



# Transposition of provisions on electronic flight bags from ICAO Annex 6

RELATED NPA/CRD: 2016-12 — RMT.0601

## EXECUTIVE SUMMARY

The objective of this Opinion is to maintain a high level of safety with regard to the use of electronic flight bags (EFBs) by all types of operators.

This Opinion proposes to amend Regulation (EU) No 965/2012 by:

- introducing EFB-related definitions into Annex I (Definitions);
- introducing implementing rules (IRs) for the use of EFBs by commercial air transport (CAT) operators, including an operational approval for the use of EFB applications having a failure condition limited to minor; and
- introducing proportionate requirements for the use of EFBs by non-commercial operations with complex motor-powered aircraft (NCC)/commercial specialised operations (SPO)/SPO with complex motor-powered aircraft (CMPA) operators.

The proposed amendments are expected to maintain the current level of safety while ensuring compliance with the ICAO Standards and Recommended Practices (SARPs) and limiting the regulatory burden due to the introduction of the operational approval for CAT operations.

<b>Action area:</b>	Airlines		
<b>Affected rules:</b>	Commission Regulation (EU) No 965/2012:		
	<ul style="list-style-type: none"> <li>— Annex I (Definitions),</li> <li>— Annex II (Part-ARO),</li> <li>— Annex IV (Part-CAT),</li> <li>— Annex V (Part-SPA),</li> <li>— Annex VI (Part-NCC),</li> <li>— Annex VII (Part-NCO),</li> <li>— Annex VIII (Part-SPO)</li> </ul>		
<b>Affected stakeholders:</b>	Operators, competent authorities		
<b>Driver:</b>	Level playing field	<b>Rulemaking group:</b>	Yes
<b>Impact assessment:</b>	Full	<b>Rulemaking Procedure:</b>	Standard

• EASA rulemaking process milestones



## Table of contents

<b>1. About this Opinion.....</b>	<b>3</b>
1.1. How this Opinion was developed .....	3
1.2. The next steps.....	3
<b>2. In summary — why and what.....</b>	<b>4</b>
2.1. Why we need to change the rules — issue/rationale .....	4
2.2. What we want to achieve — objectives .....	4
2.3. How we want to achieve it — overview of the proposals.....	4
2.3.1. Annex I (Definitions) .....	4
2.3.2. Annex II (Part-ARO).....	5
2.3.3. Annex IV (Part-CAT) .....	5
2.3.4. Annex V (Part-SPA) .....	5
2.3.5. Annex VI (Part-NCC).....	5
2.3.6. Annex VII (Part-NCO) .....	5
2.3.7. Annex VIII (Part-SPO).....	6
2.4. What are the stakeholders’ views — outcome of the consultation.....	6
2.5. What are the expected benefits and drawbacks of the proposals .....	6
<b>3. References .....</b>	<b>8</b>
3.1. Affected regulations .....	8
3.2. Related decisions .....	8
3.3. Other reference documents .....	9
<b>4. Appendix.....</b>	<b>10</b>



## 1. About this Opinion

### 1.1. How this Opinion was developed

The European Aviation Safety Agency (EASA) developed this Opinion in line with Regulation (EC) No 216/2008<sup>1</sup> (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure<sup>2</sup>.

This rulemaking activity is included in EASA's Rulemaking Programme for 2014–2017<sup>3</sup> under rulemaking task RMT.0601. The scope and timescales of the task were defined in the related ToR<sup>4</sup>.

The *draft* text of this Opinion has been developed by EASA based on the input of Rulemaking Group (RMG) RMT.0601 for CAT, NCC and SPO with CMPA operations and for non-commercial operations with other-than-complex motor-powered aircraft (NCO) based on the outcome of a technical consultation with general aviation stakeholders organised by EASA to ensure proportionate requirements for this type of operations. All interested parties were consulted through Notice of Proposed Amendment (NPA) 2016-12 'Transposition of provisions on electronic flight bags from ICAO Annex 6'<sup>5,6</sup>. 266 comments were received from interested parties, including EFB developers, national aviation authorities (NAAs) and operators.

EASA has addressed and responded to the comments received on the NPA. The comments received and the EASA responses thereto are presented in Comment-Response Document (CRD) 2016-12<sup>7</sup>.

