

Item	Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
1	Airtran	<p>Page: 4 Para: 7.b</p> <p>A means should be provided to alert the flight crew of detected airborne system failures that render the satellite voice system inoperative.</p>	<p>All non-ECAS aircraft could not comply with this requirement. Including B737, B757</p> <p>Engine indicating and alerting system</p>	Operational impact	Adapt verbiage consistent with HF serviceability requirements of an operational check prior to entering airspace requiring Long Range Communications.	<p>Nonconcur</p> <p>Only referring to detected loss. See RTCA DO 210, 2.2.10</p>
2	Brad Snelling AVN Aircraft Configuration Team, 405-954-9060	<p>Para 10b(3)</p> <p>Evaluate acceptable voice transmission and reception continuity in normal turns and pitch maneuvers, ensuring continued operation at extreme latitudes.</p>	<p>I. Suggest a sample case of L-Band intermod to look for with the associated calculations. This will increase the likelihood of this check getting done correctly,</p> <p>II. Suggest clarification on (3). Does this imply that show compliance certification flights should be done at extreme latitudes? I think this is stating the</p>			<p>Concur</p> <p>Modified to include note. See item# 22.</p>

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			reason for doing turns and pitch maneuvers but I am not sure. Show compliance at extreme latitudes will make a big difference in budgeting for flight test hours and coordination required.			
3	AirTran, Greg Cleath	Page: 5 Para: 7 J  The system should display caller identification (ID) information to the flight crew for incoming calls.	If an individual is able to defeat the security at the ground earth station that includes caller ID, PIN ID, aircraft octal and priority code by “spoofing” a phone number. Additional caller ID at the aircraft would not provide an additional level of security.	Inability of any aircraft installed SATCOM system currently in production to meet this requirement.	Relief in the requirement to have caller ID at the SATCOM system onboard the aircraft. Currently, no production SATCOM system can meet this requirement.	Concur,  Modified text now in paragraph 7.k., see item #20.
4	AIRBUS	Page 3 § 6a  Satellite voice calls should be prioritized consistent with figure 1. The	<i>Req 6.a: “Satellite voice calls should be prioritized consistent with figure 1. The satellite voice equipment’s internal signaling procedures should provide for the aircraft operator to start an aeronautical mobile</i>	Clarification of requirement’s intent	Cockpit calls of priority level 3 answers to the intent of Recommendation 6.a.	Nonconcur,  Pilot has the option to select priority level 3.

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		satellite voice equipment's internal signaling procedures should provide for the aircraft operator to start an aeronautical mobile satellite (route) service (AMS(R)S) voice call at priority level 2.	<p><i>satellite (route) service (AMS(R)S) voice call <b>at priority level 2.</b></i></p> <p>We understand that objective of requirement 6.a is to ensure that cockpit calls should have priority to cabin calls. In consistency with Figure 1 page 4, a level 3 priority is acceptable for cockpit calls.</p>			
5	AIRBUS	<p>Page 5 §7j</p> <p>The system should display caller identification (ID) information to the flight crew for incoming calls.</p>	<p><i>Req 7j: "The system should display caller identification (ID) information to the flight crew for incoming calls".</i></p> <p>Objective of the requirement not fully understood. Calls' priority remains the key information to be available to the pilot.</p>	Clarification of requirement's intent	Calls' priority remains the key information to be available to the pilot.	Concur, Modified text now in paragraph 7.k., see item #20.

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6		Page 6 § 9	<p><i>Req 9: “Voice Call Routing. The satellite voice equipment should verify the priority level when a “ground-to-air” AMS(R)S voice call is received. The following priority levels are routed:</i></p> <p><b>a.</b> <i>To the flight deck, if they are satellite voice calls of priority levels 1-3.</i></p> <p><b>b.</b> <i>To the passenger cabin, if they are satellite voice calls of priority level 4.”</i></p> <p>Draft AC 20-150A §9b recommends “ground-to-air” messages routing to the passenger cabin, if they are satellite voice messages of priority level 4.</p> <p>Airlines are contacting flight crew for their daily operational needs (flight management) through satellite voice messages of priority level 4.</p> <p>This specific airlines’ operational need has been deeply discussed &amp; assessed as acceptable during initial SATCOM Voice Task Force” (SVTF) trials (see the Report of the Third meeting of the Satcom</p>	Operational airlines’ needs should be taken into account.	<p>Satellite messages of priority 4 could be routed in the cockpit provided that:</p> <ul style="list-style-type: none"> <li>- there is a means in the cockpit for the flight crew to have access to all incoming messages with their allocated priority</li> <li>- the flight crew is always able to check the priority levels of incoming calls before answering</li> <li>- the flight crew is able to reject any incoming messages</li> </ul>	<p>Nonconcur</p> <p>Priority level 4 is considered public correspondence and should not be used for regularity of flight and airline operator communication.</p>

