



A BRANCH OF THE LIGHT AIRCRAFT ASSOCIATION PROMOTING RECREATIONAL AVIATION IN THE SOUTHWEST
www.devonstrut.co.uk

The Devon Strut is twinned with RAA Toronto Region, EAA Chapter 14 San Diego and Chapter 20 SAAA

DEVON STRUT NEWS – December 2014

Chairman's Chat

by David Millin

At the beginning of the month a couple of members braved the elements and managed to fly out to Henstridge. The weather was not very conducive toward a good day out and heralded what was to come. So, here we are at the start of winter. Now is the time to take stock and consider what precautions might be applied to 'Winter Flying.' I will leave you to think about it but you might want to refer to: <https://www.caa.co.uk/docs/33/20130121SSL03.pdf> which is one of the Civil Aviation Authority's excellent Safety Sense Leaflets (Number 03). Study and apply!



For those of you who attended the November presentation by Dodge Bailey, Chief Pilot of the famous Shuttleworth Collection, you will know what an interesting and entertaining evening it was. Thank you all for supporting the event and I hope you will also come along to our December talk on Thursday 11th by our friend from RNAS Yeovilton, Simon Wilson, who will be leading an interactive Flight Safety Seminar, including sharing advice on forced landings. Simon is also an LAA coach and I can vouch for his practical application of this subject through my last biennial flight revalidation.

News from head office: Roger Hopkinson has after many years in the post, stepped down as Chairman of the LAA. Brian Davies succeeds him. Our support goes to Brian whose commercial background will no doubt be of great assistance in his new position. We wish Brian every success for the demanding role which lies before him. Roger continues as Vice President and we offer a vote of thanks for the outstanding work he has done at all levels of GA in the UK. There are many legislative controls and restrictions imposed upon us but I believe it fair to say that if it were not for Roger's influence and pragmatic wisdom, many of us would not be flying today, in the manner in which we are accustomed. The LAA's announcement can be found at <http://www.lightaircraftassociation.co.uk/2014/News/Chairman.pdf>.

Your committee is monitoring aviation politics and watching with interest the activities of our national representative bodies. For example, the General Aviation Awareness Council (GAAC) continues with its sterling efforts to fight for our rights to fly. Current issues of importance include the promotion of the benefits of general aviation to the community and the associated need for airfield protection. Also, Sport England seeks nomination of airfields as designated sports sites to help ensure the continued use of these valuable community recourses.

On the social media scene, the Devon Strut Facebook and Twitter accounts are growing steadily. For those of you who hold such accounts, you will realise their advantages for information gathering and social interaction. For those of you who do not enjoy such accounts, it may be worthwhile exploring the possibilities and potential benefits and seeing if they are for you! Chris Jackson, who is moderating our FB and Twitter accounts has been co-opted onto the Committee. Welcome, Chris!

The Strut Christmas Dinner at the Ley Arms is on Wednesday 3rd December and I look forward to seeing you there for some festive cheer.

At the time of writing, it seems a little early but I'd like to take this opportunity on behalf of your committee to thank you all for your support during the year and to wish you a very Merry Christmas and all the best for 2015 with blue skies and safe flying. - David.

New FASVIG Forum

by Steve Hutt, FASVIG Programme Coordinator

The Future Airspace Strategy VFR Implementation Group (FASVIG) Vision is to provide safe, efficient airspace, that has the capacity to meet reasonable demand, balances the needs of all users and mitigates the impact of aviation on the environment. The Future Airspace Strategy captures the benefits of modernising the airspace system in the areas of safety, capacity, environment and cost. In a written statement to Parliament on 6th November 2013 the Minister for Transport said: "*General Aviation can and should contribute to the UK's economic success, whilst providing a safe environment for participants and the public. The Government's aim is therefore to make the UK the best country in the world for general aviation. The objective of FASVIG is "to provide a sustainable future for VFR operations"*".

FASVIG aims to work in partnership towards developing a jointly agreed implementation plan which will address technology, procedures, airspace changes and associated policy framework to deliver the improvements to safety, capacity, environmental performance and airspace efficiency of VFR operations required by the FAS via a set of tangible benefits within the 2016-2020 timescale or earlier where possible. The FASVIG will provide governance, direction and resources to sub groups which will be undertaking significant workstreams.

