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**AVIATION 205**

**COVER NOTE**

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| Subject:      | Draft COMMISSION REGULATION (EU) No .../2011 of [...] laying down common airspace usage requirements and operating procedures for airborne collision avoidance |

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Delegations will find attached the Commission document D014946/01.

Encl.: D014946/01

Draft

**COMMISSION REGULATION (EU) No .../2011**

**of [...]**

**laying down common airspace usage requirements and operating procedures for  
airborne collision avoidance**

**(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC <sup>(1)</sup>, and in particular Articles 8(1), 8(5), and 9(4) thereof,

Whereas:

- (1) Safety requirements should be imposed on operators of aircraft registered in a Member State or registered in a third country and operated by a Union operator, and on operators of aircraft used by a third country operator within the Union.
- (2) Following a series of mid-air encounters in which safety margins have been lost, including accidents in Yaizu (Japan) in 2001 and in Überlingen (Germany) in 2002, the current airborne collision avoidance system software should be upgraded. The studies concluded that with the current airborne collision avoidance system software there is probability of a mid-air collision risk of  $2.7 \times 10^{-8}$  per flight hour. Therefore the current ACAS II version 7.0 is considered to be of an unacceptable safety risk.
- (3) It is necessary to introduce a new software version of the airborne collision avoidance system (ACAS II) to avoid mid-air collision of all aircraft flying in the airspace covered by Regulation (EC) No 216/2008.
- (4) To ensure the highest possible safety standards, aircraft which do not fall within the scope of the mandatory carriage requirement but were equipped with ACAS II prior to

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<sup>(1)</sup> OJ L 79, 19.3.2008, p. 1.

entry into force of this Regulation should install ACAS II containing the latest version of collision avoidance software.

- (5) In order to ensure that the safety benefits associated with the new software version are achieved, all aircraft need to be equipped as soon as practically possible. However, it is necessary to provide a realistic time for the aeronautical industry to adapt to this new Regulation taking into account the availability of new equipment.
- (6) The Agency prepared draft implementing rules and submitted them as an opinion to the Commission in accordance with Article 19(1) of Regulation (EC) No 216/2008.
- (7) The measures provided for in this Regulation are in accordance with the opinion of the European Aviation Safety Agency Committee established by Article 65 of Regulation (EC) No 216/2008,

HAS ADOPTED THIS REGULATION:

*Article 1*  
***Subject matter and scope***

This Regulation lays down common airspace usage requirements and operating procedures for airborne collision avoidance to be fulfilled by:

- (a) operators of aircraft referred to under Article 4(1)(b) and (c) of Regulation (EC) No 216/2008 undertaking flights into, within or out of the Union, and
- (b) operators of aircraft referred to under Article 4(1)(d) of Regulation (EC) No 216/2008 undertaking flights within the airspace above the territory to which the Treaty applies as well as in any other airspace where Member States apply Regulation (EC) No 551/2004<sup>2</sup>.

*Article 2*  
***Definitions***

For the purposes of this Regulation the following definitions shall apply:

- (1) ‘airborne collision avoidance system (ACAS)’ means an aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders;
- (2) ‘airborne collision avoidance system II (ACAS II)’ means an airborne collision avoidance system which provides vertical resolution advisories in addition to traffic advisories;
- (3) ‘resolution advisory (RA) indication’ means an indication given to the flight crew recommending a manoeuvre intended to provide separation from all threats or a manoeuvre restriction intended to maintain existing separation;

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<sup>(2)</sup> OJ L 96, 31.3.2004, p. 1.

(4) ‘traffic advisory (TA) indication’ means an indication given to the flight crew that the proximity of another aircraft is a potential threat.

#### *Article 3*

#### ***Airborne Collision Avoidance System (ACAS)***

1. The aeroplanes referred to in Section I of the Annex to this Regulation shall be equipped with and operated in accordance with the rules and procedures as specified in the Annex.
2. Member States shall ensure that operation of aeroplanes referred to in Article 1(2)(a) of Regulation (EC) No 216/2008 comply with the rules and procedures specified in the Annex in accordance with the conditions set out in that Article.

#### *Article 4*

#### ***Special provisions applying to operators subject to Council Regulation (EEC) No 3922/91***

1. By derogation from provisions OPS 1.668 and OPS 1.398 of Annex III to Council Regulation (EEC) No 3922/91<sup>3</sup>, Article 3 and the Annex to this Regulation shall apply for operators of aeroplanes referred to in Article 1(a).
2. Any other obligation imposed on air operators by Regulation (EEC) No 3922/91 as regards the approval, installation or operation of equipment shall continue to apply to ACAS II.

#### *Article 5*

#### ***Entry into force and application***

1. This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.
2. Articles 3 and 4 shall apply as of 1 March 2012.
3. By way of derogation from paragraph 2, in the case of aircraft with an individual certificate of airworthiness issued before 1 March 2012, the provisions of Article 3 and 4 shall apply as of 1 December 2015.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [...]

*For the Commission*  
*The President*

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<sup>(3)</sup> OJ L 373, 31.12.1991, p. 4.

## ANNEX

### **Airborne Collision Avoidance Systems (ACAS) II**

#### **[Part-ACAS]**

#### **Section I — ACAS II Equipment**

##### **AUR.ACAS.1005 Performance Requirement**

- (1) The following turbine-powered aeroplanes shall be equipped with collision avoidance logic version 7.1 of ACAS II:
  - (a) aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg, or
  - (b) aeroplanes authorised to carry more than 19 passengers.
- (2) Aircraft not referred to in point (1) but which will be equipped on a voluntary basis with ACAS II, shall have collision avoidance logic version 7.1;
- (3) Point (1) shall not apply to unmanned aircraft systems.

#### **Section II — Operations**

##### **AUR.ACAS.2005 Use of ACAS II**

- (1) ACAS II shall be used during flight, except as provided in the Minimum Equipment List as specified in Annex III to Council Regulation (EEC) No 3922/91, in a mode that enables RA indications to be produced for the flight crew when undue proximity to another aircraft is detected, unless inhibition of RA indication mode (using TA indication only or equivalent) is called for by an abnormal procedure or due to performance limiting conditions.
- (2) When an RA indication is produced by ACAS II, :
  - (a) the pilot flying shall immediately conform to the indications of the RA indication, even if this conflicts with an Air Traffic Control (ATC) instruction, unless doing so would jeopardise the safety of the aircraft;
  - (b) the flight crew, as soon as permitted by workload, shall notify the appropriate ATC unit of any RA which requires a deviation from the current ATC instruction or clearance;
  - (c) when the conflict is resolved, the aircraft shall:
    - (i) be promptly returned to the terms of the acknowledged ATC instruction or clearance and ATC notified of the manoeuvre, or
    - (ii) comply with any amended ATC clearance or instruction issued.

**AUR.ACAS.2010 ACAS II Training**

Operators shall establish ACAS II operational procedures and training programmes so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.