Instrument Pilot
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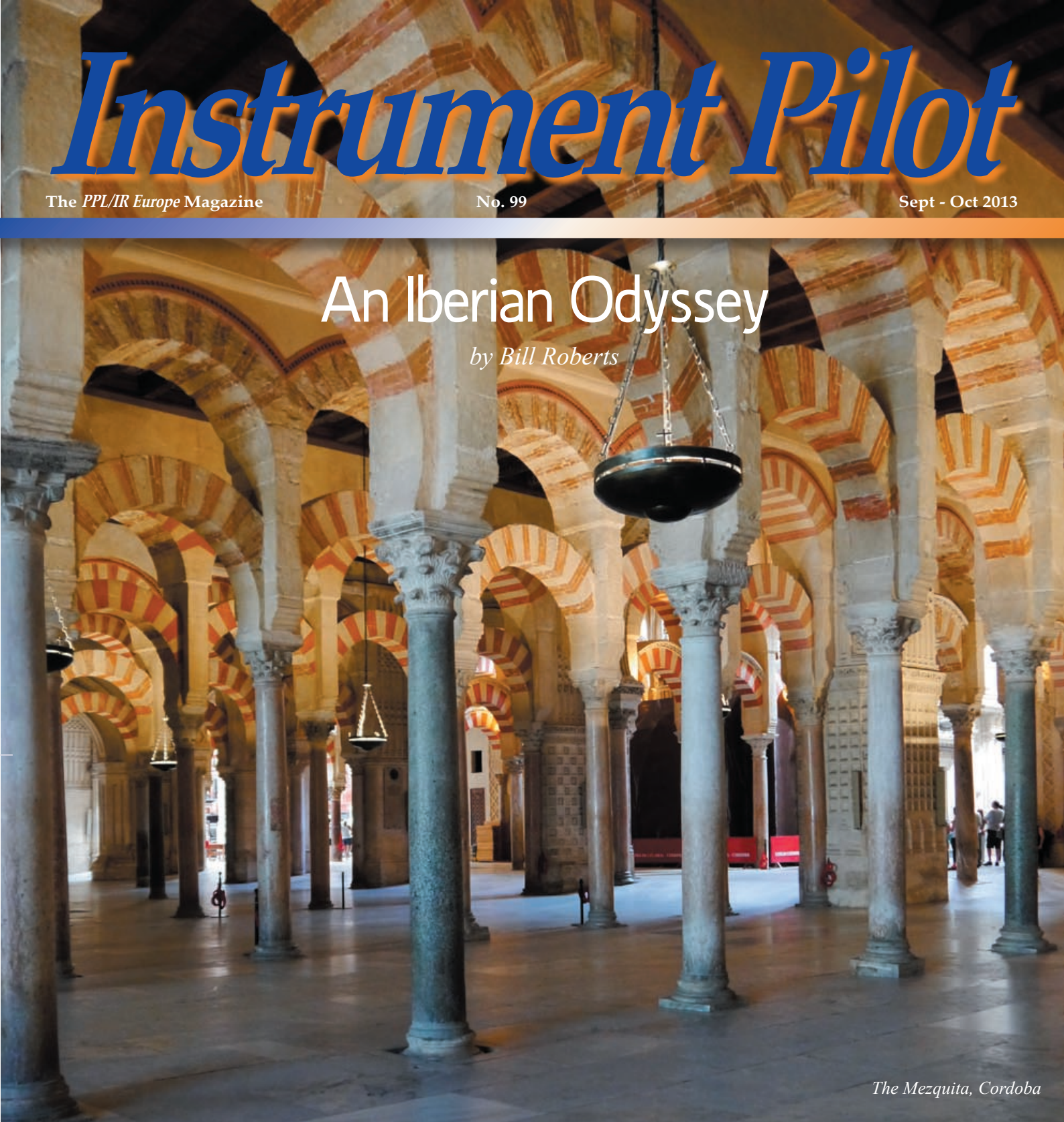
An Iberian Odyssey

by Bill Roberts



The Mezquita, Cordoba

No matter how many ***PPL/IR Europe*** trips one makes, each one is always somehow different and unique in its own way, even though one is often travelling in aerial convoy with people with whom one has previously travelled.

Last spring, having long been an avid hispanophile, I leapt at the chance to put my name forward when Steve and Judith Niechcial first advertised in the ***PPL/IR Europe*** magazine their intention to plan an autumn trip starting in southern France and passing through several of the great cities of central Spain down through the famous region of La Mancha to Cordoba and then on to Lisbon. I have known Spain well for a quarter of a century but this central area - so vividly described in Cervantes' *Don Quixote* - I have never properly explored and was eager to do so in the company of so many old friends travelling in our own personal winged *Rocinantes*.

The trip, as proposed, was tempting indeed, with two nights to be spent in the French walled city of Carcassonne, nestled amidst the northeastern foothills of the Pyrenees, followed by stopovers in the central Spanish cities of Segovia and Toledo, then a night spent as guests of a friend of Stephen and Judith's, Eugenio Llamas, at his home in the ancient Andalusian city of Cordoba and finishing with a hop west over the border to spend two final nights in the Portuguese capital of Lisbon - all cities I have long been hankering to visit.

Fortunately, I was not alone in my wish to explore these cities and soon Steve had a full complement of five or six aircraft

P 18 ▶

PPL/IR EUROPE

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Contents

STOP PRESS . . .

At an EASA meeting on 17th October three matters were decided:

1. The approval to introduce the En Route IR (EIR) and the Competence Based Modular IR (CBM IR) and the ability to convert a foreign IR to an EASA IR with only "training as required", an oral test and a flight test. ***PPL/IR Europe*** have been working away at this for more than 5 years and we are delighted with the outcome.

2. The preservation of the IMC rating for at least 5 years.

3. An extension of the deadline for converting foreign licences and ratings to EASA licences and ratings from April 2014 to April 2015.

New Members

PPL/IR Europe welcomes our new members:

Phil Garvey	UK/EGTF
Nick Hanley	UK/EGNH
Graham Leese	UK/EGCJ
Daniel Manterfield	UK/London
Rafal Raczynski	Poland/EPRP
John Strutt	UK/EGSR
Elie Vannier	Switzerland/LSGG
David Whalley	Guernsey/EGJB
Sebastian Golze	Germany/EDAZ

Checklists are vital

by Jim Thorpe

That's what we are told from the first PPL lesson but I have come to the view that many of the checks we chant like some religious mantra are irrelevant and occasionally a serious distraction. They are handed down from the church of RAF Central Flying School circa 1930 as interpreted by the later day church of the CAA whose evangelists are often ex RAF navigators displaced by technology. I have also noticed that many pilots who say they follow the creed actually do so only in limited circumstances. They work through checklists in careful detail when the need is least but abandon them completely when under pressure. In some ways, this is worse than never doing checks at all.

I do not argue against a true challenge - response list in a two crew cockpit. This is especially true where there are complicated lists of actions that do need to be followed and where some of those actions such as landing and take off speeds vary according to circumstances. Typically, this process follows the actual actions which are completed from memory as a flow. However, this is not the same situation at all as being a single pilot in a relatively simple cockpit. Threat and Error Management (TEM) is the latest magic solution to trickle down from on the commercial aviation world like some B-movie monster, seeking to attach its mind sucking tentacles to potential general aviation victims. I am old enough to remember teachers who had TEM nailed. 'If you make that mistake again Thorpe you will get the cane'! However, even this aging cynic can accept that we all make mistakes from time to time and there are useful strategies which could mitigate the potential consequences of our errors. I propose to look at some airborne checklists from this perspective As shorthand, I rate the need for checklist actions on the following scale:

Vital	Failure to do this is likely to result in an accident.
Useful	Omission is unlikely to cause an accident but an undesirable outcome is quite possible.
Possibly Useful	An omission might be embarrassing.
Probably Useless	A poor outcome just conceivable but very unlikely.
Distracting	Marginal value and just adds to the workload.

Over the years, I must have been forced to learn a dozen checklists; I believe you have to learn them. There is no chance of getting out a paper checklist when it really matters. I would qualify this for certain emergencies where there is an immediate memory action but a back up list of procedures that are rarely used. An example of this might be a gear unsafe warning where the immediate action is to go round and hold somewhere safe where the checklist or flight manual can then be consulted.

Eventually, I learnt a list of my own which still includes much I think of as distracting or probably useless but it is bearable and still covers all that is needed for skill tests and revalidations. A further difficulty with check lists is that there is never a right moment to run them. One or more items always need to be deferred and that is very undesirable if the mindset the process engenders is 'I ran that checklist so all those items must have been completed'. My only solution is to run the same list several times not as a prompt to action but as a tick list of items that have been actioned naturally at the correct point in the flight.

The after take off list is BUFFPEARL:

- Brakes
- Undercarriage
- Flaps
- Fuel
- Power, Pressurization, Prop sync
- Engine
- Altimeter
- Radios
- Lights

Lets take it item by item.

B Brakes. We rotate and touch them. This stemmed from problems with heavy bombers in the war experiencing undercarriage problems because of the loads caused by the gyroscopic effects of moving a heavy rotating mass. I found it hard to believe this mattered with a relatively lightweight wheel but I have seen a single service difficulty report of wheel bearing wear in Chieftains used for intensive short sightseeing flights hence many take offs and landings. Lets call this check a Distraction except for a rare situation taking off in mud or slush where it might be upgraded.

U Undercarriage is fair enough so is **F Flaps**. You will probably notice, eventually, if you forget them but you don't have to be stupid to get distracted by a radio call or the need to watch the aircraft ahead. You might also bust a limiting speed. However, it is hardly life threatening so give them a U for useful.

F Fuel usually means pumps off. The logic in having them on in some aircraft is that the mechanical pump might fail and it would be good to have the standby already working. In some types the pump is left off and in one or two aircraft models inadvertent pump selection can stop the engine. Lets call this one Probably Useless.

E Engine covers power setting, mixture, prop, cowl flaps and carb heat. Most aircraft do demand attention with cruise climb settings and consideration given to CHTs. Some of all of these need dealing throughout the climb so we might regard these checks as Useful.

A Altimeter is again useful especially if we ignore the nonsense of regional pressure settings and bring things down to QNH on both for take off and 1013 on no 1 altimeter when cleared to a flight level. I might qualify this in certain cockpits where the number 2 altimeter is in hard to reach locations. Here it might well be safer to leave the number two on 1013/ 29.92 and this is what I do in my own aircraft.

R Radios means setting something of value or potential value on every box and identing anything that needs it. My view is that identing is almost a thing of the past. The cross check is the GPS. About the only thing that cannot be dealt with easily in this way is the ILS. Nevertheless it is useful to scan round and see that, within reason there is something meaningful on every box or dial. It's a mixed bag on the whole useful but from time to time edging toward being vital.

L Lights are to my mind a distraction in most circumstances. People say they reduce the risk of bird strike but I doubt it. If there is some traffic related reason to feel at risk then by all means use them but for

me they are probably useless.

As we have said, the various actions discussed above occur at different times. Gear goes up almost at once but the power reduction might not occur for several minutes. Keep running the same list in your head or better still spoken out loud until mentally, every item can be checked off.

In all honesty, none of the above checks seem likely to have a great potential to be direct causal factors in an accident. The real killer in an IFR departure is not making the climb gradient or failing to follow a SID which was designed to avoid terrain. If, in these circumstances, the reason you are not climbing well is that you have forgotten gear or flap then you probably should not be flying IFR. Some people have a dedicated top of the climb check list. I just use the same BUFFPEARL even though most of its items are now irrelevant. Cowl flaps are the one that gets forgotten here and the E for engine should prompt you but again its not the end of the world if you leave them open. The speed loss usually tips pilots off in the end.