On 1st July 2014 I took on the role of FASVIG Programme Coordinator. You may have seen my article in the October 2014 LAA Magazine but if you didn't read the article or have already forgotten about it, you can (re)read it online here: <http://www.lightaircraftassociation.co.uk/2014/Mag/Oct/FASVIG.pdf>.

Also, the FASVIG Information Sheet is available here:

<http://www.lightaircraftassociation.co.uk/FASVIG/FASVIG%20Information%20Sheet.pdf>

There is now a 'FASVIG' item on the main menu of the LAA website. This takes you to this page: <http://www.lightaircraftassociation.co.uk/FASVIG/fasvig.html> which contains background information on FAS (CAA's Future Airspace Strategy) and FASVIG (FAS VFR Implementation Group) plus links to FASVIG documents and other related material.

And finally, in order to facilitate improved visibility and development feedback, we have created a dedicated FASVIG Forum within the LAA User Forum on the LAA website. I have created a separate topic in the forum for each Draft Package of Change from the Draft FAS VFR Implementation Plan (FASVIP). The LAA FASVIG Forum can be accessed at: <http://services.lightaircraftassociation.co.uk/phpbbforum/viewforum.php?f=39>

Please login and contribute to this effort. An introduction to the FASVIG Forum is here:

<http://services.lightaircraftassociation.co.uk/phpbbforum/viewtopic.php?f=39&t=4340>

Your assistance with input/comments/ideas to help formulate the FASVIP is vital. FASVIG offers a unique opportunity to improve the way airspace is managed in the UK for the benefit of GA. Do please get involved. Don't wait for others to say something. They may never do so. Your contributions are greatly appreciated and you will benefit from everything FASVIG manages to achieve.

NATS 24 - Air Traffic Visualisation

The UK airspace is busy, complex and there is a lot going on. Each year the National Air Traffic Service (NATS) manages around 2.2 million movements, peaking at over 8,000 a day (although there are around 7,000 on this particular day earlier this summer), with only 5.5 seconds delay per flight attributable to NATS activity. Obviously there are the flows of large aircraft from the airports into and out of the UK, but there is also a lot of activity outside controlled airspace. UK 24 is a data visualisation from actual flight records and is designed to help understand the breadth and depth of UK aviation and why airspace is such an important asset. <http://nats.aero/blog/2014/11/take-guided-tour-uk-skies>

The day starts with the bow wave of transatlantic traffic heading towards the UK on their organised and separated tracks. This is quickly joined by traffic from Europe and the first waves of departures from UK airports. Over a short period of time the traffic levels grow to show the main trunk roads of airspace as well as the hubs around London, Manchester and central Scotland.



We then move to give a unique view of the holding stacks over London and how they are a fundamental part of the Heathrow operation, providing the constant flow of traffic that makes it the world's busiest dual runway airport with 1,350 movements a day.

Our tour then takes us around the UK, including the other major airports, our two control centres in Swanwick and Prestwick, some general aviation traffic and examples of military training off the east coast of England and near to North Wales. We then dwell on the spider's web of helicopter tracks that originate from Aberdeen, taking people and vital supplies to and from the North Sea oil and gas rigs.

We hope you enjoy this insight into the complexity and beauty of a day of UK air traffic and the value of airspace as the invisible infrastructure that makes it all work.

Incidentally, we've also produced a more simple [static video showing an overview of the UK that you can watch here](#) too.

Why Rotate Spark Plugs?

by John Schwaner, Sacramento Sky Ranch

Spark plug life can be just about doubled by proper plug rotation. Look at the spark plug electrodes the next time you remove the spark plugs from your engine. One electrode is usually worn more than the other. On one plug, the centre electrode may be worn, while on another plug, the ground electrode may be worn. Swapping plug position evens out the wear between the centre and ground electrode, thereby preventing any one electrode from incurring excessive wear.

This uneven electrode wear is caused by the spark plug's firing polarity. The magneto generates energy by means of a rotating magnet. As the magnet rotates, the magnet's north and south poles generate positive and negative electromotive forces. The magneto sends a positive voltage down one lead and a negative voltage down the next lead and so on. Each ignition lead always fires the same voltage on horizontal-opposed engines, but the voltage alternates among leads. (*However D-2000/D-3000 magnetos on 4-cylinder engines always fire at the same polarity*). Current flow, from the spark plug's cathode electrode to the anode electrode, causes the cathode electrode to wear.

