

# AOPA UK

## Flying in a unique classic

*Lucky Henry Simpson is given the honour of flying in one of only two C-41s, the rare former military-used DC-3s*



**ISLE OF MAN VISIT**  
MWG Chairman David Chambers visits the legendary island in the Irish Sea

**TOP PILOTING TIPS**  
Pilots never stop learning - Matt Lane offers more advice on flying safely

**LAPL AND PPL EXAMS**  
Nick Wilcock explains the latest decisions from EASA on gaining your licence

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# REFLECTIONS ON THE PAST AND THE FUTURE

**D**URING THE Christmas and New Year period the media indulges, some might say self-indulgently, in an abundance of stories about what made the news in the previous year, this year being no exception. Also, as we are now entering a new decade there has been a plethora of predictions for the forthcoming years. However, some things remain the same. If you're reading this as an AOPA member I'm delighted to inform you we have decided to keep the Membership Rates for 2020 the same as last year. During the course of 2019 AOPA has successfully run campaigns to increase the membership and will continue to actively do so during 2020 with the help of the Members Working Group (MWG). For about fifteen years now AOPA has run periodic MWGs throughout the year. I stepped down as Chairman of the Group at last year's November meeting and David Chambers was elected as the new Chairman. It was one of the best attended meetings for some time, a mixture of long-standing attendees and also non-members wanting to understand more about what AOPA does for its members and the wider UK GA community. Thank you to all those who attended and participated. I hope that you will give David your continued support. Further news from the meeting can be found in this magazine along with the dates for the 2020 meetings – also on the website. Don't forget we offer a discount for new members who join up at an MWG meeting.

Moving from in-house to national news, and to the future, I noticed that according to *The Daily Telegraph*, 'Intercity e-planes are cleared for take-off'. George Freeman, Minister for Transport and Innovation, is predicting a whole new world of low-level aviation at 2,500 ft with one service starting this coming year. Billed as environmentally cleaner, economically cheaper and time saving, what's not to like? My first thought is: how will they integrate into the existing airspace that AOPA's members move in? Then, is it an opportunity for new businesses to work out of existing GA airfields, bringing sustainable economic benefit to them? One thing is assured, AOPA will be engaging with, and influencing, our legislators to ensure the safety of all, and continued access to airspace and airfields for AOPA members.

Let's not forget the influence AOPA UK wields which is, in part, derived from its participation and representation at European and global level. AOPA UK is hosting the AOPA European Regional Partners Meeting in London in March. Delegates from all of the AOPA European organisations have been invited. As I write, the agenda is a work in progress. However, now that we're purportedly 'going to get Brexit done', I'm sure there will be lots to discuss and influence. AOPA UK will continue to work with the CAA and other agencies to help clarify what Brexit will mean for our members. I'd like to thank all of you for your support last year and I hope we can rely on it for this year. There's never been a time when the work AOPA carries out on your behalf has been so important and greatly needed. ■



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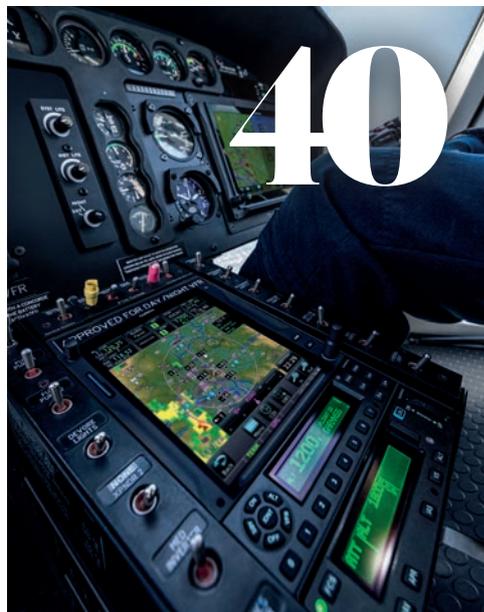
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## EDITOR'S MOMENT

Well, January has passed and at time of going to press we're still in Europe – but you can rest assured that when we do eventually leave, AOPA is ready to cope with any potential fallout. Go to the Community section to see how we're continuing to work for you.

I would like to welcome David Chambers to the AOPA board as he becomes the Chairman for the Members' Working Group. David is a keen flyer and will often hop over to Europe to fly in new skies. You can read about his adventure to the Isle of Man on page 24. David will also be writing in the Community section from now on, updating members on recent meetings.

Also in the Community section is Matt Lane's 'top tips for flyers' – well worth a read.

Now that winter is all but behind us, it's time to get back in the skies and start flying again; if you're planning an adventure, let us at the magazine know about it and we'll happily publish it and maybe others will follow in your footsteps.

**David Rawlings**

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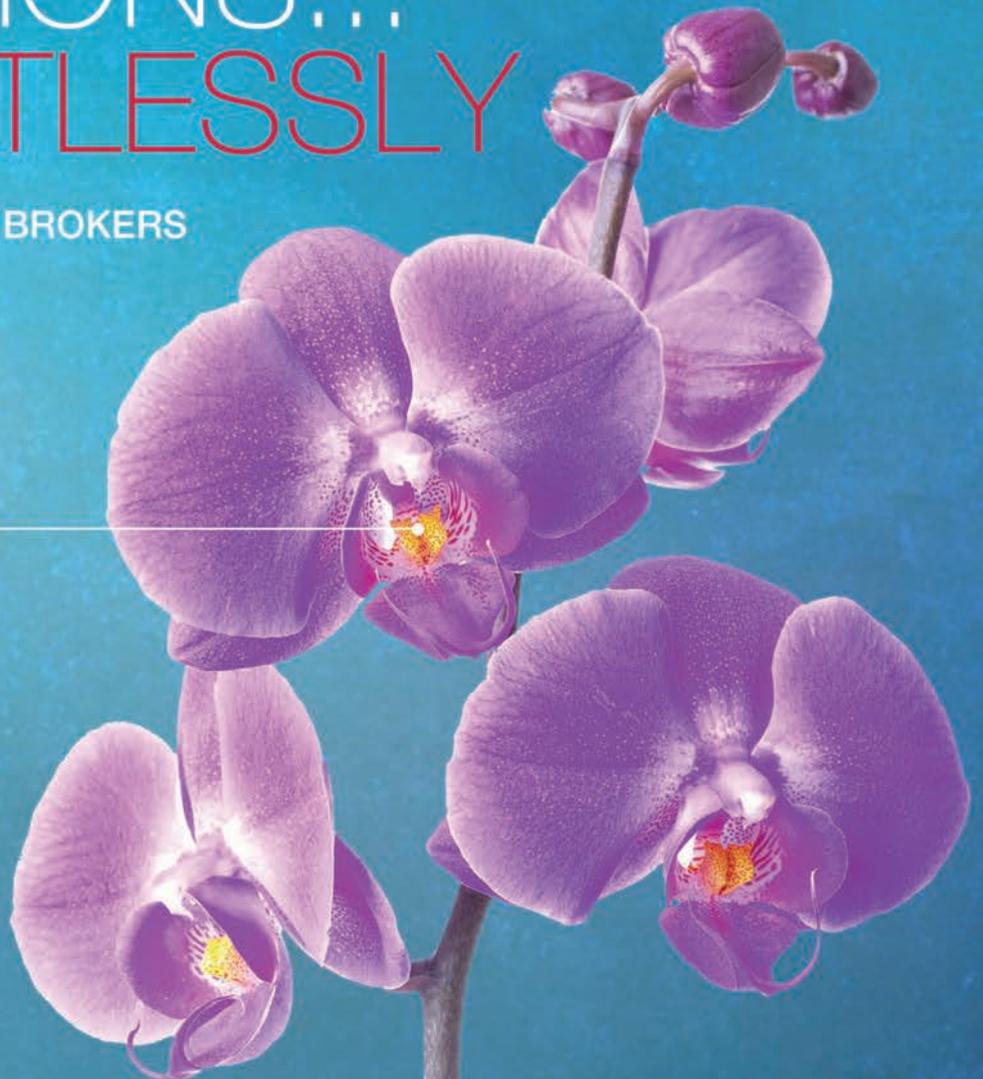




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# AIRSPACE, DRONES AND TRAFFIC MANAGEMENT ON THE AGENDA AGAIN

**T**HE ELECTION is well and truly over and it is clear now that we have left the European Union (well, we should have done by the time you're reading this).

There is still a degree of uncertainty about the future, but for now the existing rules remain unchanged when it comes to EASA aircraft, pilot licences and maintenance. The rules of the air are also remaining unchanged, and the UK ANO was previously amended to align it to the last update of the European Union's basic regulation.

In the future, the UK may alter some parts of the ANO in order to better reflect the needs of UK aviation but as an ICAO contracting state, which we will remain, your ICAO-compliant licence will allow you to fly where ever you want to go (for those that have them). So, Le Touquet for lunch will still be possible – the issues that relate to the freedom of movement are still to be decided but as a non-EU member state, issues like customs clearance will surface. AOPA is trying to stay abreast of these issues as best we can. However some other European institutions we will be staying a part of – such as Eurocontrol and the European Civil Aviation Conference; (ECAC) – have a larger membership than the EU.

## AIRSPACE

Airspace is firmly on the agenda for the coming year and a lot of new directives have been passed from the Secretary of State for Transport (The Right Hon. Grant Shapps MP) to the CAA. These include issues like completing the GNSS approaches that have been developed for GA to use, and giving powers to the CAA to recover controlled airspace that is no longer required, but for which there was no mechanism to do it. We think that this is a very positive step although it may not mean huge areas of airspace get reclassified as Golf but at least it will

*"Although we have responded to the various consultations in the past, it was an opportunity for us to emphasise the concerns we have"*

ensure that the UK's airspace is being used efficiently.

There are other drivers that will alter the shape and size of the airspace as well. There are issues with airspace capacity (fragmentation) that leads to inefficiencies which leads to more emissions than necessary and I believe that these will be of fundamental concern to government. With the number of airports in the south-east of England there are major challenges ahead, including the question of the third runway at Heathrow – therefore the management of the lower airspace is going to become a real focal point, particularly when you include Beyond Visual Line of Sight (BVLOS) Drone operations – the consultation on the Airspace Modernisation plan is on the CAA website. AOPA will be responding and we shall share our views with you, but please comment individually as well. As a part of these developments a new body has been established: ACOG (Airspace Change Organisation Group) under the leadership of Mark Swan (formerly of CAA/SRG). The intention is then to consult with all interested parties on airspace changes in the future but following the ICAO principle that Controlled Airspace should be the minimum required to ensure the safe and efficient flow of Commercial Air Transport (CAT) operations. This is a policy that IAOPA/AOPA UK has promoted over many years and can be seen in the IAOPA resolutions.

