

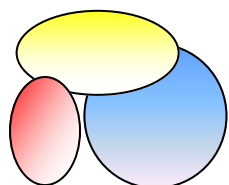


Brissle Strutter

Newsletter of the LAA Bristol Strut

bristolstrut.uk

June/July 2020



A letter from our strut chairman —

Well, things are starting to get better. Airfields are beginning to open - but check times, facilities. They are making considerable efforts so please support them. But not everyone can yet fly, or in the way they would like. The major problem is training/accompanied flying. Personally it certainly diminishes the enjoyment, not being able to fly with my usual flying partner. There may be some alleviation in the next Government announcement on 4 July. Also Pooleys are now selling Tecnam visors - could these become part of the solution?

The LAA Rally committee is thinking about what can be done for 2020—difficult, when adverse change in response to a new infection wave could impact at any time. But there is appetite for some form of gathering.

2021 offers more possibilities, particularly as it is the 75th anniversary of the formation of our precursor organisation, the Ultralight Aircraft Association.

Be patient, appreciate what we have, stay safe - and happy flying.

Trevor

Next Meeting?

Of course, we had to cancel our April - June meetings because of Covid-19, but we have rebooked our speakers (Chris Bigg on Bristol Aeroplane Co in WWII, and Fiona & Angus Macaskill on Aerial sightseeing in Oz) for our next season. All of course still depends on Covid restrictions but we will start with the **AGM on 1 September** - whether that's a physical or virtual meeting remains to be seen!

MEMBERSHIP UPDATE FROM OUR NEW TREASURER

As we are not able to meet at the moment, the Committee felt that the issue of subscriptions should specifically be considered - and therefore has decided to *extend all subscription due dates by initially 4 months*. Effectively therefore, anyone whose subscription was due in March will now be due in July (and similar for April, May and June) - and we'll look at this again if we end up having to significantly delay restarting beyond the 4 month point.

At the same time, I am putting together a proposal to move to a system where all subscriptions are renewed at the same time each year, and to encourage the use of standing orders or electronic means for payment - in order to make it a slicker and less administratively intensive process. We anticipate coming out with that proposal shortly.

Neville

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Picture Quiz

Last Month's question from Trevor

But who was exploring this approach over 70 years ago, and what was this aircraft from the mid '50s? What were the company's most recent aerospace products? Use of the internet allowed.



Suggestions received from:

Alan George who writes:

Being furloughed I have time to look at the picture quiz today. Without the internet I know this is a Hurel-Dubois survey aircraft used by the French IGN for mapping. The high aspect wing idea was then used on the Shorts Skyvan. The internet then tells me Hurel-Dubois now make engine nacelles for Airbus and have a partnership with Shorts to do that. Also that the Miles Aerovan was a stepping stone to the Skyvan.

And also **Pat Thody** says: The aircraft in the May/June newsletter is a Hurel Dubois. I remembered it from my youth without looking it up! However I did have to look up the mark it was a Hurel-Dubois HD34 I think

CAA ETC UPDATES

Corrected issue of CAP 413

Stakeholder feedback concerning Edition 23 of CAP 413 Radiotelephony Manual has highlighted the need to address a number of issues.

As a result CAP 413 ED 23 will be withdrawn on 8 June 2020 and replaced with a corrected edition, **ED 23 Corr, to take effect 17 August 2020**. Here's a link to the full document:

<https://publicapps.caa.co.uk/modalapplication.aspx?catid=1&pagetype=65&appid=11&mode=detail&id=9651>

Bringing new light aircraft between 450-600kg under national regulation

The CAA has issued the results of a consultation on bringing new design sub-600kg aircraft into national regulation, including their proposals for doing so: CAP1920

<https://publicapps.caa.co.uk/docs/33/CAP1920%20450-600kg%20Consultation%20Response.pdf>

PREVENTING INFRINGEMENTS

Now flying has resumed we need to keep a focus on avoiding airspace infringements. The Airspace and Safety Initiative website has a number of briefs on preventing airspace infringements in the vicinity of significant controlled airspace - the latest, for Stansted is at:

<https://caa.us4.list-manage.com/track/click?u=9a13f6185a0a697970bd3de1d&id=3e7372e3de&e=3edf2eff83>

Last Call, Immediate Boarding Flight in a Trislander

29TH June this year sees the 5th anniversary of the retirement of G-JOEY, the much loved Trislander. Back in 2015 Graham Clark translated the following article from a French club. It seems appropriate to print it here this month.

