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Piper's new M600 is the product of customer feedback, put into practice. See how Piper designed its new model, borne from the shortfallings of a predecessor

GARMIN'S G5 The latest bit of Garmin kit receives certification

AOPA AWARDS

Who won what at the recent Aero Expo

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CHAIRMAN'S MESSAGE

LET'S MAKE SURE WE TALK

very two years, AOPA presents its Awards for Achievement and Endeavour. This is a happy and rather special occasion celebrating the unique contribution recipients have made to the wellbeing of General Aviation in the UK and further afield. The trophies were presented during Aero Expo 2017 at Wycombe Airpark in the AOPA marquee. Details, including the award specifications and citations, are to be found on page 22. It will be seen that amongst the award winners are people whose efforts are mainly behind the scenes, but who provide an important role in ensuring the future viability of GA.

A valuable benefit arising from Aero Expo is the opportunity to meet and chat to visiting AOPA members. The relaxed and sociable atmosphere allowed discussion of many concerns and problems, not least the topic of Brexit and its future impact on aviation – the subject of this column in the June issue of the magazine. Representatives of the various AOPA committees and working groups were available to provide advice on topics such as aerodromes, flight training, licensing and maintenance.

Later in June, the AOPA Members Working Group held a meeting, hosted by On-Track Aviation, based at Wellesbourne Mountford airfield, and ably chaired by Board member, Pauline Vahey. These informal meetings, as at Aero Expo, provide key channels of communication between the wider membership and the AOPA Board. This one attracted a good turnout, the majority of whom hailed from the Midlands area, and led to a worthwhile discussion and exchange of views – more on page 10.

Following the meeting, many of those who attended were treated to a tour and visit to the cockpit of one of the last Vulcans to be built for the RAF. The Vulcan is based at the airfield and maintained in ground running condition by an enthusiastic band of volunteers, the XM655 Maintenance and Preservation Society. The journey up to the cockpit is best described as a mini assault course, and the final stage into the right hand seat of the cockpit was a very tight squeeze. In the left hand seat, and providing a first-hand account of what the bomber was like to fly, was ex-Vulcan pilot, AOPA Board member and flight crew licensing guru, Nick Wilcock. As I remarked at the time, the whole flight deck appeared to be an ergonomic nightmare, and the outside view not much better.

Whilst such fascinating extras cannot be guaranteed at every WG meeting, look out for details of the next meeting – this will be held at Gloucestershire Airport on Saturday 09 September 2017. Please note the date in your diary, especially if the venue is easily accessible for you. Any AOPA member is welcome to attend. To help ensure the future viability of GA, AOPA needs to be tuned into members' thoughts on current issues, and your support is appreciated. We look forward to seeing you there.



George Done Chairman, AOPA UK george@aopa.co.uk

AOPAUK

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Articles, photographs and news items from AOPA members and other readers are welcome. Please send to the Editor. Inclusion of material in AOPA Magazine cannot be guaranteed, however, and remains at the discretion of the Editor. Material for consideration for the October 2017 issue should be recieved no later than 01 September 2017.

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AIRFIELDS UPDATE John Walker explains all the llatest on the UK's airfields that are potentially under threat from greedy developers or uncaring councils.

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EDITOR'S MOMENT

GOT TO LOVE SUMMER...

What's not to love about summer? Especially as a pilot and aviation lover. Living between Panshangar and Elstree, it always makes me smile hearing an engine bumbling along overhead. And long evenings mean it happens more often than not. But as we all know there is a serious threat to the future of GA in the UK. There are plenty of airfields in jeopardy, including Panshangar, and we need to make sure we do not lose these valuable assets. Nnot only are they crucial for GA enthusiasts and hobbyists, but the network of airfields in the UK provide an important transport network. On page 11, Pauline Vahey has explained a new and innovative way we can all help. It's important that we're all aware of these threats, but this magazine is also about the joy of being in the sky. Ian Nayler's article on importing an aircraft from Modolva, the hoops he had to jump through and the fun he had - is a romp of a read! So, as they say, while the sun is shining make hay. If you don't want to, go flying!

David Rawlings Editor, AOPA Magazine UK david.rawlings@aopa.co.uk





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ANOTHER BUSY PERIOD FOR THE ASSOCIATION

ne of the privileges of my job is I get to meet many members, particularly at events like Aero Expo. I was surprised when a pilot came to the stand and said, "I would join AOPA, but it doesn't do anything". Thinking about that comment, I wondered why he thought that? I mean we have the excellent magazine, website, Facebook, Twitter etc. so it cannot be we are lacking on social media! So I am interested to hear from members about where you think we could do more to promote the Association.

The primary role of the Association is to give GA a voice in areas of government that matter, and help in the safe development of piloting GA aircraft. AOPA provides assistance to individual members if and when the need arises and there are always a number of pilots who need our assistance for whatever reason. And AOPA supports in kind and financially other bodies like GASCO, FASVIG and GAAC where we feel its important to have a collective GA voice.

AOPA has a team dedicated to serving the membership. The results of consultations and meetings are only as good as the level of advocacy AOPA can provide. Your subscription allows us to speak for our members but, sadly, too few pilots appreciate why there is a need for a strong voice yet are happy to benefit from the results. Whilst I would like more pilots to join AOPA, the fact is you should join any association that meets your needs. So if you know pilots who don't contribute to associations, have a word.

1ST-3RD JUNE

Let me start by saying congratulations to Alex Ayling of Aero Expo for running a well organised event.

Alex, John and his team work hard to make sure our industry has a showcase event and AOPA is committed to supporting the show next year.

Next let me thank Jeppesen for the remarkable support they give us and

I can mention Cay Roth and Reggie Arsenault – thanks guys, we really value the relationship.

It was great to meet new members and see old friends in the marquee. If you enjoyed it, please let us know. It can help us make improvements for next year (info@aopa.co.uk).

20TH JUNE

Had a meeting with the CAA to discuss the proposal for developing LPV Approaches at Haverford West. Philip Church and Ken Ashton are AOPA's technical experts. The meeting was conducted in a professional/friendly manner and I thank the CAA for their constructive inputs.

21ST JUNE

There was the meeting of the AOPA Training Committee; all of its members are volunteers. The Committee is chaired by Ian Marshall, a highly experienced examiner, instructor and airline pilot. If you feel you'd like to make a contribution to furthering the quality of flight training or want to raise an issue related to instructing or training, email info@aopa.co.uk – all contributions are welcome!

23RD JUNE

Attended the CAA Finance Advisory Committee. The CAA is running a tight budget – they are trying to transform their business processes. It's like doing ship repairs without going into dry dock!

The 6% rate of interest on deployed capital has been reduced to 3.5%, in line with other government bodies. However, as the CAA rarely achieved 6%, I do not think we will notice any difference or changes but the principle in changing was the right thing to do.

24TH JUNE

MWG meeting in Wellesbourne. A good turnout given the weather. As a result of the discussion, AOPA will move to fly-in events. If you'd like to host one, please let me know.

27TH JUNE

Attended the BBGA/CAA PBO (Performance Based Oversight) meeting. The CAA is transitioning to a performance-related safety oversight system for all involved in regulated aviation. I am not convinced PBO is the way forward for small entities, and I wonder if a CBO (Compliance Based Oversight) system would be more straightforward. The idea being that the entity is audited with respect to the regulations relating to their activity. So if the rules are established to deliver a set of safety outcomes, and the entity complies, then safety should prevail.

28TH JUNE

Made a visit to Elstree to chat to Mike Murphy the manager, who is doing great things, including the possibility of new hangars. Without people like Mike, GA wouldn't have the facilities it needs. Thanks Tony for lunch!

30TH JUNE

Met with Douglas Cairns from the "Pilots with Diabetes" group for an update on the Class 1 Medical issue. We should also recognise the efforts of the CAA's CMO Dr Sally Evans, who has been leading from the front on this subject – more to follow!

4TH JULY

Teleconference with Philip Church, Michael Erb and myself about our next involvement with SESAR – Europe's next gen of ATM.

5TH JULY

AOPA Board/Executive Committee meeting when we discuss many of the issues contained in the magazine.





Martin Robinson CEO, AOPA UK martin@aopa.co.uk



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AOPA COMMUNITY





WORKING FOR YOU What AOPA is doing for you



AIRFIELDS UPDATE The latest from around the UK



PPL CORNER Help with the written exams



AOPA ADVICE Look after your aeroplane



09

WORDS Pauline Vahey

APA ON THE ISSUES All the latest from the meetings within AOPA that look out for the pilot

The Members Working Group and and Corporate Members Committee have regular meetings to ensure the world of General Aviation is being taken care of, and that the businesses involved in GA are protected. In the latest meeting, which took place on 24 June at Wellesbourne Airfield, the following subjects were the hot topics of debate amongst the Members Working group.