## TRAFFIC MANAGEMENT

There will have been the second reading of a Parliamentary Bill covering Air Traffic Management and Unmanned aircraft and AOPA provided an input on this subject to Members of the House of Lords.

Although we have responded to the various consultations in the past, it was an opportunity for us to emphasise the concerns we have about drones operating near to aerodromes and what penalties could be applied in the case of a misuse of drones such as fixed penalty notices. Although these may be appropriate in some instances, we feel that where a drone interferes with manned aviation then court action is the right solution. However, the bill did not cover autonomous drone operations or how to deal with individuals that may – in future – not even be in the UK; or how to stop people in prison from using a mobile phone for an amazon delivery.

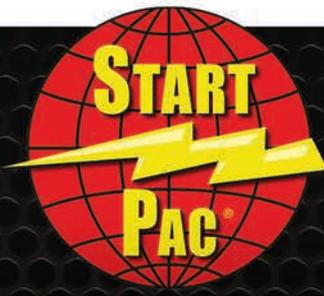
The other area of interest to us is in the development and use of new technology, and whilst the CAA has a new department: 'The Innovation Team', we have had no contact with anyone from that group as of yet, and I think that it is very important that we know what they are thinking about. Technology moves extremely quickly and often regulation lags behind, so there are a lot of developments ahead and your association is in the midst of it. And be assured that we will keep you informed as progress is made... ■



*M Robinson*

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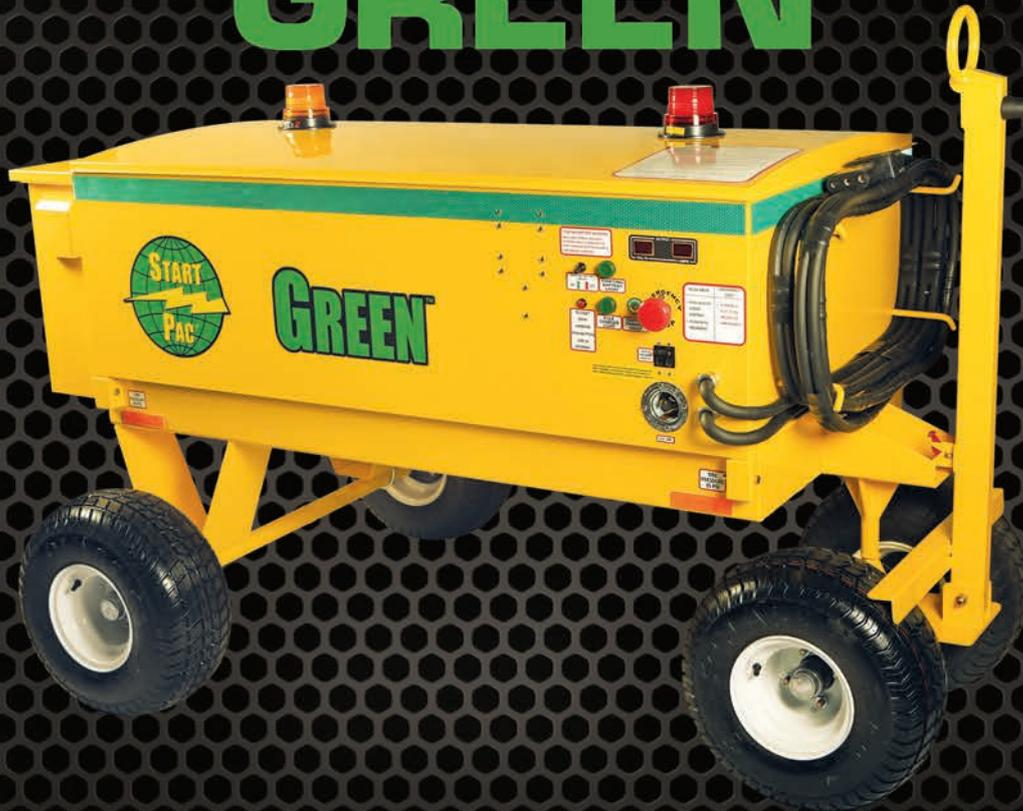
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# HELPING YOU STAY FLYING

Welcome to the **AOPA COMMUNITY** section of the magazine, bringing you all the **NEWS AND INSIGHTS** from the world of AOPA...



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WORDS David Chambers IMAGES Various

# AIRFIELDS, RULE CHANGES, AND EVERYTHING ELSE...

New Members' Working Group chair David Chambers hit the ground running at the latest meeting. Here, he talks about the subjects that were on the agenda

**THE MEMBERS' Working Group** is a forum open to all members (and potential members) which allows two-way communication between the executive committee and members in person. It's a great way to, ask questions, find out about and provide feedback on current issues. In the past, volunteers within the group have taken on various projects of specific interest to them, for the benefit of all.

The last Members' Working Group of 2019 – held on Saturday 23 November at West London Aero Club, White Waltham – was well attended by more than 20 pilots. Highlights are provided below, and more detail on several of these topics can be found elsewhere in the magazine.

## CEO UPDATE

Martin Robinson reminded everyone of the ongoing advocacy that AOPA provides to members who get into difficulties with the CAA and other authorities. He recently supported two specific cases in which pilots were reported to the CAA for quite different reasons. He pointed out that in these cases the CAA does not just look at the individual specific incident; it thoroughly investigates the pilot background and paperwork, looking for evidence that the pilot remains fit and competent to hold their licence.

AOPA helps to ensure that the pilot's case is presented in the best light, often resulting in a more favourable outcome. Martin continues



The MWG discussed the possibility of how Permit To Fly aircraft could be used in ab initio training

*"The implications for Certified Aircraft and the businesses that rely on these are not yet fully appreciated"*

to be surprised at how few pilots seem aware of AOPA or that this service is available to members. AOPA is not a regulator and is a completely independent organisation representing pilots, and at times this has even included pilots in dispute with the LAA.

## PERMIT CONSULTATION

A consultation started on 6 January 2020 regarding the use of Permit Aircraft for ab initio training. The consultation will last 12 weeks, followed by four weeks for deliberation and then a final decision. The implications for certified aircraft and the businesses that rely on these are not yet fully appreciated.

## AIRFIELDS

John Walker, AOPA UK Board Member, actively tracks

developments, and threats to UK airfields and infrastructure. Mostly this relates to planning applications for housing development, which remains financially lucrative. Old Sarum and Redlands have both closed since the last meeting. More positively, St Athan has been purchased from the RAF and is now owned by the Welsh Assembly and operated by Cardiff Airport. Wellesbourne continues to operate and the signs are good for the future. Redhill has been named an important employment site in the Local Plan. A decision on Fair Oaks is expected in February 2020. Cambridge will be closing in 2030. A decision on Manston was expected in January 2020. Proposals for Andrewsfield were going to the Planning inspector between 14 and 20 January 2020.



Night flying changes were also on the agenda

Members also enquired about other airfields and John was able to answer their questions.

### EASA UPDATE

Nick Wilcock reported that there had been a major update to the EASA Basic Regulation, with several improvements and clarifications taking effect from November. He is still awaiting publication of the AMC (Acceptable Means of Compliance) and guidance material which should have been delivered by now.

One significant change that benefits PPL licence holders is that the combination of a PPL licence and LAPL Medical is now valid for flights with LAPL privileges throughout Europe. You must still have a valid SEP Class Rating but can fly any EASA or non-EASA aircraft. This will be useful where LAPL medicals have a longer expiry date than Class 2, reducing the frequency of visits to the AME. This relaxation doesn't apply to pilots using their IMC/IR(R) or instructing.

Other relevant changes for AOPA members mostly relate to LAPL/PPL training:

- LAPL/PPL theory exams no longer required to be taken in a maximum of six sittings
- Navigation theory exam is cross-credited when subsequently taking PPL(A) or PPL(H)
- Non-ab initio LAPL licence holders not required to fly 10 hours before taking passengers
- Night Rating instruction

must be completed within six months of the first flight (applies after Easter 2020)

Nick expressed disappointment that his detailed analysis sent privately to AOPA members explaining these points had been copied onto social media both erroneously and without giving him or AOPA any credit. Nick provides a very useful regular email update about regulatory changes to instructors and others, available free to members on request.

### CAA CONSIDERS LSA

The CAA has been consulting on whether to directly regulate aircraft between 450 kg and 600 kg. This wouldn't include any aircraft already approved through CS-LSA – only new-build UK aircraft types. It would also exclude EASA training. However, it is thought that the Modular LAPL could allow microlight pilots to fly them with CAA permission.

Nick had also been investigating proposed airspace changes at Oxford and Brize.

### GAINS PROJECT

This EU-funded project explored two aspects of adopting new technology – use of electronic conspicuity (such as ADS-B), and the viability of GNSS instrument approaches to GA airfields. Bob Darby reported that the GAINS project flight testing was now complete and should be published shortly. Forty-

# AOPA FLYING INSTRUCTORS REFRESHER COURSES

For revalidation of an FI certificate, the holder shall fulfil two of the following three requirements:

- 1 At least 50 hours of flight instruction during certificate validity as FI, TRI, CTI, IRI, MI or Examiner;**
- 2 Attend a Flight Instructor Refresher Seminar within the validity of the certificate; and**
- 3 Pass an Assessment of Competence within the 12 months preceding the expiry of the certificate.**

For at least each alternate subsequent revalidation, an assessment of competence must be undertaken. In the case of a renewal you should, within 12 months before renewal, attend a Flight Instructor Refresher Course and pass an assessment of competence.

## NEXT DATES

The next dates for the courses are  
**10-11 March 2020, 7-8 July 2020,  
24-25 November 2020.**

All courses are now run at the AOPA offices at 50a Cambridge Street, London 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](http://WWW.AOPA.CO.UK).**

**The seminars start at 1100 and end at 1800 each day to facilitate travel.**

two pilots had participated in demonstrating the value of electronic conspicuity, while 29 pilots had flown 357 instrument approaches using GNSS at a total of eight participating airfields. It is hoped this will lead to wider use and availability of both.