To equalize wear, move the spark plug to a different position so that it fires at the opposite polarity. Do this by swapping the spark plugs with worn ground electrodes with the plugs that have worn centre electrodes. You may also move the spark plug to the next lead position coming out the back of the magneto.

Spark plugs also wear unevenly due to differences in lead salt deposits and ignition lead capacitance. The higher wear rate on spark plugs operating on avgas than on mogas is due to lead salt corrosion from the lead in avgas. Swapping plugs from top to bottom helps equalize wear caused by lead salt corrosion.

The greater the ignition lead's capacitance, the more current flows across the spark plug gap and the more the plug electrodes wear. Shielded spark plug leads, having an insulator separated by two conductors, act as linear capacitors. Approximately 25 percent of the energy sent to the plug from the magneto is used to charge the lead's capacitance. Once the lead is charged, the voltage across the spark plug electrodes increases until a conductive path forms between the ground and centre electrodes and the plug fires. The conductive path completes the electrical circuit between the lead's centre conductor and the ignition lead's shielding. Capacitance energy stored in the lead then discharges across the spark plug gap after the original arc. Usually, the spark plug has already ignited the fuel/air mixture, so this capacitance energy is of no use except that it causes electrode wear. The longer the lead, the greater its capacitance, and the more the electrode wears. Hence, swap spark plugs between short and long leads to equalize wear caused by lead capacitance.

Here is a sequence of plug rotation that not only swaps plugs from top to bottom, but also swaps from short lead to long lead, and reverses spark plug polarity. This method works with most horizontally opposed engines, where T=top and B=bottom and the number is the cylinder position number.

For a four-cylinder engine move plugs:

1T to 4B
2B to 3T
1B to 4T
2T to 3B

For a six-cylinder engine move plugs:

1T to 6B
2B to 5T
3T to 4B
1B to 6T
2T to 5B
3B to 4T

New CAA Aviation Fuel Requirements and Guidance

On 25th November the Civil Aviation Authority released new consolidated advice for owners of light aircraft clarifying the options they have to choose which fuel they use, including the use of petrol from a garage if it is approved for their particular aircraft. The guidance is published as a webpage <http://www.caa.co.uk/default.aspx?catid=1407&pageid=16578> and is reproduced below.

The advice states that any type of fuel may be used in an aircraft providing it meets the specification set out in the aircraft's approval documents and any operational limitations. The guidance also details the responsibilities of aircraft and airfield operators in storing fuel and ensuring it is of the correct specification.

The advice is the latest move from the CAA in its aim to be dedicated to effective regulation that supports and encourages a dynamic GA sector that imposes the minimum necessary burden and empowers individuals to make responsible decisions to secure acceptable safety outcomes.

“Any type of fuel may be used in an aircraft providing it meets the specification(s) set out in the aircraft's approval documents and any associated operational limitations. For Type Certificated aircraft this information will be found in the Flight Manual, the Type Certificate, Supplemental Type Certificate, Airworthiness Approval Note or Operating Limitations document or associated referenced documents; for national Permit aircraft this will be found in the Airworthiness Approval Note, Permit Conditions, Permit Operating Limitations or associated referenced documents.

The fuel should be of the correct grade, meet the performance and composition requirements of the specification and be free from contamination. For managed aerodrome fuel installations, there is a legal

obligation to ensure that the fuel received is of the correct grade and specification and it is stored so as not to render it unfit for use (Refer to [CAP 748](#) and the [Air Navigation Order](#), Article 217). Any person putting fuel into an aircraft is also responsible for ensuring the fuel is fit for use and is of a type approved for use in the particular aircraft.

Clearly the full requirements and obligations of a managed aerodrome fuel installation may not be applicable in some situations, for example it does not apply to road transport fuel obtained from a garage forecourt and stored in jerry cans but reasonable care should still be taken before use.

Quality assurance of the fuel is better assured if it is supplied from a managed installation and of an aviation grade. For this reason it is advisable for commercial operators to obtain fuel from a managed aviation fuel installation.

This revised guidance means that Safety Sense Leaflets 4 and 28, Information Notice 2014/092 and General Concessions 2, 3, 4 and 5, published in CAP 747 are withdrawn”.

Branscombe Planning Update

I am delighted to be able to let you know that East Devon District Council, for once, have seen sense and have granted us the permission to shift the airfield rights from our names to the land. What a victory!! We ended up with 10 votes against and 19 for, mostly thanks to the Strut members. I'll be writing to them all individually in the next couple of days, but if you want to let them know the good news, please feel free to share. It was heartening to see such support from some people that we don't even know.

