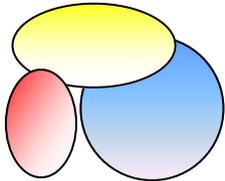




Brissle Strutter



Newsletter of the LAA Bristol Strut

www.bristol-wing.co.uk

December 2017

NEXT MEETING – ANNUAL QUIZ

Our next meeting will be on **Tuesday December 5th**—Quiz. Once again Alan will test our aviation knowledge and it promises to be a thought provoking and fun filled evening. Here's what he has to say:

Similar to last year I have found a period film that shows Filton in its heyday, so you will need to watch the clips carefully to answer the questions. And continuing the historical theme record breakers are the first picture round.

As it's my 5th year doing the quiz, although I have retained the aircraft technical and aviation trivia rounds, new material was hard to come by, so they are 'probably' more straightforward than previously. Inspired by the Cosford museum, where I met Dave & Graham last year, I set the aircraft recognition round.

I thought some new topics were needed and given that the Bristol Aero Club are now based at Staverton, plus Darren's talk last month, there is a round on Gloucestershire Airport. And since I am having fun flying a Pitts Special I slipped some aerobatics questions in there too.

Traditionally we all bring along some nibbles to share around and to keep the 'little grey cells' working. We will start to gather together in Room 7 at BAWA about 19.30 and the quiz will commence at 19.45.

For directions to BAWA see our website: www.bristol-wing.co.uk

LAST MEETING— Darren Lewington

We were pleased to have Darren Lewington telling us about the history of Gloucestershire Staverton airport.

From its beginnings in 1931 as a grass strip across the road in Down Hatherley, it was set up as a dealership for the de Havilland Moth, but joined in the same year by the newly formed Cotswold Aero Club, and then to its present site on land purchased by Cheltenham and Gloucester Councils.

Staverton was a training base in wartime, and a test base for Rotol propellers and Cobham in-flight refuelling. Post-war there were regular scheduled services until the runway proved too short for the later generations of jet airliners.

Now it is a centre for business and recreation aviation and also a base for the supporting industry, with daily movements peaking beyond LAA Rally-like figures, as well as being very supportive of charity events..

Wishing all our readers a very

Happy Christmas

followed by a

healthy and peaceful New Year

with blue skies, fair winds



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PICTURE QUIZ

Last month's quiz picture was sent to us by Trevor asking why this was an appropriate aircraft for November. It generated a response from 3 people.

Phil Mathews was first to reply with the following:

It's Desmond Norman's Turbo Firecracker. Was pitched for the RAF training contract that was won by the Tucano - think Falklands politics played a hand there!

I got to fly one at Cranfield in the mid 80s, a sporty number.

Next came Pete White who was also correct and lastly our Quiz master Alan George who said: *The Picture Quiz - an NDN (aka Desmond Norman) Turbo Firecracker contender for the UK military trainer requirement that went to the Shorts Tucano. Appropriate for November indeed.*



We also have an Aircraft Puzzle Picture with local and Christmas connections. Can you name it?

These photos should get your brains working in time for the Quiz on Tuesday.

This month we have two picture quizzes
Here's a photo of an airfield. Can you name this strip?—picture taken by Ron and Lyn Perry. Some of you will definitely know it!



MEMBER'S NEWS

Welcome to new member Ken Hodierne who owns a Rans Coyote S6ES

Where to go...

Free Landings for November 2017 in:

Flyer: .Beverley, Bourn, Crosland Moor, Netherthorpe, Shipdam, Strathaven

LAA Light Aviation – Henstridge, Sherburn-in-Elmet both free – Peterborough Conington ½ price and Sandown are offering a free Christmas bacon bap!

