



**Deviation request #65 for an ETSO approval for CS-ETSO applicable to
Air Traffic Control Radar Beacon System/Mode Select (ATCRBS/Mode S) Airborne
Equipment - Mode S transponder (ETSO- C112c)
Consultation Paper**

Introductory note

The hereby presented deviation request shall be subject to public consultation, in accordance with EASA Management Board Decision No 7-2004¹ products certification procedure dated 30 March 2004, Article 3 (2.) of which states:

“2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency.”

ETSO-C112c#7 – Air Traffic Control Radar Beacon System/Mode Select (ATCRBS/Mode S) Airborne Equipment

Deviate from EUROCAE ED-73C section 3.28.3.4 and use the newer specification in EUROCAE ED-102A/RTCA DO-260B section 2.2.3.3.2.12 instead for the ADS-B message termination.

Requirement:

ED-73C 3.28.3.4 ADS-B Message Termination

- a. The transponder shall terminate broadcast transmissions of the Airborne Position, Surface Position, Aircraft Identification and Type, Velocity, Trajectory Intent, Operational Co-ordination, Aircraft Status, and/or Event – Driven messages if input data necessary to update the particular ADS-B message type is not available for a period of 60 seconds.

NOTE 1: *For the Airborne Position Message, specifically, Altitude Data alone shall be considered necessary and sufficient to maintain broadcast of the message once the message has been initiated.*

NOTE 2: *For the Surface Position Message, the receipt of new Position (i.e., Latitude and Longitude, combined), Movement, or Ground Track data shall be considered necessary and sufficient to maintain broadcast of the message once the message has been initiated.*

NOTE 3: *For all other ADS-B Messages, the receipt of new data necessary to update any single parameter of the message shall be considered necessary and sufficient to maintain broadcast of the message once the message has been initiated.*

- b. Each ADS-B Message type shall be terminated individually and independently.

Industry:

Equivalent Level of Safety is provided by use of later revision requirement document

¹ Cf. EASA Web: http://www.easa.europa.eu/ws_prod/g/doc/About_EASA/Manag_Board/2004/mb_decision_0704.pdf

EASA

When developing the latest ADS-B standard EUROCAE ED-102A/RTCA DO-260B the ADS-B Message Termination section has been adopted to the current concept of ADS-B out data use. Airborne ADS-B message broadcasting shall be terminated when the most important parameters position (latitude/longitude) and altitude is not available for a period of 60 seconds. Similar, the Surface Position Messages shall be terminated, if position data is not available for a period of 60 seconds.

During the development of EUROCAE ED-102A/RTCA DO-260B the need to harmonise the transponder standard had been identified and the corresponding working group is updating ED-73/DO-181. ED-73E passed consultation and will be adopted by EASA once published during the than next CS-ETSO update. EASA accepts the deviation as an interim measure to solve the inconsistency between both documents.

RTCA DO-181E is already published and reflects the requested deviation:

2.2.23.1.4.2.1 Timeout of Extended Squitter Messages

a. Timeout of Extended Squitter Messages shall be performed in accordance with §2.2.3.3.2.11 of RTCA DO-260B/EUROCAE ED-102A.

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2.2.23.1.4.2.2 Termination of Extended Squitter Messages

a. Termination of Extended Squitter Messages shall be performed in accordance with §2.2.3.3.2.12 of RTCA DO-260B/EUROCAE ED-102A.