



Issued: 8 September 2011

## REACTION TO ALERTS PROVIDED BY TRAFFIC ALERT AND COLLISION ALERTING SYSTEMS (TCAS) AND OTHER COLLISION WARNING SYSTEMS

**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).

| <b>Applicability:</b>                 |   |
|---------------------------------------|---|
| <b>Aerodromes:</b>                    | Not primarily affected  |
| <b>Air Traffic:</b>                   | All ATS providers   |
| <b>Airspace:</b>                      | All NATMAC Members  |
| <b>Airworthiness:</b>                 | All Aircraft Owners, Operators  |
| <b>Flight Operations:</b>             | All AOC Holders and General Aviation pilots   |
| <b>Licensed/Unlicensed Personnel:</b> | All Flying Training Organisations, and all pilots of aircraft equipped with Traffic Alert and Collision Avoidance System (TCAS) and other collision warning systems |

### 1. Introduction

1.1 On 5 March 2010 an Airprox involving a Boeing 737 (B737) and a foreign military F-15E occurred. In a radio telephony (RT) exchange with air traffic control immediately prior to the event the B737 crew had mentioned 'TCAS'<sup>1</sup> and 'avoiding' with an unintelligible word in between. The controller believed that the B737 crew were responding to a Resolution Advisory (RA) and so deliberately elected not to issue any positive control instructions. In considering the occurrence, the UK Airprox Board (UKAB) expressed concerns that some phraseology used by aircrew when referring to Airborne Collision Avoidance System (ACAS) alerts could be potentially misleading particularly if coupled with poor RT.

- a) In this instance the B737 pilot reported that he had 'TCAS' traffic range 5nm and then an unintelligible phrase relating to 'avoiding'. The controller concerned

<sup>1</sup> Traffic Alert and Collision Avoidance System (TCAS) is an aircraft system providing Airborne Collision Avoidance System (ACAS) functionality. ACAS is a generic term for any aircraft-based system based on secondary surveillance radar (SSR) transponder signals, which operates independently of ground-based equipment to provide pilots with in-flight information (Traffic Advisory) and (in the case of ACAS II) advice (Resolution Advisory) on potential conflicting aircraft that are equipped with SSR transponders. The principal benefit of ACAS as a 'last resort' collision avoidance system is enhanced safety rather than operational benefits such as free routing or increased airspace capacity.

assumed this reference to 'avoiding' and 'TCAS' meant that the B737 pilot was responding to an RA; consequently no avoiding action instructions were passed by ATC. ATC later asked whether the B737 was responding to a TCAS RA, the response to which was 'negative'. A Traffic Advisory (TA) was generated but did not lead to an RA.

- b) Other examples of inappropriate phraseology being routinely used/heard during RT exchanges occur when traffic information is passed by ATC and the response from aircrew include 'TCAS contact', 'TCAS TA' or 'we have traffic on TCAS'.

UKAB subsequently recommended that the CAA remind pilots to comply with standard phraseology in order to minimise the possibility of misleading controllers about TCAS alerts and reactions.

- 1.3 As a consequence, the CAA has published Aeronautical Information Circular P 079/2011, the purpose of which is to remind pilots and Air Traffic Service providers of the required interaction with air traffic control (ATC) immediately following a TCAS RA and subsequent departure from an ATC clearance (including correct RT phraseology). In addition, clarification of the interaction with ATC following a TA (or equivalents from other collision warning systems) is provided.

## **2. Compliance/Action to be Taken**

- 2.1 All Aircraft Owners and Operators should ensure that pilots are appropriately trained and qualified as necessary in the use of ACAS equipment, and that the use of such equipment is clearly articulated within operations manuals.
- 2.2 All pilots of aircraft equipped with TCAS and non-TCAS traffic proximity alerting equipment, all Air Traffic Controllers (ATCO) and all Flight Information Service Officers (FISO) are reminded of the need to be familiar with ACAS carriage and operation requirements (including appropriate RT phraseology) as published in the Air Navigation Order, the Aeronautical Information Publication (AIP) and elsewhere.
- 2.3 All Flying Training Organisations are reminded of the need to ensure appropriate training in the use of ACAS equipment (including associated RT phraseology) within training courses.
- 2.4 The use of inappropriate or incorrect phraseology such as 'TCAS contact', 'TCAS TA' or 'we have traffic on TCAS' is to be avoided during ACAS alert-related RT exchanges.

## **3. General Information**

- 3.1 ACAS carriage requirements are detailed in Article 39(2) and Schedule 5 of the Air Navigation Order 2009. Articles 113 and 114 outline ACAS operation and training requirements.
- 3.2 Requirements for the carriage and operation of ACAS are further detailed in:
  - a) UK AIP GEN 1.5 - AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS - Carriage of Airborne Collision Avoidance Systems (ACAS) in the United Kingdom FIR and UIR;
  - b) UK AIP ENR 1.1.3 - GENERAL FLIGHT PROCEDURES - Use of Airborne Collision Avoidance Systems (ACAS) in the United Kingdom FIR and UIR;
  - c) CAP 493 Manual of Air Traffic Services Part 1 Section 1 Chapter 9;

- d) CAP 413 Radiotelephony Manual Chapter 5;
- e) MAA Regulatory Publications: Air Traffic Management (ATM) 3000 Series Regulatory Article RA 3013 Airborne Collision Avoidance Systems.
- f) MAA Manual of Military Air Traffic Management Chapter 13: Airborne Collision Avoidance System: Traffic Alert and Collision Avoidance System Regulatory Cross-Reference.

3.3 In addition, Eurocontrol has published a series of ACAS II Bulletins and ACAS-related safety messages, each focusing on a different operational theme of interest to both pilots and ATS providers. These are hosted on the Eurocontrol website at:  
[http://www.eurocontrol.int/msa/public/standard\\_page/ACAS\\_Bulletins\\_Safety\\_Messages.html](http://www.eurocontrol.int/msa/public/standard_page/ACAS_Bulletins_Safety_Messages.html).

3.4 E-mail notification of the publication of new ACAS Bulletins is available.

#### **4. Queries**

4.1 Any queries or further guidance required as a result of this communication should be addressed to:

Controlled Airspace Section  
Directorate of Airspace Policy  
CAA House  
45-59 Kingsway  
London WC2B 6TE  
[controlled.airspace@caa.co.uk](mailto:controlled.airspace@caa.co.uk)

#### **5. Cancellation**

5.1 This Safety Notice shall remain in force until further notice