



Guidance on the Expanded Use of Passenger Portable Electronic Devices (PEDs)

Background

For decades the regulations on the use of portable electronic devices (PEDs) on board aircraft have remained unchanged. The proliferation and daily use portable electronic devices (PEDs) such as mobile phones, smartphones, e-readers, tablets, laptops, and media players have been the catalyst and cause for members of the travelling public and the airline industry to call for Civil Aviation Authorities to re-assess their regulations on use of PEDs on board aircraft.

In 2013, the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA) have issued guidance on the expanded use of passenger PEDs on board:

- Federal Aviation Administration (FAA): Information for Operators InFO 13010 (October 2013) *Expanding Use of Passenger PEDs*, InFO13010 SUP (February 2014) and the detailed report submitted by the FAA Aviation Rulemaking Committee (ARC).
- European Aviation Safety Agency (EASA): *Safety Information Bulletin No: 2013-21* (December 2013), EASA ED Decision 2013/028/R (November 2013) modifying the AMC and Guidance Material for Part CAT in respect of PED and to align with the FAA position.

In consequence, other regulatory agencies have since issued guidance. Currently the International Civil Aviation Organization (ICAO) is drafting guidance for States in order to promote a global and harmonized approach to the expansion of the use of passenger portable electronic devices (PEDs) on board aircraft. Notwithstanding individual legislative drafting styles and techniques of different States, for the sake of international harmonization, IATA encourages States to incorporate the guidance within the upcoming ICAO circular into their aviation regulations and/or guidance materials to airlines.

Definitions

Airplane mode: A setting available on many mobile phones, smartphones and other electronic devices that, when activated, suspends many of the device's signal transmitting functions, thereby disabling the device's capacity to place or receive calls or use text messaging – while still permitting use of other functions that do not require signal transmission. Other equivalent terms: Flight Mode, Safe Mode, etc.

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Critical phases of flight: Includes taxi, take-off, climb, descent, approach, and landing;

Handheld portable electronic device: Any lightweight electronically-powered equipment which is able to be handheld, such as tablets, e-readers, smartphones, media players and electronic games.

Note: the definition of PED includes both transmitting and non-transmitting devices.

Non-transmitting portable electronic device: A portable electronic device that is not equipped with a radio frequency transmitting function; or a portable electronic device that is equipped with these functions but has the device's radio frequency transmitting functions turned off or in Airplane Mode with the Wi-Fi and Bluetooth functionality also turned off.

Transmitting portable electronic device: Contains an intentional transmitter. Intentional transmitters may include devices enabled with cellular technology, wireless radio frequency network devices, and other wireless-enabled devices such as remote control equipment (which may include toys), two-way radios, mobile /smartphones and satellite phones.

Category	TPED	PED
Description	Transmitting Portable Electronic Devices: These are devices that are designed to transmit or receive data through radio frequencies, cellular functions, Wi-Fi , Bluetooth, etc.	Non-transmitting portable electronic device.
Examples	Mobile / smartphones, tablets, laptop computers, radio transmitters/receivers, navigation devices, most e-readers, most media players, most electronic games etc.	Media players*, cameras*, electronic games*, e-readers*, etc. * Although most devices are now equipped with a transmitting function, some models are not.

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Abbreviations

ARC: Aviation Rulemaking Committee;

ATC: Air traffic control;

CAA: Civil Aviation Authority

EASA: European Aviation Safety Agency

EMC: Electromagnetic compatibility

FAA: Federal Aviation Administration

FCC: Federal Communications Commission

FDR/CVR: Flight data recorders/cockpit voice recorders

ICAO: International Civil Aviation Organization

IFE: Inflight entertainment system

MPED: Medical portable electronic device

PED: Portable electronic device

PRM: Passenger with Reduced Mobility

RTCA: Radio Technical Commission for Aeronautics now the RTCA Inc.

