

Submission: 151

Jason Neatherway

I believe the proposal for ADS-B Mandate requires additional consideration for the Sports Aviation class of aircraft, such as Paragliders and Hang Gliders for the reasons outlined in attached document. I believe there is little benefit to these devices being mandated with-in our community and a substantial cost impact, and therefore there should be appropriate exemptions as part of the plan.

ADS-B Mandate Feedback

Consideration and Exemption is Required for Sports Aviation (Paragliding and Hangliding)

I believe the proposal for ADS-B Mandate requires additional consideration for the Sports Aviation class of aircraft, such as Paragliders and Hang Gliders for the reasons outlined below. I believe there is little benefit to these devices being mandated with-in our community and a substantial cost impact, and therefore there should be appropriate exemptions as part of the plan.

1. **Cost benefit difference:** The cost of the ADS-B device is significant when compared to the overall cost of equipment. For example, the average equipment value for a paraglider is ~\$4000 - so the addition of a \$1000+ ADS-B or EC device is a significant impact to our community.
2. **Low likelihood of collision:** A combination of
 - low speed of the aircraft,
 - visibility available to the pilot,
 - audible detection(the pilot can usually hear conventional aircraft),
 - low volume of air traffic in common free-flight areas
 - existing radio proceduresall mean a very low likelihood of mid-air collision from a Paraglider or Hanglider with a conventional aircraft.
3. **No impact to ATS:** Paragliders and Hang Gliders do not fly in Controlled Airspace
4. **Existing Search and Rescue Practices:** Sports aviation community has good existing practices to support search and rescue using mobile and satellite services such as inReach and Spot. Tracking pilots and retrieving them from an out landing (on [cross country](#) flying) is a part of normal operations. ADS-B is unlikely to replace these existing tools, as the location data is needed for normal operations and needs to be effective when on the ground in varied terrain (i.e landing in a mountain valley). ADS-B will likely be limited in this case without line-of sight to ground support crew.
5. **Existing standard tracking tools and common peer observation** in Paragliding and Hang Gliding mean that the ADS-B will not offer any significant improvement to accident investigation. Additionally Paragliding and Hang Gliding incidents are most common on take-off and landing, where ADS-B data would not have any value.

The remaining benefit for ADS-B given in the whitepaper is to facilitate integration with Drones (emerging aviation). Drones are always a concern to crewed flight as the risk is very different for a drone pilot - they are not making decisions based on their personal safety. I believe integrating drones under instrument flight control into VFR environments would need much greater control and mitigation than those offered by ADS-B alone, so I do not think this is a sufficient enough enablement for emerging technologies to force this burden on the free-flight community.

For additionally consideration of ADS-B, any use in Paragliding and Hang Gliding the solution should,

- 1) consider significant subsidy of cost as most of the benefit is to emerging aviation industry
- 2) there must be assurance that there are available light weight (< 150g) units
- 3) There must be safe electronic emissions for the close proximity or carriage on person
- 4) The technology must be freely and readily available so that instrument manufactures can build integrated flight instruments for Paragliders and Hang Gliders (i.e. combine [our existing GPS, Vario, altimeter devices](#) with ADS-B). I see this type of integrated flight computer, the best path of adoption for free-flight, but it would need time and industry support so any rollout policy should consider this.

Overall I welcome improved aviation safety offered by the technology for conventional aviation, but strongly believe there needs to be exceptions and ongoing consultation with the Sports Aviation Community of how this may be enabled over a longer time period for our aircraft. The freedom of flight our sport offers is invaluable, and with no real safety gain of ADS-B for the existing aviators, we must not let the \$\$ opportunity of pure industry and emerging aviation out weigh that.

Thankyou
Jason Neatherway