For the enroute sector, traditionally, it has been the famous IFREDA. I don't argue with the ice checks if there is some environmental reason to believe that ice is possible. Chanting ice every 1000 ft whether in clear air or with a high OAT is unhelpful. One aspect of TEM is to try to foster good judgment and decision making and I feel that doing things by rote is not helpful in training pilots to ponder the situation and tailor their responses appropriately. Thus I have changed my en route check to FAT RED:

F Fuel
A Altimeter
T Threats
R Radios
E Engine
D Direction

F Fuel: with the advent of totalizers, total fuel is known exactly but you may not know which tank it is in so I incline to a serious effort to change tanks or take whatever action is needed in a particular aircraft type in order to have a good grasp of the situation. While the electronics are great, everything can fail and I do think having a known departure time and departure fuel state on paper so that you can if necessary work back is a good habit. **R Radio** is OK. Trying to forecast the next frequency does no harm and getting it in place reduces workload. **E Engine** T & P has always been a valid check and with engine analysers more information is available. Their warning capability in one sense means they require less attention but once you are familiar with an aircraft they are capable of giving early indications of problems to come but this calls for a more careful and informed scan.

Few IFR capable aircraft now rely on the compass to set the DI but a gross error check does no harm and the habit is worth keeping in case you step down to a simple aircraft. Even here you are likely to have a magenta line of some sort to follow but it is surprisingly disconcerting if, due to compass or DI errors, the heading that keeps you on the line is not the one that you would expect. **A Altimeter** is probably of little use in the cruise phase unless you are outside CAS and want to keep below or above some airspace but on balance still worth having in the list, especially if we do move to a higher transition level with most flight on a local aerodrome QNH.

Moving on to arrival phase, we again need to run a list multiple times. I use FAT RED WASP.

FAT RED is unchanged from the en route checks and we add:

W Weather
A Altitude
S Slow
P Plates (pressurization, prop sync)

W Weather is a prompt for the ATIS. The prudent pilot will rarely find anything in the ATIS that is a surprise having made efforts to update their understanding en route. The exception is the runway and approach in use which can in some circumstances remain uncertain till a late stage in the approach.

A Altitude is a prompt to consider the descent point and the MSA. In northern Europe it is likely that ATC will manage this for you but in more distant parts you can easily be on your own. I feel this check can reasonably be classified Vital.

S Slow used to encompass an estimate for the beacon but this is rarely needed now and anyway can come straight from the GPS

In the old days **P Plates** meant having the right bits of paper to hand but now might involve selection of an approach on a GPS or selecting a plate on a MFD. There is a potential complexity here in that the approach in use might not be known. On the whole, getting a clear picture of what the procedure involves at the earliest possible moment is pretty vital. There is no special logic but in more complex aircraft, anything with a **P** prompts **Pressurization** and **Prop** sync two items which are easily forgotten.

FAT RED is the same as in the enroute phase although some items might move from Useful to Vital as you get closer to the ground. Ice or turbulence is more likely to be threat as you descend through a changing environment. Having an appropriate tank selected is important as you don't want any low fuel warning or coughs due to unported fuel feeds distracting you. Correct power settings make the approach run more smoothly but are unlikely to be entirely forgotten. DI is probably irrelevant but thinking of this as a gross error check on the direction you are heading does no harm. Setting and crosschecking a QNH is now important and this would also involve setting the radio altimeter if you have one.

Typically, in VFR flying we run pre landing checks when downwind. It's not quite so obvious in an IFR flight so, again, we run the list as many times as is needed. It's still BUFFPEARL, so there is nothing new to memorize. Unless some mischievous elf has hidden in the cockpit the brakes will not really need checking. Indeed in a PA28 with its lever operation it's asking for vertigo to stick your head down near the floor as many pilots do. Getting the gear down is of course vital. I am a believer in "top of the drop". This is the same prompt in VFR or IFR. I see little point in managing engine temperatures in the descent and then having to add lots of power to maintain level flight when the gear is taken far too early. It will probably be the second or third time through the list before you need flaps. Fuel pumps are hardly vital but I would probably have put them on when selecting tanks much earlier in the approach. Power settings are rarely forgotten but another prompt for pressurization, carb heat and prop sync does not go amiss and the same can be said for another altimeter check. Radios as a prompt for setting the avionics properly edges towards the Vital. You do need to be set up for the approach and in some ways, with modern avionics, this is more difficult that it was with steam gauges. You may have much better situational awareness but the potential to be locked into some GPS mode you cannot easily get out of with the wrong approach set up is quite real.

Lights seem to be contextual and I don't personally use them very often.

I am surprised how many pilots abandon the last and most important check on finals. I use PUFFA simply because I always have but anything which gives a last check of the gear being down really matters. The evidence of people landing gear up is just too strong and too current to ignore. That said you are not very likely to be hurt in a gear up landing. I personally don't go pitch full fine, (explained as part of missed approach) flaps going to full or whatever you use is a useful reminder and altimeter set is probably overkill. Really just undercarriage down and locked would do the job but old habits die hard.

The after landing checks are, I think, important in a different way. I am amazed at how many people grab for the flaps on the runway as though getting them up is vital. They will rationalise by saying something like getting the weight on the wheels improves brake efficiency. Often they say this halfway down a long runway where the exit point is a minutes taxi time away having come over the threshold 10 knots above the optimum speed. The main danger on the runway is inadvertent raising of the gear. The correct thing to do is clear the runway, stop briefly and then run a checklist for your aircraft. You can, if you want, do this with the paper list. There are several items which, while not life threatening, do have significant potential for embarrassment; Flaps up, carefully confirming it is the flap lever not the gear leaver, Pitot heat off since it can burn out, Radar confirm off since it can hurt people, fuel pumps off since they make stopping the engine difficult. Finding the taxi chart and confirming the ground frequency might be important on a big airfield where ground movement can be the most confusing part of the whole flight. Get rid of any lights if you insist on using them. I don't have mnemonic for this as I find I know the checks but only if I pause and do them when stopped. I have had the embarrassment several times of having to unlock the aircraft and re enter to raise the flaps which are invisible from the cockpit on my own aircraft.

One more check, which is mostly relevant to the training situation, is the missed approach. I like:

Nose up
Power up
Gear up
Flaps up
QNH up

It is remarkable how many pilots fail to pitch up when the safety margin is at its least. QNH up stems from the days when people used QFE and for most people this can now be ignored. This is where we consider the interaction of Throttle, Prop and Mixture. The only possible reason for needing pitch full fine and mixture rich is a missed approach. In the real world, you hardly ever do a missed approach. Pitch full fine disturbs the aircraft trim and causes noise pollution. Mixture going full rich just wastes fuel. If it's done at a time when the engine is hot and the fuel is cold soaked it's actually bad for the engine. I prefer to condition myself to never make large throttle movements without considering the prop and the mixture. For simplification in the training situation, it may be best not to adopt this technique but I suggest you consider it for the real world.

It is clear that very few of the checks we do are vital and their value changes according to the phase of flight and other factors in the environment. It is highly unlikely that, in single pilot operation, running a check list once will enable all the items to be covered. It is unlikely that it will be practical to pick up a paper check list or work through an on screen list at the very moment when the checks might be most important. The best way of dealing with this is to memorize a list that works for you in the aircraft that you fly. When I say memorize, I really mean this in the way you memorize your home address. It's not good enough for it to be a reconstructed list with pauses to remember or going back to include forgotten items. If you are getting out of your bath and some demented person shouts "after take off checks" you should be halfway through BUFFPEARL before it occurs to you to hit the madman with your wet towel!

Notes to members

by Ben Hines

Firstly, my sincere apologies from the editor's desk for the lateness of this issue, aided by a number of causes but primarily my own commitments. ***PPL/IR Europe*** is run as a voluntary organisation and in an attempt to prevent these events becoming more intrusive, there are vacancies in the team of *Instrument Pilot* for assisting in the compilation of the magazine. If you feel you can spend a few evenings a month or more to help the organisation, please contact any of the ExCo for more information as to what is involved.

The traditional flying season is starting to draw towards a close and the loss of an hour in the evening will hurt some more than others but a short plea to all of you to stay safe whenever and whatever you fly.

In this issue, Geoff van Klaveren writes up the experience of his first real IFR trip, with a run from the southern UK to Cannes which, while probably recalling memories for more seasoned pilots, I hope gives some ideas for those studying for the rating or those who have yet to use it in anger. Another trip report, submitted by Rob Limb about his trip to South Africa was, unfortunately, too large to include here in print and to remove enough or break it into a series would spoil some of the tremendous experience. So, I can only advise you to look on the website to download a copy of this fascinating trip.

Also in this issue, Jim Thorpe provides an alternative or some would say, realistic, view on checklists, Timothy Nathan describes the process of becoming an IRI and Paul Draper describes one of our longest standing members, who has finally decided the leave the wheels down for the last time.

Here's hoping the autumn brings you some fantastic flying!

Ben Hines

Getting a standalone IR instructor rating

by Timothy Nathan

I have toyed with the idea of becoming an Instrument Rating Instructor for some years. I have done a lot of informal mentoring and instructing, mainly to people with very rusty IMC ratings who wanted to be able to start using them for real and there has long been a temptation to formalise my qualification, both to improve my own skills and to give the flights a better legal framework. While I was a mentor, I had no part of the command of the aircraft: the person in the left seat was the commander and I had no legal basis to stop him or her entering a spiral dive and ripping the wings off, busting minima or committing any other dangerous or illegal manoeuvre. As an instructor, I have the right, indeed the duty and responsibility, to stop that happening.

I had also toyed with becoming a full flying instructor or a Class Rating Instructor. Neither of these qualifications particularly appealed to me, as I am not really very interested in landing, stalling or Stone Age navigation techniques. Indeed, I am not particularly good at the ab initio stuff myself, so I probably wouldn't teach it very well.

However, I do feel strongly about instrument flying and have long felt that it is rather badly taught and examined in our schools. I have no argument with the schools' approach, based on the requirements of the tests but I do feel that the whole ethos of the test is too formulaic and insufficiently based on the reality of IFR flying. That in turn means that the teaching has to be the same.

I had some advantages when it came to instrument flying:

Firstly, I started doing it the moment I was allowed to, which was, from memory, 15 hours after I did my VFR licence. I got my licence soon after my 17th birthday, meaning that I was doing the IMCR when still young and able to learn. That meant in turn that I never learnt to be scared of, or particularly phased by, clouds and precipitation. I feel about IMC flying the way I feel about driving in the rain or fog. You need extra margins but essentially it is the same skill set.

Secondly, my RAF training meant (at the time) that I did more PARs than ILSs. PARs, in their nature, do not allow you to chase needles. They teach you to recognise that relatively occasional small adjustments, executed in a calm and unpressured way, produce the best results, even to very low minima (PARs were to 75').

Thirdly, I was taught the Instrument Rating by Dai Heather-Hayes. Dai has his supporters and detractors but they all agree that he was a spectacularly experienced instrument pilot and instructor and able to explain why things had to be done as well as why. He had a hugely practical approach to getting the best results and to pushing the envelope, such that when the chips are down you know how far you can go.

Finally, I have had the advantage of flying in larger, two crew aircraft, meaning that I have been exposed both to the reasons why stability and accuracy are important and to an awful lot of monitoring other people's flying and seeing what works, what doesn't and why. I learned a lot more about flying once I was flying the line and flying simulators, than I ever did in formal training.

I am not saying that I am a particularly experienced or good instrument pilot but I am saying that I have been lucky enough to be exposed to a broader range of inputs than many private instrument pilots which gives me, I think, a sense of perspective on the whole thing.

