren, AOPA Norway representative.



Get your partner flying!

Judith Niechcial explains how one might persuade one's partner and offspring that flying has a lot to offer and brings the family together.

It is almost a truism that pilots who gain their PPL – at great expense of time, money and effort – tragically give up flying quite soon if they cannot engage their spouses/partners in their flying adventures. Time out of a busy week to escape to the airstrip for a flying fix can go down very badly with a partner who does not enjoy and/or understand what the attraction is. This may be especially the case when there are young children in the family, and maybe two careers to manage. As for going off for a week at a time with a mate or a fellow owner of a group aircraft, forget it.

Achieving the PPL is not, of course, the end of the story. What about the exciting challenges of that night rating, that IMC, that twin rating, or even that instrument rating? How can the huge expense of these be justified in the household budget if only one member of the family is going to benefit from these achievements?

As a partner who finds going around the UK and Europe in the right hand seat beside my pilot husband a huge joy, I decided to put forward a few suggestions which I hope may help the new pilot to keep their flying in the family, and therefore keep flying. I am aware that what follows may be seen as giving credence to conventional gender expectations, but it could also be gender-reversed if the pilot is the woman and the partner a man (or indeed if we are talking about a same-sex couple).

Number one is – when you first get that shiny new PPL, do not be tempted to show off to your partner right away. First gain confidence, and consolidate your skills thoroughly. Nothing is more off-putting to a nervous first-timer in a small plane than a pilot who is not rock-solid in radio communication, navigation, familiar with every aspect of the cockpit, and able to be calm and collected if the unexpected does happen,

which it often does when you are a greenhorn. When you get her in the cockpit for the first time, give a thorough cabin-crew type briefing, explain about thermals, execute the gentlest of turns, and do not be tempted to impress with your side-slipping skills. Choose a day with calm and sunny weather. Never even think of leaving the ground if there is the slightest possibility of cloud at the wrong flight level, let alone rain. Don't attempt short runways with a passenger until you are ultra-confident and have a STOL aircraft. Careering into the hedge at the end of the grass runway is likely to put her off flying for ever. Also never be tempted to put the kids, let alone the dog, in the back seat until you are sure she is confident and happy in the front.



Judith gives some advice on how to persuade your partner and other family members to fly.

After all these negatives, here are some positives to help her get enthusiastic. Do emphasise the long gliding capacity of your aircraft; the comforting accident statistics; the huge benefit of getting where you want to go quickly and relatively directly; and the ability to go to places you would never otherwise be able to go easily unless in a light aircraft. The possibility of a trip around the Western Isles of Scotland was a big draw for me early in my flying days.



Try out several touring airfields yourself, and before choosing one to take her to, check out one with a good restaurant near interesting tourist destinations or access to something of particular interest to her. A trip to a vintage aircraft museum or a race track, however unmissable for you, is unlikely to appeal. Sea crossings, even for lunch at Le Touquet, should be left until you feel really confident.

OK. Once you have engaged her in the process, here are some tips for keeping her involved. Explain the basic instruments – the compass, the altimeter, the transponder – and ask if she would like to help, by for example keeping a look out for other planes. She could keep track of your position on the VFR chart.

Even if you have a GPS, and especially if you're using an IFR chart, that is a useful job. With very little induction she will be able to set the squawk, dial in the radio frequencies, and double check altitude clearances. With a little more guidance she will be able to hold the plane straight and level while you have a head-down task to do. All these jobs free up your workload, and help her to feel that she is involved and contributing to the success of the flight.

On longer trips the labour can be successfully divided. You are responsible for the flight plan and the weather decisions, she for booking hotels, restaurants, and taxis. In this way you both have equal status as trip organisers, and are set fair for a great holiday. That will keep her coming back for more.

Happy family flying!

Letters

Letters of Agreement

With reference to the recent article published in General Aviation (February 2015) entitled 'NATS stumbles on SERA' NATS would like to correct some facts and perceptions that were reported.

NATS has invested significant effort, working closely with the CAA, to manage the impact and implementation of the European SERA rule changes. We have been working with the CAA since 2010 to understand and integrate SERA and formal CAA-led industry implementation work began in January 2013. We believe that far from 'stumbling,' we have been very successful in implemented SERA into our operation with the minimum impact.