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7	AIRBUS	Page 7 §11	<p><b>Req 11. Airplane Flight Manual (Supplement) Wording.</b>  <i>The airplane flight manual (AFM) supplement should provide a description of all normal modes, submodes, and non-normal (if applicable) modes of system operation, including what actions are expected by the flight crew for each case.</i></p> <p>As far as the aircraft manuals are concerned, the possibility to describe normal and abnormal modes/sub-modes (as applicable) of system operation and related crew tasks through the FCOM should be assessed as acceptable to answer § 11 intent.</p>	AFM is basically used to identify the criteria used during the airworthiness approval process and operating limitation with related procedures (if any).	FCOM should be referenced in §11.	Concur,  Modified text as recommended to include FCOM.
8	Garmin	Pg. 1, ¶ 1	Need better clarification of the intended function of the satellite voice equipment in sentence, “In this AC, we (the Federal Aviation	Although the previous sentence in the paragraph identified the	Revise sentence, “In this AC, we (the Federal Aviation Administration or FAA) recommend	Nonconcur,  No change required, see first sentence of section

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			Administration or FAA) recommend one way to gain airworthiness approval for satellite voice equipment.	“airworthiness approval for designers, manufacturers, and installers of equipment supporting air traffic service (ATS)” there needs to be a mention of the purpose of the equipment to mitigate any possible migration of this guidance to non-cockpit, non ATS functionality.	one way to gain airworthiness approval for satellite voice equipment <b>supporting air traffic service (ATS).</b>	1 purpose.
9	Garmin	Pg. 4, ¶ 7.c	This item implies the use of a visible audio panel with a wide variety of individual buttons and lights. This item should be reworded to remove the implication.	Newer integrated flight decks may use other types of controllers for display and control of audio functions.	Revise item text, “There should be a continuous visual annunciation to the crew indicating a call in progress. Each satellite voice channel <b>available via the flight deck audio panel should have a readily available</b>	Concur, Modified text now in paragraph 7.d., as recommended.

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					indication of call status. The indication should permit the crew to determine when a call is active on a given channel.”	
10	Garmin	Pg. 5, ¶ 7.c Note	This note implies the use of a visible audio panel with a wide variety of individual buttons and lights. This item should be reworded to remove the implication.	Newer integrated flight decks may use other types of controllers for display and control of audio functions.	Revise note text, “For air to ground calls, the call status indication may indicate an active call at call initiation (rather than connection). This provides feedback to the flight crew that the satellite voice system is responding to their input.”	Concur,  Modified text now in paragraph 7.d., as recommended.
11	Garmin	Pg. 5, ¶ 7.j	Clarify the circumstances under which caller ID is desirable.	Not all satellite system providers have caller ID information available. Additionally, some callers may have their caller ID information blocked.	Revise sentence, “The system should display caller identification (ID) information to the flight crew for incoming calls if such information is available from the satellite network.”	Concur  Modified text now in paragraph 7.k., see item # 20.

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12	Garmin	Pg. 5, ¶ 7.k	“aural” is misspelled	Editorial comment	Correct spelling	Concur  Change made as recommended.
13	Garmin	Pg. 5, ¶ 7.1	Need better clarification of when abnormal call terminations should be annunciated.	On some satellite systems, the satellite radio does not distinguish between “loss of signal” disconnects and a remote hang-up. The system may not have enough information to confirm the termination was abnormal. Thus, abnormal call terminations of this type may not always be indicated as such. Over-reporting of terminations as abnormal will result in nuisance alerts.	Revise sentence, “The system should provide an indication to the flight crew when there are <b>events that can be positively identified as</b> abnormal call terminations and link failures.”	Concur  Modified text as recommended. See DO 210D, Section 2.4.6

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14	Garmin	Pg. 6, ¶ 8.e	Control of the satellite system may not be performed through the MCDU.	Newer integrated flight decks do not use traditional MCDUs for display or control.	Replace “MCDU” with “display controller”	Concur,  Modified text as recommended.
15	Garmin	Pg. 7, ¶ 11.b	Need better clarification of the intended use of the satellite voice equipment in sentence, “The Federal Aviation Administration has evaluated the SATCOM voice equipment in accordance with AC 20-150A.”.	There needs to be a mention of the use of the equipment to mitigate any possible migration of this guidance to non-cockpit, non ATS support.	Revise sentence, “The Federal Aviation Administration has evaluated the SATCOM voice equipment used to support air traffic service (ATS) in accordance with AC 20-150A.”	Nonconcur,  No change required, see first sentence of section 1 purpose.
16	Garmin	Pg. B-1, ¶ 2.(3)  AC 20-168 misc. non-required cabin equipment	AC 20-168 is listed as relating to this AC. AC 20-168 provides the following note: Note: This AC doesn’t apply to any CS&E installed in the cockpit. Any CS&E that may interface with any required systems and equipment must be coordinated with the responsible aircraft	AC 20-168 does not apply to required cockpit equipment. The intent of AC 20-150A is to provide guidance for installation of satellite voice equipment for ATS support for oceanic and remote flight	Remove reference to AC 20-168.	Concur,  Reference removed.