NEW MEMBERS

A discussion of how to get people back into flying, such as the US AOPA Rusty Pilot scheme, was had.

Martin Robinson announced the development of an AOPA app, one feature of which would help AOPA members better communicate with each other, and reveal where the information they needed could be found.

NEW AOPA WEBSITE

Mick Elborn announced that the separate ecommerce website would be closing and membership payment will be brought into the main website, making one single AOPA website.

Online Pilot Supplies will be available through Pooley's with AOPA members receiving a 5% discount on eligible products if they use the AOPA promotional code. Pooley's are going to provide a landing page that will explain it all. **AIRFIELD CLOSURES** John Walker presented his report on Airfield closures. Progress worth noting was the court action by the ttenants at Wellesbourne is still pending, and will probably now be next year.

Despite the confirmed scaling down of operations at Coventry, they were advertising for a permanent FISO. The example of Lyon airports in France was mentioned as a template for how the UK might like to run an international commercial airport next to a small business/GA airfield; in Lyon, both airports are owned and operated by the same organisation. Andrewsfield is still being identified as one of three potential sites for housing for a new garden city. Proposals to restore Panshanger as a non-licensed aerodrome are expected shortly.

NEXT MWG

The Next Members Working Group will take place 09 September at Gloucester. The airport will waive airport parking fees, with free vehicle parking. And for those uploading fuel (the fuel is cheap), the landing fee will also be waived. There is also a Jet Age Museum on the airfield, and we will arrange a free visit after the meeting, for those interested – apparently it's well worth a visit.



GA NEEDS YOUR HELP

We all know that GA airfields are under threat. The national housing shortage and the pressure on local councils to deliver their Local Plans by March 2018 places severe pressure on airfields to justify their value both to their owners, and to local authorities, who are eyeing many of them as ideal sites for much-needed housing. In contrast, nationally, the Government has a vision for the UK as "the best place in the world for GA as a flourishing, wealth-generating and job-producing sector of the economyw" (Department for Transport's General Aviation Strategy, 2015).

So I am delighted to be able to say that the UK's GA Community has 'landed' on how to reconcile these two rather different positions. GAIN (the General Aviation Infrastructure Network) seeks to establish a strategic network of airfields, the members of which will be protected (it is intended) by law from closure and conversion to non-aviation use. Airfields in the network will need to meet criteria to ensure that airfields considered by the aviation community to be safety critical will be protected, as well as those that are the more obvious and more frequently used transportation hubs. Indeed, GAIN also exists to promote GA as a viable method of transport.

GAIN will be working with Government, with the new All Party Parliamentary Group for GA, as well as with the GA Community to ensure

success in this most worthy of endeavours. Furthermore, GAIN has been established as a Community Interest Company (CIC) which better enables any surplus to be reinvested into the GA Community. However, the establishment of GAIN is just the beginning of a very important campaign that needs your help now. National campaigns are expensive and to enable the GA Community to support its vital work, GAIN has identified both the sponsorship opportunities as well as a three-tier donation structure (CIC status also entitles donors to Social Investment Tax Relief):

BRONZE - £1,000 to £10,000 SILVER - £10,001 to £25,000 GOLD - in excess of £25,000

All donors receive a free subscription to the GAIN Newsletter and GAIN merchandise. Bronze donors will also receive discounted tickets to the GAIN Gala Dinner set for Thursday 12 October 2017 in London. Silver donors will receive discounted entry to all GAIN events, and Gold donors will receive free entry to all GAIN events with the option to appear on the GAIN website 'Key Supporters' page. GAIN is now supporting the work of FlyPlymouth in its mission to save Plymouth Airport. This is, in effect, a 'must-win' campaign for the entire sector since if Plymouth cannot be secured, then there is an obvious and much greater threat facing many other GA airfields.

For more information and/or to discuss the sponsorship opportunities please contact GAIN's strategic partner, Portcullis Public Affairs – an ethical lobbying firm of 27 years' standing – by email: james.derbyshire@ *portcullispublicaffairs.com* or by telephone in office hours on 020 7368 3102.





















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LATEST NEWS ON UK ARFIELDS John Walker offers the latest news and developments of UK's aerodromes

There are airfields across the UK currently under threat of closure. Here are the latest developments, updated 16 June 2017. If you have any new information on airfields in your area that could be under threat, please email the editor on david.rawlings@ aopa.co.uk.

BLACKPOOL

Balfour-Beatty has sold their 95% interest in the airport's operating company to Regional & City Airports. Enterprise Zone status was granted for land on the north side of the airport, which encompasses domestic facilities from the old airport. Recent statements from the Zone proprietors indicate that they are relying on the airport to attract businesses. The emerging Local Plan for the area retains the airport's existing aviation facilities.

DEENETHORPE

Site accepted under the government's garden

village scheme, which is being supported by site owner Brudenell Estate, for development of around 1,250 homes. Full public consultation expected in Summer 2017 leading to a site masterplan in support of a planning application later in 2017.

NOTTINGHAM CITY

(Tollerton) With the support of the land owner, site earmarked for up to 4,000 homes in Local Plan



Blackpool, one of the many UK airfields currently under threat

Core Strategy adopted by Rushcliffe Borough Council after approval from Planning Inspector.

REDHILL

Site land owner and Thakeham Homes, a local housing developer, are discussing with local planning authorities Tandridge, Reigate and Banstead Councils) a proposal for a 4,500 home garden community on the site. Tandridge draft Local Plan earmarks site for employment purposes and notes that it is in the Green Belt with a high risk of surface water flooding.

WYCOMBE AIR PARK Site lease holder (Helicopter Aircraft Holdings Ltd) has agreed new leases with the land owner, Wycombe District Council. Draft Local Plan provides for an industrial/warehousing complex on south-eastern part of the site resulting in loss of a runway and relocation of gliding activities.

The District Council expect to submit final draft plan for public consultation summer 2017.

MOD SITES

MOD document *A Better Defence Estate* issued on 7 November 2016 lists the following aerodrome sites for disposal in the years indicated: Abingdon 2029; Alconbury 2023; Arbroath, RMB Condor airfield 2020; Brawdy, Cawdor Barracks 2024; RMB Chivenor 2027; Colerne 2018; Dishforth airfield 2031; RAF Halton airfield 2022; RAF Henlow 2020; Mildenhall 2022;

Molesworth 2023; North Luffenham 2021; Woodbridge, Rock Barracks 2027.

Former RAF Wethersfield airfield is being transferred to the HCA in 2020.

In addition to the above, RAF Wyton airfield is being sold off - Defence Infrastructure Organisation and local property developer Crest Nicholson has submitted a proposal for up to 4,500 homes on site. Site earmarked in draft Huntingdonshire District Council Local Plan for mixed use development including housing but road infrastructure issues expected to result in scheme being deferred beyond Local Plan period. WORDS Adam Winter

A BRIEF GUIDE TO THE PPL WRITTEN EXAMS

There's so much to learn when undertaking a PPL course. Here, Adam Winter eases the worries every student pilot has, by explaining the exams

Right, lets get straight into it, there's a lot to cover. Is everyone sitting comfortably? Then I'll begin...

AIR LAW

Why is it Air Law has the reputation for being the boring or uninteresting subject? It might surprise vou to find out it in fact contains very important and practical facts, and instructions and rules to help keep you and others around you safe. It is the highway code of the air and has to be respected and appreciated. During the course I teach at AOPA, you learn the rules for avoiding collisions, rights of way, airport and runway markings, aerodrome traffic zones and flights in their vicinity. Learn about visual and instrument flight rules and the weather conditions that determine them. Learn about controlled airspace and the services you can get from air traffic control units.

OPERATIONAL PROCEDURES

This is one of the newer exams that was part of Air Law. Operational Procedures in commercial aviation is really about how companies are going to operate, the company minima and standard operating procedures they negotiate with the CAA. PPL holders and training organisations don't operate like this, but we follow ICAO recommendations. They are based on ICAO Annex 6, and part II is relevant to General Aviation operations.

Look up the Annex and have a read. It's not for everyone but interesting if you have a legal mind. Apparently. You do need to study the practical and useful information contained within it. It deals with safety equipment and its use, wake turbulence separation, wind-shear, what to do if vou have an accident, search and rescue, and other general information about the procedures involved in operating an aircraft safely.