The days are now numbered for the Trislanders operated by Aurigny Air Services, which are to be withdrawn from service in a few months. The most mythical of the fleet is G-JOEY, which has just been retired. This was the reason why we organised a club fly-out to Guernsey to tell you about flying in one of the world's last piston-engine tri-motor aircraft still in regular commercial operation.

Flying in an aeroplane powered by three piston-engines is surely a unique experience that will appeal particularly to music-lovers: Listen to three perfectly synchronised piston engines; glissando up and down the octaves and their harmonics; detect a beat that has escaped the conductor's baton; surely a pleasure for aesthetes among aviators. These days, there are very few opportunities to fly in such aircraft; maybe in a Junkers Ju52 or a Ford 5-AT if you are at Oshkosh, but the options are now greatly reduced. But not far off the French coast there is still one piece of airspace where such aircraft are to be found, but will soon be gone. The few Trislanders operated by Aurigny will soon be consigned to history. So perhaps the time has come to indulge in a unique combined aeronautical and musical experience: a Lycoming concerto in G-minor. So take advantage of this event to organise a club fly-out, practice your English aerospeak, and discover the charms of these Anglo-Norman islands just 30 minutes from the French coast.

Definitely English

To evaluate the Trislander I recruited Colin McAllister, a Loga-nair Captain who flies the twin-engine version, the Britten-Norman BN-2 Islander. Colin flies air-taxi services over the North Sea to the Orkney Islands. Ten years ago, Colin put me to work on his BN-2 and during one flight confessed that it was his dream to pilot a Trislander. I did not forget that. So the opportunity was perfect to ask if he would join me and compare flying the Trislander with that of the Islander. With almost 5,000 hr on the Islander, his technical assessment would be invaluable.

When it comes to the Trislander, you either like it, or you don't. It is one of those aeroplanes that does not leave you indifferent. At the zenith of their operations, Aurigny had nine Trislanders, but now only three remain. In two years, they will no longer be in commercial service.

This aircraft was designed by aeronautical engineers John Britten and Desmond Norman; they started in business in the 1950s by adapting DH Tiger Moths for crop spraying operations. Later, they designed the BN-2 Islander, the nine-seat air-taxi twin which became their major success. They later attempted to design and build a competitor to the Cessna 172 (the BN-3) but after completing two prototypes decided not to proceed. By 1970 they detected that the market needed a bigger aircraft than the BN-2, so they looked for a solution that would be simple and economic to design and build, but without having to start from scratch. The decision was taken to stretch the Islander and add one engine. Only an Englishman could have chosen such an atypical, eccentric and unconventional design. Some people regard this as a rotten outcome, while others regard it as magnificent. From the economic and operational point of view, Aurigny chose the Trislander because the piston engines allowed for frequent starts. Their

routes are rarely longer than 15 minutes' flying time, while turbines were certificated for a limited number of cycles and had greatly increased maintenance requirements. Now, the price of AVGAS and the problem of corrosion makes the Trislander expensive to operate.

A walk-round is instructional; when viewed at ground level the Trislander seems to stand a little higher. The long, square-shaped fuselage tapers towards the rear and is very sensitive with respect to the centre of gravity. When loading while the CG is out, the rear fuselage may need support from a peg or trestle. The elongated nose has a baggage compartment that can also accommodate ballast if required. Most structural components and the instruments are of the same type as found on the Islander. The wing-mounted engines are fitted with three-blade props (to reduce the noise) while the third engine (called Number Two) has a two-bladed prop. Certification was done using the Islander, which is why the third engine is one blade down. The wing is identical to that of the Islander, except that extra fuel tanks increase the span by 60 cm each side. The fuselage right hand side has three doors for access and two on the left hand side. On the Islander, the pilot can enter via a door on the left, but not on the Trislander. So Colin was trapped. Entry is aided by a small external step.

