EASA

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Title	Introduction of ACAS II software version 7.1
NPA Number	NPA 2010-03

UK CAA (Requirements@srg.caa.co.uk) has placed **19** unique comments on this NPA:

Cmt	Segment description	Pag	Comment	Attachme
22	(General Comments)	0	**Paragraph No:** All **Comment:** Whilst the current Standardised European Rules of the Air (SERA) consultation is limited to ICAO Annex 2 transposition, the SERA IR mandate requires the content of ICAO Doc 8168 and Doc 4444 (amongst others) to be considered. Therefore, pilot/controller ACAS procedures and RT will be amongst the potential content of subsequent SERA development. It is understood that principles of delineation between SERA, and EASA ATS and OPS material have been proposed, which would ensure that joint controller/pilot requirements and procedures would be captured within SERA, whilst those that are only of specific pertinence to aircraft operators, pilots, controllers, ATS providers, would be specified in their particular IR set. Therefore, EASA must recognise that the elements of this draft IR, which relate to pilot actions and RT procedures, are likely to need to be removed when transposed into the subsequent SERA IR Part B developments. **Justification:** Consistent content and avoidance of duplication.	
23	(General Comments)	0	**Paragraph No:** All **Comment:** There are references to both aeroplanes and aircraft in this NPA and it's not always clear that the distinction is intended. It is recommended that these references be reviewed as there are some ACAS installations on rotorcraft and consequently confusion could arise. **Justification:** Clarification	
24	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS (AUR)	7	**Page 7, Paragraph No: Draft IR, Article 2, Definitions** **Comment:** Definition of 'RA' – what is the source of this definition? ICAO Doc 8168 Sect 3 Chp 3 para 3.1.1 states: 'RAs propose vertical manoeuvres that are predicted to increase or maintain separation from threatening aircraft'. The EASA definition also does not compliment the text used in the AMC.AUR.ACAS.200 para 1.1 which closely reflects ICAO, and neither of which talk about avoiding an airborne collision as used in the EASA definition. **Justification:** Commonality with ICAO and consistency in the IR **Proposed Text:** 'Resolution Advisory (RA) means a proposed vertical manoeuvre predicted to increase or maintain separation from	

			threatening aircraft.'	
25	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS (AUR)	7	**Page 7, Paragraph No: Draft IR, Article 2, Definitions** **Comment:** Definition of 'TA' – what is the source of this definition? ICAO Doc 8168 Sect 3 Chp 3 para 3.1.1 states: '….traffic advisories (TAs), which are intended to prompt visual acquisition and to act as a warning that an RA may follow. TAs indicate the approximate positions of intruding aircraft that may later cause resolution advisories.' The EASA definition also does not compliment the text used in the AMC.AUR.ACAS.200 para 1.1 which closely reflects ICAO, and neither of which talk about avoiding a potential collision threat as used in the EASA definition **Justification:** Commonality with ICAO and consistency in the IR **Proposed Text:** 'Traffic Advisory (TA) means an indication of the approximate positions of intruding aircraft that may later cause resolution advisories (RA), and are intended to prompt visual acquisition.'	
26	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS (AUR)	7	**Page 7, Paragraph No: Draft IR, Article 4, Entry Into Force** **Comment:** The wording could be improved, without changing its meaning. **Justification:** Clarification. **Proposed Text:** '1. This Regulation shall enter into force on 1 March 2012. 2. Notwithstanding 1, for aeroplanes with an individual certificate of airworthiness issued before 1 March 2012, this Regulation shall only apply after 1 March 2014.'	
27	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS - ANNEX 1	8	**Page 8, Paragraph No: AUR.ACAS.100, Performance Requirement** **Comment:** There are some ACAS installations on rotorcraft. Should paragraph (c) then apply to those? **Justification:** Clarification	
28	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS - ANNEX 1	8	**Page 8, Paragraph No: AUR.ACAS.100, Performance Requirement, Para (c)** **Comment:** Section AUR.ACAS.100 para (c), the wording "any other aeroplane equipped with ACAS II" does not fit in to the main clause ending "…. aeroplanes which :" **Justification:** Editorial **Proposed Text:** "(c) are equipped with ACAS II".	
29	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS - ANNEX 1	8	**Page 8, Paragraph No: AUR.ACAS.200, Use of ACAS II, Para (a)** **Comment:** Para (a) appears to prevent the use of ACAS II in TA-only mode in accordance with aircraft operator Operations Manuals or where circumstances dictate. Is this the intended purpose (see ICAO Doc 8168 Pt 1 Chap 3 para 3.1.3 Note 2 and AMC.AUR.ACAS.200 para 1.3 Note 2)? **Justification:**	