HUMAN PERFORMANCE AND LIMITATIONS

A bit of biology, a bit of physiology and a smattering of psychology. This is really interesting stuff. You learn how your eyes and ears work and how they can be tricked or give incorrect information to the brain. During the AOPA lectures we cover what it means to become a competent and proficient pilot. Most accidents are caused by a lack of good judgement, and analysis of accidents involving human factors shows that there is hardly ever a single cause. Apart from passing the exam, learning about Human Factors is learning about yourself and your body and how it can be affected by a myriad of environmental factors, such as hurtling through the air at great speed thousands of feet up in a metal tube with an engine stuck to the front. **NAVIGATION**

ADAM WINTER



Adam is a commercial pilot with more than 30 years' experience. His career has included bush flying in Africa and island hopping in the West indies, as well as a stint in the airlines. He is also a physics teacher with three years' classroom experience.

The shortest distance between two points is a straight line. But how do you draw a straight line on a sphere? Or how can you put a curved line on a flat piece of paper?

This topic will teach you about course and headings, true and magnetic tracks, variation and deviation. longitude and latitude, and that the Earth is in fact not a sphere but an oblate spheroid, a useless fact but it has come up in University Challenge. This is probably the most technical and practical of the exams and requires a bit of maths and mental arithmetic. We will help you learn the easiest way to grasp these concepts. To get a historic perspective on how we navigate and for a really interesting tale of intrigue and the

establishment of the Royal Observatory at Greenwich, I highly recommend the book *Longitude* by Dava Sabel and a visit to the Greenwich Observatory. The course covers General Navigation and Radio Navigation. It also covers the use of the navigation computer, the famous whizz-wheel, that I hope you will learn to love.

FLIGHT PLANNING AND PERFORMANCE

This subject is about how to plan a safe journey. It is about how much weight you can carry, how much fuel you should carry and how much runway you need. It explains how long will it take to get to your destination and how to re-plan on route if necessary. It is also about reading, understanding and then using the information from charts to plan a safe route. Some is intuitive; the consequence of an overloaded aircraft is obvious, but what about an aircraft with a forward or aft C of G? How will this affect the take off and landing performance, stall speeds, fuel consumption, glide speed and so on? Learn about the aircraft and the system you use to operate it and vour decisions will come from an intellectual depth of knowledge. That can only be a good thing where safety is paramount.

METEOROLOGY

The atmosphere is an envelope of gas held down by gravity within which a constant battle for

equilibrium is staged by areas of higher and lower pressures, higher and lower temperatures, and higher and lower densities. Add water into the mix and it is torn between its solid, liquid and gaseous states, radiating or absorbing huge amounts of energy as it changes. These global and energetic currents of moving air and billions of tonnes of water generate static build-ups of such potential that they can instantly 'boil' a tree and cause it to explode. You need to learn about meteorology, about the mixture of gases that move horizontally and vertically. and the implications of trying to fly a machine through it. The weather poses the greatest safety challenge to your flying. You will have to make decisions based on observations you make and those predicted by professionals. You will get it wrong, they will get it wrong. Deciding not to go somewhere because of the weather and getting it wrong is the safest scenario. Being armed with theoretical

and practical knowledge of aviation meteorology will lead to your being a better all-round pilot. Learn to interpret the actual and forecasted weather charts and observations. Learn to read into the weather what vou see around vou and the conditions that they might pose to an aircraft in flight. Bore everyone else to tears with tales of good decision making and by repeating the mantra that it is 'better to be down here wishing you were up there than up there wishing you were down here'.

PRINCIPLE OF FLIGHT This subject is about what makes a plane fly and the forces around it. A decent knowledge of physics is useful, though not essential in order to really understand the dynamics of moving an aircraft through the air at different velocities. The effects of different shaped aerofoils on lift and drag, the effects of acceleration and angle of attack, stalling, stability and so on. Our course at AOPA covers all the topics, starting with

a short introduction to Newton and the three laws. These seem quite simple and intuitive, and they *are* up to a point. It is the equations and principles that can be derived from them that make them so profound. They help us describe many things, from how an aircraft flies to plotting a satellite's orbit. We will stick to how aircraft fly and what keeps them flying.

AIRCRAFT GENERAL

KNOWLEDGE The Aircraft General Knowledge topic covers all of the components of a light piston driven aircraft. Understanding how an engine works and the limitations imposed on the airframe is an essential part to becoming a good all-round pilot. You learn how engines and instruments work, how to cope if something goes wrong - like a pitot blockage - how the altimeter and VSI work on static pressure but the airspeed indicator measures dynamic. Make sense of all those dials! They are your aircraft's 'life support'.

COMMUNICATIONS

This is the last topic we cover during the AOPA course. It is not demanding intellectually and hopefully you will have picked up a lot from listening and using the radio during flying lessons. Again it is a very practical exam. and it is all stuff vou need to know, like the difference between vour Rogers and Wilcos, Over and Outs. Who and what you are. Where you are from and where you are going. Your position and altitude. Your request. ODMs and ODRs. Urgencies and Emergencies.

My philosophy for teaching these topics at this level is that for the most part you are doing this as a hobby. Therefore it is important to enjoy the learning as much as the flying. I am starting the course at AOPA in October. Everyone who has done the course and taken the exams have passed. See the advert below for times and dates.

If you have any questions regarding any flying issues Adam can advise. Email him via: adam.winter@aopa.co.uk

TAKE YOUR PPL THEORY IN LONDON

Following the popularity of the first series of courses, AOPA is pleased to advise that it is running more evening Ground School courses for ab initio pilots. The PPL Ground School takes place at the AOPA offices at 50a Cambridge Street each Tuesday and Thursday evening, 7-9pm, on the dates shown below. The AOPA office is only five minutes' walk from Victoria Station. All nine subjects required for the PPL (Aeroplanes) are taught over a period of approximately 70 hours.

The lecturer is Adam Winter, a highly qualified and experienced flying instructor who works for the Flyers Flying School at Elstree. You can read more about the training and subject matter at www.flightgroundschool.co.uk

2017		2018	
AIR LAW	OCT 3, 5, 10, 12	AIRCRAFT GENERAL KNOWLEDGE	JAN 5, 9, 11, 16, 18
OPERATIONS AND PROCEDURES	OCT 17, 19	PRINCIPLES OF FLIGHT	JAN 21, 23, 25
HUMAN PERFORMANCE AND LIMITATIONS	OCT 24, 26	REVISION	JAN 30
REVISION	OCT 31	EXAMS	FEB 1
EXAMS	NOV 2		
NAVIGATION	NOV 7, 9, 14, 16, 21, 23	PERFORMANCE & PLANNING	FEB 6, 8, 13
METEOROLOGY	NOV 28, 30, DEC 5, 7, 12	COMMUNICATIONS	FEB 15, 20
REVISION	DEC 14	REVISION	FEB 22
EXAMS	DEC 19	EXAMS	FEB 27

It is not necessary to attend the full course and candidates can select the individual subjects they wish to study from the published dates. You do not have to be a member of AOPA to participate. Further details can be obtained from Mandy at the AOPA office on 0207 8345631 or mandy@aopa.co.uk

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WORDS AND IMAGES Malcolm Bird

TAKE AN INTEREST IN YOUR MAINTENANCE

Malcolm Bird explains why it is to your advantage to take a closer look at the maintenance programme of your prized aircraft

The December 2016 issue of this magazine included an introductory article on the Self-Declared Maintenance Programme (SDMP) for EASA aircraft of MTOM 1200kg (ELA1) used for private flying. The next time vour aircraft goes in for its annual service, your maintainer should seek vour views on the Maintenance Programme (MP) to be adopted. Since October last vear, it has been an EASA requirement that each aircraft has a specific MP that is declared by the owner to be appropriate, the SDMP.

It is to your advantage to take the time to work through this with your maintenance organisation. Of course, you can simply ask your maintenance organisation to sort it out without your guidance or involvement, but the MP may end up being more comprehensive than is practically necessary. You are likely to be charged for the time to complete the forms to set up your aircraft-specific MP, so why not take the opportunity to learn more?

To make a self-declaration, it is useful to complete the EDD 2015 024 R form from the CAA website, which explains the basis of any MP in a standard format. The CAA do not review or approve any maintenance programme: this is now the responsibility of the owner. Note also that any annual service has to be signed off by a licensed engineer, so your MP will need to be agreed with them.



Make yourself aware of what is necessary on your aircraft when it comes to maintenance

The CAA simply file the declaration away in case it needs to be looked at in the future. If your aircraft has a maintenance schedule provided by the manufacturer, you, or your maintainer, can use this as a basis on which to start formulating your aircraft's MP. Note that the manufacturer's maintenance schedule might not be available directly to the private owner as many manufacturers provide the appropriate technical publication only through a specialised US provider, APT (Aircraft Technical Publications), which your maintainer hopefully subscribes to. EASA have defined a Minimum Inspection Programme (MIP) that any MP must satisfy, so yours will lie in between.

