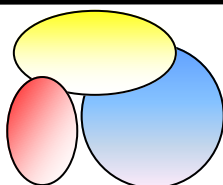




www.bristol-wing.co.uk



Bristol Wings



Newsletter of the LAA Bristol Wing

February 2011

NEXT MEETING—Phil Mathews talk on Seaplane rating

The **February** joint meeting will be held in our old venue (rooms 5/6) on **Thursday 10th** when Phil Mathews will come to tell us about getting his Seaplane class rating in a Reims Cessna FR172F amphibian based at Prestwick. This should prove to be a very interesting talk and we'll all start gathering together at about 7 30pm, Phil will start his talk about 8pm.



Informal BAC club annual dinner to which the wing is invited

Phil Green has organised BAC's Annual Meal for the following evening, **Friday 11th February** at BAWA in the First Floor Lounge to which Bristol LAA Wing members are cordially invited to join them. The meal is at cost (around £20). There will be a choice of starters and sweets (to be made on the evening), but Phil needs to know your preference for main courses in advance. **Please indicate if you prefer Roast Beef, Turkey, Salmon, or Feta Cheese and Pesto Tartlet by contacting Phil** by e-mail: Philip@green1454.fsnet.co.uk Tel 01454 777188 (eve) 01225 733232 (day) 0776 8822406 (mob) **as soon as possible**. It is OK to pay by cash or cheque on the evening - no need to pay in advance; partners and friends are also very welcome.

Note: the evening is very informal, dress code is smart casual, ties not expected or required for gentleman - this is the format they have used for the last 9 years and has worked well. Main aim of the evening is for everybody to get together, have a chat and hopefully make flying plans for 2011! Note that there is no seating plan - free seating on the evening on tables of 8 or 10.

The guest speaker this year is Ian Kirby, a retired Concorde Flight Engineer, who spent almost 22 years on the fleet. Prior to flying on Concorde, Ian spent 10 years as a flight engineer on the VC-10 fleet, following his apprenticeship at British Aircraft Corporation (BAC) at Weybridge.

LAST MEETING -

On 5th January we had a get-together to chat about our various types of flying during 2010. Phil had a map showing all the airfields which the two BAC aircraft had visited during the past year, and then Trevor showed us photos of those he had flown into in G-DENS. The kind of airfields varied between the two groups mainly because of the capabilities of the different aircraft—larger ones being visited by the BAC club planes and mainly grass farm-strips by the tailwheel.

Inside this issue:

Next Meeting - Seaplane rating	1
Where to go? Free Landings	2
SR 71 Pilot's article—Part 1	2
Quiz	3
Where did all that mass go?	3
Infringements	4
Cockpit Design Competition	4
RV9 Build—follow up	5/6

Contact Information

Wing Co-ordinator:

Steve Neale

01454 202216

E-mail:

srneale@yahoo.co.uk

Treasurer/Membership Sec:

Gordon Pritt

01934 622795

e-mail:

gordon.pritt@talktalk.net

Newsletter distribution:

Mary Leader

01275 541572

e-mail: mary@bristol-wing.co.uk

Editorial address:

7 Cantell Grove

Stockwood, BRISTOL

BS14 8TP

Where to go...

Free landing vouchers for February in:

Flyer Magazine: Andrewsfield, Eaglescott, Enniskillen, Peterborough, Sibson, Tibenham and White Waltham

Pilot Magazine: Eaglescott, Leicester, Old Sarum, Peterborough, Shobdon and Sturgate,

Today's Pilot: Cromer, Eaglescott, Netherthorpe, Panshanger and Peterborough

RAeS Local meetings

Date: Wednesday 16th February

Subject: The Rolls-Royce Open Rotor—A step change in technology

Speakers: Mark Taylor, Senior Project Engineer—Open Rotor, Rolls-Royce Future Programmes

Venue: Room 1 BAWA leisure Centre, Southmead Rd, Filton, Bristol

The probability
of survival
is equal to
the angle of arrival

How curious is this ...