Funding from the EU will be paid to participants once the report has been accepted (probably sometime in Q1).

### MAINTENANCE

George Done reported on the ongoing activities of the Maintenance Working Group.

One member raised the issue of LAMP, which was scheduled to finish on 31 December 2019, while the new EASA Part ML takes effect from late February 2020. Without any change, all owners of ELA2 aircraft (over 1200 kg) will be required to develop their own AMP (Approved Maintenance Program) for any work to be done between those dates.

George offered to take the issue up with the CAA and push for an extension to cover the interim. [Update: the CAA announced a formal extension to 20 February 2020, and thereafter a 13-month transition program until 20 March 2021, providing

a 13-month transition period after Part ML comes in to force. All ELA2 aircraft are required to have an AMP in place before their ARC renewal during the transition period.]

### OTHER BUSINESS

- NATS has published a digital AIP and withdrawn the previous format, bringing it into line with other countries. However, Google search results continue to list the old directory pages for each airport, where the underlying charts and text documents are inaccessible, leading to confusion.

- Jeppesen Mobile Flight Deck is to be withdrawn in favour of ForeFlight, since both products are now owned by Boeing.

- Mick Elborn pointed out that AOPA offers a discount for new members joining at an MWG meeting. Members can also choose to pay by monthly direct debit rather than a single large annual fee. He provided a page of QR bar codes for quick access to these various offers.

- PPL Theory Exams: a working group has spent five years developing, reviewing and approving 600 questions (five sets of 120) and 2,400 answers. These are ready to

*"Forty-two pilots had participated in demonstrating the value of electronic conspicuity"*

be sent out to examiners to replace the outdated ones currently in use. However, the CAA is keen to extend use of the electronic ATPL exam system and it has not yet been agreed how this will operate.

### NEW CHAIRMAN

Pauline had previously announced that this would be her last meeting as chair of the MWG, and sought another member to take over the role. David Chambers was proposed and approved at the meeting.

David gained his PPL at Kemble in 2010 and has made full use of it, flying to many UK airfields between Wick and the Scillies, as well as in Europe and the USA. As a flying-club committee member, he's encouraged others to do so too, arranging flyouts – not only in the UK, but as far away as Sweden and Austria. Adding an IMC and then full Instrument Rating in 2013 in addition to buying into a TB20 group share at Gloucester further extended his range. David became a PPL Flight Instructor in 2018 and is also qualified to instruct for Night and Instrument Ratings. He's keen to promote private pilot activity beyond simply gaining a licence, and for the industry to adopt more modern technology where appropriate.

### FUTURE MEETINGS

The following dates and venues were proposed for meetings in 2020.

All AOPA members are welcome to attend. There is no charge (landing fees at White Waltham are waived for those attending), but attendees must let the chairman know in advance.

- 28 MARCH 2020: White Waltham Airfield
- 18 JULY 2020: Earls Colne Airfield
- 17 OCTOBER 2020: White Waltham Airfield

The meeting closed with a vote of thanks to Pauline Vahey for chairing the group for many years. ■



George Done also discussed the latest changes in aircraft maintenance

**WORDS** John Walker

## THE LATEST NEWS ON UK AIRFIELDS

**THERE ARE airfields across the UK currently under threat. Here are the latest developments, updated 17 JANUARY.**

### MANSTON

Examination period ended on 9 July 2019 into the application made by River Oak Strategic Partners (who have now purchased the site) for a Development Consent Order (DCO) to retain the aerodrome as a Nationally Significant Infrastructure Project. The Planning Inspectorate has made a recommendation on the application to the Secretary of State who has extended the deadline to make a decision until 18 May 2020. Thanet District Council definitive 2031 Local Plan submitted for Public Examination on 30 October 2018 with hearings commencing on 2 April 2019 recognises the existing use of Manston as an airport and provides for the DCO process to continue.

### OLD SARUM

Site owner's planning application for housing development and 10 additional hangars refused on appeal in a Planning Inspectorate decision letter dated 11 July 2019. The owner applied for a Judicial Review of this decision but the application was refused by the High Court. In a letter dated 25 July 2019 the owner gave notice of the termination of site licences from 31 October 2019, the date from which the aerodrome was notified as closed to all movements until 29 January 2020.

Multi-year agreement reached with effect from 1 February 2020 for site to be used as a parachute centre but with no private flying being permitted.

### BRAWDY 2024

Cawdor Barracks. Defence Infrastructure Organisation (DIO) has submitted site for mixed use development for the review of 2033 Local Development Plan 2 by Pembrokeshire Council but this is not included in the draft Plan issued for public consultation on 15 January 2020.

### SWANTON MORLEY 2031

Robertson Barracks. There is no reference to the closure of the Barracks in the definitive Breckland Council 2036 Local Plan adopted by the Council on 28 November 2019.

### PETERBOROUGH/SIBSON

Huntingdonshire District Council submitted an unsuccessful bid for a 2,500 home Garden Village on site. The Council subsequently withdrew its support for the proposal but the site is still listed in the Council's Housing and Economic Land Availability Assessment.

### RET FORD (GAMSTON)

Originally earmarked for a Garden Village with ultimately 2,500 dwellings in initial draft 2035 Strategic Plan issued by Basselaw District Council for public consultation in 2019 but proposal is not included in latest draft Plan issued for public consultation on 15 January 2020. ■



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WORDS Matt Lane

# HINTS AND TIPS TO MAKE YOU A BETTER PILOT

Matt Lane has many years of experience as a flight instructor and over those years he has stolen, borrowed and liberated many top tips from other pilots and instructors. Here, he offers some of his favourites

**THIS IS** a collection of little tips and tricks that I have picked up over years of instructing and examining and may be of interest to pilots. Not in any particular order, and of course nothing supersedes any local orders or procedures you may be required to follow.

Credit is due to my fellow pilots and instructors from whom I have shamelessly stolen good ideas over the years – every day is a learning day in aviation!

## THE 3Ms

Before I walk away from an aircraft I always have a quick visual check of the 3M's – Mixture – Magnetos – Main Switch to make sure Mixture = cut off, Magnetos = off, keys out and Main Switch = off. That way you always leave an aircraft in a safe condition and won't come back to a dead battery!

## AIRCRAFT TOWBARS

There continues to be plenty of incidents of people starting up, taxiing and even going flying with the towbar still attached – at best it can result in hurt pride, at worst a trashed propeller and shock-loaded engine. My simple remedy is that you never take your hand off the towbar while it is connected to the aircraft – i.e. you only ever connect the towbar when you are actually in the physical action of pushing or pulling. Never walk away with the towbar connected. Even if you go away for seconds to get

*"Five incidents I know of personally happened when people had 'popped away for a second' then got distracted or called away and forgot to remove the towbar"*

chocks or refuel, never leave it connected. Always take it off, lay it on the ground away from the prop arc, then reconnect when you need to move again. Five incidents I know of personally happened when people had 'popped away for a second' then got distracted or called away and forgot to remove the towbar.

## CAR KEYS IN THE TECH LOG

There is nothing more embarrassing or annoying than getting home or being on a drive home and getting the phone call from the club or other pilot: "Do you know where the keys to the aircraft are?" and realising they are still in your pocket/bag/jacket! One idea is to clip your car keys into the tech log folder for the aircraft so when you

go to drive home there is the trigger to swap the aircraft keys for your car keys.

## POST-IT NOTES

Instrument failures can be extremely distracting and confusing during flight – especially if you are an IR or IR(R) rated pilot, or in demanding Night or VFR conditions – when you will be relying on instruments and have them in your scan. I recommend keeping one or two of the rubber suction backed instrument training covers handy in your flight bag or aircraft so you can cover a failed instrument and avoid the temptation to get distracted or confused by failed or incorrect indications. Round or shaped post-it notes, available from pilot shops or many high street



Add a diversion airfield in your flight plan, but make sure it's open first

shops do the same job just as well.

### DRY-WIPE MARKER PENS

Trying to erase permanent pen markings and lines on laminated maps and charts can be a sticky and wet job with nail varnish remover and all sorts of fluids – simply get a dry-wipe marker pen (like used on whiteboards) draw over the line or writing, wipe off and it will cleanly remove both!

### STASH SOME CASH

I have been caught out without my wallet or means to pay on diversions, land away and being stuck at maintenance on a number of occasions. I now keep a couple of notes in my headset bag so I always have some cash on me when flying. For those more up to date on tech matters, having Apple Pay or similar app enabled on your phone can be useful as well – I paid a taxi fee with it recently.

### LANDING LIGHT V TAKE-OFF CLEARANCE

I like to use switching on the landing light (or for example pitot heat in some types like a DA42, or starting avionic box timer) as a prompt that take-off clearance has been given. The Human Factors people will have some proper name for it I am sure, but I find having a specific action linked to issue and readback of the take-off clearance is a useful mental trigger that helps me ensure I do not start the take-off before getting clearance – useful if you are somewhere where 'line up and wait' clearances are common.

### DIVERSION AIRFIELD

Before flight I recommend always having a mental idea of where you will plan to divert to in the event of your destination or home airfield being unsuitable for landing – this could be because of weather or other issues like runway closed by an aircraft incident. It is not always obvious either – at one club where I fly most



Make sure you have Apple Pay, or Google Pay on your phone – should you forget your wallet

people say I would just divert to 'xx' but the runway there is orientated north/south as opposed to our east/west runway so crosswinds could make it unusable! Flight-planning apps like SkyDemon will also let you easily nominate an 'Alternate' so you can easily source the weather and NOTAMs for there at the same time as your pre-flight planning. It is valid for local flights as well – you don't want to find out your home airfield is suddenly closed because of an incident and everywhere else is fogged in.

### STERILE COCKPIT

A commercial concept is that of the 'sterile cockpit' where non-tasked-related chat and distractions are prohibited below a certain altitude – often 10,000 ft or a certain point on approach in some airlines. It may be worth considering something similar, say perhaps start of approach, or below 1,000 ft or in the circuit. It is great to share our flying environment and friendship etc. when flying, but a reminder like that may help cut out passengers or flying buddy's chatter which would distract

*"After every flight, I heartily recommend you carry out a little internal self-debrief"*

you at busy, high workload times. Downwind in a busy circuit is probably not the time for "oh by the way did you hear about what happened to....."!