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			certification office (ACO) for any additional certification considerations.	operations. This equipment is now considered “required” cockpit equipment if installed for these purposes. Additionally, DO-313, which is referenced by AC 20-168, specifically states in Table 1-1 that Satellite Radio is for cabin use only. In consideration of the intent of DO-313, Satellite Radio does not appear to be the same thing as Satellite Communications for ATS.		
17	Eurocopter	B-1 § 2	It could be useful to explicitly list other related FAA advisory circulars such as: - AC 20-148 Reusable		List the most significant related Advisory Circulars.	Acknowledge, no change made. The FAA recognizes that other Advisory

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			<p>Software Components</p> <ul style="list-style-type: none"> <li>- AC 20-156 Aviation Databus Assurance</li> <li>- AC 20-170 Integrated Modular Avionics</li> <li>- AC 20-SYSTMS Development of Civil Aircraft and Systems</li> </ul>			material maybe related to the aircraft installation. We choose to only recognize those that have direct applicability to this AC.
18	Eurocopter	B-1 § 2	<p>A reference to the relevant Orders and Notices such as:</p> <ul style="list-style-type: none"> <li>- Order 8110.49 Software Approval Guidelines</li> <li>- Order 8110.105 Simple And Complex Electronic Hardware Approval Guidance could be useful.</li> </ul>	<p>FAA Orders and Notices spell out the expectations of the FAA. They should also be considered by the applicants.</p>	<p>List relevant FAA orders and notices if consistent with FAA writing standards for Advisory Circulars.</p>	<p>Acknowledge, no change made. The FAA recognizes that other Advisory material maybe related to the aircraft installation. We choose to only recognize those that have direct applicability to this AC.</p>
19	Boeing Commercial Airplanes	Page 5 Para 7.i.	<p>The proposed text states: <i>“i. The system should provide a continuous visual indication of any calls on hold.”</i></p>	<p>We recommend revising the text to read as follows: <i>“i. The system should continue to provide a visual indication of any calls on</i></p>	<p>The Inmarsat Classic Aero network does not support placing a call “on hold.” It is actually the audio system on current aircraft that allows the flight crew to select a different</p>	<p>Concur, Modified text now in paragraph 7.j., as recommended.</p>

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				<i>hold <u>that a SATCOM call is connected, even if the flight crew member is talking on another radio system.</u></i>	system for the microphone input while keeping a SATCOM call connected. The audio system also allows the flight crew to continue monitoring SATCOM or not, when the SATCOM microphone is not selected.	
20	<i>Boeing Commercial Airplanes</i>	Page 5 Para 7.j.	The proposed text states: <i>“j. The system should display caller identification (ID) information to the flight crew for incoming calls.”</i>	We recommend revising the text to read as follows: <i>“j. The system may display caller identification (ID) information to the flight crew for incoming calls, <u>if caller ID is supported by the satellite network.</u>”</i>	Caller ID is not supported on the Inmarsat Classic Aero network today, so it is technically impossible for the majority of SATCOM voice installations to comply with the caller ID requirement	Concur  Modified text as recommended.
21	<i>Boeing Commercial Airplanes</i>	Page 5 Para 8.b.	The proposed text states: <i>“b. A means should be provided for the flight crew to positively (i.e. by</i>	We recommend revising the text to read as follows:	The flight crew on some current models do have the option of ending the connected	Concur ,  Modified text as

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			<i>manual action) accept or reject receipt of a call.”</i>	<i>“b. A means <b>should may</b> be provided for the flight crew to positively (i.e. by manual action) accept or reject receipt of a call.”</i>	call at any time, but do not have the option to reject the call before it is connected. Additionally, the flight crew do have the option of ignoring the connected call by simply not selecting the connected call’s microphone selector and ensuring the audio for that call is deselected on the audio panel. Making this requirement mandatory in order to use this AC guidance would cause a significant redesign and recertification of the audio system and possible crew training.	follows:  A means should be provided for the flight crew to positively (i.e., by manual action) terminate a connected call.
22	<i>Boeing Commercial Airplanes</i>	Page 7 Para 10.b. (3)	The proposed text states: <i>“b. <b>Flight Tests</b>. The flight tests for certification should:</i> ...	We recommend adding the following note to this paragraph: <b>“NOTE: The</b>	The satellite signal can be temporally blocked by an airplane wing during normal bank angle	Concur  Removed requirement, added note as

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			<i>(3) Evaluate acceptable voice transmission and reception continuity in normal turns and pitch maneuvers, ensuring continued operation at extreme latitudes.”</i>	<i>aircraft wing may block the RF signals between the SATCOM antenna and the satellite when a normal bank angle turn is conducted at high latitudes. It should be acceptable for a call to terminate for this reason.”</i>	turns due to the SATCOM antenna installation location on most aircraft. Call termination during a turn is a normal condition at high or low latitudes.	recommended.