Anyway, as I said, I had been thinking about doing the IRI course for a while but nothing happened to spur me into action. Until, that is, I spent a few days on the ***PPL/IR Europe*** stands at each of Friedrichshafen and Sywell. At those events it became clear that there is huge anticipation in mainland Europe for the EIR and CBM-IR and that in the UK people are leaving getting their IMC Ratings very late before the April 2014 deadline. It was also clear that there is going to be a shortage of Instrument instructors because of the very high requirements for IFR time, meaning that in reality only ex-professional pilots are likely to meet the requirements.

I should go off on a brief tangent at this point to talk about the IFR requirements. In most of Europe, indeed most of the world, the only way to fly IFR is to file a flight plan and join controlled airspace. In those environments it is not unreasonable to use IFR time as a measure of experience. In the UK the situation is very different. Here we can fly IFR in uncontrolled airspace without a plan, without a clearance and without a radio. Thus, if we are flying above the MSA and flying the correct altitude for our track, even in VMC, we can decide that we are IFR and log the hours. In the UK, being IFR is just a state of mind, a state of mind we don't have to share with anyone else. Thus, UK instructors will be able to steal a march on their European neighbours by building IFR hours on every cross country sortie. It may seem like cheating the system but hey! The system cheats us enough times!

Nonetheless, the industry is expecting a great shortage of instrument instructors over the coming years and increasing demand, so I decided to throw my hat in the ring and get the IRI.

I asked around, particularly on the ***PPL/IR Europe*** forum, about the different schools and the recommendations seemed to focus on two, Pooley's at Shoreham and On-Track at Wellesbourne Mountford. I got quotes from both, which were comparable but eventually it came down to availability. By great serendipity it turned out that ***PPL/IR Europe*** member Jean-Michel Karr happened to have booked in to On-Track to do very much the same course for exactly the two weeks I had available in June and July. The fit could not have been better, so I booked at the same time.

When I was booking, I said that I would want to be qualified as an IRI on both single- and multi-engined aircraft. That caused some extra issues to be dealt with. Firstly, I had not revalidated or renewed on SEPs for seven years, meaning that I needed an assessment and a formal course and test. Secondly, the rules had long stated that to be a standalone IRI on multis, I had to have a Class Rating Instructor (Multi Engined) rating, which would add another week and a fair bit of cash, to the training. But then, they do say that if you can't do the time, you shouldn't do the CRI(ME) (I do apologise to non-UK readers, you might not get that one!)

But, after a bit of reading and investigation, the school discovered that the EASA rules are now written in such a way that, in fact, a multi-engine IRI does not need the CRI(ME). All

that is required is that the IRI has the prerequisites of the CRI(ME) without actually having to take the course or the test. That discovery saved me a fortune and a week's work and contrary to some people's expectation, the ATO proffered the information unprompted. They are a non-profit organisation, dedicated only to the betterment of aviation and they were certainly not going to encourage me to do more training than was necessary.

The standalone IRI course is in two halves:

The first half is wholly ground based, called Teaching and Learning. It is about the theory and practice of teaching, mainly ground school teaching and briefing, though it does also touch on theoretical elements of airborne teaching. If an instructor is going to do CRI as well as IRI, he or she only has to do Teaching and Learning once; it covers all aspects.

The first day of Teaching and Learning is pretty dry. You learn a little psychology and educational theory and how to recognise certain learning styles and traits in students. It is the kind of stuff which is very obvious once you are told but which you have probably never thought about.

The rest of the time (25 hours in the classroom in total) is spent delivering and being critiqued on various briefings.

We started by delivering a talk on anything we chose, just to get in the mood. Jean-Michel presented on the Swiss Constitution, a third member of the group (who was doing an Aerobatics CRI) explained about Axle Weight Management on Heavy Goods Vehicles and I presented on how theatre box-office deals are done.

We then progressed to doing proper, fully prepared, long briefings relevant to our subject matter. Mine was on altimetry. The instructors and examiners are not really interested in the content of the briefings, much more in the way they are prepared and delivered. To me, this was grist to the mill, as I have spent my adult working life on my feet presenting material to rooms full of people but it is clearly a struggle for some, which is why it forms a substantial part of the course.

We also studied and prepared for short pre-flight briefings, where the order of the day is to keep the information very succinct and precise. You are not teaching how something is done, just what you are going to do, the objective and the Risk and Error Management (REM). They are very big now on REM. It's what we used to call Airmanship but now it is much more focussed on particular risks and errors associated with the task to be taught and how we are going to mitigate them.

Once Teaching and Learning is out of the way (it took us about 4 days, including quite a lot of preparation in the hotel room between sessions) you move onto the practical side. For the IRI, that has to include ten hours in the air plus a fair deal more theoretical work.

We did all the flying in On-Track's rather beaten up PA28-140. There are some advantages in doing it in an older, under-specified aircraft – it keeps you more on your toes and is possibly more representative of the GA fleet than a glass SR22 or whatever. It has the disadvantage of VORs which tell different stories, a non-coupled DME and a GNS430 with a database dating back to about 2005. (Out of the goodness of my heart, I actually fixed that last one for them – it just grated too much with me!)

It was interesting that I could do the whole course on an SEP but come out qualified to teach on MEP but that may be an oversight by EASA and/or the CAA, rather than an intended consequence.

The airborne part of the course is quite intense, because they are trying to achieve quite a few aims.

i. You need to ensure and be able to prove that your own flying is to a very high standard, because you need to be able to demonstrate and you cannot demonstrate something if you cannot do it, pretty much, perfectly.
ii. You need to be able to teach and to teach in rather a precise way, entailing demonstrating, watching and analysing and correcting faults.
iii. You need to be able to recover from whatever the student does, including knowing how far to allow a fault to develop before you take control.
iv. You need to manage the flight, from beginning to end, at the same time as allowing the student to feel like they are managing the flight. Some things you are clearly responsible for, such as lookout, if the student is simulating IMC but others, such as navigation, fuel planning, terrain separation, remaining outside airspace and the rest you have to both allow the student to do and be doing yourself.

And you have to learn and be able to demonstrate those skills across the whole syllabus – basic and advanced instrument flight, including recovery from unusual attitudes, enroute, holds, precision and non-precision approaches. That makes ten hours disappear quite quickly. It wasn't made any easier by the fact that we were fitting in an SEP renewal as well.

The flying part of the course also includes doing pre-flight briefings. I briefed every flight fully, so that it became second nature for the test. Also, my examiner kept throwing at me the kind of technical theoretical knowledge question I could expect from the examiner. This included a very wide range of topics, from basic aerodynamics, through radios and instruments, meteorology, air law and human performance. It was interesting that there seemed to be a focus on BRNAV and GNSS approach type questions, whereas, in the practical flying, GPS was never used or mentioned.

I had three different instructors across those ten hours but it is to On-Track's credit that they were entirely consistent with each other and each seemed better than the others. On-Track employs only highly experienced instructors, most of whom have both RAF and line experience or, in some cases, experience of heavy metal in the RAF. They are sensible and pragmatic, while at the same time keeping an eye on the learning objectives. None is there to make money. They are there because they enjoy it and want to pass their knowledge and experience on to another generation.

The Test was thorough but reasonably informal. The examiner was happy to extend the flight to include SEP renewal. I think that the CAA examiners recognise that once you get to a certain level in the learning curve, it is as much a peer-review exercise as an instructor-student one and I was certainly treated as an equal who wanted to demonstrate that I had a certain set of skills. He asked me to brief for a certain sequence but briefed me back that we would go through that sequence but that he would tell me at the time whether he wanted me to demonstrate or teach each part. For some of the exercises he was a good, compliant student, sometimes a slightly bewildered one and on the final exercise, a non-precision approach, he became a panicking, downright dangerous one!

After the Test and having told me I had passed, the examiner gave me a long, paternal talk about rights, duties, privileges and command, an issue clearly close to his heart.

P 16 ▶

Fairoaks to Cannes IFR

Geoff van Klaveren recounts his first long distance IFR flight from Fairoaks to Cannes in July 2010

I passed my JAA (now EASA) Instrument Rating in October 2009 but like most exams in life, be it driving or formal education, the real learning starts after you pass. My first IFR flight post exam was Bournemouth to Guernsey, an easy IFR flight that I had done many times in the simulator during my IR at Professional Air Training (PAT) at Bournemouth. My second flight was from Fairoaks to Deauville, mainly to see how easy it was to transition from a non-controlled airfield to the airways. Now I felt I was ready for a proper flight and so after many weeks planning I decided to fly my family to the south of france for a week's holiday, in a Cirrus SR20.

Brakes off at 0809 UTC and Fairoaks gave us our clearance "after takeoff head south west initially not above 2000 ft with sqwark xxxx". After takeoff, I completed my checklist and contacted Farnborough approach. Within 5 minutes Farnborough handed me over to London Control. I was rather apprehensive of the first call to London Control because first impressions count and if you fumble your first call you won't fill the controller with much confidence as he slots you in between airliners full of passengers. I was immediately cleared direct to Goodwood and climb to FL 90. The radio was busy and within 5 minutes the controller started to give me radar headings as he separated me from considerably faster aircraft departing Heathrow and Gatwick. Coasting out, I was given a direct to SITET and from then things settled down with the autopilot flying the programmed route. I often read in Pilot how one should only use the GPS as a back-up nav aid. The reality with airways flying is that this is just not possible. Many of the waypoints you fly don't have VORs or NDBs to reference them and in any case GPS is usually far more reliable. I used GPS as my primary nav aid with VORs as back up.

In many respects, airways flying is very easy. You often fly the route you filed and when handed over to a new controller you just say your call sign and flight level and that's it. They know who you are and where you are going. As I crossed into France I was beginning to feel confident about my radio. Listening to Air France, "Speedbird", "Easy" and "Ryanair" on the same frequency I felt my radio was as good as theirs. I remember when I passed my driving test many years ago the instructor told me not to raise my hand to thank a driver who was giving way to me because it was dangerous to take one's hands off the steering wheel. Well, after the test, it became pretty clear that not raising one's hand to thank just such a person was considered very rude. Radio is the same, they tell you in the IR not to waste airtime by using pleasantries but then when you get in the airways you hear lots of bonjour and au revoir and merci. One American pilot started every reply to ATC with "OK then, so thats a right turn onto heading 060 degrees...". So anyway I started to use bonjour with all my radio calls in France. My first slight panic was when Paris Control suddenly gave me a direct to BOBSA. I wasn't expecting this and couldn't understand what he had said. After a "say again" I found BOBSA on my map and belatedly replied. So first lesson for me was to look ahead on the airways map and be familiar with all the upcoming waypoints. A few minutes later KLM were also directed to a waypoint they couldn't locate and asked for the controller to spell it. This made me feel slightly better, clearly it was a common occurrence. If only the passengers knew!

So all was going well, I was cruising quite nicely at FL90 with a TAS of 140 kts using 10.5 USG/hr in VMC when 20 miles up ahead I saw a wall of cloud (also known as towering cumulus). Knowing that it would be very turbulent to penetrate it I decided to pluck up the courage to ask for a climb to FL100 citing weather as the reason. Despite this being the theoretically wrong level for eastbound travel I was approved to climb. To my dismay I was still not above the TCU at FL100. I asked for a 10 degrees right turn, which was approved and I managed to just avoid the cloud. It was nice to know that ATC are accommodating when it comes to weather.

Glorious enroute weather

Approaching Clermont Ferrand they kept me high until surprisingly close to the airfield (this didn't happen in the training I thought). Controllers clearly expect IFR flights to descend at at one hell of a lick, I was descending at 700ft/min but I think they were used to jets coming down at around 1500ft/min. I ended up having to close the glideslope from above, which you are generally trained not to do, although in fact commercial airliners often close the localiser from above.