This year we will experience 4 unusual dates:

1/1/11; 1/11/11; 11/1/11; 11/11/11

NOW, figure this out...

Take the last 2 digits of the year you were born, plus the age you will be this year, add them together, and it WILL EQUAL 111!!

From an SR-71 pilot



Cheaper Flying?



NO, really – it's true - IF you join Cotswold Aero Club's new **Frequent Microlight Flyer Scheme!**

Here's The Deal – pay £40 per month standing order (minimum commitment 6 months) then you can fly G-SHMI or G-CEHL for £55 (incl. VAT) per hour!

This means if you fly only 1 hour per month, it's the same rate as normal hire, but if you fly any more than 1 hour per month, the rate gets cheaper & cheaper & cheaper ...



*I Don't
Believe it!*

Conditions:

1. You must be a Cotswold Aero Club Flying member
2. You must hold a PPL or NPPL
3. You must be checked out on microlights (& specifically the Eurostar) by a Cotswold instructor & approved for the scheme.
4. You must commit to a Standing Order for at least 6 months
5. All rules regarding excess liability (£500), Flying Order book etc must be conformed with & signed up to date.
6. Book the aircraft in the usual way, but ensure it's noted as a frequent flyer booking (so you get charged the correct rate).

Contact Phil or Mike on 01452 713924 / 07721 404 823 for details & an application form

In April 1986, following an attack on American soldiers in a Berlin disco, President Reagan ordered the bombing of Muammar Qaddafi's terrorist camps in Libya. My duty was to fly over Libya and take photos recording the damage our F-111's had inflicted. Qaddafi had established a 'line of death,' a territorial marking across the Gulf of Sidra, swearing to shoot down any intruder that crossed the boundary. On the morning of April 15, I rocketed past the line at 2,125 mph

I was piloting the SR-71 spy plane, the world's fastest jet, accompanied by a Marine Major (Walt), the aircraft's reconnaissance systems officer (RSO). We had crossed into Libya and were approaching our final turn over the bleak desert landscape when Walt informed me that he was receiving missile launch signals. I quickly increased our speed, calculating the time it would take for the weapons – most likely SA-2 and SA-4 surface-to-air missiles capable of Mach 5 - to reach our altitude. I estimated that we could beat the rocket-powered missiles to the turn and stayed our course, betting our lives on the plane's performance.

After several agonizingly long seconds, we made the turn and blasted toward the Mediterranean. 'You might want to pull it back' Walt suggested. It was then that I noticed I still had the throttles full forward. The plane was flying a mile every 1.6 seconds, well above our Mach 3.2 limit. It was the fastest we would ever fly. I pulled the throttles to idle just south of Sicily, but we still over-ran the refuelling tanker awaiting us over Gibraltar ...

The rest of this fascinating article will be continued next month...

Quiz

What is it?

