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# AIC

Nr 18/15 10 DEC
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## AIRBORNE COMMUNICATIONS, NAVIGATION AND SURVEILLANCE REQUIREMENTS FOR CIVIL AIRCRAFT

### 1. INTRODUCTION

**This AIC cancels and replaces AIC 05/15.** The purpose of this AIC is to provide guidance and/or awareness to AOC holders and general aviation stakeholders (as applicable) on the implementation of various commission regulations. Recipients are asked to ensure that this AIC is made available to all staff members who may have an interest in this information. Note: The information contained within this AIC is extracted from the referenced regulations to highlight relevant aircraft requirements and specific requirements, refer to the regulations in full for detailed obligations, requirements and information. It is the users' responsibility to make sure that they are using the most up-to-date versions (latest amendments) of the regulations.

### 2. REGULATIONS AND REQUIREMENTS

COMMISSION REGULATION (EC) No 29/2009 (16 January 2009) as amended by COMMISSION IMPLEMENTING REGULATION (EU) 2015/310 Requirements on data link services for single European sky

Obligations of operators for data link communications: Article 6

Requirement date: Shall apply to all flights operating as general air traffic in accordance with instrument flight rules within the airspace defined in Annex I Parts A and B above FL 285 from 5 February 2018.

Refer to 29/2009 to determine specific aircraft applicability and airspace regions.

Eur-Lex 07.40.30 Celex ID:32009R0029

Hyperlink: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009R0029:EN:NOT>

Refer to 2015/310 to determine specific aircraft applicability and airspace regions.

Eur-Lex 07.40.30 Celex ID:32015R0310

Hyperlink: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R0310>

For certification specification data refer to CS-ACNS Book 2 – Subpart D –Surveillance (SUR).

Hyperlink: <http://easa.europa.eu/agency-measures/certification-specifications.php>

Exemptions: Commission Decision of 20 May 2011 on exemptions under Article 14

Exemptions: Commission Decision of 9 December 2011 on exemptions under Article 14

EASA Report: Technical issues in the implementation of Regulation (EC) No 29/2009 (Data Link)

(found under the heading Interoperability (Regulation 552/2004) in the attached hyperlink)

Hyperlink: [http://ec.europa.eu/transport/modes/air/single\\_european\\_sky/implementing\\_rules\\_en.htm](http://ec.europa.eu/transport/modes/air/single_european_sky/implementing_rules_en.htm)

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**COMMISSION IMPLEMENTING REGULATION (EU) No 1206/2011 (22 November 2011)**  
**Aircraft identification for surveillance for the single European sky (Aircraft identification and SSR Code)**

Operator requirements: Article 9

Requirement date: 9 February 2012

Refer to 1206/2011 to determine specific aircraft applicability.

Eur-Lex 07.40.20 Celex ID:32011R1206.

Hyperlink: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011R1206:EN:NOT>

**COMMISSION IMPLEMENTING REGULATION (EU) No 1207/2011 (22 November 2011)**  
**Amended by COMMISSION IMPLEMENTING REGULATION (EU) No 1028/2014 (26 September 2014)**  
**Performance and the interoperability of surveillance for the single European sky (24-bit ICAO address, Mode S-A/C, ELS & EHS, ADS-B)**

Interoperability (operator) requirements: Article 5 and Annex II Parts A & B

Requirement dates: Article 5 Paragraph 4; 8 January 2015, 8 June 2016 and 7 December 2017

Requirement dates: Article 5 Paragraph 5; 7 December 2017 and June 2020

Refer to 1207/2011 to determine specific aircraft applicability and requirement dates.

Eur-Lex 07.40.20 Celex ID:32011R1207.

Hyperlink: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1426161453383&uri=CELEX:32011R1207>

For certification specification data refer to CS-ACNS Book 2 – Subpart D – Surveillance (SUR).

Hyperlink: <http://easa.europa.eu/agency-measures/certification-specifications.php>

**COMMISSION IMPLEMENTING REGULATION (EU) No 1079/2012 (16 November 2012)**  
**Requirements for voice channels spacing (8.33 kHz) for the single European sky**

Obligations of operators: Article 4(2),(4) and Article 5

Requirement dates: 17 November 2013 (equipment in-service) and 1 January 2014 (airspace class A, B or C) and 1 January 2018.

Refer to 1079/2012 to determine specific aircraft applicability, airspace regions and requirements.

Eur-Lex 07.40.20.00 Celex ID:32012R1079.

Hyperlink: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1401464354165&uri=CELEX:32012R1079>

For certification specification data refer to CS-ACNS Book 2 – Subpart B – Communications (COM).

Hyperlink: <http://easa.europa.eu/agency-measures/certification-specifications.php>

**COMMISSION REGULATION (EU) No 1332/2011 (16 December 2011)**  
**Requirements and operating procedures for airborne collision avoidance (ACAS II logic Version 7.1)**

Obligations of operators: Article 3

Requirement dates: 1 March 2012 and 1 December 2015

Refer to 1332/2011 to determine specific aircraft applicability and requirements.

