

**Safety & Security**



**SAFETY**  
by **TAP**

## **Cargo Data Logger Checklist**

**Cargo Data Logger**

**Submission date**

## Part 1 – EMI<sup>1</sup> assessment

EASA_AMC1_CAT_GEN_MPA_140	Yes	No	Evidence
(d) Demonstration of electromagnetic compatibility			
(3) Alternative EMI assessment of cargo tracking devices In cases where a transmitting function is automatically deactivated in a cargo tracking device that is a T-PED <sup>2</sup> , the unit should be qualified for safe operation on board the aircraft. One of the following methods should be considered to be acceptable as evidence of its safe operation:			
(ii) The high intensity radiated field (HIRF) certification of the aircraft has been performed, i.e. the aircraft type has been certified after 1987 and meets the appropriate special condition. In such a case, the operator should ensure that the following conditions are met:			
(A) The tracking device:			
(a) features an automated and prolonged radio suspension in flight using multiple modes of redundancy; and			
(b) has been verified in the aircraft environment to ensure deactivation of the transmitting function in flight.			
(B) The emissions from the tracking device comply with the levels as defined by EUROCAE ED-14E/RTCA DO-160E (or later revisions), Section 21, Category H.			
(C) The operator should ensure that the following documents are provided by the tracking device manufacturer:			
(a) a declaration from the manufacturer identifying the device and confirming that the device and its deactivation function comply with the requirement (A) and (B) above;			
(b) a declaration showing that robust design and production controls are in place during the manufacturing of the tracking device;			
(c) a declaration of conformity and technical documentation showing compliance with the European Norms (EN), regulating the transmitter characteristics of the tracking device or its transmission module; and			
(d) the EMI assessment report documenting compliance with point (B) above.			

*Note: Bluetooth technology is considered non-transmitting.*

<sup>1</sup> Electromagnetic Interference

<sup>2</sup> Portable electronic Device (C-Controlled; T – Transmitting)

## Part 2 – Battery Assessment

EASA_AMC1_CAT_GEN_MPA_140	Yes	No	Evidence
(f) Batteries in C-PEDs <sup>3</sup> and cargo tracking devices			
Lithium-type batteries in C-PEDs and cargo tracking devices should meet:			
(1) United Nations (UN) Transportation Regulations, "Recommendations on and the transport of dangerous goods - manual of tests and criteria", UN ST/SG/AC.10/11; and			
(2) One of the following standards:			
(i) Underwriters Laboratory, 'Lithium batteries', UL 1642;			
(ii) Underwriters Laboratory, 'Household and commercial batteries', UL 2054;			
(iii) Underwriters Laboratory, 'Information technology equipment - safety', UL 60950-1;			
(iv) International Electrotechnical Commission (IEC), 'Secondary cells and batteries containing alkaline or other non-acid electrolytes - safety requirements for portable sealed secondary cells, and for batteries made from them, for use in the portable applications', IEC 62133			
(v) RTCA, ' Minimum operational performance standards for rechargeable lithium battery systems', DO-311. RTCA DO-311 may be used to address concerns regarding overcharging, over-discharging, and the flammability of cell components. The standard is intended to test permanently installed equipment; however, these tests are applicable and sufficient to test electronic flight bags rechargeable lithium-type batteries; or			
(vi) European Technical Standard Order (ETSO), 'Non-rechargeable lithium cells and batteries', ETSO C142a			

<sup>3</sup> Portable electronic Device (C-Controlled; T – Transmitting)