

**Clearance Record
DOCUMENT COMMENT LOG**

Originating Office: AIR-130	Document Description: TSO-C87a, Airborne Low-Range Radio Altimeter	Project Lead: Charisse R. Green, AIR-130	Reviewing Office:	Date of Review:
---------------------------------------	--	--	--------------------------	------------------------

Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
ANE-150 Marc Ronell	General	Please eliminate the use of the word "shall" and replace it with the word "must".	Plain language requirement.		Accepted.
ANM-130L	Page 2, Paragraph 3.d	<p>If the FAA is changing the requirement of ED -30 then we should state in the requirements not in a note.</p> <p>Paragraph d. calls out "4 of EUROCAE document ED-30 using standard environmental conditions and test procedures appropriate for airborne equipment."</p> <p>The note states :</p> <p>"Note: The use of RTCA/DO-160A, as prescribed in ED-30, or any DO-160 revision earlier than RTCA/DO-160D Change 3 is generally not considered appropriate and will require substantiation via the deviation process as discussed in</p>	A note is not normally used to change a requirement it is usually used to provide additional clarification.	ADD "RTCA/DO-160D Change 3 or higher version is required" to paragraph d. and delete note	Not Accepted: This is current TSO template language. The note allows for manufacturers to use any environmental standard other than RTCA/DO-160A, -B, C, or -D Changes 1 and 2.

Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
		paragraph 3.g"			
ANM-100D	Page 3, Paragraph 4	Include a statement requiring identification of deviations where applicable.	Page 3, paragraph 3.g. informs reader of deviation provision.	Insert the following in paragraph 4.c.: If the article includes a deviation per paragraph 3.g of this TSO, the marking should include a means to indicate a deviation was granted.	Not Accepted: This is current TSO template language. The FAA is moving away from having deviations marked on the actual equipment, but are requiring TSO applicants to provide deviation information in the installation manual.
ANE-150 Marc Ronell	Page 5	There should probably be a requirement that airborne low-range radio altimeters conforming to TSO-C87a be required to issue error/warning messages when the device is providing negative altitude measurements. These warning should be stored with high resolutions timestamps to indicate the time of the out of range reading. The readings should be required to be stored in a maintenance area accessible to both maintenance and FAA personnel, not just the vehicle's black box recorder. The data should also be made available to devices	There are already records of accidents which could have been avoided with these basic requirements. The ED-30 requirements do not seem to go far enough.		Not Accepted: The TSO does have a loss of function annunciation requirement, however we have chosen not to institute a new malfunction alerting requirement. Historically, this requirement was not incorporated in the original TSO-C87, RTCA's DO-155, or EUROCAE's ED-30. Malfunction alerting requirements will vary depending on the intended installation. Malfunction detection may not be integrated into lower end products, and could be spread across multiple articles for

Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
		which can combine its value with a weight on wheels signal to generate caution/warnings to pilots.			more complex systems.
ANM-100D	Page 7, Paragraph 8. c	Wrong phone number.	The telephone number listed here is for calls from outside the U.S. See http://www.sae.org/about/contact/	Replace (724) 776-4970 with (724) 776-4841.	Accepted:
ANM-100D	Page 7, Paragraph 8. c	Wrong URL.	<ol style="list-style-type: none"> 1. The website has changed and the instructions are no longer valid. 2. The www.access.gpo.gov portal is difficult to navigate & is not the most direct access to the Bookstore. 3. P. 7 ¶ 8. a. b. d & e do not provide navigation on the referenced web pages. 	<ol style="list-style-type: none"> 1. Replace "You can also order copies online ..." with "You can also order copies online from www.bookstore.gpo.gov." 2. Delete the last two sentences (page navigation). 	Not Accepted: This is the current TSO template policy.
ANE-150 Tony Pigott	Appendix 1, Paragraph 1.2	How does one know if FCC regulations are applicable?		Define the FCC applicability and FAA regulations(s) to be met.	Not Accepted: It is the FAA's policy that manufacturer's will have knowledge as to what frequency their equipment will operate on and will obtain the appropriate FCC licenses.