THE FOUR STAGES OF LIFE:"

- 1) You believe in Santa Claus.
- 2) You don't believe in Santa Claus.
- 3) You are Santa Claus.
- 4) You look like Santa Claus

THAT WORST DAY— Double Jeopardy words by Graham Clark

Continuing our series of articles from which we all hope to learn something useful. Many thanks to Graham for these thoughtful insights. They are reprinted with very kind permission from Flyer Magazine

Pilot X absolutely loved his D4 Fascination; one of the new generation of 450 kg ultralights in which an 80 hp Rotax could extract an amazing performance out of a lightweight airframe made from modern composite materials. Designed by an aerobatics champion now sadly deceased – and unusually for an ultralight – the ailerons were fitted with spades, each coupled to a mass balance and greatly reducing the control input forces for the pilot. The result was nice, balanced handling qualities. The airframe package consisted of a spaceframe fuselage, composite wings covered in Dacron, flaps, retractable gear and a wobbly prop, to produce a ‘pocket rocket’ which climbed at 1600 fpm, stalled at 35 kt, cruised at 146 kt and had a Vne of 157 kt. Impressive numbers, especially with two POB.

This low-wing bundle of joy had tapered high aspect ratio wings and a fuselage profile that would put many a sailplane to shame. The whole package oozed confidence and purchasing power from 53 year-old Pilot X’s pocket, and he liked nothing better than rapidly adding to his 250-odd logged hours in fine weather. The shine had certainly not yet gone off his freshly-minted licence. A day trip to the seaside up North? A couple of hundred miles each way at 146 kt? Great! No problem.

On the mid-September day in question the weather was pretty good for a high-performance machine boring through the sky at 120 kt, with visibility varying between 15 and 30 km. The surface wind was a gentle 5-10 kt and about 15 kt at his 3000 ft cruise altitude. Keen to impress his glider pilot instructor friend who was to accompany him for the day as passenger, they hauled the Fascination out of the hangar for a careful pre-flight check. Pilot X was well familiar with the D4: he topped the tanks, checked the oil, prop for damage, drain holes, and flight controls. All okay, as one would expect. He wiggled the aileron spades while his mate held the other aileron firmly to check the control runs, as a glider pilot would after rigging. The flight to the seaside airfield was all straightforward. He and his instructor pal settled down under the sleek canopy and enjoyed the sensation of easily leaving the motorway Beemers and Mercs well behind. How to enjoy a traffic jam from on high...

Arriving at the destination airfield he carefully worked down his BUMPF checks (Brakes OFF, undercarriage DOWN, mixture RICH, pitch FINE, fuel pump ON and sufficient to go round again) and the Fascination’s three wheels touched tarmac. After lunch at the airfield café, there was still time for a walk along the promenade before returning to what was really the main business in hand, top up the tanks and go flying for the return trip. Pilot X, at his AME weighing of 95 kg, was not exactly a lightweight and together with his much more experienced 80 kg co-pilot – also an instructor – brought the weight to 493 kg. In addition there were 70 litres of fuel and a

few hand tools on the back shelf, but Pilot X had done this trip and others like it several times and never had a problem. But anyway, there was plenty of distance available on the 700 m runway. Even though 100 kg overweight, the CG was always right on the money and the D4 had zipped along like a little sewing machine. Absolutely no problem; why then only 450 kg gross weight limit in the book?

Full with lunch and fuel, off they went on the return leg of the journey to their home airfield down south with an estimated flight time of about two hours, well within the comfortable range of the D4. Cruising at 120 kt and 3,200 ft with the tailwind, they made good time. But one hour and fifty minutes after their take-off, a witness on the ground out for a walk heard an unusual noise. He turned and looked towards the dark sky where he saw a white aeroplane apparently spinning out of control towards the ground. Shortly thereafter he heard a loud crunching noise, followed by the descent of other separated white objects fluttering towards the ground, which were scattered over a wide area.

Unfortunately, Pilot X and his instructor passenger were then unavailable to tell their side of the story from the mortuary. However the bits and pieces on the ground said it all. The right wing had broken off from the fuselage at a point between the flaps and the aileron and at an airspeed, according to the radar trace, that was well into the yellow arc on the D4’s ASI. In case a reminder is needed, the yellow arc is the bit between the green and red sectors. It is possible that the relatively inexperienced Pilot X had not boned up on the significance of the yellow arc, which is the ‘caution range’ at the high end of which he was playing with fire. The aircraft should not be flown in this speed range in rough air. Did Pilot X hit a gust under a dark cloud that over-stressed the airframe? We shall never know.

