



AIRPROX *Insight*

DIRECTOR UKAB'S MONTHLY UPDATE

November 2023



Photo: courtesy of British Gliding Association

AIRPROX OF THE MONTH

How much time to react?

What can I expect my Electronic Conspicuity equipment to show (and not show) – and when can I expect an alert?

As I sat down to consider the topic for this month's article, I received notification of a report into the *Human Factors Effects of Electronic Conspicuity Devices in UK General Aviation*, and as Electronic Conspicuity often features in my INSIGHT articles it feels right to return to the subject in light of the [report](#).

Commissioned by the CAA, with the work undertaken by GASCo in conjunction with Jarvis Bagshaw Ltd, it highlights a number of interesting points regarding pilot reactions to indications of other aircraft on their EC devices, and also suggests a few tips for using such devices.

Therefore, the Airprox I have chosen this month is **Airprox 2023093**, which involved a Ventus glider and a Europa. The Ventus pilot was on 'final glide' to their destination airfield at around 4000ft on a heading of around 150°, while the Europa pilot was transiting north-westbound at around 3800ft.

A Notam had been published regarding a gliding competition in the area and the Europa pilot was fully aware of it. Both aircraft were equipped with PowerFLARM as their EC devices, and the Europa also had a transponder. As the aircraft approached each other almost head-on, the Ventus pilot received an alert from their PowerFLARM of an aircraft at a range of about 800m and so they immediately banked to their left to avoid the source of the alarm. The Europa pilot reported receiving an alarm from their device but with no time to react before the aircraft had crossed flightpaths.

The UKAB often sees Airprox where both aircraft were equipped with EC devices which were incompatible, so it is well worth examining what we can learn from an event that involved two aircraft equipped with the same devices.

Firstly, it's notable that the Ventus pilot appeared to receive their alert before

the Europa pilot received theirs. While we cannot predict exactly when our EC equipment will detect another aircraft, what we can say is that it's important to react to the information it provides as quickly as possible – in this case the Ventus pilot manoeuvred immediately, before they had sighted the Europa.

One of the findings from the above-mentioned report is that the realistic maximum range to visually acquire another GA aircraft is two miles, so for aircraft approaching each other head-on at a closing speed of around 180kt, that is a maximum of 40 seconds before the aircrafts' flightpaths will cross. The lesson here is 'don't delay' – clear your flightpath visually and manoeuvre away from the EC contact.

Secondly, don't assume that because you have detected an aircraft with your EC equipment then the other aircraft's EC

equipment must have detected you (think about the SERA rule for converging aircraft here – the pilot of the aircraft on the left can only give way to the other aircraft if they know that it is there).

The GASCo report found that, on average, EC detects less than 50% of other air users in the UK. This means that a robust lookout scan is absolutely essential for the avoidance of mid-air collisions and that a combination of EC and lookout provides the best defence.

Additionally, don't dwell on the area of the EC contact – given that we know there are a lot of air users that don't carry EC equipment, and that even if your EC equipment is compatible with that of the other aircraft then there is no guarantee of detection and alerting, maintaining a disciplined lookout scan all around your aircraft (as far as is practical) gives the best chance of spotting a threat aircraft.