The Triplets

I love the checklist fixed to the window frame. As far as the instrument panel is concerned, the 'look' is resolutely Britten-Norman'. One is immediately surrounded by the BN-Islander ambience. The only obvious difference is the view over the long nose. By contrast, the view to the rear is better because the wing is much further back. However, the three throttles and propeller pitch controls immediately attract attention. Amazingly, the mixture control handles are green balls above the instrument panel and operate from front to back. All the dials are in threes: pressure, temperature, rpm... On the floor are three coloured fuel selectors for the three fuel tanks, one for each engine. The only modern concession is a Garmin/TAWS GPS to allow for GPWRS approaches accurate to 10 ft, which simplifies life for pilots during bad weather. For an Islander pilot, it is a shock to enter a Trislander cockpit with this interminable array of colour, and twice the passenger capacity.

The distance between the pilot and the engines is no help during start-up because it is difficult to hear if the engine should cough. The pilot has a good view to the rear enabling him to make a rapid assessment of the situation if there should be a problem with engine Number 2. Each engine has two magnetos. Start-up requires the magneto being selected to one side only, with the other half being switched ON when the engine starts running. You need to find the right rhythm, but by the time Number 3 is starting everything is much smoother. Another unusual feature of the Trislander is the pilot's view of the upper instrument panel; easily in view of the pilot, just above the EFIS. It is connected to engine Number 2 and lights up if the rpm drops below 2500 rpm, but the light goes out when the pilot gives full power.

If the red light should go on during taxi or take-off, this signals a loss of power from the rear engine and the pilot knows at once that he must analyse the situation. Once in the air, and

just prior to displaying the climb parameters, the alarm circuit is set to OFF.

To my ears, the sound of two Islander Lycoming O-540s is fabulous; but when these are joined by a third, the sound is nothing less than sublime. Because the fuselage has been stretched, the engine sound is reduced for the pilot, but the rear passengers are at the heart of this concerto. Taxying is easy enough thanks to the front nosewheel, which enables the Trislander to turn on the spot and manoeuvre within a space no larger than the diameter of the wingspan. With 50 percent more power than the Islander, a 50 percent increase in maximum take-off weight and the space to carry double the number of Islander passengers, the Trislander also needs twice the runway – a minimum of 500 to 600 m. Contrary to what you might think, the Trislander is no STOL aircraft; rather, a mini regional airliner.

15-Minute Flights

Line-up on Guernsey Airport's Runway 09; with his hands full of levers and switches, Colin says: "I open the throttle". The warning light for No. 2 is set. Only five pax on board with full tanks, so take-off performance should be good. Rotate at 75 kt, climb at 90 kt. At once, I feel at home as if in command of an Islander, until I have to adjust the mixture and pitch. There, it gets more complicated. How can you make adjustments by ear given the purring of three engines?

It is here that the musician's ear comes into its own, and I start to adjust the levers like a guitarist tuning his instrument. David suggests: "The thing to do is deliberately put No. 2 out of synch while adjusting One and Three. Then synchronise Number 2." The eight blades of One and Three beat against each other for a few moments before settling into their synchronised pitch, singing in unison. But not for long, because ten minutes later we are already on approach to Aurigny (gc – ALDERNEY?). Company pilots remember one 15-minute Trislander flight between Alderney and Guernsey in the course of which a pregnant woman gave birth. All the flights between these islands are very short, and often Aurigny pilots finish the year with only 500 hours logged, having made more than 1500 landings. Alderney comes into view and the runways enlarge through the windscreen. It's time for a little power and touchdown on the grass runway. Full flaps set, 56° on the Britten Norman. The first notch is set below 133 kt and full flap at below 110 kt. The approach is flown at 90 kt, with the flare commenced at 80 kt and touch-down at about 72 kt. It is important to maintain a steady approach and not let it bang down. The touchdown is soft. It's good that the Islander and Trislander have much in common with their respective ADNs, but there are some important differences. The twin is easier to handle and better suited to short grass runways, while the Trislander is more suited to hard runways.

David sings the praises of his Garmin and the benefit of having certified GPS precision approaches to within 10 ft above the runway threshold. This represents a huge safety gain for his pilots during bad weather. In the cruise, the controls are undeniably just like home; but the ailerons hold no promise of rolls at 400°/sec, ensuring excellent stability and very predictable behaviour. The Trislander has a higher turn rate, but the control forces are greater than on the Islander. In a steep turn, the pilot definitely risks aching arms.