Clermont Ferrand is a good airport to use as a stopover from abroad. ATC, fuel and customs operate 7 days a week and the landing fee is reasonable. There is also very little hassle. Operations pick you up from the tarmac and drive you 1 minute to the air conditioned operations room where you can pay landing fees, check weather and they didn't even mind us eating a quick sandwich. The only drawback is that the catering facilities are very limited. There is a sandwich vending machine but not the french restaurant that I had been hoping for.

Departure from Clermont Ferrand didn't quite go according to plan. I requested engine start 15 minutes ahead of my flightplan off block time thinking that at such a quiet airport being early would not matter. ATC came back and said that my take off slot was not for another 35 minutes. This meant 20 minutes sitting in the aircraft in over 30 degrees of sunshine (probably 35 degrees inside the aircraft) sweating profusely. I wished we had air-con. ATC tried to get me an earlier slot time but said that the problem lay down in Cannes where traffic was very busy. I started to feel apprehensive about the next leg. Then I was further bemused when I was

given a departure clearance from runway 08, despite the ATIS giving runway 26 as the active runway. What I didn't know is that at Clermont Ferrand they generally use RW26 for landing and RW08 for takeoff due to the rising high ground to the west of the airport. After rapidly reviewing the SID from RW08 I took off and headed on the second leg to Cannes.

We were hot and the aircraft struggled, at times, to climb to FL90. The controller then said that we needed to climb to FL110 to clear the military airspace along our route. We reached FL110 with a climb rate that at times was below the required min of 500ft/min for IFR (an SR22 especially with a Turbo would have been ideal). Immediately, we were faced with wall upon wall of TCU as the hot afternoon caused thermals to rise well above FL100. I managed to make very minor adjustments to my heading to avoid some but others I had to fly through and the turbulence was uncomfortable.

We were handed from Clermont Information to Lyon Control to Marseille and then over to Nice. The radio was busy with aircraft streaming into Nice for the summer holiday season. Cannes and Nice share the same approach. I had planned for the AMFOU 5R arrival and this was going quite nicely when ATC suddenly told me to Hold at MUS (NDB) due sequencing. For some reason, I really wasn't expecting this but after a brief moment of panic I started to recall the training from Steve York, my sim instructor at PAT and began planning my entry and working out my gate angles (I know Steve, I should have worked it out already!). Luckily the entry was very straightforward because I was on exactly the same heading as the beacon inbound angle. "G-XXXX taking up the hold at the MUS, FL 60". An easy direct join followed by a left turn...I didn't even get to finish one hold when I was cleared to leave the hold on a radar heading of 120 degrees. ATC was rapid, I had a "Speedbird" behind me that was much faster. I was cleared down to 3000, Speedbird cleared down to 4000, I was cleared down to 2000, Speedbird down to 3000.

The procedure for RWY 17 at Cannes is not straightforward. Nice approach cleared me for the localiser approach to RWY 35 then circle to land for RWY 17. What this means is that you intercept the localiser on a heading of 348, then at 3.5nm break-off to the right flying accurate tracks to LEXUS (start of the downwind leg) then PIBON (end of the downwind leg) before turning base then final and landing on RWY 17. Aircraft taking off were using RWY 35 so when you break off from the initial approach they were released for takeoff. Anyway, I was closing the localiser from the left expecting ATC to vector me on anytime soon but the call never came. I passed through the localiser starting to think that Nice had forgotten about me but they hadn't, they were just separating me from the "Speedbird". I was given a left turn and told to intercept the localiser (from the right) and contact Cannes when established. The localiser approach is 348 degrees, slightly offset from the runway centre-line due to the Pointe de L'Aiguille which rises to 837ft less than a mile from track. At the Final Approach Fix (FAF), 6.5nm from CMD VOR, I descended to 1800ft as per the approach plate. At 3.5nm from CMD (located on the airfield) I turned right onto 026 degrees towards NEXUS then left onto 352 degrees for the downwind leg.

Cannes insist that all pilots register online to confirm they understand the approach before the flight and this is no bad thing. It is not difficult but you need to be mentally prepared. For example on the

The family arrive safely in Cannes

downwind (1800 ft) they want you to keep the speed up. Only as you turn base leg are you allowed to descend to 1500ft and only on finals are you allowed to slow to landing speed and deploy flap. Invariably the design of the approach means that one comes onto finals fast and high requiring some quick deceleration and trimming. The approach is also steep at 4 degrees which makes you feel too high (and the runway seem short) to add to the challenge.

The fees at Cannes are reasonable. We paid €109 for a week's parking and all landing charges and taxes. Handling is a bit of grey area. It is optional for aircraft under 2 tonnes even if arriving IFR. Despite not paying for handling I was still allowed to rub shoulders with the Netjets pilots in the briefing room and my wife and daughter were allowed to sit in the air conditioned private jet lounge sitting on the same sofa that no doubt had been graced by celebrities at the Cannes film festival a few weeks earlier. The main drawback of not getting handling is that you have to lug your own bags to the aircraft which is parked some distance from the terminal. Luckily, on our departure, someone took pity and drove us to the aircraft. I thanked him and gave him €5 worth of beer money for his troubles. One negative thing about Cannes is the re-fueling. To avoid a delay on the day of departure I went to the airport to refuel a couple of days before. You have to taxi to the pumps which anyone who has tried to start a Cirrus hot will know that this is a pain. What made the whole thing more ridiculous is that we were re-fueled from a bowser and not a fixed pump! Why the bowser couldn't have driven 200m down the taxiway to refuel us on stand I don't know.

Anyway, I was pleased to have re-fueled before the day of departure to avoid any delays. IFR slots have strict timings out of Cannes because they have to sequence you with Nice traffic. I got my clearance and taxied to the hold of RWY 17. Netjets took off just before me then it was my turn. Immediately after takeoff you turn left to intercept the CNM VOR 130 degrees radial but not below 500ft and track towards a waypoint called DIMAD. I was handed over to Nice departure who immediately gave me a climb to 4,000ft then a few moments later 6,000 then pretty soon cleared me to FL 100 direct to STP (Saint Tropez). The views were stunning as we passed over St Raphael and St Tropez. I was handed over to Marseille who asked me to climb to FL 110 to remain clear of the danger areas. The air was hot and the SR20 struggled to climb to FL 110. ATC then asked if it was possible for me to climb to FL 120 due to opposite direction traffic. I explained that this would be very difficult for me and the controller was very helpful and told me to remain at FL 110. The opposite direction traffic climbed to FL 130.

The stopover at Clermond Ferrand was uneventful and within an hour we were back in the air climbing back up to FL100. We climbed through some small cumulus cloud at 5,000ft and enjoyed VMC most of the way. As we were handed over to Paris Control the airwaves were unusually quiet, so much so that one FlyBE pilot asked for a radio check! Then we heard some interesting exchanges. One pilot had thought he had heard an ELT being activated. ATC asked a number of aircraft at P 17 ▶

Chairman's corner

by Paul Sherry

What a change since I last put finger to keyboard. When I last sat down to write my submission, the sun was in the sky and the outside air temperature was a comfortable 25°C. Tonight, as I start, it is dark already at 20.00 and the predicted weather on Sunday is heavy rain with wind gusting to 50 knots in some parts of the UK. Autumn is upon us.

My first duty is a sad one and that is to inform you of the death of one of our longstanding members – Alan Tyson – whilst flying his Baron B58. The exact details of the incident are subject to an air accident investigation process and the report has yet to be published. It is therefore inappropriate to speculate as to the cause, however, the information available indicates that he had departed from Albenga airport in Italy on the morning of 16th June 2013, radio contact with the aircraft was lost and the wreckage of the aircraft was subsequently located on Mount Mindino at an altitude of around 6000ft AMSL. Local visibility at the time was reported to be very poor. Alan was not known to be me personally but many members of both ExCo and the wider membership who did know him, have commented that he was a conscientious and safe pilot who demonstrated careful attention to detail. He was very much liked by his friends and colleagues both in ***PPL/IR Europe*** and beyond. His presence will be very much missed.

That said, it has otherwise been a generally good summer for ***PPL/IR Europe***. We started with our AGM in April, followed by a successful presence at Aero Expo Friedrichshafen with many new members joining our organisation. We had an equally successful Aero Expo at Sywell as well as a most enjoyable long weekend in Normandy, which was a 'sell out' from an attendance and participation perspective. The success of this 'long weekend' would lead us to consider further such ventures. My thanks again to Stephen Dunnett for his meticulous attention to detail.

Our next meeting of the Executive Committee will be on Saturday October 12th and is scheduled to be held at Biggin Hill. I would just take this opportunity to emphasise that all members are welcome to attend should they so wish.

A matter that has recently come to the fore is some proposed changes by the United Kingdom Border Force (UKBF) to the period of pre-notification required for flights returning from continental Europe and the Channel Isles. It would appear that deep within the workings of UKBF concerns have been expressed about all these pilots flying to and from the UK with relatively little in the way of supervision and checks.

Some of you might be aware that one of our members, John Murray, (also a member of AOPA) has been beavering away at an electronic GAR (eGAR) system for approximately 3 years. He has worked closely with UKBF during this time and has been given access to their systems so that we might be able to file a GAR electronically. The eGAR may be accessed at http://www.aopa.co.uk/gar6/ This is instead of sending the GAR by email to ncu@hmrc.gsi.gov.uk.

I am informed that GARs filed by email (still perfectly legal) require manual processing by UKBF staff. John tells me that they can often be running up to 24 hours behind with the analysis of the supplied information hence the local staff, who might choose to meet a flight, are very much "behind the drag curve" when it comes to up to accurate and timely data.

Thus the eGAR potentially has huge benefits for UKBF insofar that this allows some electronic pre-processing of the data. I am sure John could brief us all in more detail but I assume that the information supplied through the eGAR system can go through some automatic pre-screening against known lists of "undesirables". It allows UKBF to target their limited resources in a more intelligence led way. This is in all our interests. Legitimate GA flights are not unnecessarily delayed, whilst those where further information and investigation is required can be targeted.

One would hope that such engagement (which John has supported out of his own resources – both time and IT equipment) would result in a more positive working relationship with UKBF. However, recent proposed changes in their internal working practices would appear to demonstrate almost the exact opposite. There has been a lot of email traffic amongst the Executive of ***PPL/IR Europe*** over the past month on this topic and several phone calls, including calls to the executive team of AOPA and the LAA. On this topic, we have broadly agreed that the objectives of all three organisations coincide closely.

A meeting with a senior member of UKBF is scheduled for 1st October (and by the time you read this will have already taken place). At the time of writing, we are giving careful consideration as to whom to send into the lion's den on our behalf. Whilst not wanting to be accused of being cryptic, I don't want to write too much more on this topic until that meeting has taken place, save to say that we in ExCo, alongside the other major GA organisations in the UK, are doing our very best to preserve and enhance our current rights and privileges - yet another issue on which ***PPL/IR Europe*** is working on your behalf.

What else is going on? Jim Thorpe and Julian Scarfe recently attended a meeting with the UK CAA to discuss Instrument Approach Procedures to runways that would not usually meet the required criteria. This means GPS approaches to you and me. The CAA has produced an initial draft document for discussion and further development. Both Jim and Julian report positively on CAA engagement on this topic and specifically Jim stated in his feedback that "it was perhaps the best meeting that I have ever been to at the CAA" - encouraging words indeed.

This is a topic on which we have been campaigning for some time and it would appear that our efforts are finally beginning to show some fruit. Indeed, this follows on from comments that were made to me when I met with senior CAA members at the "Party in the Park" organized by the LAA at Old Warden in May. When I asked about GPS approaches at that time I was told to "watch this space". It would appear that the space might start to be filled at last. With a hopefully more realistic approach from our UK regulators, it might not be that long before we can start to put all that fancy GPS kit, on which we have all spent so much money, to wider use.

Julian Scarfe continues to lobby hard on our behalf at EASA, which is based in Cologne.