However, it soon became apparent that the imposition of SERA rules would affect some of the procedures that have been safely deployed in many of the Control Zones in the UK to permit easy access to GA airfields. As the legal deadline for implementation approached, NATS wanted to communicate our

concerns regarding SERA and the possible impact on 'Letters of Agreement' to those potentially affected and we felt it was only right to highlight the potential implications. The letters were sent in an effort to expedite conversations that were urgently needed between the regulatory authorities and those airfields.

We maintain our position that early notification to the organisations affected was a fair and pragmatic way forward as it is our continuing belief that some elements of SERA, in particular SERA.6001 (d) operations within Class D airspace, do not permit compliance with our Letters of Agreement as they currently stand. Happily, at the moment the LOAs continue to operate under agreement and direction from the CAA.

We remain committed to working with the CAA and DfT to ensure fair access to airspace for all users. It has never been and is certainly not our intent to remove Letters of Agreement, but we must always ensure absolute compliance with SERA or CAA/DfT Directions as part of our regulatory accountabilities.

Yours sincerely,

Brendan Kelly,
NATS Head of Systemised Airspace
and Airport Integration.

Viva la France!

I have been a member of AOPA UK for as long as I can remember, and although I live in France I retain my UK membership. As an association of co-owners at Atlantic Air Park, in common with all private aerodromes in France, we recently faced a threat requiring us to apply for a new authorisation every two years. Apart from the cost, inconvenience, threat and stupidity, imagine the value of investment in our aerodrome and homes with this sword ready to fall regular intervals.

We asked AOPA France to intervene on our behalf, and the outcome was so successful that not only were Air Parks excluded from this threat, but in fact the whole idea has since kicked into the long grass.

Apart from corporate membership of our Association we are encouraging individual membership of AOPA France. In fact all of our "British" ex pats are already UK members.

For anybody reading this who is not a member of AOPA, you better do it now!

Ron Turner,
Président, Atlantic Air Park,
France.

CLASSIFIED EXTRA



G-JAKI, 1995 M20R, 1369h TT, 54h SMOH, 180kts, 280hp TCM IO-550-G, speed brakes, full IFR panel with Garmin 530, Sandel 3308 EFIS, KFC-150 flight director, KX-165, KN-62A DME, KR-87 ADF, KT-73 mode S transponder. Insight GEM-602 engine monitor, Insight SF- 2000 Strikefinder, Shadin fuel computer, electric standby vacuum pump, wingtip recognition lights. Fresh annual June/14. VAT paid. Further details available from David Abrahamson, email david@cs.tcd.ie or telephone +353 1 896 1716.



GULFSTREAM AMERICAN GA 7 (COUGAR)
1979 4 Seater
Twin Lycoming 0320 160HP engines
4146 hours
Very well equipped with GNS 430 & 2nd Radio
Professionally maintained & in very good condition
Based Rochester, Kent
Price: £35,000.00
Tel: Ian Mason 07973 242672 or ianm@london-marketing.com

Insurance

life cover for pilots

Without specialist advice pilots can often face expensive premium loadings when applying for life cover.

We can usually secure standard rates with no aviation exclusions.

- Life assurance for your family, mortgage or business
- We help recreational, commercial, instructor and student pilots
- Cover can be arranged over the phone
- Our insurance advisor holds a PPL
- Online discounted quotes

stein pilot insurance

01793 491888

www.flyingcover.co.uk

Aircraft Insurance Are you paying too much?

Visicover is a unique service that lets you buy and manage your aeroplane or helicopter insurance online whenever it suits you.

- Get an instant quote online
- Spread your premiums for free
- Select the cover you want
- 24-Hour claims hotline service

To find out more go to Visicover.com

Visicover

Authorised and regulated by the Financial Conduct Authority

Aircraft protection

Cambrai Covers

Specialist Covers Since 1979

www.cambraicovers.com Cambrai Covers - Home and Dry

- Reduce Aircraft Deterioration
- Reduce Pre-Flight Time
- Improve Engine Starting
- Reduce Maintenance Costs
- 400 Patterns in Stock!



email: info@cambraicovers.com

+44 (0)1377 267426

FOR SALE

PA30B Twin Comanche 1967



Based at Lydd. Fully renovated, new interior and panel. De-iced. Was on UK register. New permit. Very low time engines and props. Garmin GNS 430 GPS/COM, Narco 810 TSO COM1 NARCO NS 800 VOR/DME/GS/RNAV, Garmin GTX 330 Mode S Transponder, Bendix/King KR-87 ADF system/timer, Dual CDI/Glideslope indicators. It has also has a new powder-coated instrument panel, electric trim and autopilot, long range fuel tanks, JPI EDM 760 Engine monitor. Ready to fly and conversion training available. Serious economical transport or training aircraft. £50,000 or Offer geoffreyboot@gmail.com Mob 07860728529

