EASA Safety Information Bulletin

SIB No.: **2013-21**
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Subject: **Use of Portable Electronic Devices during Commercial Air Transport Aircraft Operation**

Ref. Publications: Regulation (EU) No. 965/2012 CAT.GEN.MPA.140 "Portable electronic devices" and related Acceptable Means of Compliance (AMC) and Guidance Material (GM) as amended by ED Decision 2013/028/R.

Applicability: Commercial air transport operators.
National Aviation Authorities (NAAs) overseeing commercial air transport operators.

Description: The increasing use of Portable Electronic Devices (PEDs) such as mobile phones, electronic readers, tablet Personal Computers (PCs), laptops, MP3 players etc. in the day to day life has led the Agency to re-assess and to communicate the current PED policy.

Regulation (EU) No. 965/2012 and associated AMC and GM entered into force on 28 October 2012. All Member States have postponed the applicability of this Regulation to 28 October 2014 and are currently transitioning to these new rules.

Paragraph CAT.GEN.MPA.140 of this Regulation states:
The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment, and shall take all reasonable measures to prevent such use.

This means that there is *per se* no ban on the use of PEDs. However, the operator is required to demonstrate that radio frequency emissions from PEDs do not pose a risk to aircraft systems and equipment and that all hazards are mitigated before allowing the use of PEDs on board.

The associated AMC and GM has been updated compared to JAA Temporary Guidance Leaflet TGL 29 "Guidance Concerning the Use of Portable Electronic Devices on Board Aircraft" and specifies the elements to be considered by operators before allowing the use of PEDs on board. It also contains the definitions of terms as used in this SIB.

This is information only. Recommendations are not mandatory.

The AMC is further updated by ED Decision 2013/028/R. It now foresees that an operator may allow the use of non-transmitting PEDs during any phase of flight. Non-transmitting PEDs include all devices for which the transmitting functions (e.g. WLAN, mobile phone functions, Bluetooth) are disabled.

This SIB provides short term guidance to operators when intending to expand the use of non-transmitting PEDs. Subsequent EASA rulemaking in the area of aircraft operations (OPS) and initial airworthiness will address the issue further, including for transmitting PEDs (T-PEDS). Nevertheless, this document also includes some initial recommendations for T-PEDs.

Recommendation(s):

1) Applicability:

The Agency recommends to use the AMC/GM to CAT.GEN.MPA.140 also when demonstrating compliance with EU-OPS/JAR-OPS 3 paragraph 1/3.110, since the requirement CAT.GEN.MPA.140 itself has not changed compared to EU-OPS/JAR-OPS 3.

2) General:

Before allowing the expanded use of non-transmitting PEDs on board, operators are expected to carry out a hazard identification and to manage identified risks (ref. ORO.GEN.200 (a)(3)). Apart from the items mentioned in AMC1 CAT.GEN.MPA.140, an operator should address in particular the following points:

a) The spurious emissions from PEDs as received by the aircraft antennae can potentially lead to misleading information. It is recommended to address the following points explicitly:

   Low visibility operation interference risk, if such operation is foreseen. EASA recommends not to allow PED use during those phases unless dedicated mitigation strategies are in place:

   - EUROCAE/ED-130 “Guidance for the Use of Portable Electronic Devices (PEDs) On Board Aircraft” provides acceptable processes for assessing and mitigating the “front-door” interference effects.
   - RTCA/DO-307 “Aircraft Design and Certification for Portable Electronic Device (PED) Tolerance” Section 4 also addresses the “front-door” interference effects.

   Contrary to the industry standards mentioned above, EASA recommends to establish the phases of flight as follows:

   - Approach and Landing: From Initial Approach Fix (IAF) to visual reference, landing, and after leaving all active runways.
   - Taxi to Gate: Begins when the aircraft has crossed all active runways and concludes when the aircraft is parked for passenger unloading.

b) Transmitting PED (T-PED) switched-off / transmitting functions disabled: Passengers are required to switch off the T-PED or to disable its transmitting functions at the start of the flight when the passengers have boarded and all doors have been closed, until a passenger door has been opened at the end of the flight.