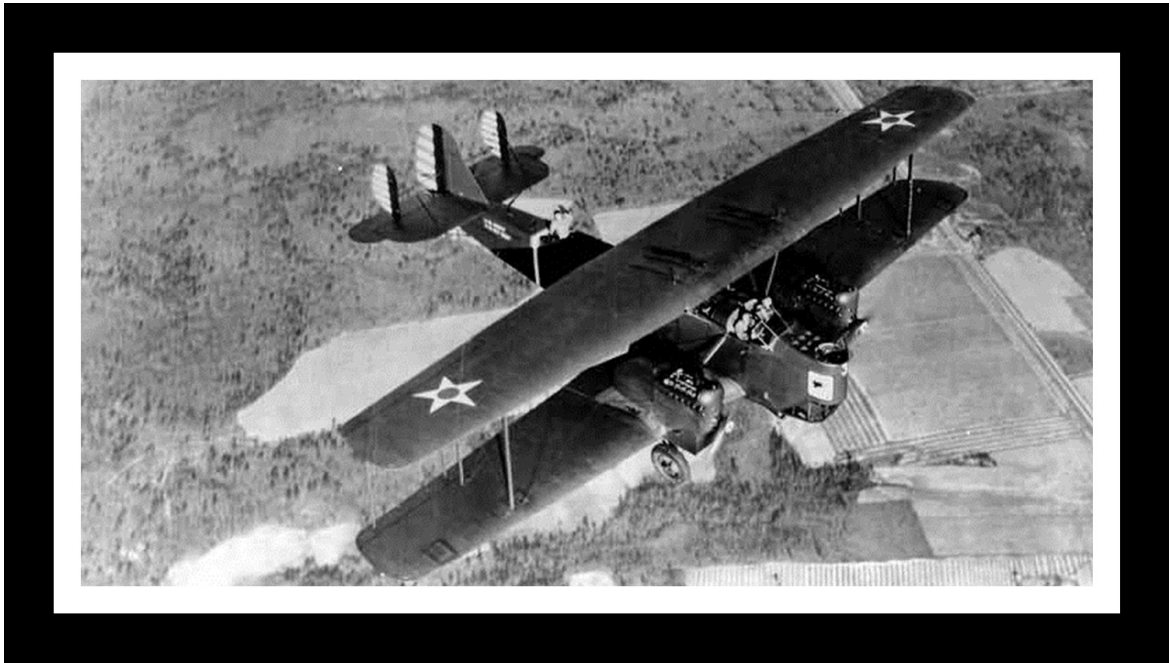
Graham thought this would be difficult but Trevor Wilcock was very quick to offer an answer, however he did admit it took quite a bit of digging on the internet to find it. There's an interesting website at http://www.nurflugel.com/Nurflugel/Horten_Nurflugels/PUL-10/body_pul-10.html that he found which shows more pictures of the Horten H-10. It was the last tailless design from the drawing board of Reimer Horten. It is in fact a homebuilt built to his design in Germany.



This month's picture:

This is the first of a large album of photos sent in by Spike Parker, thanks Spike. If I don't receive any more quiz pictures from members, or readers, then I'll dip into the album from time to time...

Can you identify the aircraft?



Phantom Jet VS Concrete

When you view this clip you'll get a good feel for what happens to an aeroplane when it hits a concrete wall. Some of you may have seen the Michael Moore-esque web site that asks the question; "If it's true that a Boeing airliner hit the Pentagon, what happened to all the parts of it? Why did we not find more pieces of it? Where did all that mass GO?" Well, for those who question what happened to "all the mass of that aeroplane" watch the video clip [here](#).

It's an Air Force engineering test of a concrete barrier that was to surround a nuclear reactor dome, to see if it would indeed survive an aerial attack. With the high-speed cameras rolling, they attached an F-4 Phantom to the sled and then pumped up the speed to 500 mph and "What happens when an 'Unstoppable Force' meets an 'Immovable Object'". Watch in slow motion as the F-4 turns to vapour. You'll play it more than once just to believe it. Where did all the "flying parts" go?

Thanks to Nigel Stokes for this very interesting article

Infringements of Controlled Airspace –

Jonathan Smith

Tom Geake attended a talk by Jonathan Smith at the Flying Show on 27th November 2010 and took extensive notes. These have been edited and the following article contains only some relevant passages and advice on avoidance and what to do after sinning.

The reasons Jonathan gave for the increases (in incursions) included the growth of all sorts of controlled airspace, including danger, prohibited and restricted areas, the consequent crowding of GA into congested air, the increased complexity of controlled airspace, particularly height limits, and the more frequent creation of temporary controlled airspace, particularly at short notice. A common cause of infringements is ignorance, such as a pilot having self-briefed on notams two hours before take-off and missing one that was promulgated just afterwards. This is increasingly common because the Police and the SAR organisations like to work in controlled airspace and will have some temporary space made at very short notice indeed. I presume that this may arise from the duties of one Flt Lt Wales as a SAR pilot.