With bated breath, we approach the engine-out condition. So how does a Trislander behave with an engine out? Pessimists say that with three engines, the probability of an engine failure is three times greater. But the Trislander will surprise us. If an engine should fail on the Islander it requires a lot of foot pressure on the rudder, especially if the motor out is the critical one

(in which direction is the propeller turning?). But this is not so on the Trislander. The yaw produced if the left engine stops is easily compensated by rudder pressure and adjustment of the rudder trim. To make things more interesting, we now shut down No. 2 and are flying only on the right engine. We can still compensate for yaw without much trouble, and it is more controllable than the Islander. With five pax on board we manage to maintain 80 kt and descend at 200 ft/min on a single engine. Not bad! We return to Guernsey and he greases it on to the runway.

Goodbye JOEY

With its red nose, yellow wings, big eyes open to the sky, eyebrows pointed to the wind and teasing grin, JOEY is now a mythical aeroplane from the Anglo-Norman islands; no more will it fly above Jersey, Guernsey, Dinard or Alderney. The most famous Trislander in the fleet was retired on 28 June after 40 years and 28,580 flight hours in service and without a hitch flying with Aurigny. During those years, JOEY flew 3,240,000 NM, equivalent to 150 times around the world. The Aurigny chief pilot David Rice had the honour of making the logbook entry for the last of 91,700 flights.

David was born at Aurigny (TRANSLATOR'S NOTE: AS FAR AS I CAN TELL THERE IS NO SUCH PLACE, BUT THAT'S WHAT THE ORIGINAL TEXT SAYS – MAYBE THE AUTHOR MEANT 'ALDERNEY?') and has dedicated his life to the company. The Trislander accounted for 26 years of his life as a commercial pilot, and JOEY has almost become his fourth son. This aircraft is a true icon of the Channel Islands. It has been a link to the world beyond, a daily presence, whatever the weather, a symbolic bridge that grew with the residents over two generations. A Facebook Group Save Joey the Trislander attracted more than 5,300 members, and is testimony to the incredible affection that the population has for JOEY. This aeroplane was the hero character of a children's book drawn by Peter Seabourne in the 1980s. This Aurigny (SEE ABOVE COMMENT?) resident wrote the imagined adventures of a yellow Trislander called Joey in a series of six books: The Little Yellow Plane Adventures. Well before the Disney Studios produced Planes, JOEY was drawn with a human face that children saw both in their books and above their heads. In November 1981 Aurigny Air Services decided to re-register G-BDGG as G-JOEY. A new paint job followed, the fuselage decorated with eyes, red mouth and nose. It was an incredible success, and JOEY became the Aurigny mascot. The company had to put on special JOEY flights, with 'I flew in Joey' certificates provided for each passenger, the creation of special children's games – and even a supporters' club. In the Channel Islands, JOEY is sacred. Aurigny Air Services has been exploring a number of options to give JOEY an honourable retirement, perhaps in a museum or as gate guardian at Guernsey Airport, but so far no decision has been taken. Aurigny still has three Trislanders in service, but these will be retired one after the other over the next two years to be replaced by a Dornier 228. After his last flight in JOEY David Rice said: "After landing, we rolled under the fire service guard of honour archway. Then, I parked the aircraft, shut down the engines and everything went quiet. I even saw some of the passengers stroke JOEY's nose before leaving."

Authors: Jean-Marie Urlacher and Colin McAllister - With acknowledgements to: David Rice, Thomas Amblard, Michael Selwood
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Continued overleaf...

Flying to Guernsey

Flying to Guernsey requires a little preparation. You need to file a Flight Plan, notify Customs and brush up your English. Air Traffic is very helpful but Guernsey airspace is very busy and you will be expected to be on top of your game because everything is timed to synchronise with the frequent IFR movements of ATR and Embraer services.

Use handling by ASG (www.flyasg.co.uk); park your aircraft by the Tower. Mistrust the forecasts here (GC – in France) because in summer fog dissipates from the French coast, but a few minutes later descends upon the Channel Islands and stays there all day. Here, is a totally different environment only 30 minutes from the French coast; British charm with French street names; an independent territory that does not even belong to the European Union.