Eur-Lex 07.40.30 Celex ID 32011R1332

Hyperlink: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011R1332:EN:NOT>

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**COMMISSION IMPLEMENTING REGULATION (EU) No 965/2012 (5 October 2012) as amended**  
**Technical requirements and administrative procedures related to Air Operations**

Eur-Lex 07.40.30 Celex ID:32012R0965

Hyperlink: <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32012R0965>

Hyperlink: [https://www.easa.europa.eu/flightstandards/air\\_ops.html](https://www.easa.europa.eu/flightstandards/air_ops.html)

**COMMERCIAL AIR TRANSPORT OPERATIONS: ANNEX IV PART-CAT and associated AMC/GM**

Subpart D (CAT.IDE) – Instruments, Data, Equipment

CAT.IDE.A/H.125	Operations under VFR by day — flight and navigational instruments and associated equipment
CAT.IDE.A/H.130	Operations under IFR or at night — flight and navigational instruments and associated equipment
CAT.IDE.A/H.135	Additional equipment for single-pilot operation under IFR
CAT.IDE.A.140	Altitude alerting system
CAT.IDE.H.145	Radio altimeters
CAT.IDE.A.150	Terrain awareness warning system (TAWS)
CAT.IDE.A.155	Airborne collision avoidance system (ACAS)
CAT.IDE.A/H.160	Airborne weather detecting equipment
CAT.IDE.A/H.185	Cockpit voice recorder
CAT.IDE.A/H.190	Flight data recorder
CAT.IDE.A/H.195	Data link recording (8 April 2014)
CAT.IDE.A/H.200	Combination recorder
CAT.IDE.A.280	Emergency locator transmitter (ELT)
CAT.IDE.A.325	Headset
CAT.IDE.A.330	Radio communication equipment
CAT.IDE.A.335	Audio selector panel
CAT.IDE.A.340	Radio equipment for operations under VFR over routes navigated by reference to visual landmarks
CAT.IDE.A.345	Communication and navigation equipment for operations under IFR or under VFR over routes not navigated by reference to visual landmarks
CAT.IDE.A.350	Transponder
CAT.IDE.A.355	Electronic navigation data management

**SPECIFIC APPROVALS: ANNEX V PART-SPA and associated AMC/GM**

Subpart B (SPA.PBN)	Performance-Based Navigation (PBN) Operations
Subpart C (SPA.MNPS)	Operations with Specified Minimum Navigation Performance (MNPS)
Subpart D (SPA.RVSM)	Operations in Airspace with Reduced Vertical Separation Minima (RVSM)
Subpart E (SPA.LVO)	Low Visibility Operations (LVO)
Subpart H (SPA.NVIS)	Helicopter Operations with Night Vision Imaging Systems (NVIS)

**3. EUROCONTROL INFORMATION**

EUROCONTROL has prepared a summary offering an overview of avionics requirements for civil aircraft. The intention is to list key avionics requirements including those recently or soon to be brought into force. Information is provided under the headings of Communications, Navigation, Surveillance and Safety Assurance.

Hyperlink: <http://www.eurocontrol.int/articles/requirements-civil-aircraft>

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#### 4. EASA AMC-20 GENERAL MEANS OF COMPLIANCE FOR AIRWORTHINESS OF PRODUCTS, PARTS AND APPLIANCES

Some AMC's border between the airworthiness and the operations domain and therefore contain a lot of material related to operational requirements. Refer to EASA website

AMC 20-4A	AIRWORTHINESS APPROVAL AND OPERATIONAL CRITERIA FOR THE USE OF NAVIGATION SYSTEMS IN EUROPEAN AIRSPACE DESIGNATED FOR BASIC RNAV OPERATIONS
AMC 20-5	AIRWORTHINESS APPROVAL AND OPERATIONAL CRITERIA FOR THE USE OF THE NAVSTAR GLOBAL POSITIONING SYSTEM (GPS)
AMC 20-9	ACCEPTABLE MEANS OF COMPLIANCE FOR THE APPROVAL OF DEPARTURE CLEARANCE VIA DATA COMMUNICATIONS OVER ACARS
AMC 20-10	ACCEPTABLE MEANS OF COMPLIANCE FOR THE APPROVAL OF DIGITAL ATIS VIA DATA LINK OVER ACARS
AMC 20-12	RECOGNITION OF FAA ORDER 8400.12A FOR RNP 10 OPERATIONS
AMC 20-15	AIRWORTHINESS CERTIFICATION CONSIDERATIONS FOR THE AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS II) WITH OPTIONAL HYBRID SURVEILLANCE
AMC 20-24	CERTIFICATION CONSIDERATIONS FOR THE ENHANCED ATS IN NON-RADAR AREAS USING ADS-B SURVEILLANCE (ADS-B-NRA) APPLICATION VIA 1090 MHZ EXTENDED SQUITTER
AMC 20-25	AIRWORTHINESS AND OPERATIONAL CONSIDERATION FOR ELECTRONIC FLIGHT BAGS (EFBs)
AMC 20-26	AIRWORTHINESS APPROVAL AND OPERATIONAL CRITERIA FOR RNP AUTHORISATION REQUIRED (RNP AR) OPERATIONS
AMC 20-27A	AIRWORTHINESS APPROVAL AND OPERATIONAL CRITERIA FOR RNP APPROACH (RNP APCH) OPERATIONS INCLUDING APV BARO-VNAV OPERATIONS
AMC 20-28	AIRWORTHINESS APPROVAL AND OPERATIONAL CRITERIA RELATED TO AREA NAVIGATION FOR GLOBAL NAVIGATION SATELLITE SYSTEM APPROACH OPERATION TO LOCALISER PERFORMANCE WITH VERTICAL GUIDANCE MINIMA USING SATELLITE BASED AUGMENTATION SYSTEM

Hyperlink: <http://easa.europa.eu/agency-measures/certification-specifications.php#AMC-20>

This AIC expires 6 months after the issue date or will be incorporated into the AIP.