SOP: Standard operating procedure

TPED: Transmitting portable electronic device

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Technical Aspects

Prior to an airline being permitted to allow the expanded usage of PEDs on board, thorough technical analysis and tests are required to be conducted in order to obtain their CAA's approval. The responsibility for determining if passenger-operated portable electronic device will cause interference is placed on the airline. The engineering and technical teams are required to fulfill all of the requirements as per the guidance offered by their State CAA, including immunity, analysis and mitigations for eligible phases of flights. The implementation plan needs to include all relevant standard operating procedures (SOPs) described in the guidance and/or safety alerts produced by their CAA.

In the absence of any State CAA guidance, airlines should follow the guidance of the FAA or EASA. It is up to the airline to select a means of determination. FAA InFO 13010, *FAA Aid to Operators for the Expanded Use of Passenger PEDS* (October 31, 2013) and FAA InFO 13010 SUP (June 2014) provide guidance for evaluating the compatibility of portable electronic devices on aircraft.

Operational Policy and Procedures

In addition to the technical aspects, there are matters related to cabin safety that will need to be considered. These should be risk assessed as applicable to each airline's respective operation and as per phase of flight. These include, but are not limited to:

- Requirement to switch-off, or place in Airplane Mode, the PED with the Wi-Fi functionality also turned off once all passengers have boarded and doors are closed.
- Permission of handheld non-transmitting PEDs (Airplane Mode) of appropriate size during the critical phases of flight and the securing of these devices.
- Requirement for larger PEDs (e.g. laptops or notebooks) to be stowed in approved stowage locations during all critical phases of flight, this in accordance with the airline's approved cabin baggage program.
- Emphasize importance of safety demonstration and encourage passengers to focus on the safety briefing and cabin crew instructions.
- Consideration of how airlines should address passengers not hearing cabin announcements due to the use of headsets.
- Cabin crew monitoring the expanded use of passenger PEDs in the cabin.
- Reporting suspected interference with the aircraft system to the Pilot-in-Command, subsequent procedures on board and submission of a report to the competent authority.
- Permission to use mobile / smartphones after landing when the aircraft has left the active runway during taxi to gate.
- If applicable, references to all aircraft in the fleet equipped with Wi-Fi or an airborne access system:

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



- *System deactivated during critical phases of flight*
- *System activated during cruise*
- Inclusion of company policies and procedures on the airline website, via on board announcements, inflight magazine, safety briefings, and safety features card.

Airlines should consult FAA InFO13010, Expanding Use of Passenger Portable Electronic Devices, (October 31, 2013) when developing or amending procedures related to the use of portable electronic devices during critical phases of flight.

Permitted, Restricted and Prohibited Portable Electronic Devices

PEDs fall under several categories including: permitted, restricted and prohibited devices. Most current regulations permit the unrestricted use of electronic watches, portable voice recorders, hearing aids, heart pacemakers, and electric shavers. Additionally, the regulations permit the use of “any other portable electronic device *that the operator of the aircraft has determined “will not cause interference with the navigation or communication system of the aircraft on which it is to be used.”* With the exception of the devices listed above, the aircraft operator is solely responsible for determining which PEDs may be used on its aircraft. PED tolerance may not address all transmitters so some devices should be prohibited unless additional analysis or testing is completed to permit their use.

Although electronic cigarettes are not a transmitting PED a reminder to both passengers and crew that electronic cigarettes are prohibited at all times is recommended as these devices may give the impression that smoking is permitted on board.

Sample List of Permitted, Restricted and Prohibited and Devices

Permitted at all times

- Electronic watches
- Portable voice recorders
- Hearing aids
- Heart pacemakers
- Approved electronic medical portable electronic devices (MPEDS) as determined by the operator

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Permitted when aircraft door is open or at the Pilot-in-Command's discretion during lengthy ground delays; and when fueling is NOT taking place

** Note: some regulatory authorities do permit their use during fueling operations*

- Mobile phones and smartphones (unless restricted by local regulations)
- Wireless computer/mobile phone accessories
- One-way pagers (capable of receiving signals only)
- All other portable electronic devices

Restricted Transmitting Portable Electronic Devices (TPEDS)

- Mobile / smartphones
- Tablets
- Bluetooth devices
- E-Readers *when equipped with a transmitting function
- Electronic games * when equipped with a transmitting function
- Digital media players *when equipped with a transmitting function

Under an approved expansion of use of PEDs program the above are permitted for use during taxi, take-off, cruise, approach and landing with restrictions. The 'Airplane Mode' must be enabled once the aircraft door is closed and until the aircraft has left the active runway after landing. It is recommended that PEDs not be charged during critical phases of the flight.