A manufacturer has to assume that an aircraft can be used in a range of environments and operating conditions, perhaps being stored outside, maybe in arctic, coastal or desert conditions, with some pattern of assumed usage. But your aircraft may be stored in a warm hangar and flown just 50 hours a year, so the maintenance requirements might not need to be so demanding. So the opportunity now exists to have a slimmeddown MP that is fit and suitable for your aircraft, with unnecessary aspects removed and others reduced in scope or frequency to meet your situation. You may, however, wish add in some checks and procedures to cover particular operational aspects, e.g. more frequent

landing gear checks when operating out of a very bumpy airfield.

So dig out the CAA form; immediately you can draw a line through many of the boxes as you are not a balloon and only have an ELA1 etc. Then take a careful look at the manufacturer's or current maintenance schedule and question each part. This is where you need to get together with your maintainer, removing all that does not apply. Time spent establishing the most appropriate MP will save you money in future years.

No doubt there will be some one-off costs involved in setting up your SDMP but the overall aim is to allow more relevant MPs to exist for each aircraft. So create the MP that works well for you and your aircraft.



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VISION JET CERTIFIED Almost ten years since it first flew in to Oshkosh, Cirrus' jet is now fully certified

by Chad Trautvetter

It's been a busy month for Cirrus. Not only has it received EASA certification at EBACE 2017, it also delivered the first new Vision Jet to a European customer.

"It's an exciting day for Cirrus Aircraft and for our customers throughout Europe," says Cirrus CEO and president Dale Klapmeier. "This is an aircraft meant for the owner to fly. The most comfortable seat is the pilot's seat." Pat Waddick, Cirrus'

Pat Waddick, Cirrus' President of Innovation and Operations said, "The EASA approval of the Vision Jet type certificate paves the way for a ramp up of aircraft deliveries in Europe. There is no better way to celebrate this achievement than to have the first Vision Jet delivered to Europe on display at EBACE this week." Klapmeier said six Cirrus jets are to be delivered in Europe by year-end.

Klapmeier added that the unnamed customer taking delivery of the jet will base it in Switzerland. The EASA certificate was delivered by Steven Higgins, the agency's High Performance Aircraft and Turboprop Section Manager, accompanied by Project certification manager Ralph Menzel. It comes seven months after the FAA certified the Cirrus jet. Earlier this month, the company received the FAA production certificate for the SF50. In addition, the Vision Jet recently received approval from the Civil Aviation Safety Authority in Australia.

Menzel and Higgins praised the cooperation of the FAA, saying that harmonisation between the authorities is clearly improving. Higgins cited the adoption of European small-aircraft certification rules, mirroring the FAA's Part 23 rewrite.

Cirrus said it is now ramping up manufacturing to one aircraft per week. The production rate goal is 100 aircraft per year in 2018 and, eventually, as many as 125 annually. The company currently holds an order backlog of 600 SF50s worth more than \$1 billion. Klapmeier said the percentage of European customers is likely on par with those of the piston SR22.

The \$1.9m SF50 is equipped with the Cirrus Perspective Touch cockpit based on the Garmin G3000 avionics suite and powered by a single 1,800-poundthrust Williams FJ33-5A turbofan. It is equipped with a ballistic whole-aircraft parachute system.

JET RANGER X CERTIFIED

by David Rawlings

Just as Bell were delivering three of their latest helicopters, the 505 Jet Range X, to Canada it received certification from the FAA – another shot in the arm for the Textron company.

The X received certification in Canada first, hence the deliveries and now that FAA certification has been granted, the company vows to continue working with authorities around the world. "This is another milestone in our journey to market entry for the Bell 505," says Mitch Snyder. Bell Helicopter's president and CEO. "This aircraft incorporates the latest advancements in safety and aviation technology and we are extremely proud of our return to the short light single class of helicopters."

Through the flight test programme, the Bell 505 underwent rigorous certification activities and achieved more than 1,000 flight test hours. The Bell Helicopter Training Academy is also prepared for entry into service with customer training, and the



The new Jet Ranger X - in 'easy to spot' orange

flight training device and coursework are all on track. "Customer response for the 505 has been outstanding, and we look forward to seeing the aircraft perform all the various missions it's equipped for around the world," added Snyder.

The 505 offers operators many advantages including the Safran Helicopter Engines (HE) Arrius 2R engine that incorporates the dual channel Full Authority Digital Engine Control (FADEC), which delivers exceptional performance and reduces pilot workload. A fully integrated Garmin G1000H flight deck features dual displays, which provide critical flight information for crews at a glance. Through Bell's high inertia rotor system, the company has demonstrated throughout the flight test programme exceptional autorotation capability that is part of the Jet Ranger legacy.

With a speed of 125kts and useful load of 1,500lbs, the 505 is designed to be safe and easy to fly while providing significant value to the operator. The customer-driven design of the aircraft places safety, performance and affordability at the forefront, blending proven systems with advanced technology and a sleek design.

LOOK BACK... THIS MONTH 100 YEARS AGO



FIRST MAN TO LAND ON A MOVING SHIP

Edwin Harris Dunning made history on August 02, 1917 when he became the first person to land an aircraft on a moving ship.

The South African born 25-year-old was serving as a Squadron Commander in the Royal Naval Air Service during the First World War. Although pilots had previously taken off and landed on stationary ships, nobody had landed on a moving ship until Dunning.

Dunning successfully landed his Sopworth Pup on the deck of the HMS Furious as the ship steamed through the waters around Orkney. Without the safety of arrest wires, Dunning relied on the deck crew of to grab the wings of the aircraft to stop him. Just five days later, Dunning attempted to repeat his feat, but the adventure went horribly wrong. On approach, his engine stalled and he came down on the deck of the Furious at too steep an angle. He was knocked unconscious, his plane went over the side, and Dunning was drowned.

AOPA AGM ANNOUNCED – GET YOUR OPINIONS HEARD

by Lucy Fields

The 51st Annual General Meeting AOPA UK will be held on Tuesday 19 September 2017, starting at 14:00. A set of the financial accounts for the year ended 31 March 2017 will be provided in advance of the meeting on the AOPA website, together with the minutes of the 50th AGM and brief personal details of the members offering themselves for election and re-election. This data will also be available at the AGM.

Any member wishing to elect another member to the Board of Management must provide notice in writing or email to the AOPA office at least 35 days in advance. A statement of willingness to serve will be expected from the proposed member together with appropriate personal details. Proxy voting is permitted, either by nominating in writing or by email a member who will be present at the AGM as proxy, or by nominating the Chairman as proxy. It is important for planning that members who wish to attend let the AOPA office know in advance, either by telephone (020 7834 5631), email (info@aopa.co.uk), or by post.

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AOPA NEWS HIGHLIGHTS

SR20 AS A TRAINER

Lufthansa Airlines will use the SR20 as its primary trainer. Lufthansa Aviation Training has ordered 25 aircraft for its ab initio, multi-crew pilot certificate, and other flight-training programmes in Arizona. The SR20 was chosen as its systems are similar to airliners.

SHOREHAM HANGAR TO BE RESTORED

Shoreham's stunning art deco terminal building is a sight to behold, but few realise the hangar alongside it is also a Grade II listed building. The 1930s hangar will be restored over six months, with the roof being replaced in stages, along with the front fascia.

FLYING CAR CROSSES ENGLISH CHANNEL

French pilot Bruno Vezzoli successfully flew over the English Channel in a Vaylon Pegasus flying buggy suspended beneath a paramotor-type parachute.

Reports say the flight was "...perfect, pleasant flight."

UNITED DO IT AGAIN

United Airlines' bad reputation has surfaced again after video emerged of an employee apparently pushing a passenger to the floor of Houston's International Airport. In the video, a ticket agent, Alejandro Anastasi, is shown in an altercation with a passenger.



CESSNA 172 JT-A RECEIVES EASA & FAA APPROVAL

Diesel-powered Skyhawk receives both European and American certification as Cessna announces performance increases

by David Rawlings

Cessna announced last month that its 172 Turbo Skyhawk JT-A, with nextgeneration Garmin G1000 NXi avionics, has been certified by both US and European authorities.

The company also announced the aircraft, equipped with the proven Continental CD-155 engine, has exceeded initial performance targets including improved maximum range.