### SELF-DEBRIEF

After every flight, I heartily recommend you carry out a little internal self-debrief – can be any time, perhaps even driving home afterwards or even better over a nice post-flight coffee or other drink! I always think: "What went well on that trip? What wasn't so good on that flight? What would I do differently next time?". Sometimes it also raises a trigger that I need to go and check up, or read up, on something as well. ■

*Matt Lane is a CPL/FI/FE/FICI who is Head of Training for the RAF Brize Norton Flying Club and a current RAF Tutor staff pilot. He instructs and examines for a variety of schools across Oxfordshire and Gloucestershire, across MEP, SEP and Touring Motor Glider types. Matt is also the Head of Training for AOPA UK and runs the AOPA FI Refresher Courses with the AOPA team.*

**WORDS** Malcolm Bird **IMAGES** Various

# LATEST UPDATES FROM THE MAINTENANCE TEAM

Malcolm Bird gives a round up of what's been drawing the attention from the AOPA Maintenance Working Group

**AOPA's Maintenance Working Group** has been keeping an eye on the following...

## **PART ML FINALLY ARRIVING**

After a very long gestation the "light" maintenance programme, applicable to most certificated GA aircraft, is finally to become available from 24 March 2020. This is intended to be a more proportionate programme in regard to continuing airworthiness management and maintenance for general aviation aircraft. The CAA is planning to carry out a number of small workshops for existing maintenance organisations and licensed engineers. When Part ML becomes applicable there will be an 18-month transition period for organisations who wish to gain associated organisational approvals. The programme makes provision for Part 66 licensed engineers to issue an Airworthiness Review Certificate (ARC) for aircraft operated under Annex VII (Part – NCO) when they are authorised by the CAA.

*"The subsequent investigation resulted in new documentation and circuit diagrams being generated by the manufacturer"*

## **KEEP SUBMITTING MORS**

A recent report covered an incident in which a circuit board caught fire during flight of a Cirrus SR20. The subsequent investigation resulted in new documentation and circuit diagrams being generated by the manufacturer, which will help prevent similar occurrences in the future. This is another good example of why submitting MORS can be a big benefit to the whole community.

## **MAINTAINING STANDARDS**

At several of our Maintenance WG meetings examples were raised of previous poor maintenance work seen by WG members when aircraft turned up at their facilities. This has led to questions about how these aircraft were released to service and over time some names are heard repeated. It was interesting to hear recently from the CAA that it hears of such issues from reviewing Safety Reports, whistleblowing and also ramp checks by surveyors. The CAA does investigate and around five engineers per year have their

licences suspended while they are placed under scrutiny. It is good to know that there is an active stance on standards.

## **LAMP GOES OUT**

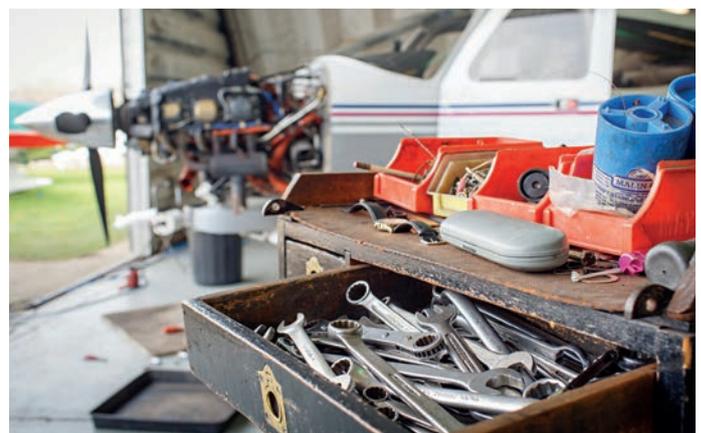
The deadline set for the phased withdrawal of CAA LAMP (CAP 767/766), has now been extended to, but not beyond, 24 March 2021 – one year after the new Part ML becomes applicable. This applies to EASA aircraft below 2,730 kg (ELA2 and ELA1 not commercially operated).

The deadline to transition from LAMP to a maintenance programme compliant currently with Part M or Part ML was originally set with the agreement of EASA for 31 December 2019. However, the later introduction of Part ML has enabled the CAA to extend the end date to align with, and make allowance for, the new requirements and to provide a further 15 months to complete the transition.

CAP 1454, Issue 3 dated 26 November 2019, has been amended to reflect this new deadline. ■



Part ML is intended to be a more proportionate programme



The CAA is hosting workshops for maintenance organisations

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# AOPA NEWS



The 2020 Cirrus range is now accompanied by an app

## CIRRUS 2020 SR SERIES HAS ITS OWN APP

The updated range features an app that connects to aircraft anywhere in the world

by AOPA News Team

CIRRUS RECENTLY announced the launch of the all-new 2020 G6 SR Series, saying that the highlight of the new model year is the introduction of the Cirrus Aircraft App powered by Cirrus IQ – providing a digital connection to the aircraft from virtually anywhere in the world. Other enhancements include a new-look interior and exterior, along with an optional 4-blade SR22T propeller from Hartzell.

The 2020 G6 SR Series introduces the iPhone app as the next step in ultimate connectivity.

Cirrus IQ enables remote communication between aircraft and pilot via the app,

enhancing the ownership experience and maximising safety and operational efficiency. Owners and operators of SR Series aircraft equipped with Cirrus IQ can now remotely access important pre-flight status information, including fuel and oxygen levels, battery voltage, oil temperature, aircraft location and flight hours, at the touch of a button.

Joining an array of industry-leading safety features, additional upgrades to the Cirrus Perspective+ by Garmin flight deck further augment safety. These upgrades include a new stabilised approach advisory system which provides visual and aural alerts to the pilot about unstable

*"Cirrus IQ enables remote communication between aircraft and pilot"*

conditions during an approach.

With these upgrades, the series offers the most comprehensive, integrated and intelligent flight experience available today, enabling a smarter aircraft, a smarter pilot and smarter flying.

Joining the new aircraft is an all-new 4-blade clean sheet SR22T propeller from Hartzell. Utilising the most technologically-advanced

carbon fibre construction and finished with a nickel leading edge protectant, this new upgrade option adds an unmistakable ramp presence for the 2020 G6 SR22T. The 2017 G6 SR Series launched the high-speed Cirrus Perspective+ flight deck, Cirrus Spectra wingtip lighting, premium cockpit connectivity solutions and more. In the following two years, the G6 SR Series was further enhanced with flight deck upgrades and new features in connectivity, including flight data streaming and the ability to text or call contacts on the ground with FlightStream 510.

Deliveries have already begun on the new aircraft. ■

# CAA OPENS CONSULTATION ON PERMIT AIRCRAFT TRAINING

by Lucy Fields

THE CAA has launched two related consultations that propose expanding the types of aircraft that can be used for initial paid private pilot training. If enacted, it would allow certain aeroplanes and amateur-built microlights operating on national permits to be used as training aircraft. The proposals are in line with the CAA's approach to make the regulation of GA more proportionate.

The move follows an amendment to European regulations which came into effect in 2019, that now allows countries to recognise training and experience gained on certain aircraft, with permits to fly towards gaining a PPL under EASA requirements. For those



Should a Vans aircraft be used in training?

training in microlights, a national licence would be issued.

Input from the GA community has been included, as the working group developing the proposal was comprised of key stakeholders from the sector's representative groups.

The CAA believes the proposals could have a positive impact on the training sector, including cost savings that may lead to more people learning to fly.

The consultations are open until 17 February 2020 and are available on the CAA website. ■

## LOOK BACK... THIS MONTH 56 YEARS AGO



### GERALDINE MOCK MAKES HISTORY

Back in March 1964 Geraldine 'Jerrie' Mock became the first woman to fly around the world solo, in a Cessna 180 Skywagon. She took off from Columbus, Ohio on 19 March and completed her flight on 17 April taking 29 days.

The flight included 21 stopovers and she covered 22,860 miles. In 1965 Mock was awarded the Louis Blériot Medal for her achievement. An almost forgotten part of the flight is the 'race' that developed between Mock and Joan Merriam-Smith, who had flown from a field near San Francisco on March 17, 1964. Joan's departure date and flight path was the same as the aviator Amelia Earhart's last flight and though not in direct competition with each other, media coverage soon began tracking the progress of each pilot, fascinated with who would complete the journey first. The story of this race is told in a book written by Taylor Phillips entitled, *Racing to Greet the Sun, Jerrie Mock and Joan Merriam Smith Duel to Become the First Woman to Solo Around the World*.

Mock also holds numerous speed and distance records for a female pilot. Her Cessna now resides at the Smithsonian.

## P2002 TO BE CERTIFIED IN THE EU 600 KG CATEGORY

by Robert Care

TECNAM ANNOUNCED today the certification of the low-wing P2002 Sierra MkII light aircraft to align with the new German 600 kg rules.

The latest version of the EASA Basic Regulation now allows for 600 kg MTOW Ultralight aircraft under the control of the CAAs of the member states. Germany is the first country to declare the opt-out, implementing the new-regulation German 600 kg technical LTFUL 2018 rules. It is also the first country to develop and publish the necessary airworthiness requirements for these aircraft, delegating

the certification process to the DULV (Deutscher Ultraleichtflugverband e.V.) agency. The new certification of the MkII is important, since the German Type approval is recognised in many European countries. The increased weight allowance means greater safety, as the aircraft can be equipped with a parachute, more avionics and more fuel. All else remains unchanged.

The MkII offers state-of-the-art technology in a jet-style cockpit. Customers can choose from an extensive range of options, starting with the basic analogue instruments needed for visual flight, a six-pack analogue with

Garmin GPS, the Garmin G3X which features twin 10.6-inch screens, and the Garmin G3X touch suite.

The largest range of options is for interior and exterior styling, with four choices for every style package: Standard, Premium and Power. For the exterior, the range of paint schemes includes new metallic colours which can be matched to the seats, cabin sides and instrument panel covering. The customer is free to choose whatever suits their taste.

