



Explanatory Note to Decision 2014/029/R

Portable electronic devices II

'AMC and GM to Part-CAT – Issue 2, Amendment 1'

RELATED NPA/CRD 2014-14 — RMT.0637 — 24.9.2014

EXECUTIVE SUMMARY

The Agency's RMT.0637 addresses a regulatory issue related to portable electronic devices (PEDs), and include amendments to Part-CAT, -NCC, -NCO and -SPO. There is no safety recommendation linked to this rulemaking task.

The specific objective is to enable the expanded use of PEDs during various phases of flight by reviewing and updating the operational provisions related to the PED policy.

With RMT.0637 the Acceptable Means of Compliance (AMC) and Guidance Material (GM) are amended by adhering to the following approach:

1. The operator has to ensure that PEDs have no negative impact on the safe operation of the aircraft, i.e. the operator has to demonstrate that PEDs do not interfere with on-board electronic systems and equipment.
2. In accordance with 1., the use of PEDs may be granted under the responsibility of the operator, i.e. the operator decides which PED may be used during which phases of the flight.

The proposed changes are expected to establish a more reasonable and more passenger friendly framework for the use of PEDs. These changes will give operators reliable tools to mitigate PED-related risks and hazards, and, therefore, are expected to maintain a high uniform level of safety during all phases of flight.

Applicability	Process map
Affected Regulations and Decisions: Decision 2014/015/R (Part-CAT)	Concept Paper: No
Affected stakeholders: Operators, NAAs, passengers	Terms of Reference 6.4.2014
Driver/origin: European Commission	Rulemaking group: No
Reference: N/A	RIA type: Light
	Technical consultation during NPA drafting: No
	Publication date of the NPA: 24.6.2014
	Duration of NPA consultation: 6 weeks
	Review group: No
	Focussed consultation: Yes
	Publication date of the Opinion: N/A



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1. Procedural information

1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the 'Agency') developed this Decision in line with Regulation (EC) No 216/2008¹ (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure².

This rulemaking activity is included in the Agency's 4-year Rulemaking Programme under RMT.0637³. The scope and timescale of the task were defined in the related Terms of Reference (see process map on the title page).

All interested parties were consulted through the Notice of Proposed Amendment (NPA) 2014-14⁴. The Agency received 131 comments from interested parties, including industry and National Aviation Authorities.

The Agency has reviewed the comments received on the NPA. The comments received and the Agency's responses are documented in the Comment-Response Document (CRD) 2014-14⁵.

The final text of this Decision with the Acceptable Means of Compliance (AMC) and Guidance Material (GM) has been developed by the Agency.

The process map on the title page summarises the major milestones of this rulemaking activity.

1.2. Structure of the related documents

Chapter 1 contains the procedural information related to this task. Chapter 2 explains the core technical content. The text of the AMC/GM is annexed to the ED Decision.

¹ Regulation (EC) No 216/2008 of the European Parliament and 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), as last amended by Commission Regulation (EU) No 6/2013 (OJ L 4, 9.1.2013, p. 34).

² The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material (Rulemaking Procedure), EASA MB Decision No 01-2012.

³ Rulemaking Programme available under .

⁴ In accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Rulemaking Procedure; NPA available at <http://easa.europa.eu/document-library/notices-of-proposed-amendment>.

⁵ CRD available at <http://easa.europa.eu/document-library/comment-response-documents>.



2. Explanatory Note

2.1. Overview of the issues to be addressed

Portable electronic devices (PEDs) are any kind of electronic devices brought on board the aircraft by crew members, passengers or as part of the cargo, and that are not included in the approved aircraft configuration. The use of PEDs on board the aircraft, either by crew members and passengers or included in the cargo, presents a source of uncontrolled electromagnetic emission with potential risk of adverse interference effects to aircraft systems.

PEDs fall into two main categories: non-intentional transmitters and intentional transmitters (T-PEDs). The first category includes, but is not limited to, calculators, cameras, radio receivers, audio and video players, electronic games and toys. Intentional transmitters are transmitting devices such as remote control equipment (which may include some toys), two-way radios, mobile phones of any type, satellite phones, tablet and laptop computers, e-readers, Global Navigation Satellite System (GNSS) cargo tracking devices and others. For both categories, these devices may assist crew members in their duties or be used for medical purposes.

