

The BGA is not in principle opposed to the carriage of a transponder that will give safety benefits when flying in controlled airspace where we currently have to obtain a 'clearance ' to fly.

However, the current CAA proposals are deeply flawed and should be resisted. Some of the major issues are explored in the following paragraphs.

1. Currently, no low power mode S transponder (LPST) has yet been developed that is suitable for un-powered aircraft. However, we now have here a document proposing to mandate the carriage of such a transponder. The development of suitable equipment must be carried out with verified testing on different glider types to see where the aerial should be placed for best reception for either a CWS scenario or for ATC information. This is important, especially when one considers the significant blanking affect of carbon. We can thus see that this will be a lengthy technical development process taking several steps. Each step will need to be checked against ATC radars to see if the performance does achieve the desired result. To suggest that all gliders will be fitted when a LPST becomes available is far too simplistic.
2. Tugs are covered by this mandate. If they are currently fitted with a Mode A/C transponder then these will react to any CWS system and we believe that it is unnecessary to mandate that these existing transponders be replaced with a Mode S type. The fitting of Mode S to all CAT has relieved the strain on the present system.
3. Another point to note is that the UK will not have changed all civil and Military radars to Mode S until 2011/2012. If you were to purchase a Mode S transponder today, a full power type minimum 70 watts, you will have the same problem with power consumption as with mode A/C systems until the ground stations are in active service.
4. There are some suggestions on Exemptions, such as winch launching and staying in the circuit and for large groups of gliders remaining in a small area of airspace. These indicate that the authors of this document have little knowledge of our operations. The BGA has not been asked for details of how often and where we operate. This is fundamental to the whole idea of all aircraft being mandated to carry a transponder. There needs to be a true assessment of gliding activity on a reasonable soaring day both during the week and at the weekend. When this is completed then we must be given details of NATS' operational concept of how they intend to handle all this extra information if we do have transponders. Our type of flying is quite unique as we rarely stay on a heading for long and of course we are usually descending while we are gliding and then climbing, sometimes very rapidly. What would an ATC controller do when he/she saw two gliders, or more approaching each other at a closing speed of up to 170kts at the same height to join a thermal? Ask the question.

5. This RIA document, however, focuses its arguments for the safety case of CAT in Class G airspace and Terminal airspace, without any supporting safety data and analysis as to where and when the current situation is causing serious problems in Class G airspace. There is also no description of any operational concept about how ATC units intend to use all this information when many aircraft will not be in radio contact, even if they do have a radio. Remember that to talk to an ATC unit you need to hold an official R/T licence.
6. It's quite possible that the thrust of this RIA is to mitigate NATS concern for the increasing number of CAT aircraft which, for commercial expediency in most cases, are choosing to fly in unregulated airspace rather than join the nearest airway structure. However, there no proven risk data is given to substantiate this concern.
7. Information that we have received from NATS shows that, should the capacity of a particular radar be exceeded, then the radar plots will be dropped to ensure that the best possible radar service remains in the airspace of high priority. There is also the possibility that a low power transponder may not be seen by some radar due to the range from the radar. It's quite possible the huge numbers of GA flying in Class G airspace will be filtered out.
8. The UK CAA is going beyond the international obligation to mandate the use of transponders in all UK airspace. No other suggestion such as TMZ's (which have worked well in Germany and give immediate safety benefits) are considered. A TMZ is a Transponder Mandatory Zone, which an airport in Germany and in parts of France is granted when the IFR traffic is between 10,000 and 30,000 movements of CAT aircraft. (For example, Ryanair to Hahn (Frankfurt)). When flying through this TMZ area, the pilot switches on the transponder, but does not need to talk to a controller who can see his aircraft. This achieves a safety benefit and could be applied to airports such as Coventry, Norwich, Teeside, etc.
9. There was a review of the risk of collision between CAT and military fast jets in unregulated airspace in January 2005. The Team considered a wide range of issues including future activity trends and the wider assessment of risks outside CAS, remembering that there has been no CAT collision outside CAS since 1949.

The conclusion was that the enquiry found no evidence to suggest that CAT operations outside CAS were not tolerably safe, but concluded that risk should continue to be mitigated to the greatest extent possible.

10. The military are fitting CWS in the Tucano aircraft and the Tornado GR4. This is due for completion in 2009. Their transport aircraft are fitted. They will not be fitted in their helicopters. The Hawks will not be fitted.

11. The statement in Para 2.1.2 of the RIA document gives forecasts of traffic levels INSIDE European airspace. This figure, which refers to CAT traffic, is totally irrelevant and is no basis to mandate transponders in UK Class G airspace.
12. There are more CAT operators who, for commercial expediency, choose to fly through Class G airspace rather than join the airway structure. This saves some charges and can avoid ATC delays.
13. Another argument for this RIA is the large number of airspace infringements (350) annually mostly attributed to GA and mainly into terminal areas. How many of these infringements are gliders? Gliders, for the most part, are flying with moving maps displaying airspace with some PDA's giving audible warnings. The BGA has a paper record of gliders flying through Class D airspace or a refusal to fly through. Therefore we can truly state that gliding is NOT a cause for this requirement.
14. UAVs. These will be developed in the future and are in use in the USA today. They will use sense and avoid technology, but it does not necessarily follow that they need to sense a transponder. A GPS system giving out height and position would meet the requirement.
15. The Airprox information is quite misleading, as it is a fact that IF an aircraft had been able to react to a CWS system or an ATC system then an incident may have been less of a problem. How many collisions are occurring in Class G airspace every year? If we did not open the hangar doors we could reduce the number of Airprox's. Again this paragraph states the benefit for traffic growth in UK airspace by which they mean CAT in Class G airspace. There is talk that in future, CWS systems could be affordable for all. Then that really will lead to collisions as all pilots spend all the time looking inside the cockpit and not, like us, always looking out.

We already know that many small, fixed-wing power pilots do not look out, spending more time speaking to any ATC unit they can, which can be very distracting. All aircraft having transponders will not prevent the close encounters that we have with powered aircraft where we fly. Nor will it prevent our glider to glider accidents that mostly occur within our circuits.

16. The costs have just been guessed at and with installation, certification and annual verification, could quite easily make the less expensive, but still equally enjoyable section of our sport just give up.

This issue is of such importance to the very continuation of our wonderful sport that I urge you to reply either as a club or individually. The completed response form may act as a guide to your thoughts. Please do not just copy it out verbatim as we know from the past that multiple, boiler-plated responses

will be ignored. Please put the response in your own words and add your own thoughts.

Thank you for reading this – please act now!

Carr Withall  
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