



### **Deviations request #108 for an ETSO approval for CS-ETSO applicable to Cockpit Area Microphone (ETSO-C123b) Consultation Paper**

#### **1. Introductory note**

The hereby presented deviation requests shall be subject to public consultation, in accordance with EASA Management Board Decision No 7-2004 as amended by EASA Management Board Decision No 12-2007<sup>1</sup> products certification procedure dated 11<sup>th</sup> September 2007, 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.” Consultation period has been exceptionally shortened to 1 week.

#### **2. ETSO-C123b#1 Cockpit Area Microphone**

Deviate from ED-112 section I-3.3.3 Polar Response – Area Microphone to use newer revision ED-112A requirement section I-3.3.3 Polar Response – Area Microphone.

##### **Industry:**

Microphone element has an omnidirectional response pattern, it is not specifically compliant with the ED-112 requirement for a directional acoustic response. ED-112A considers the omni-directional characteristics of the Cockpit Area Microphone. This upgrade in requirements was driven by the need to provide an acceptable Cockpit Area Microphone recording quality (to facilitate accident and incident investigation). Note that new revision ED-112A is endorsed into FAA TSO-C123c.

##### **Equivalent level of Safety:**

ED-112 requires in section I-3.3.3 “Polar Response – Area Microphone” the following requirement:

“When measured in a free field, the ratio of front response to the response at  $\pm 60$  degrees shall fall within a  $\pm 6$  dB range, and the response from the rear shall be at least 10 dB less than that from the front.”

ED-112A requires in section I-3.3.3 “Polar Response – Area Microphone” the following requirement:

“When measured in a free field, the ratio of front response to the response at  $\pm 60$  degrees shall fall within a  $\pm 6$  dB range.” The newer revision of ED-112A with regard to this requirement is providing the possibility of omni-directional response microphone element.

##### **EASA:**

We accept the deviation.

Note : EASA is planning to update ETSO-C123b to refer to this newer revision of ED-112A standard into ETSO-C123c in the next CS-ETSO NPA.

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<sup>1</sup> Cf. EASA Web: <http://easa.europa.eu/management-board/docs/management-board-meetings/2007/04/MB%20Decision%2012-2007%20amending%20the%20certification%20procedure.pdf>