There is a seasonal variation in incursions. They peak in the spring, which Jonathan attributes to fair weather pilots taking to the air after a winter break for a local refresher and being a little careless with navigation. The bulk of infringements are by pilots flying from nearby airfields in an area with which they are very familiar.

An infringement occurs as soon as an ATCO thinks that it has. Usually this arises from an alarm signal on the radar display. The display is computer generated, possibly from more than one echo and possibly from both primary and secondary echoes. There is no calibration error, and GA pilots have to be aware that their transponders signal flight level information that ATCO's translate into altitudes as desired.

NATS loves transponders, especially mode S because the identity of an infringer is known immediately. NATS wants the whole of UK airspace to be a TMZ!

The recommended prevention action is to be in contact with a LARS at all times. If a LARS is not available, be in contact with a local airfield or London Information. NATS has spent over £1M

establishing Farnborough Radar to help GA pilots flying south west of Heathrow. There were complaints from the floor that the London Information and Farnborough frequencies are normally overloaded. NATS is aware of this and thinking about it. Once in contact with someone on the ground, speak if at all uncertain. NATS is less aggressive towards pilots who have expressed a concern.

Jonathan advised the audience not to be reluctant to use 121.5 for information on one's position. He also recommended monitoring 121.5 on one's second radio because the problem of short notice controlled airspace is being ameliorated by broadcasts on that frequency. Better still, have a box on board, as commercial aircraft do, showing notams.

If one is guilty of an infringement, grovel and do so quickly. The first step is to get out of the controlled airspace as quickly as possible, and then report and apologise as soon as possible. According to him, if one does this, the procedure is for NATS to report the infringement to the CAA using a procedure that prevents prosecution by keeping the information confidential. One is likely to escape with a verbal reprimand or possibly a written one. Only if the infringement is deliberate (in the view of NATS or the CAA) or the pilot fails to take sufficiently rapid action will prosecution follow. Jonathan stated that NATS has no power to prosecute.

After the talk, I asked him about the veracity of his advice on prosecution. He admitted that infringements are criminal offences of strict liability and that neither NATS nor the CAA can promise that a prosecution will not follow. That decision rests with the Crown Prosecution Service and should the CPS decide to prosecute, NATS has to disclose all that it knows, regardless of any indications of confidentiality. My personal conclusion is that the CPS will not prosecute unless NATS or the CAA advises it to do so, but once such advice is given the CPS will not hesitate because a conviction is almost certain, and the court costs to the CPS are low. The CPS gets good figures and HMG the fine money. NATS and the CAA may get the satisfaction of having a tiresome GA pilot permanently grounded.

Many thanks to Tom for sharing this very useful information with us

Members flying each other

A generous scheme which we operate within the Wing is that those members who have aircraft available, offer to fly members, either with or without a licence, who wish to fly but have no access to an aircraft. Gordon compiles and has circulated the two lists to members and we would remind each of you to consult the list when you go flying with a spare seat to contact someone with an offer and make their day!

RAeS Cockpit Design Competition

Thanks to Tom for reminding us about this competition organised jointly between the LAA and the Royal Aeronautical Society.

The Cockpit Design Competition aims to stimulate thought on cockpit design, pilot comfort, ease of interpretation and operation of the flight and engine instruments by the pilot, rapid identification of malfunction warnings, canopy reflections that may affect clear external vision, weight, and anthropomorphic range and crashworthiness. Side-by-side seating for two pilots should be assumed.

Our Wing members would be aware of this but, as it is open to all designers, our friends in BAC may also be interested. For more information go to:

<http://www.raes.org.uk/conference/PDFs/GAGComp2011.pdf>

Factory build permit aircraft in France

If you fly a factory built aircraft on permit, please read this update from Roger Hopkinson re flying in France:

<http://tinyurl.com/4kev3v9>

Note this does not affect home built aircraft that have a blanket permission over much of Europe under the 1980 ECAC agreement.