We've now put in an application for stables and a play park for campers, and the same old locals are kicking off once more – the joys!

By way of thank you, everyone who took the time to write to EDDC are now honorary members of Branscombe Airfield, so no landing fees for as long as David and I are in residence – speaking of which – know anyone looking to buy an airfield?!

Thanks again for all your help.
Naomi Hayman

Thruster

by Chris Oakes

On 5th November I took to the skies for a lovely autumnal flight, although the temperature made it feel more like a winter's day.

As there was a 15 knot northerly, my plan was to fly north to the Severn bridges and take some photos. In my year of flying microlights this was to probably be my farthest venture.

I took off from runway 35 at Dunkeswell and continued north and apart from a reasonably sized blanket of dark grey cloud as I left the Blackdown Hills, the weather was pretty good. Just before I got to Weston Zoyland a flight of five helicopter gunships flew across in front of me, heading towards Yeovilton no doubt. From their profile I would say they were Apaches, big ugly brutes. Before I realised this was a good photo op they were long gone.



I continued north and was passed by Westland Approach onto Bristol Radar. I requested zone transit but without a transponder I knew what the answer would be. I was instructed to stay out of controlled airspace and flew over the Mendips at 350 feet agl keeping under the CTA heading north east with Chew Valley Lake on my left and then Bath racecourse on my right.



Chew Valley Lake



Severn Bridge

I turned left just south of Chipping Sodbury, or Chipping Nodbury as I referred to it by mistake! I would think that made them laugh in the control room. I headed towards the Severn and as the bridges came into view I realised, on an engineering and architectural level, how impressive these bridges really are. Although in my opinion, on an aesthetic level, the old bridge wins hands down.

I took my photos, crossed over into Wales without paying a toll and headed back towards Dunkeswell on a reverse route. The journey back took considerably less time with the tail wind.

All in all, it was a lovely autumn flight in my Thruster!

Members' News

Peter Gilmour has provided an update on his RV8 project: I sold my VP1 in the summer and it now resides at Boscombe Down with the new owner.

Because I have been working out of Edinburgh for the entire summer season [Thomson Airways – Ed], the RV has been receiving the lions share of the work this year, with the Nipper taking a bit of a back seat (right).

All the major assemblies for the RV8 are now complete. It seems that an inordinate amount of time was spent on the canopy and wheel spat fitting, but I am glad to report these are now complete. The wiring



is completely installed with just some final tidying up to be done by my brother-in-law and partner Colin. In fact, the only relatively major task to be completed now is the installation of the fuel sender units and the final sealing of the fuel tanks.

I am now back in Devon for the winter season so the emphasis will now shift to the Nipper. However, I am hopeful that the RV will be ready for painting by the end of January followed by final assembly and test flying. We also had some good news the other day in that, due to my previous life and Colin's association with the Air Cadets, we have been granted permission to keep the aircraft at RAF Leuchars, soon to become Leuchars Barracks! This is a great relief and a huge privilege to be allowed to keep the aircraft in a heated HAS!! So the RV is well on course to make its first visit to Devon this summer.



Welcome to New Members

Bruce Dougan, Exmouth, Devon.

Richard Tobin, Sherborne, Dorset. Richard flies Vans RV6 G-GRIN from Branscombe.

Clive Baylis Combe St. Nicholas, Chard.. Clive and his son Stuart, have bought Tony Simpson's Jodel D11 G-BAZM. They are to be joined in the new year by Matt Smith who sold his Watchford based Menestrel earlier in the year. Clive and Matt are Virgin Atlantic flight crew colleagues and live close to Watchford so the Jodel will be staying there.

Ray Bowden, Exeter. Ray owns Mosler N3 Pup G-BVEA (*photo right by John Allen*) and Taylor Monoplane G-RAAY based at Dunkeswell and Chard respectively.