The Turbo Skyhawk JT-A is a factory option that includes an integrated powerplant, propeller and cockpit upgrade package that boosts the standard Skyhawk's performance.

"The Skyhawk platform represents the most successful single-engine aircraft of all time, and we're excited to further enhance its capabilities with Jet-A powerplant technology," says Doug May, Vice President, Piston Aircraft. "The Turbo Skyhawk JT-A allows operators to meet changing environmental regulations around the world, providing solutions to increase the global reach of this already proven platform."

In testing, the Skyhawk JT-A achieved a range of 963 nautical miles – an increase of 78 nautical miles over original estimates. The aircraft also reached an improved take-off distance of 1,320ft and a max climb rate of 76fpm.

The 155hp turbo-diesel Continental CD-155 features direct fuel injection and a dual channel FADEC driven by a single power lever. The engine burns globally available Jet-A fuel and improves the standard Skyhawk's performance. At 963 nautical miles, maximum range increases by 50% over the standard Skyhawk, and maximum speed is increased to 134kts. The Turbo Skyhawk JT-A also offers improved take-off performance, especially in high and hot conditions.

The Skyhawk platform offers the Garmin G1000 NXi avionics system with wireless connectivity, a standard angle-ofattack display system, and proven dependability. More Skyhawks have been delivered to customers around the world than any other type of aircraft, with more than 44,000 put into service.

LAA LAUNCHES PILOT-LED INSURANCE FOR MEMBERS

by Robert Care

The Light Aircraft Association has announced a tailor-made insurance programme designed for, and exclusive to, its members

The scheme is the result of more than a year of work by Air Courtage Assurances – a leading insurance broker for GA in Europe – who is notably involved in recreational aviation with organisations such as the RSA, the LAA's equivalent association in France.

One key area which was identified, was the potential benefit in linking the insurance to a member and pilot, rather than the traditional, aircraft-led policy. This allows added flexibility in enabling pilots to – subject to meeting the appropriate weight and passenger liability criteria - to fly any other similar aircraft, a flexibility that was lost for many pilots when EC requirements were linked to specific aircraft in traditional policies.

"This 'pilot-attached liability cover' has been approved by the CAA as it fully meets the EC legal requirements. It is also valuable for private aircraft owners as it covers automatically and without any additional cost the liability arising from the ownership of the aircraft," savs Caroline Cognet-Reynard of Air Courtage Assurances. "This focus on the pilot rather than on the aircraft also enables Air Courtage to take into account their own specific history, in an activity where human factors is key, particularly rewarding those members who have



LAA members will now benefit from a special insurance

good safety and retaining records," she added.

The LAA Member Insurance has been designed to encourage and reward individual initiatives linked to safety by granting insurance premium discounts for participation in LAAapproved training and safety schemes. Because recurrent training and ongoing preparation for unexpected situations are proven essential elements in preventing accidents, this programme aims to reward those who show a special emphasis on flight safety and take part in any of the wide range of LAA Pilot Coaching Scheme courses.

SUCCESFUL AERO EXPO FOR AOPA

by Martin Robinson

We were kept busy with a steady stream of visitors to the AOPA Marquee and were able to greet many of our members, answer questions and sign up a good number of new members. Hopefully we are seeing a change in attitudes from the estimated 50% of pilots who do not belong to any organisation, even though they benefit from the work we do. So please do keep speaking up for AOPA.

Thank you to members who introduced a flying friend to AOPA, a good many of whom we signed up as new members. All members who introduced a friend were entered into a draw for a year's free membership. Well done to Graham Stevenson who was drawn as the winner.

Another good sign was the number of new student pilots we signed up over the event. Student pilots are essential to General Aviation. Without new students becoming new pilots, GA will simply have no future in the UK.

Also thank you to Jeppesen for sponsoring our Marquee again this year. This partnership only works if our members continue to show an interest in, and subscribe to, Jeppesen aviation products.

DIRECTORY CORRECTIONS

Last issue the Flight Directory proved hugely popular, but a few clubs had incorrect information. please find below the updated information. GLASGOW FLYING CLUB Ltd Walkinshaw Road RENFREW PA4 9LP Tel: 0141 889 4565 Email: info@ glasgowflyingclub.com Web: www. glasgowflyingclub. Aircraft: Piper Warrior PA28 (2) Piper Arrow PA28R (2) **ULTIMATE HIGH** Goodwood Aerodrome

Goodwood CHICHESTER PO18 OPH Tel: 01243 913916 Email: info@ ultimatehigh.co.uk Web: www.ultimatehigh. co uk Aircraft: T67M260 Slingsby Firefly (3) Extra 300L (1) MONA FLYING CLUB RAF Mona Gwalchmai Anglesev LL65 4PB Tel: 01407 720581 Email: ron.kelsall@ freezone.co.uk Web: www.flymona.com Aircraft: Cessna 152.

NEWS SPECIAL AOPA AWARDS 2017

The Annual AOPA Awards took place at Aero Expo in front of a packed tent. Congratulations to all the winners

AOPA's bi-annual awards were held at the recent Aero Expo event at Wycombe Air Park. It was a great event and congratulations to all of those who won.

INDIVIDUAL MERIT

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



WINNER Philip Church.

Philip is an experienced consultant and avionics engineer who works for Helios, the specialist consultancy for Air Traffic Management. He is a key advisor to AOPA on the GAGA Project (GNSS Approaches for GA) funded by the GSA (Global Navigation Satellite Systems Agency) for the development and introduction of LPV (Localiser Performance with Vertical Guidance) aerodrome instrument approaches. Those selected will benefit from up to 60% funding and the support of a professional team who will help deliver the approaches in line with the necessary

regulatory requirements. This will result in enhanced safety and increased business opportunities at these aerodomes upon completion. The outstanding contribution to the project by Philip Church is recognised by this award.

AOPA SPECIAL AWARD

Awarded to a person or organisation who 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.



WINNER Bob Darby and Adrian Price. Bob Darby is the AOPA project coordinator for the SESARfunded EVA (Electronic Visibility via ADS-B) project and Adrian Price is the NATS technical lead. This is a collaboration between AOPA, NATS, FUNKE Avionics and Trig Avionics which has resulted in flight trials that have taken GA closer to the elusive 'Known Airspace Environment' where affordable

THE LENNOX-BOYD TROPHY

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.

WINNER Carol Vorderman MBE. TV

presenter and author, Carol Vorderman gained her Private Pilot's Licence in 2014 and shortly after accepted the appointment of Ambassador to the RAF Air Cadets assuming the rank of Honorary Group Captain RAFVR(T) for the duration of her appointment.

As a person whose name is widely recognised in the UK and abroad, her support of young British cadets and her proposed solo flight around the world in a GA aircraft has raised the profile of General Aviation, especially for the younger generation.

Unquestionably, she has contributed, and continues to contribute, significantly to the furtherance of General Aviation. conspicuity devices are the norm. The results of the flight trials have been widely reported and the project is recognised as a significant contribution to the future safety of general aviation.

CONTRIBUTION TO THE COMMUNITY

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.



WINNER Cay Roth.

Cay Roth is the Senior Manager for GA in Europe for Jeppesen, the wellknown provider of aviation products worldwide. In UK GA, the company is best known for the provision of VFR and aerodrome charts for European countries. These are invaluable for touring the continent and have provided an outstanding contribution to the community. Cay Roth has maintained close links with AOPA UK for many years, and has been instrumental in supporting AOPA UK at many aviation events.

BEST AERODROME

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



WINNER Jersey Airport. Jersey Airport is a busy destination for many commercial aviation flights. Nevertheless, the experience of visiting GA pilots is that Jersey Airport, supported by a helpful ATC, makes a significant effort to accommodate GA. The Airport is aware that GA has nowhere else to land on the island and it has worked with the Jersey Aero Club to avoid GA getting mixed up with the commercial passenger traffic. Jersey stands out as a busy airport that manages to provide an outstanding service to GA.

FRIEND OF AOPA

Awarded to a person (or persons) who has made a special contribution towards the work of AOPA. (A tankard to keep, no permanent trophy) **WINNER Matthew Bolshaw**. Matthew is a longstanding member of AOPA and aircraft owner who has considerable professional experience in the aviation insurance market. He has

always been, and continues



to be, happy to provide AOPA with the benefit of his expert advice, this is now recognised by the Friend of AOPA Award.

INSTRUCTOR OF THE YEAR

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.



WINNER Geoff Prout. Geoff came into instructing at Old Sarum via microlights and then light aircraft, having qualified as an flying instructor in 1995. He has about 12,000 hours in his logbook. He has recently retired from GoFly where he was CFI. He gained a reputation as a dedicated instructor and for constantly putting his student first, using his wit, charm and humour to help any student through their course. He has been an ambassador for AOPA and GA throughout his flying career.



