

European Aviation Safety Agency

**Certification Specifications
for
Aircraft Noise**

CS-36

**Amendment 2
31 August 2009**

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AIRCRAFT NOISE

PREAMBLE

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PREAMBLE

CS-36 Amendment 2 Effective: 07/09/2009

The following is a list of paragraphs affected by this amendment:

Book 2

- GM 36.1 (p) Amended
- GM 36.1 (q) Amended
- GM 36.1 (r) Added
- GM 36.1 final section

CS-36 Amendment 1 Effective: 03/04/2007

The following is a list of paragraphs affected by this amendment:

- | | |
|----------------------------------|-----------------------|
| Title page | Amended |
| Contents | Contents page added |
| Preamble | Preamble added |
| Book 1 | Title page amended |
| Book 2 | |
| • AMC 36.1 (a) - (i) | Amended |
| • GM 36.1 (a) - (h), (j) and (q) | Amended |
| • GM 36.1 (i) | Deleted and reserved |
| • GM 36.1 | Final section Amended |

EASA Certification Specifications
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Book 1

Noise Requirements

CS-36 BOOK 1

CS 36.1 Aircraft noise

(See AMC 36.1 and GM 36.1)

The aircraft must be designed to comply with the applicable noise requirements defined under 21A.18(a).

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EASA Certification Specifications
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Book 2

Acceptable Means of Compliance and
Guidance Material

CS-36 BOOK 2**AMC 36.1 Aircraft noise**

The acceptable means of compliance for aircraft noise are presented in:

- (a) for aeroplanes for which Chapter 2 of Annex 16 to the Chicago Convention¹, Volume I, Part II is applicable, Appendix 1 of Annex 16, Volume I;
- (b) for aeroplanes for which Chapter 3 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of Annex 16, Volume I;
- (c) for aeroplanes for which Chapter 4 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of Annex 16, Volume I;
- (d) for aeroplanes for which Chapter 5 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of Annex 16, Volume I;
- (e) for aeroplanes for which Chapter 6 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 3 of Annex 16, Volume I;
- (f) for helicopters for which Chapter 8 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of Annex 16, Volume I;
- (g) for aeroplanes for which Chapter 10 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 6 of Annex 16, Volume I;
- (h) for helicopters for which Chapter 11 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 4 of Annex 16, Volume I; and
- (i) for aeroplanes for which Chapter 12 of Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 1 of Annex 16, Volume I.

GM 36.1 Aircraft noise

Guidance material for the application of the certification specifications for aircraft noise is presented in:

- (a) for equations for the calculation of noise levels as a function of take-off mass, Attachment A to Annex 16 to the Chicago Convention, Volume I;
- (b) for evaluating an alternative method of measuring helicopter noise during approach, Attachment D to Annex 16 to the Chicago Convention, Volume I;
- (c) for applicability of noise certification standards for propeller-driven aeroplanes, Attachment E to Annex 16, Volume I;
- (d) for equivalent procedures for subsonic jet aeroplanes, Chapter 2 of the International Civil Aviation Organisation (ICAO) Environmental Technical Manual;
- (e) for equivalent procedures for propeller-driven aeroplanes over 8,618 kg, Chapter 3 of the ICAO Environmental Technical Manual;

¹ The Convention on International Civil Aviation on 7 December 1944

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- (f) for equivalent procedures for propeller-driven aeroplanes not exceeding 8,618 kg, Chapter 4 of the ICAO Environmental Technical Manual;
- (g) for equivalent procedures for helicopters, Chapter 5 of the ICAO Environmental Technical Manual;
- (h) for evaluation methods, Chapter 6 of the ICAO Environmental Technical Manual;
- (i) [Reserved];
- (j) for control of noise certification computer programme software and documentation related to static to flight projection processes, Chapter 8 of the ICAO Environmental Technical Manual;
- (k) for calculation of confidence intervals, Appendix 1 of the ICAO Environmental Technical Manual;
- (l) for identification of spectral irregularities, Appendix 2 of the ICAO Environmental Technical Manual;
- (m) for a procedure for removing the effects of ambient noise levels from aeroplane noise data, Appendix 3 of the ICAO Environmental Technical Manual;
- (n) for reference tables and figures used in the manual calculation of Effective Perceived Noise Level, Appendix 4 of the ICAO Environmental Technical Manual;
- (o) for worked examples of calculation of reference flyover height and reference conditions for source noise adjustments for certification of light propeller driven aeroplanes, Appendix 5 of the ICAO Environmental Technical Manual;
- (p) for noise data corrections for tests at high altitude test sites, Appendix 6 of the ICAO Environmental Technical Manual;
- (q) for reassessment criteria for the recertification of an aeroplane to Annex 16 to the Chicago Convention, Volume 1, Chapter 4, Appendix 8 of the ICAO Environmental Technical Manual; and
- (r) for the use of DGPS-based time space position information tracking systems, Appendix 10 of the ICAO Environmental Technical Manual.

References throughout these Certification Specifications to the ICAO Environmental Technical Manual refer to the ICAO Environmental Technical Manual on the Use of Procedures in the Noise Certification of Aircraft, ICAO/CAEP/7 approved revision, 2 April 2007 (based on ICAO Doc 9501 AN/929; Third Edition - 2004).

[Amdt. 36/1, Amdt. 36/2]