The CBM IR is now in EASA committee which, to confuse you all, is not actually an EASA committee. It is the EASA oversight committee of the European Union. The principle, as I understand it, is when EASA wants to make amendments to certain rules it comes up with a plan to amend a rule or procedure. This is worked up toward a more solid proposal within various internal structures within EASA. In the specific case of the CBM IR this was FCL008. Once that process is complete, EASA pass the proposed amendments up the chain to the EASA committee that is made up from nominated representatives from each of the member states. It is likely that a bit of politics and "horse trading" gets involved at this stage so it is important that the representatives of the individual countries are properly briefed. - we have been working on this.

In an ideal world the EASA proposal gets voted through with as few changes as possible. It is then handed back to EASA who then, in turn, hand it back down to the National Aviation Authorities (NAA's) to implement locally.

This is perhaps a rather simplistic reflection of what exactly goes on and I am sure Julian would rightly correct my rather superficial understanding. However, it does rather throw into sharp relief where issues might arise. In general, misunderstandings tend to be generated at what one might call the "interfaces" – between EASA and the EASA committee and also between EASA and the NAA's. The problem is often similar to that which Humpty Dumpty alluded in "Alice Through The Looking Glass":

`When I use a word,' Humpty Dumpty said, in rather a scornful tone, `it means just what I choose it to mean -- neither more nor less.'

`The question is,' said Alice, `whether you can make words mean so many different things.'

I hesitate to cast EASA in the role of Humpty Dumpty and the NAA's in the role of Alice but you can perhaps see the problem. EASA tries their best to draft proposals and amendments that they pass up to the EASA committee and then back down to the NAA's. The NAA's then presumably set up an implementation group that studies the weighty tomes that descend from on high and try and work out exactly what EASA want them to do. However carefully the words are drafted there will still be some interpretation required. Hence the practical differences in implementation of the same rules in different countries by the various NAA's. This has, on occasions, led to some plain daft outcomes.

On the subject of avionics approvals, Julian has had an informal meeting with Carl Thomas who is Head of GA Certification at EASA. The topic under discussion was how to encourage them to move from a compliance based process to a more risk assessment based process. In other words, to try and persuade EASA to take a more balanced view of the potential benefits of any new piece of technology when put alongside the risks. Perhaps one example would be the replacement of very basic levels of piston engine monitoring in most aircraft (a single CHT gauge, an oil temperature gauge and may be an EGT) with much more sophisticated multi channel monitoring kit with individual piston CHT's and EGT's as well as data recording and trend analysis. Carl has suggested that I meet with another of their team on this topic – Paul Hatton.

As it so happens on Tuesday and Wednesday of this coming week I am also out at EASA on your behalf for our second meeting on RMT0278 which goes under the rather (? un)inspiring title – "Importing of aircraft from other regulatory systems and Part 21 Subpart H review". In other words, how do you get an aircraft from another registry onto an EASA register? – should you wish to do so. I am sitting round a table with a senior person from Airbus, the same from Embraer, a representative from GECapital (who lease a lot of heavy metal aircraft around the world) and someone from the UK CAA who used to work at the Citation Centre in Bournemouth and has spent most of his life dealing with certification issues. I am rapidly learning about CAMO's (Continuing Airworthiness Maintenance Organisations), the detail of Part M (particularly Parts 710 and 904), Part 21 (Subpart H of course) as well as trying to get my head around the BASA (Bilateral Aviation Safety Agreement) with the FAA.

I am, of course, completely out of my depth but trying to learn fast. Rob Doherty at Aerotech Coventry has been an invaluable source of background information. It is important that we have representation on the rule making groups that can and do affect GA. Decisions are made by those who turn up and unless we are there in the thick of it, then we can't moan (too much) if a committee that is discussing Airbus A380's, Boeing 787's and the like makes some rule without thinking about the possible impact on the smaller end of the market.

The BASA is an interesting document and all the important parts can be found in the TIP (Technical Implementation Procedures). As an example, did you know that Form 337's on used aircraft are now acceptable to EASA as long as it does not affect a 'critical' part. Those who operate N registered aircraft become quite familiar with the Form 337, which is used by maintenance organisations to document a wide range of tasks. I am informed that the original GNS430 was installed to a Rockwell Commander under a Form 337 Field Approval and most of the USA fleet followed on from that. That is one of the reasons why here in Europe we struggle with approvals for the Garmin 430 and 530 GPS navigators. Garmin recognized the problem when they introduced the 650 and 750 series, talked to EASA and went down the route of an AML (Approved Model List) that covers the vast majority of GA aircraft.

However a major spin off from the BASA is that until recently a 337 field approval could be a major stumbling block to transferring an N reg aircraft onto an EASA register as there was no EASA equivalent process for a 337. That issue has now been resolved, at least from EASA's perspective. I am told that some NAA's might be taking a different view.

Our representation on this rule-making group comes about through Julian Scarfe and our affiliation with Europe Air Sports (http://www.europe-air-sports.org). Europe Air Sports functions as the voice of sports and recreational aviation in Europe. Its membership consists of the national aero clubs of 22 countries, including most of the countries that are part of the EU. A number of other pan-European aviation interest groups are also members, including ***PPL/IR Europe***. When EASA are looking for some GA representation on various rule making tasks and committees they turn to EAS, who in turn look to their member organisations.

Some of this might seem a bit distant from the day to day issues of flight planning, the cost of fuel and the myriad other operational considerations that concern us when we operate our aircraft. But, unless we understand and are involved with the regulatory process then we might not like the outcome.

Safe flying…

Paul Sherry

Pilots' talk

Compiled by Klaas Wagenaar

Pilots' Talk is a compilation of news items and snippets based on various regular aviation publications like AVweb, AOPA, GAnews, Flyer, Aviation International News, Aviation eBrief, NATA, CASA, Eurocontrol and other related web-articles.

ADL120 – European weather radar displayed on your iPad

Some months ago, we discussed the ADL110 which is a new approach to European in flight weather. Data link weather is a great tool in order to enhance your situational awareness but the ADL110 requires an empty space in the instrument panel of your aircraft which is not always available. Today, many pilots are flying with an iPad in the cockpit. The devices are used to display approach plates, run moving map applications and much more. So the next step is a solution which also brings data link weather to the iPad. The ADL120 is the first devices which does exactly that. It downloads the weather information and sends it to the iPad for display.

You might ask why one would need a specialized device and why not simply use an Iridium phone as a modem? Basically there are two reasons. First, the communication with the satellite network has to be continuous. If you switch apps or put the iPad in standby, it cannot interface continuously with the satellite network. Second a standard internet connection is very inefficient concerning its data usage. In most cases this does not matter but when communicating over a satellite every byte counts. A highly compressed direct link is required to limit transmission time and costs. A dedicated device like the ADL120 does exactly that. It operates continuously and reduces the data transmission volume to the raw data necessary for in flight weather. No update requests to the Apple servers etc. will be transmitted over the satellite.

The data service for the ADL120 is the same as the one for the panel mounted ADL110. You can download weather radar, strikes, METAR and TAF. In addition, you can send SMS, receive SMS and update your position on a Google map. For the ADL110 we did a short comparison of the competing products. For the ADL120, as of today, there is no similar product. In the US, there are devices like the Sporty Stratos. But it uses ADS-B to gather the weather data which is not available in Europe.

The retail price for the ADL120 is currently 2,090 Euro excluding VAT. The data service is 25 Euro per month excluding VAT. You can install it permanently in your aircraft or use it as a mobile device and power it using the cigarette lighter socket. The required app "ADLConnect" for your iPad is available in the Apple App store for free. It comes with some sample data which allows you to try the app without an ADL120. We will keep you updated on future data link developments. The airlines are working heavily on controller pilot data link (CPDL). At some point many things like enroute clearances, position reports etc., which are done over the radio today, will become data link services.

NTSB concerned about go-arounds

The National Transportation Safety Board wants the FAA to modify its procedures for directing traffic around major airports. This is to reduce the possibility of mid-air collisions when a landing aircraft must conduct a go-around.

Five incidents involving departing aircraft and go-arounds were studied by the NTSB. In each case the crews had to take evasive actions to avoid collisions. In those five incidents, the aircraft that had initiated the go-around was put into the flight path of another aircraft either arriving or departing from a different runway at the same airport.

Taking evasive action at low altitude and high closing speeds can be hazardous, the NTSB says, by putting the crew of the aircraft performing the go-around into a position of taking action at dangerous times of low altitudes and usually slower air speeds. Current separation standards and operating procedures are not adequate and need to be revised, the NTSB letter to the FAA noted.

Incidents studied by the NTSB included three at Las Vegas McCarran Airport, one at New York's Kennedy Airport and another at Charlotte-Douglas Airport in North Carolina. All five are international facilities. One of the incidents at McCarran Airport involved a Spirit Airlines A-319 and a Cessna Citation that was on a short final for landing on a runway different from the departing A-319. The two aircraft came within about 1,300 feet laterally and 100 feet vertically from each other.

Another at the Las Vegas airport involved a JetBlue Airways A-320 and a Learjet 60. The Learjet was departing from a different airport than the one the A-320 was approaching. They came within about 1,800 feet laterally and 100 feet vertically to each other. Incidents studied at the other airports involved two airliners.

Current FAA procedures are specific about separations between aircraft departing from different runways that have intersecting flight paths. The procedures, however, do not prohibit controllers from clearing an airplane to land at a time

when it would create a potential hazard if the landing aircraft needed to make a go-around. The FAA has not made any statements about the recommendation.

FAA site gives lessons from transport aircraft accidents

NTSB accident reports give us the cold, hard facts behind an accident but those facts don't always help us understand the "why" behind a crash. No matter the type of aircraft, operators want to know what it all means to them and how their crews fly.

Little pearls of wisdom offer the value to a website called FAA's Lessons Learned. While the site doesn't attempt to address every aviation accident, it does "represent some of the most major accidents and their related lessons." The site is divided into three major segments: airplane life cycle, accident threat categories and aircraft common themes. For example, click on flight-deck layout and avionics confusion under threat categories to find a brief concept synopsis followed by an opportunity to review any of 14 accidents that relate, such as the American Airlines DC-10 crash at Chicago O'Hare International Airport (ORD) in 1979 or even as far back as the 1972 Eastern L-1011 accident in Florida's Everglades. Are you wondering what lessons a 40-year-old accident has to teach? It wasn't the aircraft that killed 112 of the 163 people aboard the flight that night. It was the crew's failure to focus on flying the aircraft while they troubleshot a landing gear problem approaching Miami. Forty years later, the July 6 Asiana Airlines 777 accident in San Francisco seems to show that pilots are still not focusing on flying the airplane all the time.

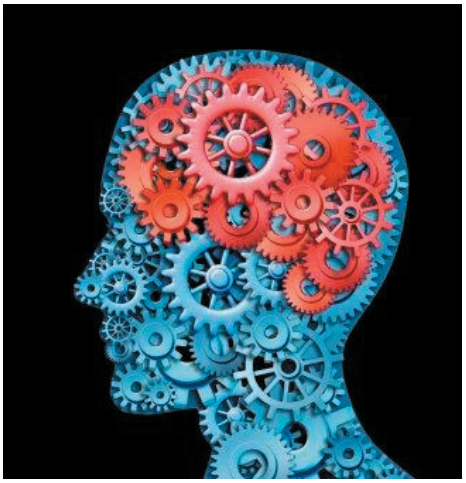
iStart debuts

iStart Partners has introduced the iStart system, an electronically controlled aircraft piston engine starting system that automates the delivery of fuel during engine startup. iStart is simple to install by any person with reasonable mechanical skills in just a few hours, according to company officials. The system is comprised of only two components. There are no additional switches or pumps to install. The iStart control module is installed behind the instrument panel. A throttle body injector plate is installed between the fuel servo and intake manifold.