WORDS AND IMAGES lan Nayler

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A group of adventurous enthusiasts changes their aircraft with an ambitious C182 import

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R-COB landed at Redhill R36 at 16:30. The airfield then closed. We had arrived just in time, within minutes the clouds had rolled in, rain came and darkness fell. What a rollercoaster adventure...

For a flying group, changing to a new aircraft is always challenging, but the Tango Golf Group's recent acquisition of a Cessna Skylane brought rather more headaches and challenges than expected. Just how hard can it be to buy a nice aircraft in an Eastern European country? We were about to find out.

Our group has been operating for 20 years and our members are enthusiastic tourers. Our faithful Cessna 172 has been up to Norway, down to Malta, all over Italy and, of course, countless times to Le Touquet. However, she was an old lady. Even when we bought her from the well-known flying college, Embry-Riddle in Florida, she had a "mature" number of airframe hours. So, last year our engineer who had originally imported her for us - gently said that, with 22,000 airframe hours it might not be prudent to push her too far. So, well in advance of the 2017 touring season we bit the bullet and sold an old friend and embarked on the search for a suitable replacement.

And how hard could that be? Lots of good aircraft around, surely plenty of choice? Well - our outgoing C172 was a Model Q, specially built for Embry Riddle and designed for instrument training with a 180hp Lycoming and many extras. It was perfect for touring but was now the only one in Europe - so what could replace it? The

Odessa

obvious choice was a newer Cessna 172SP but that was priced far outside our budget. Then we realised that a Cessna 182 Skylane could be within budget and would be superior in almost all ways to the C172. Faster, more load, spacious, longer legs and just costing a bit more to run.

A test flight at Bristol & Wessex Aero Club convinced us, but now to find one. All those being advertised in the UK were already sold so we looked further. This was Brexit time and the dollar rate ruled out any US imports, so we searched Europe for a clean 182 that had not been used as a parachute mule. That is when we discovered on Plane Check a low-hours, low-priced, Cessna 182R Skylane for sale in Moldova. "Where's that?" we all cried. Answer, a former Soviet state tucked in between Romania and Ukraine, still with heavy Russian influence. But the Model 182R was ideal for our needs, built just before Cessna closed the production line in the early 1980s, and this one had low hours, new paint and interior. It sounded like the answer to our prayers.

Risk analysis time! Moldova is not in the EU but is a member of EASA. The aircraft had spent almost its life hangared in Germany and was still being maintained by a German Part-M organisation. We read carefully all available advice about importing aircraft, none of which covered imports from outside the US or European Union.

The Group decided it could be worth a look, so in September David Hockings, our engineer and experienced importer, and I flew over. We were met on arrival by the seller – a very

Sea of Azof

CRIME

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senior officer in Soviet days and evidently still wielding immense power. On the way to the hotel we stopped at a closed restaurant, forced them to re-open and cook us a meal. He used only the middle lanes of traffic, ignored red lights, speed cameras and police patrols, all the time juggling two mobile phones. Plus he didn't speak a word of English, relying on an assistant to translate. Scary!

Next day he drove us out of town to his own private airfield at Vadul lui Voda near the Ukraine border. ER-COB was waiting with the German engineer and files of paperwork so we could check everything. On the test flight we were instructed not to turn to the east on take-off as Russian separatists were fully armed and might shoot us down! The aircraft was much as expected - smart, good mechanically meticulously

German-maintained including all ADs and CIDs, but with antique avionics. Crucially there was no evidence of VAT being paid in Europe, and a C88 certificate was crucial to avoid us having to pay 20% VAT on arrival in UK, or at any future ramp-check.

Given that the seller only spoke Russian and Romanian it was fortunate that he had employed a ferry pilot, Gica, to guide us through the discussions. Gica later proved to be a key player, seeing matters to a satisfactory conclusion for both sides, as well as getting the aircraft back home.

We left after agreeing a price and a list of must haves. These included notarised Proof of Seller's Identity, right of ownership and free title: a letter from the Moldovan CAA certifying the seller was the registered owner, and the aircraft had no mortgages or liens and would be released to CAA, as well as the essential C88 certificate.

Weeks passed, official papers arrived, but the VAT issue was still unresolved. Finally, we agreed only to complete the purchase if the seller imported the aircraft to his company in Romania (in EU), paid all duties and VAT. He did and we bought it as an EU asset with a C88 certificate. Problem solved.

In November, I again took a flight out to Chisinau to meet the seller and ferry pilot to complete the transaction. The first challenge was security at Luton objecting to the gas canisters fitted in the lifejackets which we required for the return journey; then getting sufficient cash for the deposit safely through Customs; and finally getting airside to inspect the aircraft without ownership or a flight plan. All difficulties were overcome.

Eventually after signing the Bill of Sale came the major finance arrangements, which were complicated, not least because of recent money-laundering scandals. HiFx International, one of the few UK agents who deal with currency transfers to Moldova, had setup a Swift bank transfer to be released against my authorising email; and confirm when that was irrevocably in the international payments system. This was the only way the seller could be persuaded to give me the aircraft keys without seeing the money! A few computer glitches, but the deal was done and we were taken to a nightclub to celebrate with his pilot friends.

Next day, out to the airfield, take-off was delayed because officials had never authorised an export departure before! Nevertheless, after the diplomacy of the ferry







Clockwise from Left: The 182 collected from Chisinau with ferry pilot, Gica Peacariu (I); COB when she first arrived at Redhill; the mountains of Romania

pilot, Gica and I were away ready for the 1250 nm flight back to UK. The first leg was complicated, as our insurers had forbidden us to go direct which was over Ukraine: and national politics do not advise landing in Romania or Hungary let alone both. Kosice (LZKZ) in Slovakia was the first stop after 3.5 hours of sparsely populated countryside with high snow-covered mountains. The next leg was 90 minutes of deteriorating weather to Bratislava (LZIB) where vectors to the ILS were most welcome! We enjoyed a Saturday night in a bright lively town that is now marked for a return trip.

Sunday dawned with IMC from ground-up and we spent time with the Met Office picking options for the route home. In the end, we filed for Brno (LKTB), then re-filed in the air for Prague (LKPR) but overflew both. En-route ATC were "The next leg was 90 minutes of deteriorating weather to Bratislava where vectors to ILS were most welcome" exceptionally helpful as we tip-toed through the weather using their advice and a real-time weather radar app. This pattern of aerial re-filing was repeated, eventually passing over Bonn, Liege and Lille to land at Le Touquet. Six hours of serious flying much in IMC, and now almost home. A mere 10 minutes on the ground for a splash of fuel and we were away to Lydd. Unfortunately the pre-booked HMRC officials required to import the aircraft had not arrived at Lydd so the Border Agency took our details "for later" and we departed with less than 30 minutes before Redhill closing, managing it just, but spooking Gatwick with the unusual ERregistration!

The flight had taken us almost 12 hours flying, over two days with four stops. All countries provided excellent ATC services but the Moldovan registration ER-COB mystified everyone! The antique avionics held up supplemented by apps on iPhone and iPad.

wanted to continue flying on the Moldovan register and Certificate of Airworthiness for a while. The UK CAA did agree but the impracticalities of poor avionics and our engineer's enthusiasm to get moving meant we had to concede and start work immediately. Plane-spotters missed a rare registration.

The C182 had its first UK Annual, a prop overhaul, some items renewed and other planned improvements before emerging as G-KKTG with modern IFR-certified avionics – surprisingly under budget! Group members are now poised for CB/IR training and some serious touring. Our Group would welcome new members, so if interested contact the author Ian.Navler@Outlook.com.

> ER-COB makes its transition to G-KKTG on handover from the engineer, David Hockings

August 2017 AOPA Aircraft Owner and Pilot

G-KKTG



WORDS David Rawlings IMAGES Piper Aircraft

TEP Piper has lister

the shortfalls of the Meridian, the aircraft manufacturer set to work on the M600... and has delivered so much more...

wenty years ago Piper announced that it was going to create a turboprop version of its popular Malibu Mirage. This was to become the Meridian. Powered by Pratt & Whitney's PT6, it was certified in 2000, and instantly began selling well.

Over time it upgraded to better avionics and more features, but ether manufacturers in the market outperformed and outsold it. So in 2015 Piper announced it was going to build the M600, an updated version that had more power, payload, fuel, range and safety.

The FAA certified the M600 in 2016, but EASA only certified it in late June, much to the frustration of Piper's CEO Simon Caldecott, who was quoted as saying that the process was, "Not good enough."

