

## Position Paper

05 October 2009

### TRAFFIC COLLISION AVOIDANCE SYSTEM (TCAS) VERSION 7.1 (25<sup>th</sup> September 2009)

#### Background:

Several AEA members, through both crew reports and Flight Data Monitoring (FDM) programmes, have noticed a significant number of initial opposite flight crew reactions to TCAS Resolution Advisories (RA). It is therefore well recognized that the current TCAS II Version 7 includes serious safety flaws which require urgent rectification.

A study commissioned by EUROCONTROL last year showed that TCAS II Version 7.1 would further reduce the risk of a mid-air collision in European airspace by factor of 4. The events that prompted the development of TCAS II Version 7.1 (no reversal in certain critical geometries, and incorrect pilot response to the Adjust Vertical Speed RA and) still continue to occur. The probability of collision, due to the combination of these two safety issues, is in the order of 1 collision every 3 years in the European airspace.

In response to those serious safety concerns, the AEA has worked with Eurocontrol and the European Aviation Safety Agency (EASA) to ensure - through the US RTCA and Eurocae - the development of a new TCAS Version 7.1 standard. This new standard has now been approved and solutions are becoming available on the market.

#### AEA position:

In the interest of flight safety, the AEA stresses the need to mandate TCAS 7.1 on all aircraft as a matter of priority. The AEA members commit to equip their aircraft with TCAS 7.1 as soon as possible whenever feasible ahead of legal mandates.

The AEA calls on the European Aviation Safety Agency (EASA) to further fulfil its responsibility as European safety regulator and to issue as a matter of priority an EASA rule requiring all aircraft (EU as well as non-EU) flying through EU airspace to be retrofitted with the new TCAS 7.1:

- Newly delivered aircraft should be equipped as soon as service bulletins are available
- Those existing aircraft, which only require a software upgrade, should be retrofitted at the latest within 2 years after availability of relevant Service Bulletins
- Those existing aircraft, which require a more extensive hardware upgrade, should be retrofitted at the latest 5 years after the availability of relevant Service Bulletins

In addition, the AEA calls on ICAO and IATA to support a worldwide mandate for TCAS 7.1

This position was adopted by the AEA TOC at its meeting in Hamburg on 25<sup>th</sup> September 2009.

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