"Operation is as simple as setting mixture to cutoff, throttle cracked to approximately 1,000 RPM, turn on mags and energize the starter," officials said in a prepared release. "iStart controls fuel delivery to ensure a perfect starting mixture regardless of whether the engine is hot or cold (iStart monitors the engine temperature to determine the best mixture). iStart will idle your engine and indicates to the pilot when it is time to transition the mixture control to rich. Once the pilot advances the mixture, iStart will automatically conclude its control of fuel delivery and the aircraft will operate as normal by pilot control. iStart cannot interfere with normal operations of the engine until the next engine start." iStart is currently available for Lycoming powered experimental aircraft. FAA certification is in process. Development for Continental engines is nearly complete, company officials note.

Volunteer pilots wanted for cognitive study

Healthy GA pilot volunteers are needed this year at AirVenture for computer-administered confidential testing to help the FAA determine when previously injured pilots are safe to return to flying. The FAA requires cognitive screening tests to help determine when a pilot who



has suffered a stroke, head, or brain injury can be considered safe to return to the cockpit. The testing project aims to create a set of normative data from a group of healthy pilots that can be adapted and used for comparison against the functionality of previously injured individual pilots. General aviation pilots who participate in the project will receive benefits.

FAA sends letter to pilots re: medications

The FAA is sending a letter and fact sheet to all U.S. pilots to make them aware of the potentially negative effects that certain types of common over-the-counter and prescription drugs could have on the safety of flight. Specifically, the FAA notes the "sedative effects" caused by "many medications" and the ability of some medications to cause cognitive impairment. It also emphasizes the "subtle degradation of the ability to competently evaluate actual IMPAIRMENT [sic]" caused by some medications. According to the FAA, medications that are prohibited by the agency are found to be a factor in roughly 12 percent of fatal GA accidents. Along with those warnings, the FAA also offers guidance.

The letter lists four ways that pilots can reduce the risk of being impaired by medication. It asks pilots to educate themselves by reading documentation and asking their doctor about medications they are using, specifically with regard to their impact on the performance of complex tasks like flying. The FAA warns pilots not to fly until at least five maximal dosing intervals have passed. That translates to waiting 30 hours to fly after taking a medication that can be administered every four to six hours. The agency asks pilots to apply the illness, medication, stress, alcohol, fatigue, emotion checklist (IM SAFE) and step back from flying activities if the checklist suggests you may be distracted or impaired in your assessment or decision-making due to use of any medication. Finally it reminds pilots that expert guidance is available from designated FAA Medical Examiners.

FAA committee releases recommendations to simplify GA aircraft certification regulations

The Aviation Rulemaking Committee report on recommended changes to general aviation aircraft certification regulations has been released and offers hope for lower-cost certification processes under Part 23.

The Aviation Rulemaking Committee (ARC) report on recommended changes to general aviation aircraft certification regulations has been released, just in time for the opening of this year's EAA AirVenture Oshkosh show on July 29, and in what appears to be encouraging

support from the federal government, new Department of Transportation Secretary Anthony Foxx expressed support for the recommendations. "Streamlining the design and certification process could provide a cost-efficient way to build simple airplanes that still incorporate the latest in safety innovations", he said. "These changes have the potential to save money and maintain our safety standing–a win-win situation for manufacturers, pilots and the general aviation community as a whole."

The ARC recommendations are aimed at developing a more sensible method of certifying not only new Part 23 aircraft but also aftermarket modifications. The regulations should be performance-based, "focusing on the complexity and performance of an aircraft instead of the current regulations based on weight and type of propulsion", according to the FAA. "Under many of the existing Part 23 requirements, small, relatively simple airplanes have to meet the same regulatory requirements as more complex aircraft". Like the light sport aircraft category, the new certification regulations should be based on consensus standards, the ARC recommended, which makes keeping up with new technology much simpler. The FAA agrees that it would be able to retain its oversight duties while encouraging innovation under the ARC-recommended scheme. The agency said that it "will review the ARC recommendations as it decides how to proceed on improving general aviation safety". The ARC consists of 55 representatives from industry associations, aircraft manufacturers from around the world and FAA and other countries' regulators, including those from Europe, Brazil, China, Canada and New Zealand. Other countries are working with the FAA to harmonize the regulatory process so that there can be more standardization between countries and less time spent on unnecessary certification processes.

Spain makes progress on saving GA

July saw the last meeting of the working groups promoted by the Spanish CAA, the Dirección General de Aviación Civil. The meetings of the Airport Access and GA Airspace Access working groups mark the conclusion of a first, intense year in which all members around the table (DGAC, airports operator AENA, Safety and Security Agency AESA, AOPA Spain and other GA and aerial work representatives have developed specific measures to save general aviation in Spain. Rafael Molina of AOPA Spain reports that a new Real Decreto (bill) which will add flexibility to the operation of public airports, a new ministerial order on ultralight aircraft, the slow but steady implementation of VFR/N and the simplification of flight plan filing are the highlights of these work programmes. Also in the final staging phases are items such as the Real Decreto on restricted use airfields, terminal building segregation for general aviation and handling services, as well as fuelling service requirements for GA. We hope that the momentum given by the Director General de Aviación Civil Mr. Angel Luis Arias, will continue into the future in order to keep on working on the many subjects that still need improvement. The new board of AOPA Spain, elected in June, is preparing for the start of the next round of working programmes in September, pursuing the updated version of the "19 key measures to save general aviation in Spain" manifesto, which was delivered one year ago and which has served as a template for these meetings.

UK IMC rating – not dead yet

The United Kingdom is fighting to retain its IMC rating, which EASA says cannot be awarded after April next year. Andrew Haines, Chief Executive of the UK CAA and Mark Swan, who is responsible for GA safety, are to meet with EASA and European Commission officials to try to find a compromise which will allow the rating to continue in the UK. The British believe the IMC rating underpins their excellent GA safety record. Despite Britain's unpredictable weather – and EASA accepts that bad weather is the big killer of GA pilots – the UK's safety record is said to be as much as four times better than elsewhere in Europe with similar levels of activity. The IMC rating is a 15-hour flying course which teaches GA pilots to maintain control of aircraft in IMC and return them to the ground by whatever means are available. IMC-rated pilots are encouraged to practice their instrument flying skills and renewal requirements are strict. Since AOPA UK wrote the syllabus for the rating 40 years ago some 26,000 pilots have obtained it and the CAA says only one IMC-rated pilot has been killed flying into IMC. The system has co-existed with Commercial Air Transport for decades without problems and professional pilots' bodies are among the rating's strongest supporters. Flight in IMC, outside controlled airspace, is forbidden in some European countries so EASA says the UK must abandon the IMC rating. It also says the IMC rating is untenable because it is a sub-ICAO qualification – but so is EASA's En-Route Instrument Rating. EASA cannot remove qualifications that pilots already have, so IMC rating holders will be granted an EASA Instrument Rating (Restricted) which will allow them to exercise the privileges of the IMC rating in UK airspace. This means the full IMC rating instruction system must remain in place for currency and renewal purposes but instructors will be prevented from teaching the same lifesaving skills to new pilots. *(At the time of going to print there has been a significant development to this – see "STOP PRESS" on page 2 and the* ***PPL/IR Europe*** *website - Ed).*

NTSB: GA accident rate flat

The NTSB this week released preliminary aviation accident statistics for 2012, showing that Part 121 commercial airline operations remained fatality-free and general aviation accidents were virtually unchanged. In the general aviation segment, the number of total accidents was 1,470 in 2011 and 1,471

in 2012. Fatalities decreased slightly, from 448 to 432 and the accident rate per 100,000 flight hours declined from 6.84 to 6.78. On-demand Part 135 operations showed improvement, with decreases across all measures, the NTSB said.

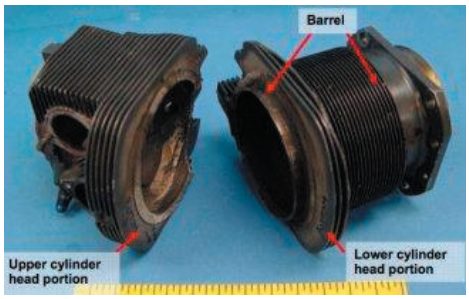
Researchers see clear air turbulence

German researchers have developed a system that uses lasers mounted on aircraft to "see" clear air turbulence ahead of the plane. At the German Aerospace Center DLR Institute of Atmospheric physics, researchers have designed a Light Detection and Ranging (LIDAR) instrument for that purpose. It sends a beam of short-wave ultraviolet laser radiation into the air and measures backscatter from air molecules to determine air density. Based on density differentials, it can provide information regarding the state of turbulence in the air ahead of the aircraft. The technology is being tested in Germany through August. Use of the LIDAR technology is part of a larger clear air turbulence detection project.

Use of LIDAR to detect or predict clear air turbulence was developed as part of the European project Demonstration of LIDAR based Clear Air Turbulence detection (DELICAT). The test aircraft is a Cessna Citation, modified under the program and operated by the project's Dutch partner, National Aerospace Laboratory. The team's long-term goal is to create a turbulence detection system that can be integrated into aircraft, allowing future pilots to predict turbulence with greater accuracy and to warn passengers or divert around areas of intense disturbances.

Continental responds to cylinder concerns

In a letter sent to distributors last week, Continental Motors aimed to ease concerns about the FAA's recently proposed airworthiness directive for ECi cylinders, noting that "no Continental Motors factory-new/rebuilt engines or parts are affected." Continental said it has never used the ECi cylinders, so owners "can be confident that no AEC (Airmotive Engineering Corp., a sister company of ECi) or ECi cylinder(s) has ever shipped from Continental Motors on engines or aftermarket spare parts." However, if aftermarket cylinders were installed after engine shipment from the factory, verification with ECi should be made, the company said. The FAA said its proposed directive could affect up to 6,000 Continental engines.



Continental also said it is increasing production of its 520/550 cylinders "in order to meet potential demand" that would be created if the AD takes effect as proposed. AOPA and EAA are at work on detailed responses to the FAA proposal.

FAA: Heads up when runways are used as taxiways

The FAA issued DAFO 13007, which warns pilots to use extra caution when taxiing on intersecting or active runways. "At many airports, it is common for ATC to use an active or inactive runway as a taxiway [to accommodate] airport geometry, construction, congestion or taxiway restrictions." For these operations to be conducted safely, the FAA said crews must maintain positional awareness and be aware that some of the visual cues - such as signs, markings and lighting - that help safeguard them on taxiways might not be present.

Since runways are typically wider than taxiways, the signs located on the edge of a runway could be more difficult for pilots to see and identify than those on the edge of a taxiway, the FAA said. "When the runway being taxied on crosses another active runway, the intersections of runway-to-runway crossing points are frequently missing many of the visual cues present on taxiways such as signs, markings and lighting." To help prevent runway incursions, the FAA is urging pilots to minimize distractions, such as head-down time, cabin communications, engine starts and checklists when on any runway. It is also asking operators to include realistic runway incursion prevention as part of their pilot training program.

Online courses offer advanced aviation education for free

If you're interested in airplanes and wish you knew more about aerodynamics - or air traffic control, space policy, satellite engineering or airline management - you can study all of those topics and more, for free, at the Massachusetts Institute of Technology, via their OpenCourseware website. Each course features a syllabus, readings, video lectures and projects that you can complete at your own pace. The courses don't include any instructor support, classroom interaction or certification, so learners must be self-motivated. If you prefer more structure, MIT also offers MOOCs, or massive online open courses, together with Harvard, at the EdX website. These courses run on a schedule and offer active discussion forums and students can receive a certificate when they complete

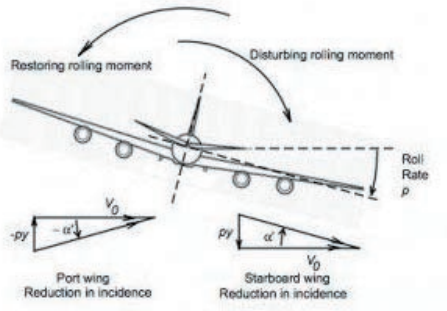


Image: MIT

all the coursework.