However, the investigation did find that, as a consequence of vibration and sheer stress, a sub-standard weld seam had failed between the right aileron mass balance and steel tube aileron control. The mass balance was connected via a bellcrank to the spade, which on weld failure fully deflected the aileron upwards, over-stressing the right wing. The weld seam failure separated the link between the aileron and the mass balance, resulting in unwanted aileron deflection, causing the wing failure and the resulting fatal spiral dive. Ouch.

QUESTIONS

What was pilot X’s first mistake?

What was his second mistake?

What was his third mistake?

(Answers at the end of the newsletter)

An Exhausting Few Days in October by Trevor Wilcock

Friday: Downwind in DENS at Colerne with an RAF passenger when there's a sudden judder, partial power loss, rough running and noise, lots of landing surface available so a quick MAYDAY and relatively relaxed return to earth. Surrounded by Colerne emergency services. Evident that it wasn't a simple matter as the prop would now only turn so far. The only hangar at Colerne is condemned and unusable so DENS has to stay outside. Get car and tools from Garston Farm, remove spark plugs, #1 cylinder plug heavily damaged, as is piston crown, so clearly not a quick job.

Saturday: Remove #1 cylinder; detached, mangled exhaust valve head, and piston split over half its depth.

Sunday: Wet.

Monday: Discuss with Colerne ATC staff, we push DENS from open position by hangar to an old Spitfire revetment - more sheltered, and better access. Winter approaching, and indeterminate time for engine repair so need to move DENS back to the farm. Pity the failure wasn't 30 sec earlier - could have landed back at the farm. But had it been 7 flight hours earlier we would have been in the Channel, so be thankful!

Tuesday: Ron's TMG renewal cancelled because of weather so he helps remove engine and get it to farm.

Wednesday: Wet, and John Brady warns of approaching Hurricane Olivia!

Thursday: In London on RAeS business.

Friday: With Mary and Ron, disconnect wing-fuselage interfaces ready for split. one-piece 8.12 metre wingspan to transport, but Garston owner Mike has a solution.

Saturday: Gales forecast for Monday, so some urgency to finish the job. Team assembled; it takes an hour to get reluctant wing bolts out, but after that some skilful work by Mike with the fork lift on the front of his tractor has the fuselage on his baling trailer, followed, after lunch, by the wing on hay bales. All safely tucked away in the hangar; now in slower time to sort engine repair and airframe reassembly.

A week later the engine had been taken for inspection, and another week later the fuselage was reunited with the wing.



Fuselage and wing separated



Fuselage nearly ready for transport



Wing carefully and expertly positioned for transport back to the farm

Skywise information

Kidde handheld fire extinguishers recall

The FAA has issued a [Special Awareness Information Bulletin \(SAIB CE-18-05\)](#) advising of certain Kidde fire extinguishers with plastic handles, which may become clogged or require excessive force to discharge and can fail to activate during a fire emergency.

Consultation on CAA statutory charges 2018/19

<https://consultations.caa.co.uk/finance/caa-charges-2018-19/>

This consultation contains the proposed amendments to the CAA Schemes of Charges within the documents shown below, which are planned to be effective as from 1 April 2018. All comments must be received before the consultation closes on 8 February 2018

CHIRP LATEST EDITION

What's in this edition?

Are you dressed appropriately for flight and the possibility of things going awry? Distractions, changes of routine and checklists; errors still occur. Post maintenance flight tests – expect the unexpected. Practice Forced Landings away from an airfield – understanding the hazards. Go-around? That will be a contact-less payment. Dissimilar performance in the circuit – it's hard to keep track. Cessna seat latches – more information. Pitot Heaters – on or off? Project Pegasus – lookout with a difference

Click on the link below to read the articles:

[https://www.chirp.co.uk/upload/docs/General%20Aviation/GAFB%2074%20\(E%20Version\)%20V1.pdf](https://www.chirp.co.uk/upload/docs/General%20Aviation/GAFB%2074%20(E%20Version)%20V1.pdf)

FOR SALE.