- Laptops and notebooks: must be unplugged, switched off and stowed in an approved stowage during taxi, take-off, approach and landing.
- Portable DVD players: must be unplugged, switched off and stowed in an approved stowage during taxi, take-off, approach and landing.
- Navigation devices must be switched off for taxi, take-off, approach and landing.

Permitted during flight

** Usually prohibited during taxi, takeoff, landing and flight operations below 10,000 feet, unless approved for use by the State.*

- Personal Digital Assistants (PDAs), and other two-way communication devices (provided that the transmitting function is disabled – e.g., aircraft mode, hospital mode, wireless system off).

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



- Computers and printers modems connected directly to aircraft satellite phone or via wireless internet (where applicable)
- Digital media players
- E-readers
- Electronic compact cameras (film, digital, video)
- Customer-owned electronic noise-cancelling/reduction headphones
- Electronic calculators
- Voice recorders

Permitted After Landing *When Aircraft Has Cleared the Active Runway*

- Mobile phones / Smartphones / Tablets
- 2-way pagers

Prohibited at all times

- AM/FM transmitters and receivers (including televisions, radios)
- Two-way communication devices (unless the transmitting function is disabled)
- Remote-control devices (customer-owned)
- Personal air purifiers (unless the operator determines them to be safe and their policy permits for use on board)
- Electronic simulated smoking devices (cigarettes, pipes, cigars)
- Large heavy electronic power devices
- Wireless mouse
- VHF scanner receivers;
- Portable television sets;
- Radio controlled toys;
- Two way transmitters such as walkie-talkies, amateur radios,
- Citizen Band (CB) radios
- 49 MHz transmitters

Medical Portable Electronic Devices (MPEDS)

Each operator must also determine that its aircraft are PED tolerant. This is to avoid the evaluation of each specific PED make and model. A determination of aircraft PED tolerance with respect to passenger PEDs does include MPEDs.

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Airlines are encouraged to include MPEDs in their carry-on baggage program and/or personal items policy in order to increase accessibility in air travel for people with disabilities. Some MPEDs are life sustaining, such as a ventilator, and must not be turned off at any time during flight. MPEDs have been safely used during all phases of flight for decades in commercial operations. An airline's risk assessment and crewmember procedures should address the proper stowage of larger MPEDs and the inability to turn off certain types of these devices during aircraft operations.

Small MPEDs must be secured during taxi, take-off, descent, approach and landing. Operator procedures should encourage passengers to secure small MPEDs on their person by placing them in an armband or garment pocket.

Airlines must be aware of their Authority's regulations related to Passengers with Reduced Mobility (PRM) to ensure conformity with these regulations, including the use of MPEDs. In addition, airlines that operate inbound and outbound of the United States should be aware of Department of Transportation (DOT) requirements in *14 CFR Part 382 - Nondiscrimination on the Basis of Disability in Air Travel*, which address the use of certain MPEDs. Information on (DOT) Part 382 is available at: http://airconsumer.dot.gov/SA_Disability.htm

Use of Mobile Phones or Smartphones on Board

When on board an aircraft, passengers and crew must not use any device that can adversely affect the performance of the aircraft systems and equipment. The Pilot-in-Command shall require the switching-off and/or deactivation of any device believed to adversely affect the performance of aircraft systems or equipment.

Existing regulations require that all TPEDs be turned off and properly stowed when the aircraft engines are running. Mobile / smartphones and other devices have an Airplane Mode that turns off just the wireless radio parts of the device, for safe use on an aircraft where radio transmitters are not permitted. Airplane Mode permits the user to safely use other functions of a mobile or smartphone phone (such as music, games or organizer functions) during flight.

Mobile phones must be either switched off or must have Airplane Mode enabled from door-close on departure until vacating the active runway after landing. The Senior Cabin Crew Member (SCCM) must determine when the aircraft is clear of the landing runway and make a PA to permit the use of mobile / smartphones. On aircraft equipped with either Wi-Fi or an airborne access system, use of devices is permitted on selected routes above 10,000 feet.

