

Proposed Equivalent Safety Finding to FAR 29.1457 (c) amendment 6 dated 07/08/1970 and CS 29.1457 (c) amendment 3 dated 11/12/2012

1. Introductory note

The hereby presented equivalent safety finding shall be subject to public consultation, in accordance with EASA Management Board decision 12/2007 dated 11 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".

2. Statement of issue

The applicant has proposed a design whereby the audio signal from second pilot station and 3rd crew member are hard-wired in parallel to the socket for the headset at the second pilot station. This connection is intended to ensure the maximum reliability of the communication between 3rd crew member and first pilot station during very specific operation of the aircraft.

As a result of such design solution, the audio signal recorded on the second channel of the CVR contains, in addition to the audio signal received from second pilot station, the audio signal received from the 3rd crew member.

FAR 29.1457 (c) /CS 29.1457 (c) requires that audio signals obtained from first pilot, second pilot and 3rd crew member stations are recorded on separate channels of the CVR.

The proposed design is such that this requirement is not met, since the design does not record separately the signal from the second pilot and 3rd crew member.

3. Safety Equivalency Demonstration

The applicant shall demonstrate the equivalent level of safety of such design by showing that:

- the recording of audio from second pilot station and 3rd crew member station in the same CVR audio channel still meets the objective of CS 29.1457 (a),
- such design does not adversely affect accident investigation when retrieving the audio signal recorded.

Means of compliance shall be proposed such as analysis, tests, etc. containing at least a comparison between compliant and non-compliant channel recordings. A demonstration of the ability to subsequently separate the second pilot voice recording and 3rd crew member voice recording shall be demonstrated as an Equivalent Level of Safety for EASA acceptance.