In non-European countries, the P2002 is available in the Ultralight, US Light Sport Aircraft and Experimental categories. ■



# ROLLS-ROYCE UNVEILS ALL-ELECTRIC RACEPLANE

The British company's plan to build the world's fastest all-electric aircraft takes a giant step forward towards reality

by **David Rawlings**

ROLLS-ROYCE unveiled its all-electric aircraft at Gloucestershire Airport, and has stated that work will now begin on integrating the ground-breaking electrical propulsion system. This will enable the zero-emissions plane to go for the record books with a target speed of 300+ mph in late Spring 2020.

The plane is part of a Rolls-Royce initiative called ACCEL – short for 'Accelerating the Electrification of Flight' and is a key part of Rolls-Royce's strategy to champion electrification. The project involves a host of partners including electric motor and controller manufacturer YASA and the aviation start-up Electroflight. Half of the project's funding is provided by the Aerospace Technology Institute (ATI), in partnership with the Department for

Business, Energy & Industrial Strategy, and Innovate UK.

Rob Watson, Director of Rolls-Royce Electrical, said: "Building the world's fastest all-electric aircraft is nothing less than a revolutionary step change in aviation and we are delighted to unveil the ACCEL project plane. This is not only an important step towards the world-record attempt but will also help to develop Rolls-Royce's capabilities and ensure that we are at the forefront of developing technology that can play a fundamental role in enabling the transition to a low-carbon global economy."

The ionBird test airframe, named after the electrical technology propelling the aircraft, was also unveiled. The ionBird will be used to test the propulsion system before it is fully integrated into the plane. Planned tests over the next couple of months include

*"The ACCEL project is just one of the ways Rolls-Royce is developing lower carbon power"*

running the propulsion system up to full power as well as key airworthiness checks.

ACCEL will have the most power-dense battery pack ever assembled for an aircraft, providing enough energy to fuel 250 homes or fly 200 miles on a single charge. Its 6,000 cells are packaged to minimise weight and maximise thermal protection. An advanced cooling system ensures optimum performance by directly cooling cells during the high-power record runs.

The propeller is driven by

three high-power-density axial electric motors and compared to a conventional plane, the propeller blades spin at a far lower RPM to deliver a more stable and far quieter ride. Combined, they'll continuously deliver more than 500 horsepower for the record run. Even during the record run the all-electric powertrain delivers power with 90% energy efficiency and of course zero emissions.

The ACCEL project is just one of the ways Rolls-Royce is developing lower carbon power. This includes partnering with Airbus on the E-Fan X technology demonstrator project, which is an important stepping stone towards hybrid electric commercial aircraft at the scale of today's single aisle family. The programme is part of the airline's ambition to replace and electrify its regional fleet of 30+ planes by 2030. ■

# GOSKYDIVE TO CONTINUE FLYING OPS FROM OLD SARUM

by **Lucy Fields**

PARACHUTE OPERATOR GoSkydive has announced that it will continue operations from Old Sarum Airfield throughout 2020 and beyond.

The tandem skydiving specialist says it has reached a multi-year agreement with the airfield owners at Old Sarum.

The airfield closed to private pilot and flying school operations at the end of October.

Paul Shipway, general manager of GoSkydive said, "Today is a hugely important day for GoSkydive as we can now plan for our future at Old Sarum."

"Securing our agreement means we will be able to continue to employ almost 70 people at Old Sarum and of course bring visitors to the local area."

"Our new agreement removes the aircraft related operational constraints that had been imposed by the

owners, allowing us much greater flexibility to grow as a business and provide additional opportunities for our customers to develop in the sport, including freefall skydive training and sports skydiving at the site.

"It is certainly a very exciting time for us as a business as we plan for our first operational day, 1 February 2020."

Gordon Blamire, founder of GoSkydive, added, "We have been in discussions with the owners of Old

Sarum Airfield for some time and following their decision to change the mode of operation to dedicate the airfield to unlimited flying by commercial organisations, we are pleased we can now concentrate fully on additional growth opportunities and improving our skydiving packages even further."

GoSkydive has also confirmed it will be reopening the cafe at Old Sarum. ■

# EASA APPROVES VOLOCOPTER

by **AOPA NEWS TEAM**

EASA awarded Volocopter the Design Organisation Approval (DOA) following a series of thorough audits. The approval is a confirmation by EASA that Volocopter is performing its tasks as an aircraft manufacturer in a controlled and safe manner. As an approved Design Organisation, Volocopter has a competitive edge in development speed, while guaranteeing the

highest safety standards. Volocopter is the first eVTOL startup on record to receive DOA with vertical take-off and landing (VTOL) as scope of work worldwide.

EASA is the European Union's aviation authority and regulator, ensuring the highest level of safety protection. By awarding a DOA, EASA entrusts a growing range of responsibilities to Volocopter as per a set of rules and processes. The

*"The benefit of having a DOA is EASA exercises surveillance to the organisation as a whole"*

benefit of having a DOA is EASA exercises surveillance to the organisation as a whole, and the involvement can be reduced to fewer steps on the way to the final commercial certification. Consequently, product development can be conducted at a faster pace by the approved organisation. Receiving EASA DOA thus proves to be a strong competitive advantage for Volocopter within the global context.

"Receiving this seal of approval from EASA is testament to our rigorously professional processes,

world class team, and devotion to safety here at Volocopter," says Jan-Hendrik Boelens, CTO and Head of Design Organisation of Volocopter. "Design Organisation Approval is a crucial step towards receiving commercial certification and brings air taxis ever closer!" says Florian Reuter, CEO of Volocopter.

EASA awards DOA to companies they have thoroughly audited with regards to their organisation, processes, resources, and staff expertise. Key aspects the agency checks before giving their seal of approval are clearly defined throughout certain processes, that also need to be lived in everyday work, safety awareness, and the organisation. The audits ultimately serve to assess and decide whether a company can bring a safe aircraft to market. ■



Volocopter has been given Design Organisation Approval

**AOPA NEWS HIGHLIGHTS****DELTA DUMPS FUEL ON SCHOOL**

A Delta Air Lines Boeing 777 dumped fuel that fell on a Los Angeles-area school as it returned to LAX after an "engine issue". The flight had an undisclosed engine issue after departure and had to dump fuel to achieve landing weight. Los Angeles County Fire dispatched more than 70 firefighters and paramedics to the school to treat 17 children and nine adults. None required hospitalisation.

**RADIO RANT COSTS BIG**

A helicopter pilot has been fined £1600 and had his pilot licence suspended for an on-air rant aimed at an air traffic controller. Joel Tobias dressed down controller Andrea Tolley for what he said was a delay in answering his call. "I'm in a helicopter that costs £550 an hour and I've waited 10 minutes for you to answer the call – it's appalling," a transcript read. He pleaded guilty to an offense under the Air Navigation Order.

**MOONEY MAKES REDUNDANCIES AGAIN**

Employees at Mooney, furloughed in November and recalled in December, are once again out of work. Employees were told to "go home" and that the company would not be giving them the two weeks of holiday pay they were promised. Devan Burns, who worked for Mooney in human resources, stated that 55 employees were discharged. "I've been trying to help keep Mooney stay alive. It's extremely frustrating," she said.



The sleek and supersonic X-59 will go into final assembly

# SUPERSONIC X-59 CLEARED FOR FINAL ASSEMBLY

NASA's first supersonic aircraft for more than 30 years has been given the go ahead

by **David Rawlings**

THE FIRST large-scale piloted X-plane to be commissioned by NASA for more than 30 years has been cleared for final assembly and integration of its systems, following a major project review by senior managers at NASA Headquarters in Washington. The management review, known as Key Decision Point-D (KDP-D), was the last programmatic hurdle for the X-59 Quiet SuperSonic Technology (QueSST) aircraft to clear before officials meet again in late 2020 to approve the aircraft's first flight in 2021. "With the completion of KDP-D we've shown the project is on schedule, it's well planned and on track. We have everything in place to continue this historic research mission for the nation's air-travelling

*"We've shown the project is on schedule, it's well planned and on track"*

public," said Bob Pearce, NASA's associate administrator for Aeronautics. The X-59 is shaped to reduce the loudness of a sonic boom reaching the ground, to that of a gentle thump, if it is heard at all. It will be flown above select US communities to generate data from sensors and people on the ground in order to gauge public perception. That data will help regulators establish new rules to enable commercial supersonic air travel over land. Construction of the X-59, under a \$247.5 million cost-

plus-incentive-fee contract, is continuing at Lockheed Martin Aeronautics Company's Skunk Works factory in Palmdale, California. Three major work areas are actively set up for building the aircraft's main fuselage, wing and empennage. Final assembly and integration of the aircraft's systems – including an innovative cockpit eXternal Visibility System (XVS) – is targeted for late 2020. The XVS is a forward-facing camera that uses its processing power with custom image processing software and camera systems, to create an augmented reality view of the X-59 pilot's forward line-of-sight along with graphical flight data overlays. The X-59 falls under the Low Boom Flight Demonstrator project, which is part of NASA's Integrated Aviation Systems Program. ■



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CRAFTED FOR AVIATORS

WORDS & IMAGES: David Chambers

# HEADING FOR THE ISLE OF MAN

The Isle of Man isn't too far away but for David Chambers and his wife, it turned into quite an adventure



**DAVID CHAMBERS** PPL FLIGHT INSTRUCTOR **MWG CHAIRMAN** SHARED OWNER OF A TB20 **IMC AND INSTRUMENT RATED**

**I** HAD BOOKED G-CORB, our shared TB20, for a weekend away with my wife. There was no firm pre-planned destination, but with the weather forecast quite changeable in the days

beforehand we had decided not to go far.

The Isle of Man had been on our target list for some time and is quite convenient to get to with just over an hour's flight from Gloucester. The benefit of a shared aircraft is that you

aren't under any pressure to fly long hours or even every day when it's your turn to use it.

Planning was done at a fairly late stage. The weather for Saturday looked extremely windy (Force 6 or 7) so we decided to fly out on Friday

afternoon. I filed a VFR flight plan and a GAR form the previous evening, since the IoM is covered under similar arrangements to the Channel Islands. SkyDemon had a hiccup and didn't immediately offer me the option of filing a GAR

so I had to work around that by amending an artificial flight to Ireland instead. Handling is mandatory, and while the Private Jet Centre would have been very easy to use, it was considerably cheaper to use Rendezvous Handling on the south side of the airport. I had a lot of trouble contacting them (the phone numbers and details on their website are well out of date), but persistence got there in the end. We would be arriving on the last day of the TT motorbike races, hence the airport was very busy.