1963 PA24-250 Comanche



Stunning loaded Comanche, the best one outside of the USA. Please call or Email for full spec and photos, there is just too much to list here. £54,000 ono Email: brain5@mac.com. +44 (0) 7771511734

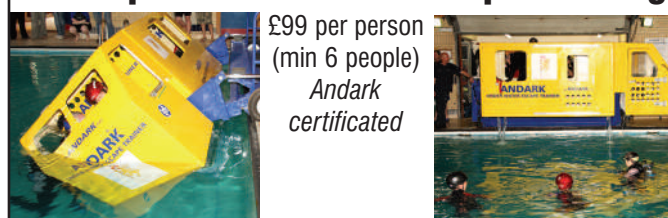
Safety

Andark Diving & Watersports

www.andark.co.uk Email: admin@andark.co.uk

Telephone 01489 581755

Helicopter Underwater Escape Training



£99 per person
(min 6 people)
Andark
certificated

Aircraft restoration

Cornwall Aviation Services

SPECIALISTS IN RESTORATION AND REBUILDS



- Highly experienced staff
- Friendly and helpful
- Reasonable prices
- Flexible approach
- Routine maintenance available

Based at Bodmin Airfield in central Cornwall (PL30 4BU)

For more information call: Rod Bellamy on 01208-821535

E-mail: cas@cornwallflyingclub.com

Web-site: www.aircraftservicingcas.co.uk

FOR SALE

Turbo Arrow IV, Fairoaks



1/5 share for sale

Two 1/5 shares available in excellent low hours Piper Arrow IV. Great tourer (140kts cruise), full IFR kit, incl: GNS 530 (8.33KHz), Stormscope, Mode S, Autopilot, Oxygen. TTAF: 3390; Eng 580 SMOH; Prop 290. Leather interior. Costs (based on 5) £240pm, and £150 per hr wet. Significant engine fund. Price: £12,000 ono per 1/5 share. Contact David on 07765 251740; E mail: blakedj@btopenworld.com



AA5 Traveler

G-BBDM - AA5 Traveler - 1/5 Share £4,000. £110 pcm and £80 per tach hour (wet). Excellent availability - internet booking. Four seater, full IMC fit - Based Thruxton (EGHO). Airframe 2850 hrs., recon. Engine. Recent annual/CofA. Contact: Tony Harris (0777 5504526 or anthonywharris@hotmail.com)

Navigation aids

SkyDemon

Your SkyDemon subscription is now accessible on iPad, Android, PC and Web.

- Unique ultra-clear vector charts
- Peerless briefing and safety features
- Unmatched integration between planning and flying
- Packed with powerful features but simple to use

SkyDemon makes VFR easy and more fun. Start your free trial today.

www.skydemon.aero

Available on Google play and the App Store

Derrick Ings Aircraft Sales

offer a professional, friendly & individually tailored service to both business & private clients to suit your specific requirements & budget



PIPER SENECA II (1978)

TTAF 7547. Engines Zero in 2014 & 1405 last o/h in 2009. Props 1165/1165. Annual valid Sept/2015, ARC valid June/2015. Garmin GNS430 NAV/COM/GPS, King KX155 NAV/COM, King KR87 ADF, Century NSD360 HSI & King No2 GS, King KN64 DME, Trig Mode S Transponder, Altimatic IIIC Autopilot, Garmin GMA340 Audio/Marker Panel. 2nd Altimeter. Deiced. 1999Kgs certified.

GBP£80,000 (Plus VAT where applicable in Europe)



SLINGSBY T67C FIREFLY (Aerobatic/Trainer) (1989)

TTAF 4786. Engine 381 (last overhauled 2004). Prop 232 (fixed pitch). Annual valid Aug/2015, ARC valid June/2015. King 196A COM, King KNS80 RNAV/DME w/GS, King KR87 ADF, King KT76A Mode C Transponder, King KMA24H Audio panel, Intercom. Accelerometer (G-meter).

GBP£25,000 (Plus VAT where applicable in Europe)

CHECK WEB SITE FOR LATEST LISTING - WHICH CAN CHANGE AT SHORT NOTICE - IF YOU ARE A SELLER - DON'T FORGET TO CHECK THE WANTED PAGE ON THE WEB SITE.