Note: Some aircraft are equipped with systems that enable the use of T-PEDs. The authorisation of these systems and the use of T- PEDs in combination with those systems are outside the scope of this SIB.

c) PED stowage should be considered during critical phases of flight and taxiing to prevent possible injuries from projectiles and to allow for egress from the aircraft. Operators should ensure compliance with AMC1 CAT.OP.MPA.160. Operators should clearly identify the phases of flight in which PEDs are to be stowed and determine suitable stowage locations, taking into account the PED's size and weight.

d) The passenger briefing is important for providing information to passengers on the safety aspects, such as egress from the aircraft in case of an evacuation, demonstrations of safety and emergency equipment and aircraft systems, etc. It is recommended that PED distraction during the passenger safety briefing is avoided so that passengers' attention concentrates on the safety briefing and crew instructions.

e) The operator is reminded of the briefing requirements of CAT.OP.MPA.170 and associated AMC material. Communication to passengers should be clear and concise.

f) EASA recommends that operators provide general information on their PED policy to passengers before the flight. This information should clearly specify at least the following:

   i. which PEDs can be used/are not to be used throughout the flight/during critical phases of flight and taxiing;

   ii. if, when, and where PEDs are to be stowed during critical phases of flight and taxiing; and

   iii. that the instructions of the crew are to be followed at all times.

   EASA recommends to the operator to use uniform information in terms of terminology to avoid passenger confusion.

   It is the Agency's endeavour to harmonise PED policies as much as possible to avoid passenger confusion. However, it is generally expected that, as each operator rolls out his process, the PED policies will become increasingly different. The information to passengers should therefore reflect the specific boundaries set by the individual airline policy.

g) Operators should reflect their changed procedures in the operations manual and brief or train flight crew, cabin crew and technical crew before an expanded use of PEDs is implemented.

Such procedures and crew members briefing or training should specify:

i. PEDs that can/cannot be used on-board;

ii. at which times PEDs are to be switched-off, can be turned on, or can be in non-transmitting mode;

iii. at which times PEDs can/cannot be used;

iv. if, when, where, and how PEDs are to be stowed;

v. to which aircraft/fleet this policy applies;

vi. continuous update on the PED market development as far as it concerns the operator's PED policy.

The expanded use of PEDs should be reflected in the normal, abnormal and emergency procedures for flight crew, cabin crew and technical crew. The procedures should include instructions on how to recognise, respond to and report suspected or confirmed PED interference events. The procedures should clearly specify the cabin crew responsibilities and procedures concerning the use of PEDs, taking into account that cabin crew will not be able to physically check the transmission status of each PED carried by passengers and will not be able to move around the cabin during certain phases of flight to enforce the operator's procedures. The operator should assess and address crew resource management and workload issues for all crew members, including passenger information and handling.

h) To monitor the application of the expanded use of PEDs, EASA recommends that operators should report PED events to their competent authority. Such events could be linked to suspected or confirmed PED interference, passenger handling, smoke or fire caused by a PED.

i) It becomes more and more difficult to distinguish between devices being transmitting, having transmitting functions disabled, or being non-transmitting at all. Therefore, EASA recommends to commercial air transport operators to evaluate their aircraft as being T-PED resistant, considering the most commonly used transmitting technologies, or to clearly communicate to passengers that T-PED use is still restricted.

3) Transmitting PEDs:

AMC1 CAT.GEN.MPA.140 provides a way for operators to allow the use of transmitting PEDs (T-PEDs) such as mobile phones, WLAN or Bluetooth devices, during non-critical phases of flight, excluding taxiing, if the aircraft is certified accordingly, e.g. as PED tolerant, phone tolerant, having WLAN installations, etc.

a) EASA considers that the method of basing T-PED assessment purely on the aircraft HIRF (High Intensive Radiated Fields) compatibility leaves the risk of several aircraft system malfunctions, as the HIRF certification does not cover all aircraft systems using appropriate radiation

levels when considering on-board transmissions. EASA therefore recommends performing the additional assessment as described in EUROCAE ED-130 Section 4 and related annexes. Effects known to result from transmitting devices and having operational consequences are not sufficiently addressed when using HIRF compliance only.

b) EUROCAE ED-130 provides processes for assessing and mitigating both the “back-door” interference effects caused by T-PED transmissions as well as the “front door” interference effects of spurious emissions from all PEDs. As alternative method to EUROCAE ED-130, EASA would accept the use of RTCA/DO-307, Chapter 3 and 4, which can be applied during aircraft development for PED tolerance certification or followed subsequently to demonstrate PED tolerance.

c) To support industry, EASA has established the possibility to develop changes to aircraft for PED compatibility assessment, which may result in changes to the documentation only, in case no necessary change to the aircraft configuration is identified during the project. Furthermore, a voluntary Special Operational Evaluation process has been created allowing the review e.g. of reports demonstrating the compatibility of Controlled-PED (C-PED) with certain aircraft environments.

d) The Agency reminds to consider the applicable telecommunication regulations before allowing the use of transmitting functions on-board aircraft.

Contact(s):

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