On the morning of the day itself, this was one of the first times I seriously thought about cancelling a flight because I'd been quite stressed after a busy week. But as the day progressed, I decided that the flight was within my capabilities. My wife drove us up to the

airport and there was no pressure to rush or expedite the flight.

#### **OUTBOUND**

The outbound routing kept slightly to the east of Snowdon where you are penned in by some very low Class A airways just to the southwest of Liverpool. I did get a Basic service from Shawbury who terminated service as we exited their zone, and as is common with LARS didn't handover or suggest a next station. Perhaps I should have spoken with RAF Valley but instead called London Information, who were quite busy. Nonetheless, they set me up for an early handover to Ronaldsway shortly after coasting out, who then gave me a Traffic service.

I had climbed up to FL85 to try and find some VMC above

*"We would be arriving on the last day of the TT motorbike races, hence the airport was very busy"*



the clouds, which were in layers and made finding a good cruising altitude difficult. Ronaldsway cleared me into their Class D but asked me to descend to 3,000 ft before entering. I had originally requested a VFR arrival, based on the report of broken clouds around 2,000 ft, but amended that to a vectored ILS for 26 which was immediately granted.

The few extra track miles resulted in a calm, ordered and very stable approach and landing that was much appreciated by my passenger. We even got some good views of Douglas as we intercepted the approach track.

**BUSY BUSY BUSY**

It was busy after landing, with both sides of a taxiway on the south side being set aside for grass parking – there were at least sixty or seventy aircraft parked up in a line. The handlers marshalled me to a space and helped me manually push back onto the grass. After thoroughly tying down the

aircraft (with portable tie-down kit that screws into the ground) and putting the cover on, we were driven by minibus to the gate. An old portacabin serves as an office. A taxi took us directly to our hotel in Douglas. Alternatively, we could have taken a taxi round to the main terminal and either hired a car there or taken the bus into town.

It was the last day of the TT races and we enjoyed a spectacular fireworks show later in the evening from our hotel room facing the beach. After unsuccessfully trying to hire a car in Douglas, we found the bus service was excellent (all day tickets cost £7) and probably less hassle. We visited Peel, Ramsey, Castletown and Port Erin including several museums and castles which gave us free admission with our National Trust cards. I'd observe that the southern half of the island was more scenic than Ramsey in the north, although we didn't venture to the far northern coast. The island population is around

*"The few extra track miles resulted in a calm, ordered and very stable approach and landing that was much appreciated by my passenger"*

90,000 of which 27,000 live in Douglas.

There are quite a few tourist attractions including trams (electric and horse-drawn), castles, museums and an abbey covering the period of Viking rule through to present day. The Bee Gees were born here, and may this year be celebrated by their own statues on Douglas seafront.

The island has its own parliament, the Tynwald, and strongly resembles the administration found in the Channel Islands. The ferry service has for many years, been provided by the Isle of Man Steam Packet company. One thing we noticed was an apparent lack of solar panels – perhaps there are engineering or financial limitations not found elsewhere.

The Isle of Man used to have a major zinc mining industry until the early 1900's, extracting as much as the rest of the British Isles put together. One of the mines goes down 2,000 ft (600m) below ground, and features the largest water

**BELOW CLOCKWISE: A busy airfield due to the TT; a view of Castletown from the castle's ramparts; the famous ferry terminal**



wheel I've ever seen to pump water out. We were able to climb up to the top of the Laxey Wheel which both gives great views and really lets you appreciate this marvel of engineering.

#### WINDY RETURN

It was still pretty windy on Sunday, with METARs reporting 25 kts gusting 35 kts, although mostly down the runway. The spray from waves at the harbours was splashing over the tops of the piers. We met a (small) yacht crew from Wales who had decided to stay until Tuesday before the weather would be calm enough to depart. By pure co-incidence, I saw Phil Mathews, CFI of Cotswold Aero Club, at the main airport terminal – he'd just ferried an aircraft over and was taking a commercial flight back home. He not only provided a PIREP about the weather conditions but even showed me a photo from FL60.

I had filed IFR to ensure we could fly in the airways and route well clear of the Welsh

mountains, avoiding low-level turbulence. My thinking was that I could cancel IFR at any time and just drop down to return home VFR. My clearance on the ground was via L10 airway as filed, but initially told to steer a heading of 165 after departure. I was offered the choice of departure runway and selected 21 with wind 200 at 25 knots. After a commercial flight landed in front of me on 26, I taxied gingerly to the hold.

Scottish Control continued to provide headings, effectively giving a short cut while keeping me high at FL90 as requested. Western Radar provided a traffic service in the descent outside controlled airspace, reverting to Basic at lower levels.

A Freecall to Gloucester confirmed they weren't busy and I requested a VFR direct arrival but with an extended final leg to ensure I was fully stable before landing.

It was quite gusty on landing but the wind was not as variable in direction as the reports suggested, and the

*"We were able to climb to the top of the Laxey Wheel which both gives great views and really lets you appreciate this marvel of engineering"*

TB20 makes it relatively easy to cope with crosswinds.

An enjoyable weekend away, especially considering the weather conditions, and generally quite relaxing even if I was keeping a very close eye on the weather for the return flight.

David Chambers is a private pilot licence holder and flight instructor keen to encourage more private pilots to venture further afield. He also runs a popular series of one-day VFR cross-channel ground schools which explain all you need to know.

It's aimed at private pilots of all experience levels and involves a mix of slides, videos and practical exercises. Find out more at <https://www.flyerdauiduk.com/groundschoo-courses>

Have you been on a fantastic adventure? Then tell us about it and we could publish it on these pages. Send your story to [david.rawlings@aopa.co.uk](mailto:david.rawlings@aopa.co.uk) ■

**BELOW CLOCKWISE: Flying just south of Liverpool; a horse-drawn tram; the Tynwald Manx Parliament building**



# Flying in a unique classic

WORDS & IMAGES Henry Simpson

Henry Simpson is given the honour of flying in one of only two C-41s. Here he talks about his amazing adventure in the former military-used DC-3s



**T**HE SILVER aircraft sparkled in the sun in sharp contrast to the green grass it sat on. The engines coughed into life with puffs of smoke and both Pratt & Whitney PW1830-94

'Twin Wasp' radials churned characteristically. It was the C-41A, a very special variant of the ubiquitous Douglas DC-3 Dakota.

We taxied out and lined up on Goodwood's runway 24. Power on and with the tail

quickly raised, the aircraft soon lifted smoothly into the air remaining surprisingly stable despite the gusty conditions. Once clear of the airfield we continued south-west past Thorney Island and on our way to the Isle of Wight.

This rather special aircraft is owned by Richard Martin; in 2019 it has been touring Europe and I have been invited to enjoy a short flight in the aircraft. It is the only C-41A ever built; it was one of the first two DC-3s to enter



government service in 1939, the other being the only C-41. In fact Richard was quick to mention that the aircraft's 80th birthday had actually been the previous day!

The C-41 and C-41A were built to serve as military staff transports for General Henry H. 'Hap' Arnold. The C-41A differed from the C-41 primarily in that it was partly a sleeper, with four sleeping berths in the forward cabin like the original Douglas sleeper transport, for which role the DC-3 design was intended. The only exterior evidence of this past configuration is panels denoting where two small sleeper berth windows used to be on each side above the first and third cabin windows.

Hap Arnold went on to become known as 'the father of the US Air Force' and with its creation he became a five-star General of the US Air Force, having already been made a General of the Army – making him the only person to have held a five-star rank

in two branches of the US military.

After the end of the war the aircraft was deemed surplus and so was sold off into the civilian market to the Superior Oil Company. The C-41 and C-41A staff transports, became the foundation for the post-war use of DC-3s as executive transports, making them the forerunner of the modern business jet.

In 2015 Richard, now semi-retired, purchased the aircraft: "I wanted to find a way to do something a bit more interesting" he says, "I'm not interested in a package holiday or sailing around the world. I saw this for sale and ... it seemed like a good idea at the time!"

Who can disagree? Watching the engines turn and looking out across the silver wing takes you back to the golden era of aviation.

The aircraft is rather quiet, benefitting from soundproofing not found in other military variants. Flying

*"I'm not interested in a package holiday or sailing around the world. I saw this for sale and ... it seemed like a good idea at the time!"*

down the coast of the Isle of Wight just below cloud level, instruments in the cabin bulkhead inform passengers that we are cruising at 140 knots and at a height of 800 ft.

Inside, the aircraft interior still has its 1950s furnishings with two sofas along the fuselage, two sets of swivelling seats with a table and four large seats at the back of the cabin next to a galley work surface and cupboards, with a lavatory opposite the rear door.

When Richard purchased the aircraft, registered as N341A, it had not flown for five years and a ferry permit was obtained to fly it to Oregon, where it spent a year being thoroughly inspected and overhauled. Richard's long-term goal is to circumnavigate the world with the aircraft. A key part of that trip is planned to be the recreation of the 'hump' flight across the Himalayas, that being the original route flown from India to China in WW2 to supply American and Chinese forces fighting the Japanese.



Looking out over the silver wing takes our author straight back to historic flights; and the famous 'That's all...brother'

Instantly recognisable, the Dakotas are an aviation favourite



The C-41A has been largely kept in its original condition



For this reason the engines were upgraded to PW1830-94s with two-stage superchargers in order to allow the aircraft to reach a safe height and keep you there if one fails.

The aircraft has been kept in largely original condition but other compromises have been made for safety and reliability given the ultimate goal. Modern avionics have been fitted and the aircraft is fully IMC certified.

The aircraft itself being a pre-war example, was built with better quality aluminium as "quality dropped throughout the war", which bodes well for the longevity of the aircraft.

"The plan had been to start last year, but then the D-Day 75th and the D-Day squadron turned up," explained Richard.

The D-Day squadron was an ambitious effort to bring multiple DC-3 variants across the Atlantic to participate in the commemorations for the 75th anniversary of D-Day. Run by the Tunison Foundation, the operators of the C-47 'Placid

*"The engines were upgraded to PW1830-94s with two-stage superchargers in order to allow the aircraft to reach a safe height and keep you there if one fails"*

Lassie', the effort resulted in 15 aircraft making the journey from all across America. Among the aircraft making the trip was the Commemorative Air Force (CAF)'s C-47 'That's all...Brother' that led the main wave of the US airborne forces on D-Day and had been the focus of a significant restoration effort over the past few years to get the aircraft airworthy for the Normandy celebrations.