Commission Regulation (EU) No 965/2012⁶ and its amendments, Commission Regulations (EU) No 800/2013 and 379/2014 make it the operators' responsibility to demonstrate that any PED use on-board is safe and does not affect adversely the performance of the aircraft systems and equipment. Associated AMC and GM for CAT and NCC operations contain detailed considerations and give reference to technical standards. GM to Part-NCO and Part-SPO include explanations of terms and general considerations to be observed.

The Agency has reviewed the PED policy, recognising the wide proliferation of PEDs and the wish of passengers to use them everywhere and at any time, as well as accounting for new certification standards.

The Agency, as a first step, amended AMC1 CAT.GEN.MPA.140⁷, containing provisions on the expanded use of PEDs. Transmitting devices were not part of this first step. In addition, the Safety Information Bulletin (SIB) 2013-21⁸ was established, containing guidance on the use of non-transmitting devices during any phase of flight.

As a second step, this Decision will enable the expanded use of any kind of PEDs by amending the provisions (AMC and GM) related to the PED policy. This includes both, non-intentional transmitters and T-PEDs. Thereby, emphasis is given to aircraft technical aspects as well as to cabin safety elements. The Agency's approach concerning the proposed amendments can be summarised in two steps:

1. The operator has to ensure that PEDs have no negative impact on the safe operation of the aircraft, i.e. the operator has to demonstrate that PEDs do not interfere with on-board electronic systems and equipment.
2. In accordance with 1., the use of PEDs may be granted under the responsibility of the operator, i.e. the operator decides which PED may be used during which phases of the flight.

Aside of this Decision concerned with Annex IV (Part-CAT), other Decisions, related to the same subject matter introduce AMC/GM to Annex VI (Part-NCC), Annex VII (Part-NCO) and Annex VIII (Part-SPO).

It should be noted that, after the publication of the envisaged new operational provisions on the use of PEDs, SIB 2013-21 is not needed any longer and, therefore, will be cancelled.

⁶ 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), as last amended by Commission Regulation (EU) No 379/2014 of 7 April 2014 (OJ L 123, 24.4.2014, p. 1).

⁷ Decision 2013/028/R, dated 26 November 2013; in the meantime superseded by ED Decision 2014/015/R.

⁸ <http://easa.europa.eu/easa-and-you/passenger-experience/personal-electronic-devices-ped-board>.



2.2. 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 this chapter of the NPA.

The specific objective is to enable the expanded use of any kind of PEDs during various phases of flight by reviewing and updating the operational provisions related to PED policy.

2.3. Outcome of the consultation

As mentioned above, the Agency has received 131 comments towards NPA 2014-14 during the public consultation period. Additional comments were received during a two-day focussed consultation with stakeholders after the end of the NPA-consultation period. An overall description of the changes resulting from these comments is provided in CRD 2014-14. Concerning this Decision, the Agency made the following changes, compared to the AMC/GM presented in NPA 2014-14:

1. **Revisions of referenced documents:** The references to documents have been modified, where applicable: A certain revision level is given as the 'basis' (in the text e.g. 'ED-14D', i.e. Revision D). However, later revisions of the document may be used (in the text: '*or later revisions*').
2. **Table for the scenarios:** The Agency decided to establish a table containing the different scenarios (instead of 'on-going' text) to enhance clarity and readability (paragraph (c) of AMC1 CAT.GEN.MPA.140).
3. **Split of Scenario No. 3:** Scenario No. 3 has been split into two scenarios (now Nos. 3 and 4, see paragraph (c) of AMC1 CAT.GEN.MPA.140).
4. **Additional scenario for permitting the use of PEDs:** The following Scenario No. 6 has been added: '*The EMI assessment ... has demonstrated that the back door coupling has no impact on safety when using particular technologies*' (paragraph (c) of AMC1 CAT.GEN.MPA.140).
5. **Use of PEDs before taxiing and during departure delays:** Provisions concerning the use of any kind of PEDs before taxiing and during prolonged departure delays have been incorporated in Scenario No. 8 (paragraph (c) of AMC1 CAT.GEN.MPA.140).
6. **Demonstration of electromagnetic compatibility:** Paragraph (d) of AMC1 CAT.GEN.MPA.140 (former paragraph entitled 'Test methods') has been rephrased and restructured to enhance clarity. Concerning the front door coupling of C-PEDs, additional reference is given to an alternative compliance method described in AMC 20-25 of EASA AMC-20 for electronic flight bags used in the flight crew compartment.
7. **Hazard identification and risk assessment:** For completeness the item '*PEDs in different aircraft zones*' has been added to the list of items to be covered by the risk assessment (paragraph (c)(1) of AMC2 CAT.GEN.MPA.140).
8. **Stowage, passenger information and briefing:** Paragraph (d)(3) of AMC2 CAT.GEN.MPA.140 has been modified and in parts rephrased to enhance clarity.
9. **PEDs in the flight crew compartment:** Paragraph (e) of AMC2 CAT.GEN.MPA.140 has in parts been modified to enhance clarity.
10. **Definitions of PEDs:** GM1 CAT.GEN.MPA.140 has in parts been restructured and rephrased to enhance clarity. PEDs now include two categories (instead of three), namely non-intentional transmitters and T-PEDs (C-PEDs are not any longer assigned as one 'category').
11. **Crew rest compartment:** The crew rest compartment is now being considered (paragraph (a) of GM2 CAT.GEN.MPA.140).