The *final* text of this Opinion and of the draft regulation has been developed by EASA. The draft rule text proposed by EASA is published on the EASA website<sup>8</sup>.

The major milestones of this rulemaking activity are presented on the title page.

### 1.2. The next steps

This Opinion contains the proposed amendments to Regulation (EU) No 965/2012 and their potential impacts. It is submitted to the European Commission to be used as a technical basis in order to prepare an EU regulation.

For information, EASA published the draft text for the related EASA decision containing acceptable means of compliance (AMCs)/guidance material (GM). The final decision issuing/amending the AMCs/GM will be published by EASA once the European Commission has adopted the regulation.

<sup>1</sup> 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 (OJ L 79, 19.3.2008, p. 1) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1467719701894&uri=CELEX:32008R0216>).

<sup>2</sup> EASA is bound to follow a structured rulemaking process as required by Article 52(1) of Regulation (EC) No 216/2008. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (<http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure>).

<sup>3</sup> [https://www.easa.europa.eu/system/files/dfu/RMP-EPAS\\_2017-2021.pdf](https://www.easa.europa.eu/system/files/dfu/RMP-EPAS_2017-2021.pdf)

<sup>4</sup> <https://www.easa.europa.eu/system/files/dfu/ToR%20RMT.0601%20%26%20RMT.0602%20Issue%201.pdf>

<sup>5</sup> <https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2016-12>

<sup>6</sup> In accordance with Article 52 of Regulation (EC) No 216/2008, and Articles 6(3) and 7 of the Rulemaking Procedure.

<sup>7</sup> <http://easa.europa.eu/document-library/comment-response-documents>

<sup>8</sup> <http://easa.europa.eu/document-library/opinions>



## 2. In summary — why and what

### 2.1. Why we need to change the rules — issue/rationale

The main issue to be addressed by this Opinion is the promotion of a level playing field for European companies wishing to use EFBs.

This level playing field issue is linked with the following current conditions:

- There is a lack of requirements in the area of EFBs, as only AMC 20-25 is available;
- There are currently no provisions for the use of EFBs in NCC, NCO and SPO, as AMC 20-25 is only applicable to CAT operations;
- The current ICAO provisions for EFBs in Annex 6 Part I, II and III, applicable since November 2014, have not yet been transposed into the European regulatory framework.

### 2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 2 of the Basic Regulation. This proposal will contribute to the achievement of the overall objectives by addressing the issues outlined in Chapter 2.

The specific objective of this proposal is to:

- ensure compliance with the ICAO SARPs;
- provide specific requirements on the use of EFBs in the Air Operations Regulation for CAT operations;
- provide requirements proportionate to the complexity of the operations and/or propose safety promotion actions related to the use of EFBs for non-commercial operations and specialised operations; and
- conduct a first review of AMC 20-25 based on the experience gained so far by competent authorities since its publication.

### 2.3. How we want to achieve it — overview of the proposals

- (1) With regard to CAT operations, the main change is the introduction of an operational approval for the use of type B EFB applications by CAT operators.

#### 2.3.1. Annex I (Definitions)

The following amendments are proposed:

- (2) The introduction of new EFB-related definitions transposed from AMC 20-25 (for airport moving map displays (AMMD), type A and type B EFB applications, miscellaneous (non-EFB) software applications, human-machine interfaces, EFB systems, EFB host platforms, EFB mounting devices, EFB system suppliers, portable EFBs, installed EFBs, EFB installed resources and viewable stowage).
- (3) The introduction of definitions for portable electronic device (PED), controlled PED (C-PED) and transmitting PED (T-PED), which were previously contained in GM in different annexes.



### 2.3.2. Annex II (Part-ARO)

The following change is proposed:

- (4) The introduction of a specific approval for the use of type B EFB applications into the operations specification template.