Upcoming aviation-related courses at EdX include Introduction to Aerodynamics, starting in September and Flight Vehicle Aerodynamics, starting in January. Students can choose to simply audit the courses, or complete all the homework assignments and exams

to earn a Certificate of Mastery. The prerequisites for Intro Aerodynamics include a familiarity with vector calculus, differential equations and control volume analysis, so if you're starting from familiarity with the Pilot's Handbook of Aeronautical Knowledge, it may be tough going - but there's nothing to lose if you fail and no limit on how many times you can re-take the course.

UK CAA moves forward on GPS approaches

AOPA UK's long-standing request for work to begin on GPS approaches has finally been answered by the CAA, which has set up a study group to look at the issue. While the move is welcome, it comes late - there are already some 5,000 WAAS-assisted GPS approaches in the United States and France has decided it will adopt EGNOS-assisted GPS approaches in place of ILS systems. IAOPA Senior Vice President Martin Robinson has produced a paper at the request of the European Commission on why IAOPA-Europe supports the establishment of GPS "LPV" approaches with vertical guidance derived from EGNOS. IAOPA has long held that the teaching of NDB and VOR approaches should be replaced with the study of GPS let-downs. Five years ago the UK CAA established a handful of GPS approaches but only at large airfields which already had ground-based systems. AOPA has been urging the Authority to make establish GPS approaches at fields with no instrument landing capability, where ad hoc GPS approaches have been created by users, some with less understanding of safety issues than others. Martin Robinson says: "The reality is that 97 percent of the time the GPS signal has an accuracy of three meters and 90 percent of the time accuracy is within 20 meters. An ILS - lookalike system with this level of accuracy is more than sufficient for most of GA. There is absolutely no reason why we should be required to use the same technology our grandfathers used and we congratulate the CAA on beginning to look at this issue."

New "RMZ" concept tried in the UK

The UK Civil Aviation Authority has introduced a temporary Radio Mandatory Zone (RMZ) at an English airport as an alternative to imposing controlled airspace while the airport's radar is replaced. The RMZ, at Blackpool on England's north west coast, is the first of its type to be introduced, came into effect on the 27th August and runs until the 3rd September. Non-radio aircraft, of which there are several hundred in the UK - mainly microlights and vintage aircraft - are barred from the notified airspace between those dates, except under special circumstances. The CAA says the RMZ allows them to provide an airport with increased protection without the need to introduce new controlled airspace or place unreasonable demands on airspace users. Locally agreed procedures have been established for aircraft taking off from within the RMZ in circumstances in which communications prior to flight are impossible. At the same time, the CAA has imposed a temporary Transponder Mandatory Zone (TMZ) around another English airport, Exeter, again to cover a period in which the airport's radar is inoperative. The TMZ is active from the 16th September for a period of up to 28 days.

Sporty's E6B updated

Sporty's E6B app has been updated, with new features and an all-new design. The app includes all the features of the traditional E6B, including 22 aviation functions, 20 conversions and complete timer features. Version 2.0 of the app adds a quick-access favorites list, a redesigned interface and a new weight and balance calculator. The E6B app is available for Apple's iPhone, iPod Touch and iPad. "Based on pilot feedback, we've made the E6B app faster and easier to navigate, all while adding new features", says Sporty's Vice President John Zimmerman. "The app is written by pilots for pilots, so it features an intuitive menu layout and plain English explanations." The new weight and balance function allows pilots to store custom aircraft templates for each airplane they fly. After initial

setup, calculating gross weight or CG takes just a few seconds, according to Sporty's officials. Additionally, pilots can group frequently used features into a favorites list to be more easily accessible. The E6B app is not just for student pilots, company officials said. Experienced pilots will come to rely on a number of features such as Top of Descent, Specific Range and Planned Mach Number. The timer can be set to count up or down to time approaches, holds or switching fuel tanks. A clock shows home, local and Zulu time. "We've also made some upgrades to the Conversions feature", says Zimmerman. "It's easy to convert nautical miles to statute miles, Celsius to Fahrenheit and lots of other handy conversions".

◄ P 7 The paperwork which I had to present to the CAA was truly, truly painful. I think that I must have written my name fifteen times and my licence number thirty and then provide all that in triplicate. This was exacerbated by the fact that I had to get an EASA licence to replace my JAR (because of the SEP Renewal, ironically) and was doing both an IRI and SEP but nonetheless, it was a bureaucratic experience which I couldn't decide whether was a hearty joke or a nightmare.

I chose to present the papers to the CAA the next day, because the Gatwick office is only a short distance from where I live and by 11am I was a fully-fledged IRI.

Since then, I have done only a few training flights, all with ***PPL/IR Europe*** members. One in his own C172; he is an IMCR holder and he wanted to experience airways flight. In another case I have been training an IMCR holder both so that his flying is improved and he is gaining instructional hours eventually towards his CBM-IR. I am loving it.

So, even if you are not an instructor but can produce a logbook which shows at least 800 IFR hours (remembering that, in the UK, that is very easy to demonstrate), I do recommend doing the IRI.

And it's good for the industry and the cause of GA IFR.

Fred Arnold FRICS.

Our oldest and longest flying member?

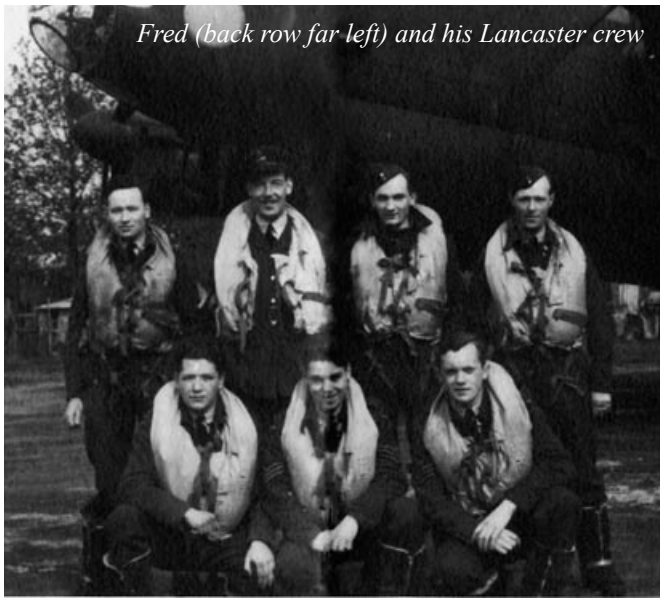
by Paul Draper

In August, at the age of 88, ***PPL/IR Europe*** member No. 84, Fred Arnold, decided that the time had come to hang up his helmet and goggles and sell his TB20. What an innings!

Fred and I have known each other, for some 19 years, since we were both members of the Chartered Surveyors Flying Association and both based at Elstree.

Fred started flying when he joined the RAF in 1943 with the second world war still in ongoing. He was just approaching 18 when his elder brother, a wireless operator/gunner, had been shot down the week before in a bombing raid in the Ruhr. Luckily, he and another crew member survived (the only two). Six months pre-aircrew training later, Fred still remembers having to learn the principles of "moments" (don't ask!) when he was at gunnery school at RAF Dalcross (now Teeside Airport). In January 1945, he was with 626 Sqdn at RAF Wickenby as a rear gunner in Lancasters - an awful job in freezing and very cramped conditions and little chance of escape if needed. His last sortie was "Operation Manna" in which his Lancaster dropped food over a field in Rotterdam at 500ft with bomb doors open, an unofficial cease-fire having been agreed with the Nazi Governor of Holland in a vain attempt to save himself in the subsequent war trials. In June 1947, he was a rear gunner at Scampton in Lincolns and was then demobbed later that year. He was clearly smitten by flying, (yes, he caught the bug as we all have!) for in 1954 he re-joined the RAF on a short service commission and graduated as a pilot flying Prentice and Harvard piston engine and Meteor 4 and 7 jets out of Middleton-St-George, now "Newcastle International".

Fred at the Socata centenary celebrations in Tarbes June 2011


Fred (back row far left) and his Lancaster crew

Demobbed again in 1957, he still had that "bug" lurking and gained his PPL in 1977. Various aircraft followed but in 1989 he bought a new TB20, which he still has but will now be selling (anyone interested in an FAA Reg circa 2,300hrs, one owner, fully IFR aircraft, let him know!)

Some 15 yrs ago, aged 73, Fred's UK CAA medical was withdrawn as the CAA medics didn't like his heart. However, his consultant and the FAA medic said there was no problem (where have I heard that before!) and whilst most of us would have called it a day at 75 and thought ourselves lucky to have flown for so long, not Fred! He went off to the USA, trained for and got a FAA IR and put his TB on the N Register! So, flying continued and I was privileged to fly with him on many occasions both in my own TB and his. We went on several rallies, mainly around the outer parts of Europe and of course, on some with ***PPL/IR Europe***; Fred has that good mix of determination and a wry sense of humour so our trips were always good fun.

After a long period of flying and some 4450 hrs, my good friend Fred has, sensibly, now decided the time has come to stop. He must surely be our oldest and longest flying member.

Well done Fred!

◄ P 9 different flight levels if they had heard anything but they had not. Later, one aircraft asked for descent to FL 180 due passenger medical reasons. ATC said it was impossible to fly over Paris at less than FL 200 and they settled for this. I had a filed a Y flight plan for this leg meaning IFR initially followed by VFR. The reason being that the airways routes from Goodwood to Deauville are southbound only. Flying IFR all the way back to London would have meant a significant detour up to Le Touquet then across the channel. (I have since learnt that you can get round this by routing from SITET DCT CAMRA Y8 GWC).

So, my IFR flight plan ended at Deauville where I planned to descend below the airways and fly the remainder of the journey VFR. Paris Control seemed slightly bemused by my flightplan which seemingly ended at Deauville and asked my intentions. I said that I wished to cancel IFR after DVL and they handed me over to Deauville approach, I descended to FL65 (moving to the quadrantal for IFR outside controlled airspace) and flew the rest of the journey back to Fairoaks like any other VFR flight. Overall, a very successful and confidence building trip. For getting places quickly and reliably, there is nothing quite like flying IFR.

◄ PI and accompanying personnel to join himself and Judith on the trip.

Having undertaken, precisely a year earlier, a three-and-a-half week VFR trip around my native United States with my good friend Bob Bailey in a rented Liberty XL2 (the same type of aircraft which I own and fly here out of Biggin Hill), I was keen to avail myself of the same extremely useful flight planning and en route GPS iPad application for the Spanish trip that I had used in America but alas the brilliant, stateside, Foreflight package is not available here in Europe. Instead, after doing some research I decided to purchase the highly lauded Sky Demon software, which I did some weeks before our Spanish trip was due to commence so as to allow time for familiarisation. Although Sky Demon - designed solely as a VFR flight aid - lacks some of the amazing facilities of the Foreflight programme that Bob and I had come to rely upon and love during our American trip, we soon found that it fulfilled almost all of the criteria we had hoped it would offer for flight planning and en route GPS moving map positioning. After some days experimenting with it we considered ourselves ready to use it on the Spanish trip as a backup to our faithful Garmin 530.