12. **VHF omni range (VOR) navigation:** Guidance has been added as precautionary measure, since front door coupling may influence the VOR navigation system (paragraph (b) of GM2 CAT.GEN.MPA.140).
13. **Guidance on entities performing tests:** The Agency added guidance concerning the qualification and experience of organisations performing the necessary tests for demonstrating the electromagnetic compatibility of the aircraft (paragraph (b) of GM2 CAT.GEN.MPA.140).
14. **Fire caused by PEDs:** Reference material concerning 'Fire caused by PEDs' has been reduced to ICAO Doc 9481, since this document mainly contains the information contained in the UK CAA documents. In addition, this item is not a separate GM any longer, but has been incorporated as paragraph (c) of GM2 CAT.GEN.MPA.140.
15. **Guidance on fire caused by PEDs for NMPA:** The Agency has incorporated guidance on 'Fire caused by PEDs' for non-motor powered aircraft (paragraph (d) of GM1 CAT.GEN.NMPA.120).

2.4. Summary of the Regulatory Impact Assessment (RIA)

The complete RIA related to the present rulemaking task can be found in NPA 2014-14. The options identified in the RIA are as follows:

- Option 0: **Baseline option:** No change to the AMC and GM, i.e. no specific risk;
- Option 1: **Use of PEDs when technical prerequisites are met:** Amend the AMC and GM to permit the use of any kind of PEDs, when specific technical prerequisites (certification or interference assessment) have been fulfilled; and
- Option 2: **Use of PEDs with no prerequisites:** Amend the AMC and GM to permit the use of any kind of PEDs. No specific technical measures are required as a prerequisite.

Concerning the safety impact, Options 0 and 1 are expected not to change the safety risk, while Option 2 would have a substantial negative impact on safety. Therefore, Option 2 is not considered any further.

No economic impact is foreseen for Option 0. For Option 1 the economic impact on aircraft configuration and crew training can be considered minor compared to other economic impacts related to the aircraft operation. Therefore, when comparing Options 0 and 1, the economic impact can be neglected.

The further comparison of Option 0 and 1 leads to the following conclusion:

- Option 1 will lead to a positive social impact due to an increased passenger comfort and satisfaction, when the permission for the expanded use of PEDs is handled in an appropriate manner by the operator.
- Option 1 will lead to better harmonisation with the current FAA rules and with the expected ICAO procedures. As a result of this better harmonisation a reduction of passenger conflicts and confusion is expected.

Therefore, when considering the different evaluating factors, Option 1 is the preferred option.

2.5. Overview of the amendments

NPA 2014-14 provides a detailed description of the amendments originally proposed by the Agency. Following the comments received, the Agency modified the AMC/GM of Annex IV (Part-CAT) as described in Paragraph 2.3. In addition, editorial changes have been made. The final text is provided in a separate Annex to this Decision.



3. References

3.1. Related 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), as last amended by Commission Regulation (EU) No 379/2014 (OJ L 123, 24.4.2014, p. 1).

3.2. Affected decisions

Decision 2014/015/R of the Executive Director of the Agency of 24 April 2014 on adopting Acceptable Means of Compliance and Guidance Material to Part-CAT of Commission Regulation (EU) No 965/2012 and repealing Decision 2012/018/R of the Executive Director of the the Agency. Available at <http://easa.europa.eu/agency-measures/agency-decisions.php>.