### 2.3.3. Annex IV (Part-CAT)

The following amendments are proposed:

- (5) The introduction of a new IR related to the use of EFBs. This IR is mostly focused on the hardware part of the EFB, but also specifies that an approval in accordance with Part-SPA is required for the use of type B EFB applications.
- (6) The removal of the requirement in point CAT.POL.MAB.105 for an operational approval related to the use of an on-board computerised mass and balance system as the case of non-certified mass and balance applications is covered by the new requirement for an operational approval for the use of type B EFB applications. With regard to certified on-board mass and balance applications, they are part of the avionics and it is considered that an operational approval is not relevant. In addition, the provisions related to the use of computerised mass and balance systems have been clarified by specifying the objective of the integrity test and by mentioning that the operator establishes procedures related to the use of such systems and integrates them into its operations manual.

### 2.3.4. Annex V (Part-SPA)

The following amendments are proposed:

- (7) The introduction of a new Subpart M to Part-SPA, named SPA.EFB, including a new IR related to the approval for the use of type B EFB applications. This IR focuses on the risk assessment to be developed by the operator, on the human-machine interface (HMI) assessment to be performed by the operator, on the EFB administration system, procedures and training requirements to be established by the operator, and on the suitability of the hardware for the intended use of the EFB application.

### 2.3.5. Annex VI (Part-NCC)

The following amendments are proposed:

- (8) The introduction of a new IR related to the use of EFBs. This IR deals with the hardware for all EFBs, but also with type B EFB applications. As regards the latter, a risk assessment and an EFB administration system (including procedures and training requirements) have to be developed by the operator.

### 2.3.6. Annex VII (Part-NCO)

The following amendments are proposed:

- (9) Amendment of the existing IR related to PEDs to align it with the ICAO provisions.



### 2.3.7. Annex VIII (Part-SPO)

The following amendments are proposed:

- (10) The introduction of a new IR related to the use of EFBs. This IR deals with the hardware for all EFBs, but also with type B EFB applications. As regards the latter, a risk assessment and an EFB administration system (including procedures and training requirements) have to be developed by the operator.

### 2.4. What are the stakeholders' views — outcome of the consultation

266 comments were submitted by 40 commentators, including 9 EU NAAs, 8 EFB developers, 13 air operators and several associations. The comments mainly supported the proposed approach for CAT, i.e. the introduction of an operational approval for the use of type B EFB applications, and the absence of an operational approval for all other types of operations.

A summary of the comments on the NPA, as well as the responses to the individual comments, is included in CRD 2016-12. The revised draft AMCs/GM are also included in the CRD. The outcome of the consultation of the proposed AMCs/GM will be available in the explanatory note to the decision that will be issued following the adoption of the regulation which will be based on the present Opinion.

### 2.5. What are the expected benefits and drawbacks of the proposals

The comments received on the NPA have been duly considered by EASA in the preparation of this Opinion. In this respect, EASA proposes with this Opinion a clearer scope for the approval of the use of EFB applications for CAT operations, which is expected to ensure a level playing field in this area. In addition, proportionality is ensured for NCC, SPO and NCO by not introducing any operational approval and by proposing requirements which are adapted to the risks involved and to the resources of the affected operators.

As regards CAT operations, the proposal is expected to incur low implementation costs for the affected stakeholders (operators and competent authorities) and hence has a low negative economic impact. For Member States that have elected to already require an operational approval for the use of EFBs, the implementation costs are still considered to be low as the related approvals are in any case based on the current content of AMC 20-25 which has been transposed without major changes. Therefore, the affected operators should have already demonstrated compliance with AMC 20-25 to their competent authorities. Furthermore, the rules will bring benefits in terms of positive environmental impacts (reduced fuel burn, reduced paper consumption, reduced weight carried on board aircraft), increased operational efficiency, and increased safety of operations as flight crews will have access to more up-to-date information for operational decision-making. The proposal ensures harmonisation with ICAO Annex 6 and introduces as well proportional requirements by limiting the scope of the operational approval for CAT operators to some EFB applications.

As regards NCC, SPO and NCO operations, the objective of the proposed rules is to provide for a level playing field by ensuring compliance with ICAO Annex 6 and introducing proportionate requirements adapted to the risks involved and to the resources of the affected operators. In addition, there would be a positive medium safety impact because the proposed rules will address the main risks associated with the use of EFBs. Compliance costs for these operators are expected to be low due to the very limited number of applications within the scope of the proposed rules. Overall, the proposal is



expected to bring a level playing field benefit by providing requirements that are proportionate to the complexity of the operations in question.

