



Issued: 01 May 2014

Implications Of Reduced Radar And Procedural Air Traffic Control Provision On Aircraft Operations In Class G Airspace

This Safety Notice contains recommendations regarding operational safety.

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	Not Primarily Affected
Air Traffic:	All ATS Providers
Airspace:	Not Primarily Affected
Airworthiness:	Not Primarily Affected
Flight Operations:	All AOC Holders, PAOC Holders and General Aviation Pilots
Licensed/Unlicensed Personnel:	All ATCOs, FISOs, Pilots and Approved Training Organisations

1 Introduction

- 1.1 Review and analysis of recent Airprox events has indicated that some pilots may not be fully aware of the implications of the Air Traffic Service (ATS) provision on flights in Class G airspace when receiving either a Procedural Service, or a 'reduced' radar service, including where Secondary Surveillance Radar (SSR) only is employed. Due to the uncontrolled and 'unknown' Class G airspace environment, it is important that pilots recognise, fully understand, and appropriately manage, any limitations or reductions in ATS capability.
- 1.2 Within Class G airspace, regardless of the ATS being provided, pilots are ultimately responsible for collision avoidance and terrain clearance, and they should **always** consider ATS provision to be constrained by the unpredictable nature of this environment. Such unpredictability and constraints include but are not limited to:
- Aircraft not showing on radar due to slow speed or poor radar cross-section, e.g. gliders and hot air balloons;
 - High performance aircraft manoeuvring in the lateral or vertical planes, and which may not be immediately evident to the controller due to radar update rates;
 - The inability of the controller to detect aircraft due to the vertical or lateral limits of radar cover, or radar clutter caused by effects such as weather and interference.

2 Procedural Service

- 2.1 The provision of a Procedural Service does not require information derived from radar systems. Procedural Service is routinely provided to Instrument Flight Rules (IFR) flights, and on request to Visual Flight Rules (VFR) flights, by Air Traffic Control (ATC) units that are not equipped with radar, or when their radar is unavailable.
- 2.2 When flying in Class G airspace, pilots in receipt of a Procedural Service should be aware of the **high likelihood of encountering conflicting traffic that is unknown to ATC**. Controllers providing a Procedural Service may be able to provide some limited and generic traffic information on those aircraft in the area that they are aware of; however, due to the absence of radar data, the traffic information is unlikely to be specific. Therefore, **in response to traffic information provided by ATC, pilots may in fact gain visual contact with other traffic that is unknown to the controller**. This highlights the importance of always following an Airborne Collision Avoidance System (ACAS) Resolution Advisory (RA) when enunciated.
- 2.3 Recent Airprox events have indicated that some pilots operating under IFR in receipt of a Procedural Service may incorrectly believe that they have right of way over other aircraft routing through the local area. However, in the absence of a priority being communicated by ATC, operating under IFR does not confer any precedence over other aircraft that may be encountered. Therefore, **pilots in receipt of a Procedural Service must still comply with Rule 8 of the Rules of the Air Regulation 2007 (Avoiding Aerial Collisions)**. Pilots should always advise ATC whenever it is necessary to deviate from their clearance in order to comply with Rule 8.

3 Reduced Radar Services

- 3.1 A Traffic Service and a Deconfliction Service can only be provided by a controller using radar. Air traffic controllers generally use two types of radar, often in combination: Primary Surveillance Radar (PSR) and SSR. PSR is normally available in much of the UK and gives horizontal position information on non-transponding aircraft, subject to those aircraft being good reflectors of radio energy and to various atmospheric conditions. SSR is used for most radar service provision and relies on aircraft operating transponders, ideally with mode C selected so that level information is available.
- 3.2 When surveillance performance is degraded (for example due to weather clutter) controllers may still be able to offer a radar service that is reduced to reflect the shortfall in radar capability. Pilots will be advised of any such service reductions using the following Radiotelephony (RT) phraseology:
- ‘(Aircraft identity), reduced traffic information (direction and extent) due to (reason)’.
- 3.3 Where PSR is temporarily unavailable (for example following a failure or during short periods of maintenance), an ATS using SSR alone may be provided. In these circumstances, controllers will limit the extent to which the service is provided and will highlight this to pilots receiving a Traffic or Deconfliction Service through the use of the following RT phraseology:
- ‘(Aircraft identity), reduced traffic information, SSR only’.
- 3.4 When in receipt of a SSR only service in Class G airspace, ATC will only be aware of aircraft that are transponding. **Aircraft that are not equipped with a transponder, or the transponder has not been selected to transmit, will not be detected, and therefore ATC are unable to warn pilots of their proximity. Such aircraft would also not be able to be detected by ACAS**. This situation may arise in large volumes of Class G airspace.

4 Compliance/Action to be Taken

- 4.1 All pilots should ensure that they understand the limitations inherent in a Procedural Service or reduced radar service. In such circumstances, pilots should take appropriate action to ensure the safety of their flight, specifically with regard to avoidance of aerial collision.
- 4.2 Air Operator Certificate (AOC)/Police Air Operator Certificate (PAOC) Holders and Approved Training Organisations should ensure that reductions to ATS provision are included in their safety risk assessments for flights outside controlled airspace. This should specifically include consideration of any reduction to the availability of radar, and appropriate mitigations to address the risks generated.
- 4.3 Aircraft operators should proactively engage with ATC units to establish information on routine levels of ATS provision; the availability of radar, and contingency plans in the event of any reductions to routinely provided services.

5 Further Information

- 5.1 ATS provided in UK Class G airspace, and the associated expectations on pilots, are detailed within CAP 774 (UK Flight Information Services), which is available at: [www.caa.co.uk/CAP 774](http://www.caa.co.uk/CAP774).
- 5.2 CAP 789 (Requirements and Guidance Material for Operators), Chapter 4, specifies the process for aircraft operators to conduct safety risk assessments for flights outside controlled airspace, and is available at [www.caa.co.uk/CAP 789](http://www.caa.co.uk/CAP789).

6 Queries

- 6.1 Any queries or further guidance required as a result of this communication should be addressed to:
 - a) For pilots and AOC/PAOC holders: the assigned Flight Operations Inspector (if applicable) in the first instance. Otherwise, queries should be addressed to the following e-mail address: FSTechnicalSupportTeam@caa.co.uk.
 - b) For ATC providers and Approved Training Organisations:

Intelligence, Strategy and Policy
Safety and Airspace Regulation Group
Civil Aviation Authority
2W, Aviation House
Gatwick Airport South
West Sussex
RH6 0YR

E-mail: ats.enquiries@caa.co.uk

7 Cancellation

- 7.1 This Safety Notice shall remain in force until further notice.