BN-2A MkIII

Three Piston Engines

Designer: Britten Norman
 First Flight: 11 September 1970
 Number Built: 72
 Crew: single-pilot
 Capacity: 17 passengers
 Length: 15.01 m

Wingspan: 16.15 m
 Height: 4.32 m
 Wing Area: 31.31 m²
 Wing Section: Naca 23012
 Empty Weight: 2,650 kg
 Gross Weight: 4,536 kg
 Fuel Capacity: 700 litres
 Useful load: 1 382 kg
 Engines :3 x six-cylinder 260 hp Lycoming 540
Performance
 Max speed: 156 kt at sea level
 Cruise speed: 135 kt at 59 %, 13,000 ft
 Range : 870 Nm
 Ceiling: 13,156 ft
 Climb: 980 ft/min
 Take-off distance to 15 m : 590 m
 Landing distance over 15 m obstacle.....440 m
 Stall (clean): 61 kt
 Stall Flaps, landing at gross weight: 50 kt
 Fuel consumption: 148 l/h

Useful links

- Book a flight with Aurigny www.aurigny.com/
- The Yellow little plane vimeo.com/76876826
- Bye Joey www.youtube.com/watch?v=bljpwgs_A1Q



FREQUENCY CHANGES AT EXETER

Though recent AIS amendments have given a date of 20 August for 8.33kHz frequency changes at Exeter, we hear from Devon Strut that the changes have already been made: **Approach 128.980; Tower 119.805; Radar (South) 123.580; Radar (North) 128.980 and ATIS 119.330**

Membership news:

Congratulations to Strut member Bill Sweetnam on the first flight of his RV14 - the first in the UK in the early evening of Tuesday June 9. . See <https://forums.flyer.co.uk/viewtopic.php?f=1&t=115762>



Where to go?

Should there be any lift of the restrictions here's what **Flyer Magazine** have to offer: for **June**:

Audley End, Crosland Moor, Eshott, Fife, Peterborough Sibson, Sherburn-in-Elmet.

And **July**: *Brimpton, Chiltern Park, Longside, Shipdham, Sittles, Skegness*

Let's hope you are managing to resume flying. Quite a few airfields are now open to visitors, though facilities vary from none to fuel/toilets/take-away food, and hours/days are sometimes restricted. PPR often required. Here's a list of the known ones (at time of printing) below, but you need to check directly with the airfield as the situation changes frequently.

Bembridge, Blackbushe, Bolt Head, Bodmin, Charlton Park, Compton Abbas, Cotswold, Coventry, Earls Colne, Enstone, Henstridge, Lee on Solent, North Weald, Old Warden, Popham, Redhill, Sandown, Shobdon, Shoreham, Sleaf, Stapleford, Thruxton, Turweston Also see <https://www.gaac.org.uk/airfield-status/>

Guinness World Record Attempt

Angus & Fiona Macaskill are currently planning to attempt a Guinness World Record for the 'Most airfields visited in 12 hours by fixed-wing aircraft'. This is from Fiona:

A twenty four hour world record has already been set in America, landing at 92 airfields, where they have numerous long, hard surface runways enabling fast landings & take offs. They also have runway lights so many of the landings were at night.

We've already both gained separate FAI speed world records so thought we might now have a go at a Guinness World Record this time. No one has ever set a 12 hour Guinness World Record so we have decided to go at it and use it as a way of **raising money for the Air Ambulance Service** at the same time. I've contacted over 120 airfields and gained permission to land from 101 of them. Everyone, without exception, has agreed to waive the landing fee in exchange for us supporting the Air Ambulance Service.

We'll be taking off from Sywell at 0730 on either **Tuesday 7th or 14th July** (weather permitting). We have three alternate routes planned, depending on the weather and actual speed of the flights on the day.

We'll start by flying east through Bedfordshire, Hertfordshire and Essex. Then we'll fly north into Suffolk and Norfolk and back west through Cambridgeshire, Leicestershire and Staffordshire before returning east to Sywell before 1930. The total distance will be around 740 nm.

Evidence of a full stop landing and a photo of each airfield has to be supplied to the Guinness World Record adjudicators. We are very excited about this challenge and also hope to enter the Pooleys 'Dawn to Dusk' competition once we have written up the attempt.



It would be fantastic if pilots would like to donate to this very good cause. This can be done through our Just Giving website:

<https://www.justgiving.com/fundraising/fiona-angusmacaskill>