RV9 POST BUILD EXPERIENCE

Back in April 2009 John Mapplethorpe submitted a very interesting article on building his RV9 and promised to give us a follow-up in due course... Well time has passed, real life intervened, and then John found time to put fingers to the keyboard and sent the following :

Having completed our RV9 build in the latter part of 2009 I looked forward to using 2010 to get used to handling a rather different aircraft to the flying club offerings I had been used to over the past 30 or so years and getting to grips with our somewhat challenging farm strip.

Being so very careful with the build, following Van's instructions implicitly, talking incessantly to other builders and constantly referring to my infinitely patient LAA inspector, I had naively discounted the possibility of teething troubles. Big mistake!



Approaching the farm strip



The aeroplane behaved beautifully during testing, handled well and with all T's and P's in the green we looked forward to blue skies and clear horizons. Well not quite!

Having completed the tail-wheel conversion in a Cap 10 at Old Sarum the previous year I was ready to tame the farm strip! With a lightly loaded weight of some 1600 lbs and a 160hp Lycoming 0-320, take off on a reasonable day should be in the region of 150 yds and with a strip of nearly 700 yds there was plenty of spare. However, with a east/west upward slope of around 5 degrees and north/south side slope with fencing to one side and rough ground to the other there was more than enough to concentrate the mind of a 200 hour pilot. Strut member and LAA coach Ron Perry took the hot seat making short work of the first few take offs and landings and with a favourable wind I even managed a few myself. There's still a lot to learn and experience to gain but with Ron's penchant for interesting strips and patience, together with some solo circuits at Eaglescott and Dunkeswell, the learning process is well underway.

The aeroplane flies and handles beautifully, easily cruising at 150mph and topping out at around 180 mph. The RV9 stalls full flap at 50mph so there is a

considerable speed range and, apart from the challenges of the home strip, a lot of practise has been needed in slowing the aircraft sufficiently on approach to reduce speed to the somewhat low flap limit of 90mph.

As for the machinery, well it's very slightly port wing heavy; apparently a common feature of the RV9 and easily corrected with a trim tab. We fiddled about a lot getting the stall warner to function at the required 5mph above stall and swinging the compass to provide accurate readings. Initially we had some problems with the swivel tail wheel and this was resolved following dismantling and a thorough lubrication. A split pin mysteriously disappeared from the trim tab actuating rod and was easily replaced.

Slightly more concerning is a tendency for high cylinder head temperatures at full power in the climb accompanied by some rough running. Levelling off and gaining speed quickly reduces temperatures to normal. The usual causes; plugs, mixture, fuel flow, mag timing, cooling ducts have been investigated and not, so far, produced a solution: investigations are on-going.



Ron posing at the Branscombe fly-in July 2010

Most worrying was the complete loss of fuel from the starboard wing tank. Fortunately this was discovered during a pre-flight check and proved to be a breakdown of the fuel sender unit gasket which proved to be unfit for purpose. An expensive 15 gallons of Avgas leaked under the wing and fuselage evaporating into the hanger over a period of two weeks causing extensive fuel staining to the underside. It could have been a lot worse! The paintwork will get attention when the warmer weather arrives. Needless to say the port fuel tank gasket was also checked and, although not leaking, was also showing signs of distress. Both senders were re-fitted using a liquid gasket sealant known as pro-seal and both have been fuel tight since. It transpires that other builders have reported problems with this gasket and, as there were clear safety concerns, the matter was referred to LAA Engineering and reported in the October issue of the magazine. Although Van's Aircraft were unfailingly supportive during the build process their response to this problem has been disappointingly ambivalent which I guess may have something to do with US companies typical concerns over product liability. After some further prompting they have now finally amended their build manual instructing that the gasket should be discarded and pro-seal used instead.

So was the commitment in time and money worth it? Most certainly; in spite of the perhaps inevitable teething troubles with a new build, we have managed to log 32 enjoyable hours since completion and look forward to 2011 optimistic that the last few issues will be resolved and we can fully enjoy a very fine aeroplane.

John and Sally Mapplethorpe