

## Submission to Independent Aviation Safety Review Panel

Dr Paul Tridgell



Key Issues in submission:

- 1) Transponders & Mode S
  - Reducing risk of Mid Air Collisions Glider and Power/RPT Aircraft
  - Regulatory barriers to use of Mode S with Non TSO GPS is reducing safety
- 2) Comments on PPL and Glider Training – Spin and Spin Recovery

It is not uncommon for me to respond on the Area Frequency to a discussion between an RPT aircraft and ATC about me flying a glider at 10,000 feet near their flight path in G airspace. They can see me as I am one of a small number of gliders that are equipped with a Transponder (Mode S but operating as C due to regulatory constraints. I know that there are other gliders out there that are not being seen. The Panel will be aware of incidents of mid-air collisions between gliders and Jet aircraft (e.g. Reno in USA in 2006). While electronic surveillance does not diminish the effort required in good look out – the visibility of a glider to a jet approaching at 300Kn will be very small.

The cost and more importantly for gliders the power consumption required has been falling. My Trigg T22 transponder has a current draw of about 0.25A at 12v.

In Europe my glider would be transmitting mode S using a non-TSO GPS source and the broadcast also transmits the low accuracy field. The cost of TSO GPS and the additional power required for a TSO GSP source would add \$6000 and importantly at least another 0.25A. For RPT traffic and ATC to know that a glider is in the vicinity within 1000m is much better than having the current regulations where the requirement for a TSO GPS by low speed aircraft is **REDUCING SAFETY**.

Any change in this area will probably be gradual – but a couple of practical issues that the Safety Review Panel could do is:

- Require **NEW** gliders to be fitted with a mode S Transponder
- Change the regulations so that low speed aircraft (especially with limited electrical power) can use Mode S Transponders with non TSO GPS source.

In the last 2 years I have done my PPL training and there are different strengths between the GFA training and PPL Training. The importance of avoiding stall/spin on approach is emphasised in both training programs. With PPL training one does not need to ever enter into a spin and demonstrate spin recovery – with gliders this is a mandatory element in both training and annual flight reviews. Clearly there are issues with the capacity of many training PPL aircraft to spin that is a limitation – but I think I am a better PPL pilot for emergencies due to my gliding experience. Where PPL aircraft do not have the capacity to spin but there are plenty of gliding clubs where a gliding instructor could take a PPL student for a flight so that they can

experience a spin and spin recovery. The barrier to this is the regulations with the division between different pilot training programs. Even requiring at least one spin/recovery either in PPL aircraft or a glider within the PPL training would assist the reflex response and quick recognition that is required if such a situation emerges.

Thank you for considering this submission,

Dr Paul Tridgell  
MBBS BE(Elec) MBA FRACMA