As the date of our group rendezvous (September 17th) was approaching, I suggested to Bob that as a warm-up to the trip we head down a day early to Aix les Milles airport (LFMA), just outside of Aix en Provence, to spend a night with my daughter and her family who live a forty-five minute drive to the east. This we did, Bob flying the first leg VFR from Biggin to our old friend Troyes (LFQB), southeast of Paris - which boasts a fine restaurant in its terminal and a friendly and accommodating customs service - and me flying the second leg IFR from Troyes to Aix les Milles, thereby avoiding all the horrendous and confusing military training areas that make every French VFR flight such a joy to plan! Then, having spent a very pleasant evening with the grandsons and their parents, Bob and I were dropped off at Aix les Milles in the late morning of the 17th in order to fly on to Carcassonne (LFBK), where we were to meet the first contingent of the ***PPL/IR Europe*** group in the late afternoon. Again, owing to complex controlled airspace along the south French coast, it was decided that I

Aircraft ads

IFR Equipped touring aircraft for sale:

1995 Mooney Ovation M20R

1315hr TT, 0hr SMOH, 180kts, 280hp TCM IO-550-G, speed brakes, full IFR panel with Garmin GNS530, Sandel 3308 EFIS, KFC-150 flight director, KX-165, KN-62A DME, KR-87 ADF, KT-73 mode S transponder. Insight GEM-602 engine monitor, Insight SF-2000 Strikefinder, Shadin fuel computer, electric standby vacuum pump, wingtip recognition lights. New Annual inspection completed June 2013.

Contact David Abrahamson david@cs.tcd.ie or telephone +353 1 896 1716

1982 Mooney M20K 231

This Mooney is unique! M20K 231 the most efficient Mooney with a factory rebuilt engine and overhauled hot prop; a great travelling machine! Hangared at EDAZ, Schoenhagen near Berlin, Germany.

Annual due 2/2014, airframe approx. 2080 TT (May 2013), engine Continental TSIO 360 approx. 550 h TT since factory rebuild, hot prop approx. 550 h TT since overhaul. Garmin GNS530 and GNC300 XL both B-RNAV coupled to HSI, King KAP 150 2-Axis Autopilot, GMA 340, 4-place intercom, KX 165 , KR 87, KN62A-01, Garmin 330 GTX Mode S Transponder, Insight Stormscope, 4-place oxygen, Artex ELT ME 406. Repainted (Konprecht) and new leather interior in 2000. Liese Muffler (acc. to German noise abatement rules).

Asking Price is €82,500. Your offer will be appreciated! Contact Pit Odenthal for more information and pictures at mooney@kunde.inter.net.

Aircraft shares available:

Biggin Hill based Grumman Tiger

Probably the best G-reg IFR equipped Tiger in the UK! **Zero hours engine**, GNS 430, HSI, RMI, dual VOR/ILS, two-axis autopilot, mode S, Stormscope, new leather interior.

Friendly and well established group of three other pilots, excellent availability and online booking system. Membership of group available on an equity or non-equity basis. £250 pcm plus £95 per hour (wet). Contact Stephen Niechcial at SJNiechial@hotmail.com

1993 Piper Mirage PA46-350P

N9220G 1650hr TT, 2 Owners, 3 Pilots (all CPL), no damage history. Fresh annual, 5 yearly MT propeller and governor

overhauls recently completed.

Equipped with G500, GTN750 and GTN650, TCAS and RADAR.

If desired, with US Trustee via Avcorp Registrations UK.

Asking price 350000€ including VAT Further details available from Francois Mias +336 72 01 95 76 For more pictures go to: www.caalaviation.fr.


Balloons above Segovia Cathedral

should do that hop IFR and accordingly this was done - a straightforward and uneventful flight that got us to the walled city in good time and in clear VFR conditions. As planned, there we met our colleagues - or those among them who were joining us for that first stop (the others to arrive later on, in Segovia and beyond).

After a quick freshen-up in our conveniently located hotel (just a quarter of a mile from the main gate to the old walled city - thanks, Judith!), we all met downstairs and set off into the old city to the restaurant that Judith had also found for us, nestled amidst narrow winding medieval streets. Over fine food and excellent wine, we enjoyed an animated conversation, renewing old friendships and covering the years that had passed since our last trip together. As always, there were one or two new faces with new stories and backgrounds to be assimilated but it was clear from that first night that the mix of people that were to spend the following days together was thoroughly congenial, sparkling with wit and knowledge and entirely compatible in all ways. If only life gave us such good companionship consistently!

The following morning it was time to explore the ancient city so, armed with a map, courtesy of the hotel, Bob and I set off and spent five or six delightful hours ambling through the cobbled streets, working our way through the impressive castle within the walls and visiting the modest cathedral, where we chanced upon a trio of - as we later discovered - Russian singers and scholars of medieval ecclesiastical music who were filling the vaulted nave with their smooth-toned, clear and melodious voices as they intoned Gregorian chants. To hear such inspiring music in such a setting was a bonus that several of us were able to enjoy, some even taking away CDs of the Russian group's music, which were quietly and tactfully sold at the close of their impromptu recital. Then, it was a walk around the city walls, passing eventually through a low gate to circle around the outside of the massive stone barrier, finishing our ramble at the Roman bridge that led across the Aude River and down into the modern part of Carcassonne. After a leisurely and enjoyable lunch on the central square, we headed back to the hotel for a snooze and a brush-up before enjoying another wonderful meal at another fine restaurant within the walls.

Apparently, in the mid-nineteenth century the old city was in danger of becoming a safety hazard as many of the walls and structures were in a sad state of repair. So, in 1853, the French government hired Eugène Viollet-le-Duc to restore the medieval construction - in the course of which he removed all of the houses that had been built against the outer walls, taking certain liberties with his renovations that became hotly contested by a large sector of the public, who claimed he had destroyed the authenticity of the site. Although, in its present, pristine form, the site smacks slightly of a rather tasteful theme park, Carcassonne remains evocative and impressive. What Viollet-le-Duc may have sacrificed in verisimilitude he certainly recovered in terms of charm and authentic "feel" and the walled city has rightly become a tourist mecca.


Judith in front of the Roman aqueduct in Segovia

Our next stop was to be Segovia and our route, owing to the availability of fuel, among other reasons, taking us first to Biarritz (LFBZ) and then southwest, skirting the massive Sierra de Guadarrama. We landed at the small airport of Fuentemilanos (LEFM), fifteen or twenty kilometres from Segovia, the spire of the great cathedral and the rooftops of the city clearly visible across the bare, buff-coloured meseta.

Fuentemilanos is worth mentioning again, for as we discovered, both on our arrival and later during our return trip to Blighty, the helpful staff at this airport, the small café/restaurant with its friendly, English-speaking waitress and the ease of securing Avgas, make it an ideal fuelling point for any trips across central Spain. We would recommend it highly as a stopover, although the rather short length of its narrow, paved runway makes careful planning for arrival and departure essential.

What to say about Segovia? It is another memorable walled city, clean and pleasant, with a central square (upon which stood our hotel) that is thronging throughout the day with tourists and locals enjoying shopping, taking their evening paseo in the cooler air or chatting amiably with friends at the open air tables of the many restaurants that line the sides. Then, there is the impressive 16th century late Gothic cathedral and the iconic Roman stone aqueduct, massive and yet graceful, that rises sixty or eighty metres above the city's streets and plazas. Finally, at one edge of the city stands the royal fortress/palace of the Alcázar, its crenellated walls overlooking the approaches across the plain. All in all there is plenty to occupy the tourist for at least a couple of days and Segovia was much enjoyed by all of us.

After two nights, a short VFR flight (at low level to avoid the Madrid TMA) brought all of us in a dogleg to the southeast to the airport of Ocaña (LEOC),


Bill and Bob arrive at Ocaña

some 37 kilometres from Toledo, the next stop on our itinerary. Ocaña is another useful airport to file away for future use in traversing Spain, for the people were friendly, the fuel readily available and the landing and tiedown costs minimal (this was, to be honest, true of all of our en route airports). The only black mark is the fact that the taxi ride from Ocaña into Toledo is exhorbitant - we were charged 80 Euros per taxi each way! The destination, though, is certainly worth the expense.

From our very comfortable small hotel at the edge of Toledo's ancient Jewish quarter we made sorties in all directions - commencing our explorations with the highly-recommended mini "train" ride (on wheels through the streets) that departs every half hour from the large square near the Alcázar. The train circles outside the city to show off some of the famous views of the outer walls, the serpentine brown waters of the Rio Tajo that flow sleepily along beside it, the remains of the Roman aqueduct along the river and finally the famous view of the city painted by El Greco, looking back over it all from an adjacent hilltop. There are too many wonderful sites in Toledo to comment on fully but of course the most famous ones are the cathedral and the massive Alcázar, which was almost completely rebuilt as a memorial after being largely destroyed at the beginning of the Guerra Civil in 1936 during the terrible Republican siege of Falangist defenders and which dominates the entire city and the surrounding countryside.

Another two nights in Toledo, with wonderful meals and fine wines enjoyed together in excellent restaurants and we set off severally again - this time almost due south, to the ancient Moorish capital of Cordoba, once the centre of Arabic culture (and religious tolerance) and from the tenth to the thirteenth centuries, the greatest city of the western world. At Cordoba airport (LEBA) we were met by Stephen and Judith's Bonanza pilot friend Sr. Eugenio Llamas, who whisked us off in a convoy of private vehicles to the city itself where we first visited a Moorish tower commanding the entrance to the old Roman bridge spanning the great Rio Guadalquivir, then passed across the bridge into the city to take a light lunch of excellent Spanish tortilla washed down with glasses of cold San Miguel beer. Here we were met by Antonio, a friend of Eugenio's, an archaeologist and academic who was to give us a guided tour through the sprawling forest of columns and Mudejar arches that is the sacred Mezquita. This amazing relic of a once fabulous empire is a thing (like the Alhambra in Granada) that once seen is never forgotten and all of us have carried away images in our minds (and in our cameras) that will be treasured forever.

Preflight inspection; next stop Cordoba

After the Mezquita, it was back to the convoy of private vehicles once more, to wind through and out of the city and up into the surrounding hills to the large and very comfortable hacienda of contractor Eugenio, where we were to spend the night. After a cooling swim in his pool followed by beer and tapas, the group spent a relaxed evening savouring fine wines from Eugenio's extensive wine cave, whilst our host slaved away at a hot grill to bring us endless platters of delicious prawns, cuts of wonderfully seasoned beef and portions of grilled local blood pudding and chorizo to try. The day ended in a waking dream of excellent food, great companionship and oft-filled glasses of top-notch wine, and afterwards everyone slept the sleep of kings!

The aviators; pictured on arrival at Cordoba together with host Eugenio, centre

The next day it was on to Lisbon - though the weather at our destination airport, Cascais-Tires (LPCS) was predicted to be at the least marginal VFR upon our arrival. This proved to be decidedly the case, with every one of our five planes, whether flying IFR or VFR, having to make last minute dives through drifts of low-lying cloud to gain the security of the runway. As for Bob and I, assured on our last call from tower that we were cleared for a VFR approach with a 1500 foot ceiling and plenty of forward visibility, we actually encountered a broken cloud base at 400 feet - conditions, as we all later joked, that '…might have been VMC, Jim, but not as we know it!' Still, we all made it and spent two great days in the Portuguese capital, availing ourselves of the local sites and enjoying, as ever, great meals, good wines and companionship, and in this instance, the added delight of Portuguese Fado music in a wonderfully atmospheric local club.

All in all, the trip was a tremendous success and now that we are home again everyone is sharing their photographs online and dreaming of setting off together on a new odyssey in the near future. For in spite of the expense and the occasionally challenging weather, the excitement of visiting for a few memorable days exotic unknown cities and historic sites and enjoying wonderful foods and wines in the company of good friends - not to mention the pleasure of the flying itself - is enough to ensure that such ***PPL/IR Europe*** trips will long be available to be enjoyed by every member of our organisation, whenever the time is right for him or her.

For this, after all, is what makes it all so very worthwhile.