Piper said the reason for the change, even though the Meridian was still selling around 40 units per year, "The engineers invloved in the jet programme used their experience and developed a wing that met the goals of the customers" was because its customers demanded more from their turboprops.

CHALLENGE SET

Now the M600 might look almost exactly the same as its predecessor, but it has a new clean-sheet designed wing. Remember the Piper Jet? Well this wing is very similar to that! Although it's not exactly the same, the engineers involved in the jet programme used their experience and developed a wing that met the goals of the customers, ie fly further faster with more payload.

By using this wing Piper exceeded the targets it had set for itself. The new wing carries 90g more Jet-A than the previous model. Another reason the new wing was required was the boost in performance from Pratt & Whitney's PT6A-42A, which produces 600shp – the old M500 wing just wouldn't cut it. Those eagle-eyed amongst you will also notice the winglets, which were extensively wind tunnel-tested and perfect for the type of flying the M600 is required to do. Together this has resulted in extending the range to an impressive 1,484nm, almost 500nm further than its predecessor.With its boosted performance, the M600 was now capable of competing with the other aircraft on the market. The writing was on the wall for the M500 with the TBM being much faster. And although it's still around 40kts slower than Daher/ Socata's TBM, it's a hell of a lot cheaper. The M600 will set you back \$2.89m, where as the latest Daher/Socata machine will cost you a lot more. So you can fly at 40kts faster to your destination or you can save around \$14m per unit. And that's a serious consideration now that single engine IFR commercial flights are authorised in Europe. You can buy 10 TBMs in your fleet or 13/14 M600s. It seems a simple choice, doesn't it?



A new wing, but aside from that, the M600 closely resembles the Meridian

Luxury up front as well as in the back

31



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Following the success of the Seminar run at its offices in London on 10-11 May, AOPA has decided to hold its 2018 Seminars in London on 17-18 JANUARY, 2-3 MAY, 19-20 SEPTEMBER, AND 7-8 NOVEMBER. The venue will be 50a Cambridge Street, SW1V 4QQ, only 5 minutes' walk from Victoria Station.

To register for a place on any of the Seminars please call the AOPA office on 020 7834 5631 or join online at WWW.AOPA.CO.UK. The Seminars start at 1100 and end at 1800 each day to facilitate travel.

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The weather radar has been incoorporated into the new wing on the M600

WHO'S IT FOR

Thomas Nielsen, the European Sales Manager for Piper met me at Oxford Airport with the M600 to show me the features of the new machine. It seems as if the core market for potential M600 owners are those who use their aircraft for business and have come to rely on it. "A lot of people come to us who have gained a lot of flying experience in a Cirrus, or something similar. They have used their aircraft for business, or pleasure, but have found the come to rely on it. Some even to the point that it is an everyday mode of transport," explains Nielsen. "They realise the more they use the aircraft the more they come to rely on it to go from A-to-B and having a turbine means you can go in all sorts of weather. Ultimately, they need to use it every day and with this you have the weather radar and good protection. One of our customers recently told

"A customer had to cancel 50 flights in the winter months... that's something you don't have to think about with the turbine" me that he had to cancel 50 flights in the winter months with the Cirrus and that's something you don't have to think about with the turbine," he adds.

So those looking to move up to the turbine market could be very interested in the new M600, especially with its impressive price point.

SAFETY FIRST

Aside from the wing there is a whole collection of new stateof-the-art safety features in the M600 as well as the newest avionics suite from Garmin, the G3000. "In the Meridian we had the G1000, but the 3000 is so much more intuitive, it's like taking out an iPhone, what you see and what you need is right in front of you. If you want the map, you press the map button, if you press the chart, you press the chart button and so on. With the older versions you had to scroll, but you would have to know where every feature was. Now it's very

easy and everything is in the right place," says Nielsen.

Although all of the safety features stem from Garmin's suite, they are also a product of Piper's response to customer feedback, as well as tragic recent events in aviation. The Hypoxia Recognition System in the M600 detects pilot incapacitation as a result of hypoxia by monitoring pilot interaction with the PFD, MFD, and Autopilot Controller at altitudes above cabin 14,900ft with the autopilot engaged. If there is not a response within four more minutes, the autopilot will descend to 12,500ft. So if there has been no input from the pilot the system will ask for one to ensure they are still awake. If no interaction is detected, the system engages Automatic Descent Mode and bring the aircraft to a lower altitude in an effort to allow recovery from hypoxia. The M600 can safely fly itself without pilot assistance to lower altitudes

34 | COVER STORY Piper M600

The new M600 has extended its range to 1,484nm - 500nm further than the old Meridian

The M600 also features an autopilot Level Mode function that, when triggered, will return the aircraft to a wings-level attitude with zero vertical speed. Upon activation, Level Mode will automatically engage the flight director and autopilot functions to return the aircraft to straight and level flight. Activating Level Mode cancels all armed and active modes leaving all other autopilot modes available, simply by pressing the associated mode control button.

INSIDE THE M600

As soon as you step in to the M600 you're well aware of how well it's put together, and how Piper have thought about the passenger as much as the pilot. Everything from the thick carpet to the redstitched black leather seats gives an instant feel of being in a high-end luxury car. There's plenty of space in the back and climbing into the business end is an easy task.

"To prove we've taken all comments on board from our customers, we even listened to the complaints about cup holders, making them bigger as people prefer a large coffee from Starbucks these days," jokes Nielsen.

Jokes aside, Piper has clearly been well-designed with the pilot in mind, as you would expect from the revered aircraft manufacturer.

The M600 has been noted as having a heavy feel to it, in part down to the bigger wing, and that it is heavier than its older sibling the Meridian. Once the 600 had been trimmed correctly, which can take time at your first attempt, it was a very stable aircraft and easy to fly. "You need experience to fly the M600, but the safety features also help" Nielsen was quick to explain the many safety features and how intuitive they are in assisting the pilot. If you start flying erratically you'll soon hear the soothing voice of G3000 say: "engaging autopilot".

But a lot of potential owners will buy this aircraft, and potentially not have enough flight hours to be able to fly it in with the respect it deserves.

You need plenty of hours of experience to fly the M600, but its safety features will be able to help out and ensure you don't come to any bother. So if you become disoriented, there are features to stop spin and recover from spin. Slight design tweaks and additions to the airframe make it even more difficult to spin the M600.

Should things really get out of hand, there is even the Associated Mde Control or 'blue' button, which will return the aircraft to straight and level flight.

SO HOW WILL IT FAIR?

Piper asked, the customers answered, and it can't be easy getting negative feedback on a product that has sold remarkably well - but Piper seems to have delivered. All the boxes have been ticked and it looks as though the M600 has added what's been missing from Piper's fleet. The Florida-based company has sold the rest of production for the remainder of 2017 and is already cutting into its 2018 serial numbers. Piper has also had a bit of luck come its way. With the approval of single-engine CAT in Europe, it can expect a boost in sales across the continent. But Piper is looking further afield. After my flight in Oxford, the plan is to take N600EU over to Africa. Once it has grass-strip certification, it will be a fantastic aircraft for multi-role purposes all over the region. It seems as if Piper have hit the nail on the head with the introduction of the M600.

TECH SPEC PIPER M600

PERFORMANCE

MAX RANGE: 1,484nm MAX CRUISING SPEED: 274ktas TAKE-OFF DISTANCE: 2,635ft (803m) LANDING DISTANCE: 2,659ft (810m) MAX APPROVED ALTITIUDE: 30,000ft

POWERPLANT

PROPELLER: Hartzell 4-blade constant speed **ENGINE:** Pratt & Whitney PT6A-42A

WEIGHTS

MTOW: 2,721kg (6,000lbs) MAX RAMP WEIGHT: 2,744kg (6,050lbs) USEFUL LOAD: 1,089kg (2,400lbs)

DIMENSIONS

WINGSPAN: 13.15m (43.16ft) LENGTH: 9.05m (29.7ft) HEIGHT: 3.44m (11.3ft) MAXIMUM OCCUPANTS: 6



36 FEATURE Training Question

CONTAMINANTS, INCLUDING WATER, ARE PEROVID FROM FUEL AND PUELS STATUS BEFORE FLORT PACURE TO ASSURE CONTAMINANT FREE FUEL AND HELD ALL SAFETY INCLUDIE AND GUNER ADVISIONES PHONT OF LIAST CAN REGAT, IN BOOLY INJUNY OR DEATH, ARDNING

TACHIVEN SEAT IS LOCKED IN POSITION PROFITO TARL TAKE OFF, AND LANDBRG. ALLINE TO PROFERLY LAICH SEAT AND HEED ALL SAFETY INSTRUCTIONS CAN REBULT IN BOOLY INJURY OR DEATH.
WORDS Ian Marshall IMAGES Various

TRANSFORME There are a lot of questions that go unanswered, Ian

Marshall asks one of the hardest to answer: "Why?"

hy is an interesting and grossly underused word in flight training! Why for example do people do so many strange things when flying aeroplanes? There you are on final approach, power set, flaps deployed and trundling down the glide path nice and stable, when at about 50ft above the ground you chop the power. Go stand next to your favourite GA runway and watch. See if you can spot the wobble when the power comes off, the nose tries to drop, and the trim goes to pot. Why do we do this? Please somebody explain to me the advantages of destabilising a perfectly good approach! How about a gentle reduction of power during the initial flare thus giving better elevator control, and a civilised harmonious return to what Neil and Buzz described as 'the good earth'.