Graham Clark has a selection of items for sale. If you are interested please contact him direct on:

cgraham978@aol.com Obviously if you are local to Bristol and you can see Graham at our meeting there will be no postage charges.

Spot Satellite GPS Messenger

In original packing complete with instructions and Lithium batteries.

See: findmeSPOT.com £55.

Clarity Aloft (CA) Aviation Headset in case. Qty. 2. Almost new condition. With case. Each with Qty. 24 new standard sized spare earbud tips (retail \$24 per pair). Noise cancelling microphone; stereo/mono switch, music input. With £350 + postage.

Also: Qty. 2 Clarity Aloft (CA) Lapel Clip with adjustment band; Qty. 4 CA Black ear tips; £5 + postage.

Unused: David Clark Microphone Protector M-1; £2+ postage. David Clark Microphone Protector M-4. £2 + postage.

GPS Airbox 2 Aware Unit

In imitation leather case. Car charger cable and connector.

With UK and France charts on SanDisk. www.airspaceaware.com £99 + postage

Pilot Aware

See: www.PilotAware.com

Unit for the small cockpit. Update needed. Complete with GPS Dongle and WiFi connection to 3" x 4" Kobo LCD Mini-reader pre-loaded with XC-Soar. With Anker PowerCore 20100 battery + cable + Medion USB Charger and cable. Combined Price £200 + postage.

ICOM Airband Transceiver IC-A6E

8.33 kHz With: antenna; three rechargeable batteries; mains charger; car socket charger unit. £250 + postage.

SOFT COMM Intercom

ATC-4 Four-place battery-powered intercom. £30 + postage.

Cockpit Ventilation: A-2-100 Snap Vents. Qty. two; 2-inch diameter. Retro-fit to canopy. Unused. In original box. £10. + postage.

FUTURE STRUT MEETINGS

January 2nd/9th—Review of last year's flying—members tales....

February 6th—Bryan Pill on "Keys Don't Float - All I know about float flying".

Navigating Reindeer

Christmas is coming and the question stands - are Santa's reindeer used for propulsion or navigation?

Based on the article from MIT (Massachusetts Institute of Technology) you are about to find out.

To answer the question we will use the poem *A visit from St Nicholas* (also known as *the Night Before Christmas*) as it gives a detailed picture of Santa's sleigh in flight.

The poem shows that 'on the roof, the prancing and pawing of each little hoof' can be heard, suggesting that because the reindeer move, the sleigh moves. They are using energy, and because they are using energy, the reindeer contribute to the propulsion of



Santa's sleigh.

So, we know reindeer create propulsion, but do they also navigate?

According to MIT, steering a vehicle is usually split into three separate processes: navigation, guidance and control. Navigation is the process or activity of accurately ascertaining one's position and planning and following a route; Guidance is the process of figuring out where next to go, and control is getting to a destination by performing specific manoeuvres. Therefore, if Santa is trying to land on a rooftop, navigation is seeing if he is too high, and not too far left or right, guidance is realising that he needs to move the sleigh down and control is how he moves the sleigh.

Later in the poem, Santa calls the names of reindeer and directs them forward. When control is implemented on a firing vehicle, it is often a matter of starting engines in different directions at different times. We can relate this to Santa when he shouts 'Now Dancer! Now Prancer and Vixen!' When he is calling their names, he is driving his sleigh's 'engines' harder, and by calling them in different variations (singly and in pairs), he is directing each individual 'engine' at different times in order for his sleigh to move in different directions - he is making a course correction so that he can land on the roof tops.

In addition, Santa provides explicit landing information to the reindeer. 'To the top of the porch! To the top of the wall!' indicates that he delivers both navigation, guidance and shares the responsibility of control with the reindeer.

So now we know that Reindeer are used for propulsion, while Santa navigates.

GAA Invokes 8.33 Exemptions

by Philip Whiteman, Editor - Pilot Magazine

Thank you to Chris Howell for bringing this information

: Noting that aircraft maintenance organisations and avionics fitters have been overwhelmed by demand, the CAA has agreed to invoke a number of exemptions that will run until 31st December 2018, confirming that until then, 25kHz radios may continue to be used when communicating exclusively with 25kHz ground stations.