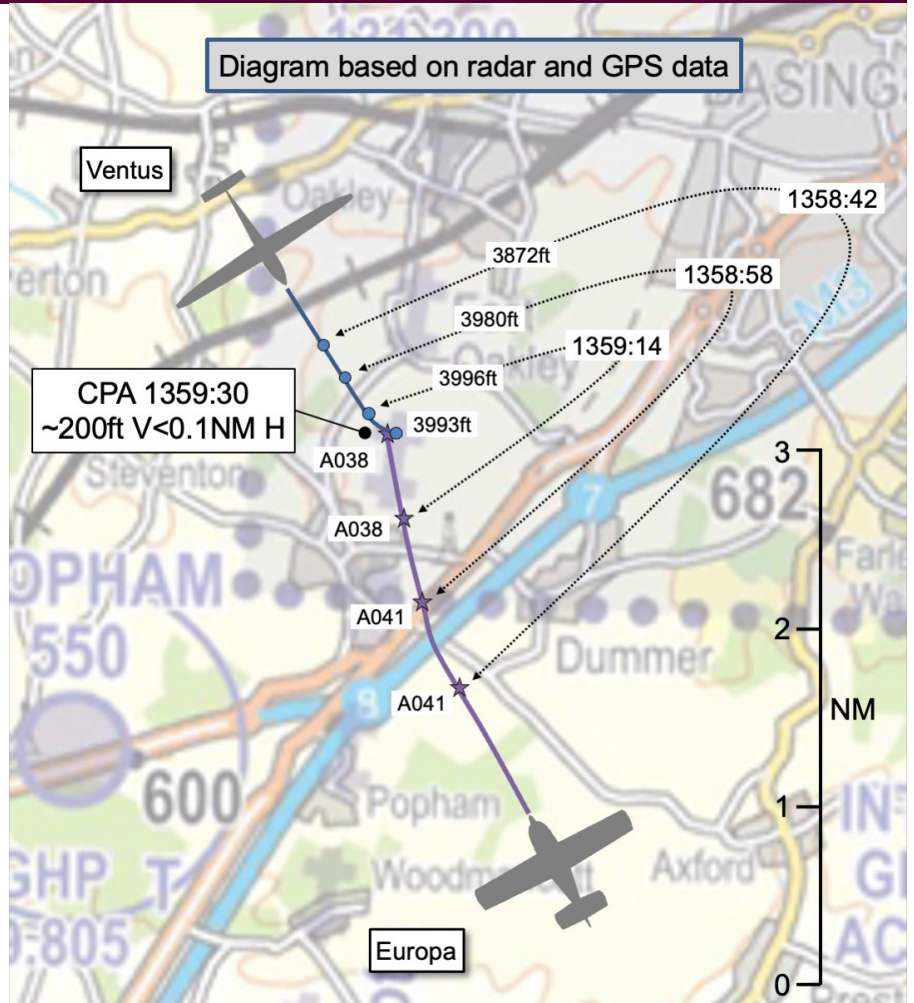
Although not really applicable in the highlighted case due to the short range involved, do remember that you are unlikely to spot another aircraft beyond a range of about two miles, so don't spend time concentrating on the area of the detected aircraft if it is further away than this or clearly doesn't represent a threat to your aircraft (e.g. the other aircraft is obviously well separated in altitude or is not on a conflicting flightpath).

This month's Airprox highlights the benefits of carrying EC equipment, but do watch out for the pitfalls as well. EC is not a panacea but, then again, neither is lookout (due to weaknesses in the human eye and our brain's programming to 'keep things simple' for us). I'd recommend reading the GASCo report as it includes some really useful tips for GA pilots and, for those of us that like that sort of thing, the data behind the recommendations. There is also a short [video](#) if you don't have the time to read through the report.

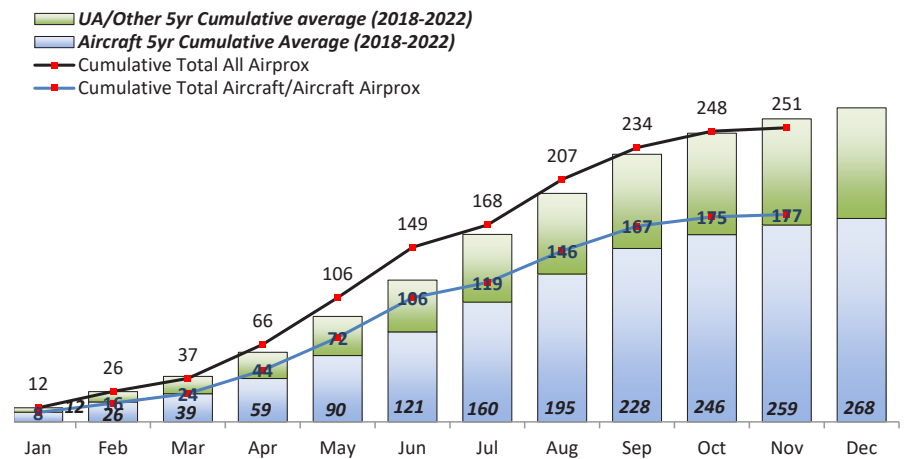
UKAB MONTHLY ROUND-UP

This month the Board evaluated 24 Airprox, including three UA/Other events, all of which were reported by the piloted aircraft. Of the 21 full evaluations, nine were classified as risk-bearing – two as category A and seven as category B. The Board did not make any Safety Recommendations this month.

As can be seen from the graphic below, Airprox reporting for the year has started to tail off. This follows the same pattern we see every year – as the weather worsens and the



2023 Airprox - Cumulative Distribution



nights close in, fewer Airprox are reported, and this is almost certainly due to less recreational flying taking place.

So, what to do with all the spare time that has been generated by not going flying? Well, once all those other jobs you've been putting off have been completed, what about considering whether your EC equipment levels for next season are what you want or need them to be? As we have seen from the example above, EC isn't a panacea but, used correctly, it can really

enhance your ability to detect and avoid other air users that may be a 'threat' to you.

Remember, if you haven't already applied for an [EC rebate from the CAA](#) then you may want to consider taking advantage of that before the funding runs out on 31st March 2024.

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