PLEASE DO NOT

Here are a few more 'whys'! Why are there nine examinations to pass to obtain a PPL? Most of the information a student has to force into his or her brain is pretty irrelevant. I have never used the 1 in 60 rule in my life and please somebody tell me – where is the signals square at Heathrow? I once had an Aldis lamp conversation with the old tower at London Airport but we were just showing off as the radio was working perfectly well! Staying with examinations – why on earth is there a requirement to pass them all in six sittings? What's that all about and how is this relevant to leisure flying?

Another question is why are we so short of flying instructors and why do they move on so quickly? Could it be that nobody can afford to live on an average instructor's wages? I recently came across a flying school paying the national minimum wage to its part time instructors on a zero hour's contract. I suppose you could live with this if work was available for 10 hours day. There is lots of lovely daylight all year round, and the weather never strays from that portrayed in English Heritage brochures. It would also help if all the students bother to turn up. So it really is not that surprising that when the airlines' seductive call is heard, the response is amorous.

Why do pilots fly so close to controlled airspace? I am getting pretty bored with providing the training required by the CAA to expunge the sin of an airspace incursion. Keep at least two miles and 500ft vertically away from these blasted zones. Remember your transponder only has to be plus or minus 100ft accurate, therefore bombing along just below controlled airspace can easily trigger an alert leading to a letter dropping on the door mat!

Another quandary with asking "why?" can be when you get a reasonable answer. However this can be very refreshing! Years ago you could come and go in and out of the country as a pilot by just waving your flying licence at customs. The Commercial licence actually stated that the holder had the right of entry into the UK. One day, all of a sudden, our passports were demanded at what was usually the end of a heavy day. This was very annoying so one day I tackled the border guards. To my horror my hostility was met with a perfectly good explanation. The UK had become a flying training centre of excellence and considerable numbers of overseas citizens had gained UK licences. Therefore this system was no longer viable. Mind you there were consequences of having to report to customs as one evening we arrived late and duly trudged off to their office. We were

longer viable. bu there were lences of having 't to customs as ning we arrived duly trudged off office. We were

SCHEENS



FEATURE Training Questions

greeted by scuffling noises from behind some lockers, followed shortly by silence and then the appearance of a young couple of somewhat embarrassed border officers, who had been indulging in what my mother would have described as 'courting'.

So what is the point of asking why? Well if you are under training you are probably overwhelmed by all the rules, regulations, and training information. By asking why a little more often vou will be able to make your own mind up about the efficiency of vour training. Does vour instructor understand the subject sufficiently to explain why you are doing something? Is your flight school giving you the very best it can? Are you doing something just to appease officials in EASA? Asking why will put you in command of your training and develop the self-reliance to be the captain of your aircraft.

"If you're under training then you are probably overwhelmed" Meanwhile back at the Training Committee we have been trying to answer some of other people's why's.

Why does the Wings scheme not cover people undertaking Tiger Moth type flying or indeed give instructors an improvement route? Why are pilots still coming to grief using flap 40 in Cessna 150s? It must be a training issue as the goaround at this flap setting has been known as all-butimpossible for decades. What is the industry doing about the flying instructor supply? My club has been using European instructors to supplement supply for vears but due to Brexit uncertainty, and the falling pound, that source has dried up. I have spoken with many retired airline pilots who started their careers instructing with the aim of getting them back into the training industry. Unfortunately very few are prepared to go back to

basics and teach again. I think the cost of renewing their instructor privileges outweigh any desire to pass on their invaluable knowledge. Shame.

We have electric aeroplanes on the horizon so what are the regulations going to be about them, and of course there are drones to avoid. Or should it be they must avoid us? Sadly there are far more drone owners then active pilots so guess where the votes are.

Two last thoughts. If you are flying in the hot weather or are popping over to the continent please be careful with pressure altitude. Your engine may well be struggling in the heat and the wing won't work that well.

The second is my AOPA email account is now up and running, Hurrah! So if you have any training issues or comments please drop me a line. AOPA is here to help! ian.marshall@aopa.co.uk



Why, why, why - possibly the most powerful question in a student's arsenal... so make sure you use it!



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GARMIN'S NEW FLIGHT INSTRUMENT OF CERTIFIED The G5 electronic flight instrument has been certified and is available now

Product G5 Electronic Flight Instrument **Maker** Garmin

Garmin has announced approval from the FAA and EASA for its new G5 electronic flight instrument. The new G5 is a replacement directional gyro (DG), or horizontal situation indicator (HSI), for installation in type-certificated fixed-wing general aviation aircraft.

The G5 can be used as a standalone primary display for heading, VOR/ LOC guidance and/or GPS guidance, as well as distance and groundspeed when paired with VHF NAV/ COMMs or GPS navigators.

The installation of dual G5 electronic flight instruments can also eliminate the dependency on steam gauges. Installation approval is accomplished via supplemental type certificate (STC) and Garmin also have an extensive approved model list (AML) with more than 650 individual aircraft models.

The G5 comprises of a 3.5inch sunlight readable LCD, and the G5 electronic flight instrument is approved for installation in place of the aircraft's existing DG/HSI. The G5 displays magnetic heading and a dedicated rotary knob allows pilots to select and adjust course and make heading bug selections. Suitable for installation in place of a standard 3-1/8-inch (79 millimetres) flight instrument, the G5 measures 3-inches (76 millimetres) in depth with the back-up battery so it can easily be integrated into a wide range of aircraft.

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INTERESTING SPIN ON ARATHER DULL TOPIC Nick Wilcock reads AFE's latest book on Air Law, and actually enjoys it...

Book Aeronautical Knowledge - Air Law **Author** Jeremy Pratt

Few student pilots, or qualified pilots, would disagree that Air Law is hardly the most interesting aspect of aviation. Yet although it is an essential part of everyone's flying, regrettably the subject often isn't very well taught and few textbooks have managed to keep up with the recent changes in legislation facing us through amendments to the Aircrew Regulation, the introduction of Standard European Rules of the Air, and the 2016 revisions to the UK Air Navigation Order.

AFE's Jeremy Pratt is part of the team that produced the UK's Alternative Means of Compliance CAP 1298-1300 syllabuses for the

PPL and LAPL and is also a member of the PPL/LAPL Examination Working Group. The primary aims of revising the PPL/LAPL syllabuses were to bring them up to date and to ensure that theoretical knowledge requirements should focus on a sound knowledge of the relevant subjects, rather than merely spotting exam answers. Jeremy Pratt's new book does just that; in an easily read, well-illustrated manner it covers the essentials of International Air Law, European Rules of the Air, Aerodromes, VMC and VFR, Airspace Classifications, Altimeter Setting Procedures, Air Traffic Services, Aeronautical Information Service, Urgency and Distress Procedures, Pilot

Licensing and National

Procedures, at a 'need to know' level in each topic. It includes all recent legislative changes in a clear, modern yet comprehensive style rather than in the leaden, often ambiguous prose of €urocracy, and it is certainly a most welcome and refreshing volume.

Although primarily aimed at those training for the PPL or LAPL, this is also a good reference for all pilots and would make a great addition to any pilot's library.

The book includes simple progress checks at the end

NEED TO KNOW

- + Clear style, which includes recent legislative changes.
- + All pilots would benefit from owning a copy.
- A dull subject.
- Progress checks could be more exam-based.
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of each section and a list of model answers. But don't for one minute think that these are taken from the forthcoming examinations – they are purely there for the benefit of readers to check

they are purely there for the benefit of readers to check their understanding of the relevant subjects. Jeremy Pratt and the

AFE team have done an excellent job in producing a textbook which actually makes a traditionally dull subject far more interesting than hitherto, and I heartily recommend it without hesitation.

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