Use of Transmitting Portable Electronic Devices (TPEDs)


It is not possible for cabin crew to verify and confirm that each and every device on board is in proper mode at all times. Nevertheless, cabin crew are expected to inform passengers of the

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



airline's policy on the expanded use of passenger portable electronic devices. During the cabin secure checks for take-off and landing, if a passenger is identified utilizing a TPED, Cabin Crew should request the passenger to check that the device is in Airplane Mode. If the passenger is unable to confirm whether the device is in the 'Airplane Mode' or if 'Airplane Mode' or the device cannot be enabled, the passenger must be instructed to switch the device OFF. After landing and once the aircraft has vacated the active runway, the Senior Cabin Crew Member will make a PA to permit the use of handheld TPEDS.

Use of *Handheld* Portable Electronic Devices by Flight Phase

		
Flight phase	Airplane Mode - Disabled	Airplane Mode - Enabled
Taxi Out	NO	YES
Take-off	NO	YES
Cruise	NO <u>Exception:</u> Only on aircraft equipped with WI-FI or an airborne access system and	YES

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



	only when crew advises of permission of use	
Landing	NO	YES
Taxi In	YES	YES

Low Visibility Operations

On specific aircraft types, during Low Visibility Operations (LVOs) all PEDs must be switched off and during take-off and landing. The Pilot-in-Command shall advise the Senior Cabin Crew Member (SCCM) to make a PA. Sample:

“The Pilot-in-Command requires all PEDs, including mobile / smartphones, tablets and e-readers, to be switched off and stowed. You may switch on your device only when instructed by the Cabin Crew.”

Suspected Interference Report

Should a PED be suspected of causing interference to aircraft operation, an entry must be recorded in the Technical Log and an Air Safety Report must be completed.

If interference from a device is suspected, the Pilot-in-Command will prohibit the use of the device. The airline must have established procedures to terminate the operation of device suspected of causing interference with aircraft systems.

Where interference with the aircraft systems or equipment is suspected from use of a device, crew members must:

- Instruct passenger(s) to terminate the use of device
- Prohibit the use of suspected device
- Recheck the aircraft systems and equipment

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



- Photograph the suspected PED, if possible and submit with report

The Pilot-in-Command will report incidents of PED interference and include the following information in the report:

- Flight Information – aircraft type, registration date and UTC time of incident, aircraft location (VOR bearing/DIST/LAT/LONG), altitude, weather conditions, name and telephone number of the Pilot-in-Command;
- The aircraft systems affected and the description of Interference – description of effects on aircraft systems, audio or systems, including radio frequency, identification, duration, severity and other pertinent information; location the device was found, phase of flight and the time the problem occurred, full description of the device, its brand, serial number, if possible the operating system of the device (type and version) and any other peripherals.

Other considerations

Additional procedures and policies should also be considered for crewmembers on handling:

Passenger care and response: Techniques that may be used to handle passengers that are using their devices in a disruptive or unsafe way (e.g. use of speakers versus headphones, loud voice communications, etc.)

Non-routine, abnormal and emergency procedures: Including but not limited to a PED/Lithium battery fire or smoke incident.

Cabin Safety “To-Do” List

When preparing for an expanded of PEDs for passengers on board, consideration should be given to the following:

- Updating of relevant safety manuals with the applicable procedure and issuance of a safety bulletin to cabin crew;
- Update the manual demonstration announcements;
- Assess and address crew resource management and workload issues for all crew members, including passenger information and passenger handling;

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



- Reflect any changes in the on board announcements (PAs) and pre-recorded announcements (PRAM);
- Update of the commercial website to reflect the changes for PED;
- Communicating information to passengers on the expanded use of PEDs on board via text message, as a reminder during electronic check-in, etc.
- Update of applicable ground personnel manuals to reflect the changes for PED;
- Produce new safety briefing card;
- Produce new safety video graphics and text;
- Communicating to passengers via PA or the safety video on how to stow their devices on board, to prevent crushing incidents;
- Communicating to passengers via PA or the safety video on when to safely charge a device;
- Update the IFE and/or Airshow, as applicable;
- Initiate a campaign to both crew and passengers highlighting the main changes to the policy, including the definition of Airplane Mode, how to recognize a transmitting PED etc.; using various mediums (paper or electronic): Training, posters, podcasts, and publications, etc.);
- Implement awareness sessions for cabin crew on handling PED compliance;

Cabin Crew Training

Cabin crew training should include training on the airline's policy and procedures for the use of both PEDs and TPEDs.