Adverts

Radio Operator's Certificate of Competence (ROCC)

Bob Woolford is a private pilot based at Sandown on the Isle of White and is known to several Devon Strut members. Bob is a CAA Air Ground Communication Service (AGCS) Examiner and has offered his services to Devon Strut members who may wish to get their Radio Operator's Certificate of Competence, which requires tuition and both written and practical examinations. If six members respond then Bob could make arrangements to do a day's block course at a suitable venue in Devon. Bob can be contacted at 51 Grove Road, Sandown, PO36 9BE or on 07980-822662 or bob@woolford.me.uk

Aviation Videos and Signed Prints

50 aviation videos to dispose of as well as signed limited edition paintings, some with quite memorable names; Goodrich, Stanford-Tuck, Johnnie Johnson, Douglas Bader, Sharkey Ward, Jackson, Cunningham, Arthur Harris, etc..To be displayed at the next Strut evening and sold in aid of BaP. Contact Jim Gale spdygale@btinternet.com or 01363-773767 / 07887-906789.

Magazine Clear Out.

I have a large collection of flying magazines that are free for collection in one lot. They are:

Pilot: March 1972 – June 1977; Flyer: April 1990 – May 1999, Popular Flying: March 1989- 2007 and Light Aviation: 2008 to date. Available from Gordon Cameron, Henacraft Cottage, Whitemoor, Iddesleigh, Winkleigh, Devon, EX19 8BN.

Rand KR2 G BRJX For Sale

Aircraft has approximately 50 logged hours since first built by C Willcocks in 1990. It has been dry stored since 1996. It has removable wings and can be trailer transported. It is built as a two seat version with dual controls but the LAA has a MTOW of 900lbs effectively limiting the aircraft to single seat operation. Revmaster 2100D 80hp engine, full top end overhaul 2006. Propeller Cowley 56D x 45P. New tyres and tubes. Icom handheld radio installed. Will need work for permit but is a complete and flown aircraft. £5000 ono. Based West Wales, buyer will need to arrange transport. Tel. John Bell on 01239 811679.

Evektor EV97A Eurostar – For Sale

Carefully built, conscientiously maintained, considerably flown, 4-year old, one-owner, one-pilot Eurostar, widely seen around the West Country. Mostly used for cross-country flights, for which it is an eminently practicable and attractive proposition, as well as being truly economical – 10.5 litres/hour over 325hrs so far with a comfortable 100mph cruise speed.

Registered as 480kg Group A machine but built to microlight weight limit, so could potentially be re-registered as a microlight by purchaser. Permit to May 2015. Always hangared. Attractively turned out and decent instrument fit. Price now reduced to £41,500. Professional inspection welcomed. Tel. John Holden 01225-862101.



Wanted: Workshop in Torbay area.

Please contact Jim Gale 07887906789 spdygale@btinternet.com or Brian Lyford on 07710214414 brian.lyford@gmail.com

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Evening Meetings 2014-2015

Second Thursday of the month, October - April, at The Ley Arms, Kenn, Exeter starting at 7.30 pm
(For evening meals, please make table bookings by phoning 01392 832 341)

11th December	Simon Wilson - Flight Safety Seminar
8th January	Clive Davidson (tbc)
12th February	Devon Strut AGM & Malcolm McBride (LAA Engineering)
12th March	Bob Mather - The Berlin Airlift
9th April	John Beattie, RN Historic Flight, Yeovilton

Next Meeting: Thursday 11th December, 7:30 pm, Ley Arms, Kenn: Simon Wilson - Flight Safety Seminar

The Strut will be running a flight seminar facilitated by fellow Strut member Simon Wilson. Simon is a serving Fleet Air Arm pilot and instructor as well as an LAA coach, CRI and volunteer pilot for the RN Historic Flight.

This will not be a 'chalk and talk' session but will run as an interactive participative learning experience and involve an element of group work to challenge and stimulate all those taking part as well as be a lot of fun.

This will be your chance to examine some key fundamental aviation safety related topic that will cover:

- Preparation before flight
- Joining airfields and airstrips
- Avoiding weather induced incidents
- How to cope if the engine quits

If you have any other topics you would like covered then please get in touch with Steve Robson sb.robson@tiscali.co.uk by Thursday 4th December who will forward them to Simon for preparation ahead of the meeting on 11th.

N.B. The A38/A380 Splatford Split on Telegraph Hill is under severe traffic management. So much so that the bridge crossing the A38 from Kenn is now closed to all but resident traffic. We'll take advice from the Ley Arms and the Highways Agency on the most appropriate access and update members by email. Those members who wish to attend the meeting but who are not on email should make themselves aware of the best access but everyone should anticipate needing more time for their journey.



Tailpiece:

Blimey...didn't you see it on the radar??
No.....it wasn't squawking!

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