For further information contact:

DERRICK INGS AIRCRAFT SALES

PO Box 1559, Gillingham, Dorset, SP8 4WB, UK.

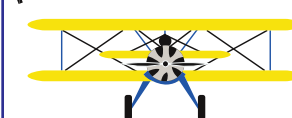
Tel: +44 (0)1747 825378 Mobile: +44 7836 708564

Email: sales@derrickings.com

www.derrickings.com

Flight training

PRESTON AVIATION



You TOO can fly a Stearman!

www.flytailwheel.com
Winter Haven, Florida

Technical services

Planeweighs Limited

Aircraft weighing & technical services
PIPER CUB to BOEING 747
Load/Trim sheet design
CAA approval A1/8538/79

Engineers throughout the UK

Tel: 44+ (0) 1792 310566 Fax 310584
Mobile: 07798 662 939

email: info@planeweighs.com
www.planeweighs.com

Classified adverts

Contact David Impey

(T) +44 (0) 207 834 5631, (M) +44 (0) 7742 605 338
(W) www.aopa.co.uk (W) www.airsoc.com

AOPA Awards 2015

**Presented at AeroExpo, Sywell.
Saturday 30th May 2015**

The following AOPA awards for 2015 were announced at AeroExpo, Sywell Aerodrome. The presentation ceremony took place in the Cirrus Room at the event on Saturday 30th May 2015 (apart from the first award, which took place at Duxford Aerodrome on 30th March).

Lennox-Boyd Trophy

Rt. Hon. Grant Shapps MP



Awarded to a person, club, group or organisation who has contributed significantly to the furtherance of general aviation, flight training, club flying or piloting standards. The trophy is a cup in a special presentation box that was originally given to the Association of British Aero Clubs by the late Rt Hon Alan Lennox-Boyd PC CH MP (subsequently Viscount Boyd of Merton) in 1953.

The Rt. Hon. Grant Shapps MP has been a PPL for many years and was first elected as an MP in 2005. Most recently as Minister without Portfolio he recognised that General Aviation was under considerable pressure from a number of factors that were leading to reduced participation in the activity. In accordance with Government Policy he initiated the Red Tape Challenge for General Aviation which recognised that GA is a crucial part of the UK's aviation sector: it trains the next generation of pilots and engineers; supports highly-skilled jobs; provides essential services;



AOPA chairman George Done (third from right) handed out the awards at Sywell.

and forms a key part of our cultural heritage. The outcome of this exercise was to identify an extensive reform programme to be implemented by the DfT and CAA. In particular, the CAA identified the need to set up a separate GA Unit leading to the removal of any gold-plating of regulations from EASA and 'lighter touch' on all aspects of GA not within the remit of EASA. Funding was also to be made available to support investment, jobs and growth in the GA sector. Such dramatic changes for GA would not have been possible without the leadership of Grant Shapps and for this reason AOPA has awarded him the Lennox Boyd Trophy.

AOPA Special Award

Cliff Whittaker



Awarded to a person who, or organisation that, has made a special contribution to safety, customer care, or other area of general aviation. The trophy is a cup originally presented to the British Precision Pilots Association in 1987.

Cliff, while at the CAA and over the past five years, has made an outstanding

contribution to the entire UK aviation community by grasping the nettle of European aviation regulation in a manner which has ensured that our transition to Part-FCL has been achieved less painfully than would otherwise have been possible. Cliff's incisive analysis of complex changes to flight crew licensing regulation has benefitted the UK GA community considerably; his pragmatism has also ensured that adequate provision has been made for all airspace users in as flexible way. Cliff recently left the CAA and is now working for the Engineering Sciences Data Unit.

Best Aerodrome

Wellesbourne Mountford



Wellesbourne's Christine Bell received the award on behalf of airfield manager Michael Littler.

Awarded to an aerodrome that offers outstanding facilities and helpful service to residents and visitors alike. The trophy is a sword donated to AOPA by Airtour International Ltd (now Pooley's Flight Equipment Ltd) in 1982. The sword was renovated by R Pooley in 2004.

