

GA ALLIANCE POSITION ON ELECTRONIC CONSPICUITY (EC)

GA Alliance Position

EC in some form will take a vital part in ensuring greater safety in airspace operations. The technology is developing rapidly with existing systems in place (both certified and uncertified) and others emerging. Acceptable practical solution(s) appropriate to the variety of members' interests, and coordinated with the wider European interest have yet to emerge. We, as noted below, recognise and support these developments in the context that equipage is not mandated and is driven by benefit to the user.

The GA Alliance recognises:

- that unaided see-and-avoid, while capable of delivering acceptable levels of safety, is imperfect as a measure to prevent mid-air collisions;
- the value of EC technologies in general, including ADS-B, in improving flight safety;
- the benefits already being delivered by FLARM, noting its high equipage rate on gliders and motor-gliders;
- that increased EC equipage rate should be driven by benefit to the equipping user, not by mandate, and notes that The Electronic Conspicuity Working Group stated in CAP 1391 that “there is no appetite for mandating carriage” (at 2.15; page 17).
- that equipage is highly cost-sensitive in GA;
- that size, weight and power supply are essential factors in providing suitable EC devices for a significant number of GA aircraft that have no cockpit (balloons, hang gliders, paragliders, and their powered variants). There are currently very few, if any, EC devices compatible with these aircraft.
- the excellent work by many manufacturers in delivering cost-effective EC technology into the GA cockpit (notable among those is the PilotAware system);
- the strong support for this work offered by NATS in project EVA¹ and other initiatives;
- the strong support for this work offered by the UK CAA, in permitting cost-effective ADS-B out through LAA/MOD 14², BMAA SMM 118³ the development of CAP 1391⁴ and its support of the ECWG;
- the need to ensure an appropriate level of data quality (which may be an uncertified GPS position) when any EC data is used for ATS purposes;
- the need for interoperability in deployed EC solutions;
- the need for analysis of human factors aspects of EC usage in operational use;
- the need for coordination of EC initiatives at a European level.
- that development of Drone use and operational technology will significantly influence, and need to be integrated into the EC scene.

¹ <https://www.nats.aero/projecteva/>

² <http://www.lightaircraftassociation.co.uk/engineering/StandardForms/LAA-MOD%2014%20-%20ADS-B.pdf>

³ https://www.bmaa.org/files/til_118_ads-b_out.pdf

⁴ <https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=7275>

The GA Alliance believes that:

1. EC has the potential to
 - a. improve air traffic services and standards in circumstances where surveillance is limited or unavailable;
 - b. reduce the need for air traffic services outside managed (at present, controlled) airspace;
 - c. mitigate the risk of mid-air collision between GA and CAT caused by airspace infringements;
 - d. provide other in cockpit safety data.
 - e. Reduce the need for managed (presently controlled) airspace.
2. there is **no** prospect in the foreseeable future of ADS-B (even in combination with WAM) replacing the need for a comprehensive network of secondary surveillance radar for en route and terminal operations in the UK;
3. the ability of the 1090 MHz spectrum to support universal equipage of airspace users with ADS-B operating at that frequency is not proven;
4. successful technology introduction in GA (e.g. moving map navigation applications) has been driven by market demand and innovation, not through “masterplans”, “roadmaps” and “concepts of operation”;
5. safety is better served if users are encouraged to adopt any appropriate EC technology rather than choosing not to equip at all while waiting for the perfect solution;
6. in the context of point 5 above adoption of any EC equipment should not be mandatory. It should be left to individual operators to define what specific equipment should be carried to suit individual operational requirements.
7. interoperability can be achieved through means other than a common datalink, for example by multi-band receivers or rebroadcast techniques;
8. that standard operating procedures are best developed through operational experience of EC in the real world.

The GA Alliance requests efforts from all parties to ensure that:

1. unnecessary regulatory barriers to EC equipage are eliminated to encourage equipage, in particular:
 - a. manufacturers are supported in creation and/or validation of STCs to enable deployment of full ADS-B capability on a wide variety of aircraft;
 - b. that CS-STAN should support the deployment of ADS-B for EASA aircraft just as LAA/MOD 14 and BMAA SSM 118 does for UK Annex II aircraft;
 - c. CS-STAN supports the installation, on a no-hazard basis, of all EC technologies (not just FLARM, as at present);
2. a proportionate and cost-effective standard for ADS-B on 1090ES with non-zero data-quality indicators is developed to enable limited air traffic services use of EC data (e.g. for monitoring and situational awareness by FIS) to form the basis of a declarative system of compliance;
3. technologies already deployed (e.g. FLARM) are used constructively in the overall deployment of EC;
4. ground-sensed traffic data is made available to GA pilots through EC channels (e.g. as the FAA has done with TIS-B).
5. that in “satisfying the requirements & needs of all airspace users”; airspace modernisation operation and design generally and in the context of EC guarantees a positive move from segregation to integrated airspace, ensuring full access to VFR users. Noting that current architecture, policies & procedures, as well as ATS capacity, appear not to do so

About the GA Alliance

The GA Alliance is an independent partnership of organisations representing the interests of some 72,000 UK General Aviation (GA), and Sports and Recreational Aviation (S&RA) pilots, owners and operators. The GA Alliance objective is to promote and protect the cost-effective use of GA and S&RA aircraft and to actively participate in the formulation of regulations and actions that may affect their interests and to ensure the welfare and the free and safe movement of these aircraft, pilots, owners and the associated operations.

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