The exemptions are listed in CAP 1606 which may be viewed at:

<http://publicapps.caa.co.uk/docs/33/CAP%201606%20833%20Limited%20Time%20Exemptions.pdf> .

Ian Leader Trophy

During the Christmas Quiz evening we will also be counting the anonymous nominations for the Wing Member who will receive the Ian Leader Trophy for *"Services to Bristol Wing"*.

Please complete this form and bring it with you to the Quiz Evening on **Tuesday 5th December**. If you can't join us on Tuesday and still wish to nominate a member please contact Mary or Trevor who will add your vote to those submitted at the meeting.

Nomination form for Ian Leader Trophy

The member I feel most deserving to receive the Ian Leader Trophy for their 'Services to Bristol Wing' during 2017 is:



A CHANCE ENCOUNTER - with an aeronautical connection—Trevor Wilcock

Margaret and I stopped for a day last year in Montpellier. While wandering through the town we noticed a plaque to Lucien O'Sughrue, accountant, who died in February 1945 after deportation to Buchenwald. Why this unusual Irish name in France? That evening, again wandering a street close by, we found a studio window full of impressive aerial photographs of Montpellier and elsewhere. The name of the photographer was Claude O'Sughrue. Although late, there was someone working inside who called us in. This turned out to be Claude himself, son of Lucien, an industrial and aerial photographer. A previous generation of O'Sughrues had moved from Ireland to Mauritius in the later 1800s, when it was a British colony (though it had earlier been French) and Lucien made the move to France. Claude proudly showed us some of his work and his equipment, and in particular his licence from the French aviation ministry for aerial photography, a requirement in the 60s and, I believe, until much later. Google "O'Sughrue, Montpellier" and you can see some of his industrial work.

DO AS I SAY, NOT AS I DO!

As a class rating instructor conducting Biennial flight reviews (one hour instructional flight) on a regular basis, I always emphasize to my pilots that they should not let their ratings expire.

The ideal time to carry out the BFR is with 3 months or less to run to the expiry date of the rating. Subject to all the revalidation criteria being met the candidate's log book / revalidation slip / examiners report to the CAA can all be completed together.

Revalidation requirements vary markedly for different licences so I am talking specifically here about the EASA PPL(A)

So what happens if your rating lapses?

I have two ratings on my EASA PPL – SEP and TMG. Unfortunately the expiry dates of my two ratings differed and I found on return from a foreign holiday that my TMG rating had expired by 10 days (my SEP rating remained in force).

You are now into the renewal of a rating rather than a revalidation.

Things now get a little complicated

- 1) You need to go to an Approved Training Organisation (ATO) where the Head of Training (HOT) will determine how much training you may require before completing a Proficiency Check (LPC).
- 2) The amount of training required depends on many aspects such as:
 - The last time you have flown the aircraft
 - Your experience
 - The complexity of the aircraft
- 3) When you have completed the required training the ATO will issue a Course Completion Certificate (CCC) which you then present to the Examiner before completing the LPC.
- 4) The LPC is quite involved and you have a minimum of 29 Manoeuvres/Procedures to pass. Not a walk in the park!

Luckily my ATO decided that due to the short time since my rating had expired I did not require any additional training so issued the CCC "no training required". This I presented to my examiner before the LPC flight.

So there we are. *Keep your ratings valid by experience if at all possible, otherwise things can get a little complex and expensive!*

Ron Perry
LAA Class Rating Instructor

THAT WORST DAY ANSWERS:

What was X's first mistake?

1. Pilot X purchased an aircraft that was certainly unsuitable for its intended use: 2 POB + fuel for fast cross-country flights,

What was X's second mistake?

2. Pilot X knowingly loaded the aircraft probably 100 kg above the gross weight.

What was X's third mistake?

3. Pilot X's cruise speed was well into the yellow arc, at which the overloaded aircraft structure was much more vulnerable to gusts and structural failure.