The C-41A left five days later than planned due to poor weather. Stops on the flight included Moosonee and Goose Bay in Canada with Richard remarking that flying at low altitude over Hudson bay was pretty spectacular. From there the aircraft followed the old WW2 transatlantic ferry route to Narsarsuaq where the crew enjoyed fantastic weather for the Greenland crossing and on to Reykjavik and finally to Wick as a diversion from Inverness due to poor weather. The trip took seven days in all.

The aircraft received a warm welcome at Duxford where the D-Day squadron rendezvoused with eight other DC-3 variants, including the only flying example of the Soviet built Li-2, to create a 23-strong cross-channel armada.

Duxford then hosted two days of events centred around the Dakotas with a flying display of other D-Day types. The main D-Day event was however a disappointment due to the French leg of the trip turning into a notorious organisational fiasco, made worse by poor weather conditions. However, 13 aircraft managed to take part in the presidential flyover above Omaha beach on 6 June and several of the C-47s performed paratroops at sites around Normandy.

Following the D-Day commemorations the D-Day squadron, along with several of the European Dakotas, flew on to Germany to participate in the Berlin airlift 70th anniversary celebrations. There they received a



The Dakota always draws a crowd and it creates a special atmosphere at any airshow or gathering

warm welcome with tens of thousands of people turning out to view the aircraft at Wiesbaden.

From Germany some aircraft headed to Paris to participate in the Paris air show whilst four aircraft went south to Venice to Lido-Nicelli airport. The C-41A flew there via Prague so one of the pilots, Rob Hutchison, who flies with the L39-equipped Patriots Jet Team could visit the Aero Vodochody factory where the latest variant of the jet trainer is being produced. Venice was one of the highlights for pilot Steve Gray: It's a small airport for a DC-3 to get into he remarked, "so you drop in, put the brakes on and stop right in front of the terminal." Once again the aircraft attracted significant attention from the public and media. After Venice the C-41A returned to the UK while the other American aircraft returned home. Richard described the return flight through the Alps as "stunning".

Back on board, from behind the pilots, the Union Flag-embazoned former Saunders-

*"It's a bit like a semi-truck in the air, it gives you nothing, so a lot of physical work is required"*

Roe flying-boat hangar at Cowes can be seen, with Spitbank Fort further beyond in the Solent.

'Steve, after getting his license 37 years ago, started flying in the C-41, taking salmon from a beach in Alaska to a processing plant in Anchorage. He describes the aircraft as rock solid to fly "as it's a bit like a semi-truck in the air, it gives you nothing, so a lot of physical work is required". He adds that "some people call it an oversized Super Cub; it is in some ways, but in others it's a lot different". Reflecting on the trip he recalls the formation fly-pasts they took part in, "It's been a one-of-a-kind adventure – there's nothing like that. Flying in formation with 20 Dakotas just doesn't happen – it's not happened for a decade or more."

Soon, passing Thorney Island we were approaching Goodwood House, where several photographers could be seen turning their cameras towards the aircraft. Once landed we taxied to take

pride of place in the Freddie March Spirit of Aviation *concours d'élégance* for pre-1966 aircraft ahead of the Goodwood Revival. The aircraft was on show for all three days of the Revival alongside many other wonderfully kept vintage types, but unsurprisingly it was the resplendent C-41A that was declared the winner. After Goodwood, the aircraft made its final appearance in its 2019 tour of Europe on static at the Duxford Battle of Britain Airshow, where it was once again well received. Now the aircraft has moved to Coventry for the winter whilst Richard works on plans for the big trip. "The biggest single challenge will be fuel," he remarks and is keen to add that they are always looking for sponsors for the aircraft and its forthcoming trip. Richard and his wife live in Sonoma California, which is where General 'Hap' Arnold himself retired to; the fact that he ended up owning 'Hap' Arnold's staff transport led to him giving it the name 'Hap-penstance' – appropriate indeed. ■

## TECH SPEC DOUGLAS C-41A

### PERFORMANCE

**Engine:** Pratt & Whitney R-1830-94  
**Power:** 1350 hp  
**Propeller:** Hamilton 23E50-505/6565a  
**Top speed:** 183 kt  
**Cruising speed:** 170 kt  
**Landing speed:** 85 kt  
**Min Control speed:** 76 kt

**Max climb rate:** 1,500 ft/min  
**Service ceiling:** 18,000 ft  
**Range:** 1,350 nm  
**Consumption:** 83 g/h

### WEIGHTS

**Basic empty weight:** 20,916 lb  
**MTOW:** 26,900 lb

**Payload:** 5,984 lb  
**Fuel Capacity:** 670 imperial gallons

### DIMENSIONS

**Wing span:** 95 ft 6 in  
**Length:** 64 ft 5 in  
**Height:** 16 ft 11 in  
**Wing area:** 987 sq ft



The C-41A has an upgraded cockpit with modern avionics, making it fully IMC Certified





WORDS Nick Wilcock IMAGES Various

# E-EXAMS ARE COMING!

Nobody likes to take exams, but things are changing for the PPL and LAPL. Here Nick Wilcock explains all...



**NICK WILCOCK** BOARD DIRECTOR IAOPA FCL REPRESENTATIVE AT EASA FORMER RAF PILOT

**S**OME FIVE years ago now, the CAA GA Unit turned its attention to updating the LAPL and PPL syllabi, including a proposal to refresh the theoretical knowledge exams as many

of the contemporary exam questions were becoming increasingly out of date.

So a LAPL/PPL Exam Working Group (ExWG) was formed, initially to agree the ground rules for new exam questions. These included some significant

changes; for example the old 'Which of the following is correct: A. i & iv, B. iii & v, C. i & ii or D. ii & iv?' style of question was banished. All question topics were given 'could know', 'should know', 'must know' Level of Knowledge values by the

ExWG, with the aim being that the actual questions in an exam would always include more 'must knows' than anything else. Various other criteria were also applied and all questions had to be stand alone, so that an incorrect answer in one



question isn't then used in another.

The questions themselves were to be entirely focused on the practical operation of GA aircraft – both aeroplanes and helicopters – and grouped into nine papers. Three papers would have 16 questions each and the other six would have 12 each, for the simple reason that the required 75% pass mark would be easily identifiable. Also (3 x 16) + (6 x 12) adds up to the EASA requirement of 120 questions in total.

The task of writing the new questions and answers was

given to industry, so potential authors were invited to bid for contracts. Regrettably this took much longer than anticipated and many questions were deemed unacceptable. The ExWG sat together at around 10 meetings to review and edit the questions, but ultimately had to rewrite many of them completely. Providing a question and a correct answer is relatively simple, but the task of providing three plausible wrong answers is rather more difficult. For questions involving numerical calculation, the answers had to be within reasonable tolerance, but

*"The questions themselves were to be entirely focused on the practical operation of GA aircraft"*

not so obviously wrong that identifying the correct answer would require little effort from the applicant.

Adding urgency to the ExWG's work was that the regrettable level of cheating and the emergence of unscrupulous 'zero-to-hero in one day' answer-spotting providers had meant that many EASA Member States (MS) became very concerned about passes achieved in exams taken in the UK. Although all exams have to be taken in one MS, it was how they were sat which was causing the problem. The CAA has been obliged to conduct



Nobody likes exams, but the CAA are attempting to make them more accessible...

validation work for some applicants in other MS who sat UK exams, but now many MS simply refuse to accept UK LAPL/PPL exam passes.

It was realised that meeting EASA requirements, ensuring exam security and keeping the question bank up to date could all be achieved by the adoption of online 'e-exams'. The CAA concluded that LAPL/PPL exams would still be sat at ATOs and DTOs, but would be provided online by ASPEQ, the IT company which is also responsible for the provision of professional pilot exams.

Starting in January, the CAA has been holding a series of e-exam roadshows for examiners and training organisations, explaining the new system in greater depth. The main points being:

- Training organisations, applicants and examiners will be required to register on respective CAA 'portals', but this will be free of charge.
- It will cost training organisations £10 per exam to book an on-line exam, the booking will then be valid for a defined time period, currently 90 days. It will be entirely up to the training provider to decide what to charge the applicant. The CAA will not retain any

company credit card details.

Once the applicant starts an exam, a countdown timer will indicate time remaining and indication will be given to show which questions have been attempted. Questions may be answered in any order as suits the applicant and may be 'bookmarked' for applicants to review before submission.

- It will be necessary for the training organisation's computer to be online to start the exam and also to submit the exam for marking. However, it will not be necessary to be online during the exam itself.

- Exam questions will be randomly selected from the database, as will the sequence of answer options. A supporting document will be made available, containing relevant graphs and other necessary data. An IT helpline will be established.

- The LAPL/PPL question database will be updated periodically. It will not be publicly available; incidentally, for those who think that the FAA publishes all its questions and answers, the truth is that they do not. In fact the faa.gov website states: 'The FAA does not publish actual knowledge test questions, in part because at least two independent

*"Exam questions will be randomly selected from the database, as will the sequence of answer options"*

studies indicate that publication of active questions could negatively affect learning and understanding, as well as undermine the validity of the knowledge test as an assessment tool.'

The LAPL/PPL ExWG assessed some 600 questions and 2,400 answers to populate the database throughout the last two to three years and is confident that they are all of a much more appropriate quality than the existing questions. To maintain this quality, the group considers that any additional questions used in the database must also have been allocated appropriate Level of Knowledge values and subjected to peer-group assessment.

So far, so good. But there is one significant area over which we have some considerable concern. The LAPL/PPL ExWG made it clear from the outset that any e-exam system must include a facility for the examiner to provide an applicant with a comprehensive debrief, by adopting the provisions of an earlier Standards Document. This stated 'Following marking of the paper and if the candidate achieves a pass, the examiner should discuss with him/her any questions



...and in the end you'll find its all been worth it when you see views which others cannot.

that have been incorrectly answered. However, if a candidate fails, the examiner may indicate areas where weakness has been indicated, but should not discuss answers to specific questions'. From what we have seen, the proposed system doesn't yet meet this requirement as the only feedback the applicant receives is currently through the rather aggressively titled 'Knowledge Deficiency Report'. But there are key differences in theoretical knowledge exam methods for private and professional pilots:

- Theoretical knowledge actually necessary for every-day operations will soon become familiar to the professional pilot through company Standard Operating Procedures and 'on the job training' (OJT). However, there is no OJT for private pilots, so they may continue their flying with blissful ignorance of why they failed a particular question, even though they passed the exam – which could be crucial.
- Private pilot exams are invigilated by an examiner who is available to debrief the applicant after the exam has been completed, whereas professional exams are conducted en masse

*"Unlike an automated system, an examiner can assess whether a failed question was due to a genuine gap in knowledge"*

with oversight provided by an invigilator whose primary responsibility is to prevent cheating.