Initial Training should include:

- The airline's policy and how to apply it
- The various types of devices and classes of technologies that may be encountered and how to apply their use on board as per the company PED and TPED policy and procedures
- Typical indicators identifying operating modes (i.e. Airplane Mode)
- Awareness of the potential impact on aircraft systems from improper use of PEDs and TPEDs
- Ability to recognize and respond to possible PED interference

Recurrent Training should include:

- Any revisions to the airline's policy and how to apply it
- Recent examples of known occurrences or interference with aircraft systems, if any
- New devices or technologies a cabin crew member may encounter, particularly those new technologies that may be forbidden for use on board

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Sample FAQ for Cabin Crew

(To be edited by each respective airline as applicable to their operation and State regulations)

Why is making this change to the procedure for use of PEDs Onboard?

Regulations regarding the use of PEDs during flight have essentially remained unchanged; this has increasingly become more challenging to manage due to changes in technology and passenger expectations. Regulatory bodies such as the FAA and EASA (specific airline CAA here) have recently extended the use of PEDs. Prior to an airline being permitted to expand the usage of PEDs on board, thorough technical and analysis tests were conducted and presented to our regulator (specific airline CAA) for approval. The engineering team has fulfilled all of the requirements as per the guidance offered (specify reference to regulatory guidance) including immunity, analysis and mitigation measures for eligible phases of flights.

How do you know it will be safe for passengers to use PEDs on all flight phases?

The potential risks for the use of expanded PED has been analysed by experts from airlines, aviation manufacturers, passenger groups, pilots associations, cabin crew and mobile technology manufacturers. Their analysis has assisted airlines to understand the risks so they can put procedures in place to keep those risks at an acceptable level.

Are there times when a PED cannot be used?

Yes, on the (specify aircraft types) and if there is low visibility approach that requires an automatic landing. The Flight Crew will advise the Senior Cabin Crew Member (SCCM) to instruct the passengers via an announcement (PA) to turn off all PED.

What are TPEDs?

A TPED is any Transmitting Portable Electronic Device with the functionality to transmit using Wi-Fi, Bluetooth or mobile transmission. Examples of TPEDs include: mobile / smartphones, Smartphones, tablets, e-readers, handheld game consoles, Bluetooth devices (such as wireless mouse), laptops and notebooks.

What has changed for passengers?

With this new policy, passengers may now use small Transmitting Personal Electronic Devices (TPEDs) in Airplane Mode for all phases of the flight, unless the flight crew or cabin crew instruct otherwise. Previously our passengers could not use TPEDs during taxiing, take-off and landing.

The Safety Video and announcements (PAs) inform the passengers to turn off and stow all electronic devices. Will the PAs change to reflect the new policy?

Yes, the PAs have been amended to reflect this change.

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Do we have to ask every passenger if they have a PED?

No. It is not possible for the cabin crew to ask each individual passenger if they have a PED or TPED and if the transmitting function is switched off. However, if a passenger is observed using a PED, you need to advise them that if it is a TPED that it must be in Airplane Mode as our company policy and procedures.

What should I do as a crew member to ensure a device is in Airplane Mode?

During you cabin secure checks, for both take-off and landing, if you notice a passenger using a TPED; ask if the device is in Airplane Mode. If the passenger cannot show you that the device is in Airplane Mode or if Airplane Mode is not available on that particular device they are required to switch the device off.

What should passengers do if their transmitting devices did not have an Airplane Mode option?

Any device that transmits or receives communication but does not have Airplane Mode must be switched off.

What are the requirements for stowing small PEDs for take-off and landing?

Small devices that can be held by hand, placed in a pocket or stowed in a seat pocket may be used. Larger devices such as laptop must be switched off and stowed in an approved stowage.