## 2.6. How do we monitor and evaluate the rules

Monitoring will generate factual information on the current level of rule implementation. With respect to this proposal, EASA suggests to monitor the following:

Indicator	When it will be monitored	How it will be monitored	Who will be in charge of the monitoring
Findings from standardisation inspection reports regarding non-compliance with the results	Annually	Via standardisation inspections	EASA Flight Standards Directorate
Authorities'/organisations' requests for, and EASA opinion on, exemptions/derogations based on Article 14 of the Basic Regulation	Annually	Via internal database	EASA Flight Standards Directorate
Number of AltMoCs issued with regard to the EFB rules	Annually	Via internal database	EASA Flight Standards Directorate

In addition, monitoring will be performed in terms of collecting and analysing data from different available sources through several tools (e.g. surveys). The responsible actors (e.g. Member States, national aviation authorities, operators, etc.) for collecting and providing the data will be specified in the implementation phase.

In addition, the proposal might be subject to evaluation in order to judge how effective the adopted rules have been, or are, taking account the predictions made in the impact assessment. The evaluation will provide an evidence-based judgement of the extent to which the proposal has been effective and efficient, consistent, and has achieved EU added value. The decision whether an evaluation will be necessary will be taken based also on the monitoring results.

Done at Cologne, on 18 December 2017.

Patrick KY

Executive Director



### 3. References

#### 3.1. Affected regulations

Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1), specifically:

- The Cover Regulation;
- Annex I (Definitions);
- Annex II (Part-ARO) ‘Authority requirements for air operations’;
- Annex IV (Part-CAT) ‘Commercial air transport operations’;
- Annex V (Part-SPA) ‘Specific approvals’;
- Annex VI (Part-NCC) ‘Non-commercial air operations with complex motor-powered aircraft’;
- Annex VII (Part-NCO) ‘Non-commercial air operations with other-than complex motor-powered aircraft’; and
- Annex VIII (Part-SPO) ‘Specialised operations’

#### 3.2. Related decisions

- Decision N° 2012/015/Directorate R of the Executive Director of the Agency of 24<sup>th</sup> October 2012 on acceptable means of compliance and guidance material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (‘Guidance Material to Annex I — Definitions’)
- Decision 2014/025/R of the Executive Director of the Agency of 28 July 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ARO of Regulation (EU) No 965/2012 and repealing Decision 2014/014/R of the Executive Director of the Agency of 24 April 2014 (‘AMC and GM to Part-ARO — Issue 3’)
- Decision 2014/017/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ORO of Regulation (EU) No 965/2012 and repealing Decision 2012/017/R of the Executive Director of the Agency of 24 October 2012 (‘AMC and GM to Part-ORO — Issue 2’)
- Decision 2014/015/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-CAT of Regulation (EU) No 965/2012 and repealing Decision 2012/018/R of the Executive Director of the Agency of 24 October 2012 (‘AMC and GM to Part-CAT — Issue 2’)
- Decision N° 2012/019/Directorate R of the Executive Director of the Agency of 24<sup>th</sup> October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European





Parliament and of the Council ('Acceptable Means of Compliance and Guidance Material to Part-SPA')

- Decision N° 2013/021/Directorate R of the Executive Director of the Agency of 23 August 2013 on adopting Acceptable Means of Compliance and Guidance Material for Non-commercial operations with complex motor-powered aircraft ('Part-NCC')
- Decision 2014/016/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-NCO of Regulation (EU) No 965/2012 and repealing Decision 2013/022/R of the Executive Director of the Agency of 23 August 2013 ('AMC and GM to Part-NCO — Issue 2')
- Decision 2014/018/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-SPO of Regulation (EU) No 965/2012 ('AMC and GM to Part-SPO')

### 3.3. Other reference documents

- ICAO Annex 6 'Operation of Aircraft' — Part I, II and III
- ICAO Doc 10020 'Manual of Electronic Flight Bags (EFBs)'



## 4. Appendix

Appendix to Opinion No 10/2017 'Transposition of provisions on electronic flight bags from ICAO Annex 6': CRD to NPA 2016-12