			Clarification	
30	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS - ANNEX 1	8	**Page 8, Paragraph No: AUR.ACAS.200, Use of ACAS II, Para (b)** **Comment:** If the intention is to paraphrase ICAO Doc 8168 PANS-OPS Pt 1 Chap 3 para 3.2 and the proposed AMC.AUR.ACAS.200, then at the very least a new sub-para should be added. **Justification:** Consistency with ICAO **Proposed Text:** AMC.AUR.ACAS.200 new sub-para 2: 'the pilot shall not manoeuvre in the opposite sense to an RA'; Renumber the current sub-para 2 as 3.	
31	I Draft Opinion - Implementing Rule – AIRSPACE USAGE REQUIREMENTS - ANNEX 1	8	**Page 8, Paragraph No: AUR.ACAS.200, Use of ACAS II Para (b)** **Comment:** It is essential that ATC are informed of a TCAS RA as soon as possible. This is required by ICAO Doc 8168 para 3.2 4) and should be included in the IR material rather than the AMC.ACAS.200 para 2.1 c) 4) and 8). **Justification:** Minimises the potential for ATC to give instructions contrary to the RA **Proposed Text:** '(b) When an RA is produced by ACAS II, 1. the pilot flying shall immediately take the corrective action indicated by the RA, even if this conflicts with an Air Traffic Control (ATC) instruction, unless doing so would jeopardise the safety of the aeroplane, ~~and~~ 2. as soon as possible, as permitted by flight crew workload, notify the appropriate ATC unit of any RA which requires a deviation from the current ATC instruction or clearance; and 3. when clear of conflict is enunciated, the aeroplane shall be promptly returned to the terms of the acknowledged ATC instruction or clearance, and ATC notified.'	
32	II Draft Decision - AMC Part-AUR	9	**Page 9, Paragraph No: AMC.AUR.ACAS.200, Use of Airborne Collision Avoidance System (ACAS) II** **Comment:** The word "should" is used throughout the AMC, even in places where the AMC is repeating the rule. This has the effect of the AMC alleviating the rule, which is not permissible. The use of "should" in the AMC should be reviewed, especially where it undermines the proposed rule and creates a disparity with ICAO requirements. **Justification:** Disparity with the proposed rules and ICAO requirements. **Proposed Text:** Replacement of 'should' with 'shall' where appropriate.	
33	III Draft Decision AMC 20-15 - 2 REFERENCE MATERIAL	11	**Page 11, Paragraph No: AMC 20-15, Para 2-1, EU/EASA** **Comment:** The list of CS references should include CS 27 and CS 29 for rotorcraft as there are some ACAS installations on rotorcraft.	

34	III Draft Decision AMC 20-15 - 3 MINIMUM EQUIPMENT QUALIFICATION	11	**Page 11, Paragraph No: AMC 20-15, Para 3, Minimum Equipment Qualification** **Comment:** The proposed AMC 20-15 does not currently identify the minimum equipment standard of ACAS 7.1, noting that the ETSO standard ETSO-C119c does not currently require compliance with ACAS 7.1 either. This should be added/amended. **Justification:** In anticipation of the proposed IR to require ACAS 7.1 being adopted.	
35	III Draft Decision AMC 20-15 - 6 CERTIFICATION TESTING	14 - 15	**Page 14, Paragraph No: AMC 20-15, Para 5.6 (a) Notes 1 and 2** **Comment:** This paragraph still allows use of Gray (Gillham) parallel altitude databus interface. Consideration should be given to precluding its use in new ACAS installations. **Justification:** To prevent the potential failure mode – especially if EASA AD 2006-0625 is amended or deleted.	
36	III Draft Decision AMC 20-15 - 6 CERTIFICATION TESTING	14 - 15	**Page 15, Paragraph No: AMC 20-15, Para 6.5** **Comment:** It is suggested that there should be some guidance on certification testing required for upgrades to ACAS 7.1 for existing installations. **Justification:** Current text only addresses updates from 6.04 A standard.	
37	III Draft Decision AMC 20-15 - Appendix 1 - ACAS II/Mode S Transponder Ground Testing Precautions	17	**Page 17, Paragraph No: AMC 20-15 Appendix 1** **Comment:** We welcome the addition of Appendix 1.	
38	C. APPENDICES	19	**Paragraph No: Appendices - General** **Comment:** Given that differing styles of ACAS display are in service, the development of an Agency view on the benefits of moving towards a single mandated display format would be constructive.	
39	C. APPENDICES	19	**Paragraph No: Appendices - General** **Comment:** Regular updates on the progress of ICAO work to mandate ACAS Software V7.1 would be constructive.	
40	C. APPENDICES - I. Impact Assessment - 5.0 Conclusion	25	**Page 25, Paragraph No: Appendices** **Comment:** There are several typographical errors in the Appendices. All are relatively unimportant, with the exception of Table 1 (page 25), which appears to state that a TCAS v7.1 retrofit by Manufacturer A could cost 'up to €75 for older aeroplanes'. This is surely not correct?	

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