Why do larger PEDs such as laptops need to be switched off and stowed for taxi, take-off, approach and landing?

These larger devices are required to be stowed as per our company cabin baggage program. If there is an emergency, larger, heavier items such as standard laptops could impede an evacuation. These devices must be in an approved stowage.

What is the difference between a laptop and a notebook?

The difference between a notebook and laptop is that a notebook is lighter and more portable; most notebooks do not have CD/DVD drives built in. However, a notebook is still large device and would be required to be stowed.

When are transmitting portable electronic devices permitted to be used during flight?

Only aircraft that are specifically equipped with an on-board system through which TPED connection takes place such as aircraft equipped with Wi-Fi, mobile or data services systems such as Aero mobile, 'On-air', etc. TPEDs may be used during cruise in transmitting mode to connect to the on-board system for texts, email and/or text (as applicable to the airlines policy on voice calls).

Can a passenger use an e-reader or tablet during flight?

Yes, if they are not transmitting (Airplane Mode enabled). On an aircraft equipped with Wi-Fi, mobile or data services the transmitting function may be activated.

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



Can passengers make phone calls or send or receive text messages and emails on the ground prior to takeoff?

Passengers have always been permitted to use their handheld portable electronic devices on the ground prior to the closure of the last cabin door. All transmitting functions on mobile phones and smartphones must be turned off using the device's Airplane Mode setting after the aircraft doors have been closed.

Are the passengers required to remove headsets connected to their PED?

Note: Airline to edit as applicable to the operator's State regulations:

There is currently no restriction on the use of headsets for passengers.

Or

There is currently no restriction on the use of headsets for passengers. However, their use is not permitted during the safety demonstration or video.

Or

The use of headsets attached to their PED is not permitted due to concerns of them not being able to hear the safety and/or emergency announcements. However, headsets attached to the aircraft IFE system are permitted for use.

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*



References

CASA, Airworthiness Bulletin (AWB) 23-003 Issue: 1, 29/05/2014 - *Aid to Operators for the Expanded Use of Passenger PEDs*;

EASA Safety Information Bulletin (SIB) 2013-21, 2013-12-09 — *Use of Portable Electronic Devices during Commercial Air Transport Aircraft Operation*;

FAA Information for Operators (InFO) 13010, 10/31/13 — *Expanding Use of Passenger Portable Electronic Devices (PED)*; and Supplement to FAA InFO 13010, 06/09/14 — *FAA Aid to Operators for the Expanded Use of Passengers PEDs*;

FAA Notice 8900.240, 10/31/13 — *Expanded Use of Passenger Portable Electronic Devices (PED)*;

Federal Aviation Administration Advisory Circular (FAA AC) 91.21-1B — *Use of Portable Electronic Devices Aboard Aircraft*;

Report from the Portable Electronic Devices Aviation Rulemaking Committee to the Federal Aviation Administration, 09/30/13 — *Recommendations on Expanding the Use of Portable Electronic Devices during Flight*;

RTCA document no. DO-160E — *Environmental Conditions and Test Procedures for Airborne Equipment*;

RTCA document no. DO-294B — *Guidance on Allowing Transmitting Portable Electronic Devices (TPEDs) on Aircraft*;

RTCA document no. DO-307 — *Aircraft Design and Certification for Portable Electronic Device (PED) Tolerance*.

Transport Canada Advisory Circular (AC) 700-005, Issue No.: 3, 2014-04-15, *Use of Transmitting and Non-Transmitting Portable Electronic Devices*;

United Kingdom Civil Aviation Authority (UK CAA), Civil Aviation Publication (CAP) 756, 11/2005 — *Portable Electronic Device Generated Electro-magnetic Fields on Board a Large Transport Aeroplane*;

United Kingdom Civil Aviation Authority (UKCAA), *Information Notice, Number: IN-2014/022, Use of Portable Electronic Devices During Commercial Air Transport Aircraft Operation*, Issued: 30 January 2014.

*This Guidance is not intended to replace or to contradict any current State regulations.
Airlines should always comply with the regulations and requirements of their competent Authority*