

Airspace Modernisation Strategy

Electronic Conspicuity Solutions



British Microlight Aircraft Association response

Introduction

This Call for Evidence response is made on behalf of the members of the British Microlight Aircraft Association (BMAA). The BMAA represents over 3,800 members who either fly, or have a significant interest in, microlight aircraft. The BMAA is managed by a volunteer Board of Directors and run on a daily basis by employed staff. The members have been made aware of this Call for Evidence and invited to contribute to this response as well as making their own.

Microlight aircraft are principally flown for recreation; although there are in the region of 200 flight instructors teaching student pilots to achieve a pilot's licence on a commercial basis. The UK CAA issues approximately 365 microlight pilot's licenses each year¹.

A majority of microlight aircraft carry radio, a lesser number, transponders, and some others an alternative EC device. Many microlight pilots just fly for the fun of being airborne and limit their activity to local area jaunts whilst some may fly several hundred miles from their home airfield.

Summary

The BMAA recognises the potential, and primary purpose, of EC to reduce the risk of mid-air collision (MAC). The BMAA supports the concept of encouraging the carriage of an EC device by all aircraft where there is an affordable and practical solution which can be demonstrated to benefit the carrier.

We also recognise that other benefits might be realised, such as better access to controlled airspace, but consider these to be secondary and not a prime reason for an aircraft to equip with an EC device.

The BMAA does not support mandated equipage by all aircraft, preferring to encourage equipage as the result of the development of suitable devices at affordable cost.

Mid-Air Collision (MAC)

Instances of mid-air collision in the open FIR between aircraft in transit are rare. Gliders tend to collide with gliders when flying close in thermal or ridge lift. Other than near aerodromes, powered GA traffic tends not to fly in such close proximity. See-and-avoid and the "big sky" as measures of mitigation against MAC work reasonably well and can be enhanced if receiving a traffic or deconfliction service from an ATS unit.

CAP 1777 suggests that changes in aircraft behaviour and density, more CAT outside controlled airspace, and an as yet unquantified amount of drone activity, will increase the likelihood of MAC to the extent that mitigation will rely upon EC devices which will either autonomously interact or provide information to traffic controllers to make intervention. Although it is sensible to look ahead, we see no evidence that supports these assumptions which should drive the solution to a problem that doesn't currently exist.

¹ Ten-year average to October 2018.

The BMAA does see the potential of EC to assist with the avoidance of MAC and supports its members who consider carriage of a device to enhance their own safety. There are potential hazards associated with fitting such a device where fitted with a proximity warning that the pilot must understand.

- Over reliance on the device at the expense of lookout
- Distraction from other tasks by audio warnings

EC devices must be seen as an aid and not an alternative to MAC avoidance by lookout and establishing situational awareness by other means.

EC advantages

Although CAP1777 determines several advantages to mandated EC equipage the BMAA rejects some of these as being irrelevant to EC and the needs of our members.

Airspace infringements

The majority of airspace infringements by GA aircraft could be prevented by the proper use of a GPS enabled moving map device with an airspace warning. [See the 2019 report on causal factors published by the CAA Airspace Infringement Working Group]. The suggestion that an EC device can prevent an infringement relies upon a communication path between the pilot and a controller and the controller taking a positive action to alert the pilot. This action relies upon two-way communication having already being established between the controller and pilot and of course the aircraft being fitted with a radio. We do not agree that solely equipping with an EC device will reduce airspace infringements.

Enhanced information

The suggestion that enhanced information, such as weather and terrain avoidance, may be provided to the pilot through an EC device is misleading. Such additional information would require additional functionality to that required for a simple EC device.

Direct routing

The majority of microlight pilots fly entirely for recreational purposes and so time saving is not particularly important to them. Current access to airspace arrangements through radio requests is adequate for the vast majority of microlight pilots and so, although there may be some benefit for controllers to have a better visual confirmation of position on a screen, the current position is acceptable and very rarely causes our members any significant difficulty.

Devices

The CAA ECWG delivered a paper in 2014 which determined desirable features for an EC device which could be used by all microlight aircraft. The cost band in the region of £200, with low power requirement and portability being essential. These requirements are still appropriate.

Interoperability

The primary purpose of an EC device is to mitigate against the risk of MAC.

This purpose can partly be achieved by a device that transmits only, relying on other aircraft to carry alerting devices and avoid the transmitting device. However, a user will gain more benefit if carrying a device that will both transmit and receive.

There are several devices in existence which either can only transmit or receive on limited frequencies. These are being adapted, or making use of retransmission, to see and be seen by other

types. It would be preferable if a single standard is agreed on which all devices could function and so be truly interoperable. The BMAA supports any move towards a single standard for transmissions to enhance interoperability. This standard should be agreed by device manufacturers and given enough time for software conversion where required.

Airspace Blocks

CAP 1777 suggest that airspace blocks will be designated where the carriage of an EC device will be mandated. Of course, these blocks already exist as controlled airspace where transponders are mandated. It is far too early in the progression of EC equipage among the GA and Recreational aircraft sector to suggest establishing such blocks in what is currently Class G airspace. There is no demonstrated need, nor data supported evidence for such blocks at the present time. The establishment of such blocks at this time would effectively class them as prohibited airspace for the vast majority of GA and Recreational aircraft.

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Submitted by Geoff Weighell on behalf of the members of the British Microlight Aircraft Association