Wellesbourne Airfield is a busy and popular ex-WW2 airfield close to several famous tourist sites, notably Stratford-upon-Avon, having two hard runways and a well maintained grass strip. It is home to about 70 based aircraft, three flying schools and two maintenance facilities. The aerodrome attracts many visitors, both those who fly in and those who arrive by other forms of transport. Families, local folk and passing visitors are welcomed, the culinary delights of the Touchdown Café being an especial attraction. On site is the Vulcan XM655 supported by an active restoration group - although non-flying, it is still capable of taxiing, and does so on special occasions. There is also a small aviation museum, based in a WW2 underground command and control bunker.

Contribution to the Community

Tim Dawson



Awarded to a person or organisation who has made an outstanding contribution to the aviation community. The trophy is a cup donated in 1997 by *Flyer* magazine.

Tim Dawson, who gained his PPL in 2006, is the managing director and chief software architect at SkyDemon, the well-known VFR flight planning and navigation software provider.

SkyDemon is recognised as having made an outstanding contribution to the aviation community by its simple and intuitive program that links to a moving map enabling real-time tracking and accurate situational awareness.

Weather, NOTAMS, aerodrome plates, weight and balance, flight plan filing, flight details and a host of other features combine to enhance pilot awareness and safety.

Individual Merit

Stephen Slater



Awarded to a pilot or individual who has made an outstanding aviation achievement. The trophy is a cup on a granite plinth.

Steve is Vice Chairman of the GAAC with special responsibility for ensuring that airfields continue to serve the GA Community. The need to secure their future means that he is constantly involved in defending landing and take-off sites from closure due to housing and other development. He also deals with those who wish to build obstacles that may intrude on airspace generally or on approaches in particular that are a threat to aviation safety and his interaction with Local Planning Authorities is of vital importance. His liaison with the CAA enables input to the relevant CAPs and most recently on the need for the conspicuity of metmasts. His reports on the AOPA Website News provide more than ample evidence of his constant efforts to protect and safeguard the essential network of airfields in the UK.

Instructor of the Year

Roy Murray



Awarded to an instructor who has made a special contribution to the training of student pilots for the PPL or NPPL, or to private pilots for added qualifications.

The trophy is an art deco cup donated in 2004 by Virgin Experience Days.

Roy Murray is Chief Flying Instructor for the Frank Morgan School of Flying, based at Humberside Airport. He made the national newspaper headlines and television broadcasts in October 2013 when a critical emergency was declared after the pilot of a C172 fell ill and collapsed at the controls, leaving the passenger having to take control of the aircraft. The passenger had no flying experience and Roy was called in to advise him on how to bring the aircraft down safely. He was able to keep him calm whilst talking him through the landing procedure. A successful landing was made at the fourth attempt well after sunset in the rapidly failing light.

Friend of AOPA

Anthony Davis



Awarded to a person or persons who has or have made a special contribution towards the work of AOPA. (A half-pint tankard to keep, no permanent trophy)

Anthony is a long standing member and supporter of AOPA, and has generously provided the fixed base flight simulator that is to be found in the AOPA headquarters building. It is capable of simulating a wide variety of aircraft from Cessnas to Airbus types. It is readily available for use by AOPA members and visitors alike and Anthony provides welcome guidance on its use. He is particularly keen to use the simulator to promote flying to younger and school pupils are often to be found having fun on the machine. Through his job, Anthony also promotes AOPA on national radio.

BOSE
Better sound through research

Why I fly.

"To capture the beauty of flight."

Jessica Ambats, Pilot // Aviation Photographer



Why Jessica flies with the Bose A20 headset.

To capture that perfect shot, every moment counts. That's why Jessica relies on the Bose A20 Aviation Headset for clear communication. Noise and wind can interfere with critical dialogue between her pilots, sometimes causing safety concerns. The A20 headset offers 30% greater active noise reduction than conventional headsets, so Jessica can hear more of what she needs to hear. And with 30% less clamping force*, she can stay focused on her flight.

Bose® A20®
Aviation Headset



Visit us at www.bose.eu/A20 or contact one of our authorised sales partners for a demonstration:

Mendelssohn Pilot Supplies
www.gps.co.uk

Heli Air Ltd.
www.heli-air.com

Pooleys Flight Equipment Ltd.
www.pooleys.com

Transair Pilot Shop
www.transair.co.uk

HSL Headset Services Ltd.
www.headsetservices.com

The AOPA Pilot Store - London
www.aopa.co.uk/thepilotstore

Connect with us @ BoseAviation



#WhyIFly #BoseA20

©2015 Bose Corporation. *When compared to conventional headsets. FAA TSO-C139 and EASA ETSO-C139 certified.