- Unlike an automated system, an examiner can assess whether a failed question was due to a genuine gap in knowledge, or simply the result of a mistake – e.g. a question concerned fuel loading in US gallons and the applicant used the specific gravity value for Imperial gallons.

The CAA is aware of our concerns and we have proposed that the 'Knowledge Deficiency Report' should be retitled 'Applicant's Report'. The existing Learning Objective feedback items should remain, titled 'Recommended Topics for Further Study' as an offer of advice to the applicant. Provided that the applicant passes the subject, the system should snapshot any failed question and the associated answer options. This should generate an 'examiner Debrief Report' as a read-only temporary file accessible by the Examiner through password entry. When closed after the debrief the file should be automatically deleted.

We have recommended that the policy concerning these reports should be:

- Applicant scores less than 50 per cent (exam is failed): 'Applicant's Report' states that the entire subject needs further study.
- Applicant scores 50–75 per cent (exam is failed): Only the 'Applicant's Report' is generated, including 'Recommended Topics for Further Study'.
- Applicant scores more than 75 per cent (exam is passed) but with less than 100 per cent: 'Applicant's Report' and 'examiner Debrief Report' are both generated.

Following the roadshows, the CAA will apply further tweaks to the e-exam system before launching a trial system within 16 selected training organisations in the spring. If this proves successful, the system will replace the paper exam system in June 2020. Any paper exams already passed by an applicant will remain valid within the normal validity period, but all others will require use of the e-exam system.

No-one likes taking exams. But the e-exam system should, if suitably configured, lead to future GA pilots being tested more reasonably, through theoretical knowledge requirements better suited to today's flying environment. ■



# MODERNISE YOUR COCKPIT

Garmin releases the GI 275 electronic flight instrument

**Product** GI 275  
**Maker** Garmin

GARMIN has released a new series of instrument panel-mounted displays that are rear-mounted into standard 3.125-inch cutouts, offering a simple way to replace steam- or electric-driven instruments with capable new electronic displays. The GI 275 can replace attitude indicators, attitude direction indicators, horizontal situation indicators, and course deviation indicators, and it can also replace engine instruments as a primary engine indication system. It can also replace engine instruments as a primary indication system. Capable of serving as a 4-in-1 flight instrument, the GI 275 can also be installed as a standby as it boasts a back-up battery that has a life of 60 minutes.

The GI 275 is intentionally designed to take advantage of the common 3.125in flight instrument size,



**The GI 275 has the ability to display maps**

reducing installation time and preserving the existing aircraft panel. It's also compatible with a variety of third-party autopilots and does not require a separate interface adapter, further reducing installation labour. The GI 275 has already received Federal Aviation Administration (FAA) approval and Garmin state that it is expecting to receive EASA certification later this year.

Several variants of the GI 275 are available to meet the needs of over 1,000 aircraft models.

The GI 275 is also

capable of displaying traffic, weather, terrain, SafeTaxi airport diagrams, optional Synthetic Vision Technology and 'and more, when fitted alongside a GTN 650 or similar instrument.

Suitable as a replacement for many ageing flight instruments and gyro-based attitude indicators on the market such as the popular KI-256, the GI 275 gives aircraft owners the benefits of a modern and reliable flight instrument.

Its bright, high-resolution touchscreen display and wide viewing angle offers superior readability in the cockpit.

A dual concentric knob allows pilots to access a variety of key functions. Highly scaleable, aircraft owners can start with a single GI 275 and add up to a total of six in a panel, paving the way for incremental upgrades. ■

**Where** garmin.com  
**Price** From \$3,995



## NEXT GEN NAV/ GPS/COMM

**Product** GTN 650Xi  
**Maker** Garmin

GARMIN ANNOUNCED the GTN 650Xi and GTN 750Xi, the next generation of in-flight navigation technology. Designed as a direct slide-in upgrade to the previous generation GTN 650/750, pilots can preserve their panel and modernise the cockpit with the new GTN 650Xi and GTN 750Xi. The all-in-one GPS/NAV/ COMM can integrate with new or existing remote-mount equipment such as a transponder or audio panel. Dual-core processors and modern hardware also prepare the GTN Xi series for advanced capabilities in the future. The GTN 650Xi and GTN 750Xi have received Federal Aviation Administration (FAA) approval and are available immediately for fixed-wing single-engine and multi-engine piston, turbine and experimental aircraft, with helicopter and business aircraft approvals soon to follow.

Retaining all the features of the older generation GTN 650/750, the GTN Xi series adds a vibrant display and vivid colours that enhance the contemporary look of the new navigators.

**Where** garmin.com  
**Price** Starting at \$12,495

# TRAINING AN RAF PHANTOM CREW

The story of the challenges faced by trainees on the road to becoming operational on the frontline, from a Cold War pilot and navigator's own perspectives

**Author** Philip Keeble and David Gledhill

**Publisher** Fonthill Media

THIS BOOK delivers an insight into a perspective that has increasingly become a point of interest to amateur historians.

The recipient of a number of rave reviews on Amazon, *Per Ardua: Training an RAF Phantom Crew* describes how Cold War aircrew assimilated the skills needed to fly and fight the complex fighter jet. Following their progress through every stage and explains why it cost millions to train each pilot and navigator.

Flying the McDonnell Douglas F-4 Phantom was a young man's dream, but the path from 'Civvy Street' to operational on a fighter squadron was long, arduous and beset with obstacles.

To succeed meant the chance to fly one of the most iconic combat aircraft that ever took to the air; however, not every fledgling aviator who began the journey fulfilled their ambition to wear the coveted 'Op. badge'.

Co-written by Philip Keeble and David Gledhill, both former Phantom pilot/navigator recount the challenges and emotions encountered during the rigorous training process in a frank yet light-hearted way that will leave you wondering how anyone achieved the goal.

The former aircrew are

also best-selling authors of *The Phantom in Focus*, *Fighters over the Falklands*, *Tornado F3 in Focus*, *Tornado in Pictures: The Multi Role Legend*, *Operational Test: Honing the Edge* and *Patrolling the Cold War Skies: Reheat Sunset*.

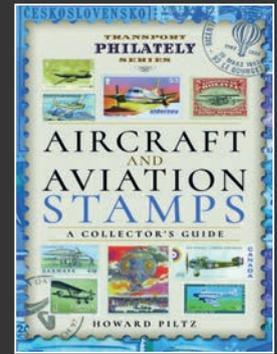
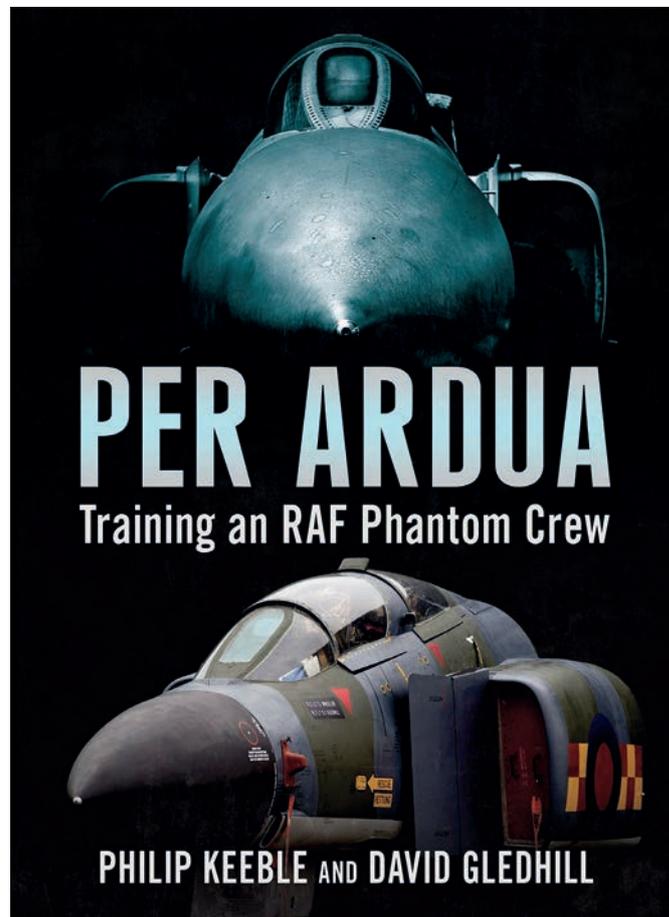
Keeble was born in 1947 in Beaconsfield, England. Educated in Slough and Fareham. In 1965, Keeble was accepted for pilot training with the RAF and had a 28-year career in the service, flying reconnaissance and

combat aircraft in a wide range of overseas theatres. On leaving the forces, he became a civilian military simulator instructor in the UK and Saudi Arabia.

Gledhill joined the RAF as a navigator in 1973 flying the Phantom. He was one of the first to fly the F2 and F3 air defence variant of the Tornado and commanded the Tornado Fighter Flight in the Falkland Islands. ■

**Where** fonthill.media

**Price** £25



## STAMPS AND AVIATION

**Author** Howard Piltz

**Publisher** Pen & Sword

AUTHOR Howard Piltz has combined his two greatest interests – transport and stamp collecting – and brought them together in a series of books looking at the way postage stamps have led him to increase his knowledge of our world, via his interest in all forms of transport world-wide. Philately (the collecting of stamps) itself is a fascinating hobby looking at the development of postal services in all its forms. Designs of stamps have evolved from the Victorian Penny Black to today's creations, often artistic but dependent more and more on photography, with greater or lesser degrees of digital manipulation.

In his quest Piltz has covered many unusual places that have only become more accessible with the advent of cheap air travel, but has still found it necessary to use his own contacts, library of related books and more recently the internet to research. Like all books in this series, they have been laid out as a global tour.

**Where** pen-and-sword.co.uk

**Price** £16.99



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