

RTCA Paper No. 210-21/SC135-733
March 11, 2021

SUMMARY OF THE SEVENTY-EIGHTH MEETING

RTCA SPECIAL COMMITTEE 135
ENVIRONMENTAL CONDITIONS AND TEST
PROCEDURES FOR AIRBORNE EQUIPMENT

The Seventy-eighth meeting of RTCA/SC-135 was held virtually on March 11th, 2021.

The following were in attendance:

Kyle McMullen, SC-135 Chairman	NIAR
Jacob VanDyke, SC-135 Secretary	Honeywell International Inc.
Rebecca Morrison, Program Director	RTCA, Inc.
Darrell Burghardt *	Textron Aviation
Eric Borgstrom *	Element Materials Technology
Philippe Chenebault *	Dassault Aviation
Nick Conquest *	NIAR
Charlie Cooper *	Collins Aerospace
Raoufou Ganionu *	Transport Canada
Jim Hatlestad *	The Boeing Company
Jeffrey Hebert *	The Boeing Company
Paul Hoyt *	Honeywell International
David Kerr *	Garmin Ltd.
Tim Lusha *	DLS
Evelyn Matheson *	The Boeing Company
Jerome Mavier *	Airbus
Kyle McMullen *	NIAR
Mark McPeek *	Collins Aerospace
Dan Molnar *	Universal Avionics
Rebecca Morrison *	RTCA



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Lee Nguyen *	FAA
Neal Pence *	Honeywell International Inc.
Marc Poncon *	Airbus
Scott Steen *	Garmin Ltd.
Tim Steinbach *	Collins Aerospace
Eric Stewart *	Collins Aerospace
Aziz Tazi *	Transport Canada
Alan Thompson *	Element Materials Technology
Randy Tsuchiyama *	Teledyne
Oral Urquidi *	Panasonic
Jacob VanDyke *	Honeywell International Inc.
Gary Van Hoy *	Honeywell International Inc.
Merrill Vaughan *	The Boeing Company
Ken Webb *	Collins Aerospace

* via Conference Bridge

The agenda for the meeting was as follows:

1. Chairmen’s Opening Remarks, Introductions.
2. Approval of Summary from the Seventy-Seventh Meeting – (RTCA Paper No. 027-21/SC135-731)
3. Discussion of path forward for DO-380 Rev A
4. Review Working Group summaries DO-160, DO-357
5. Review Schedule
6. Review and Approve TOR updates
7. New / Unfinished Business
8. Establish date for next SC-135 Meetings.
9. Closing.

(Note: The following report is organized by Agenda Item, although some sections were conducted out of sequence to accommodate some members’ schedules.)



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Agenda Item 1 **Chairman's opening remarks, Introductions**

The plenary session of the Seventy-eighth meeting of RTCA/SC-135 was called to order at 10:06 AM on the 11th of March, 2021. Chairman Kyle McMullen opened the meeting by welcoming those in attendance. Rebecca Morrison reviewed the RTCA Anti-trust, Proprietary and Membership policies. Mr. McMullen reviewed the agenda for the meeting, and invited attendees to introduce themselves.

Agenda Item 2 **Approval of the Summary from the Seventy-Seventh Meeting**

SC-135 Secretary Jacob VanDyke read the minutes from the 77th meeting RTCA Paper No. 027-21/SC135-731. A motion was made and seconded to accept the minutes, and the motion was approved unanimously.

Agenda Item 3 **Discussion of path forward for DO-380 Rev A**

Chairman Kyle McMullen announced the delay of DO-380A to allow for additional feedback from industry.

Agenda Item 4 **Review Working Group summaries – DO-160, DO-357**

The Working Group discussions were centered on the Change Proposals submitted for DO-160 Revision H.

The Change Coordinators described Change Proposals which were reviewed and dispositioned in their respective group meetings. The level of detail in the Plenary session discussions precludes accurate reporting here, so only change proposals creating significant discussion are noted. The actual Change Proposals and any dispositions are found on the SC-135 Workspace and tracked in the Change Proposal Tracking Log, also found on the Workspace.

Sections 1, 2 and 3 – David Kerr, Change Coordinator.

Discussion was held for two change proposals, H-219 and H240. CP H-219, regarding moving the EUT setup and configuration information from Section 20.3 into Section 3 was deferred. CP H240 was approved to clarify that general temperature stabilization times may be held for longer periods if necessary.



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Sections 4, 5 and 6 – Jacob VanDyke, Change Coordinator.

Two change proposals were reviewed for Section 4 and one for section 6 of the DO-357. Proposal UG-27 was accepted as modified to address the understanding that some equipment may be required to operate during the Overpressure test. UG-30 was also accepted to allow for equipment power-on immediately following the Ground Survival Low test.

Sections 7 and 8, Merrill Vaughan, Change Coordinator.

One change proposal was accepted to expand aircraft Type 3, 4 and 5 to include S or R categories. Proposal H-239 was discussed requesting to maintain a 2-hour minimum exposure for Sine-on-Random testing, independent of dwells. The proposal was deferred for additional investigation, as was CP H-238 which was reliant on a disposition of CP H-239.

Section 9-12 and 14 – Harlan Sharpe, Change Coordinator (Presented by Kyle McMullen)

Section 9 was discussed regarding rewrite of section. Determination was made that a majority of the section could be maintained with the majority of the focus on category definition and alignment. Two proposals were discussed for Section 10. CP H-186 to address a figure update was withdrawn and CP H-194 was Accepted as Modified to clarify minimal disturbance of the EUT following exposure. Section 12 contained two proposals, H-179 and H-190. Both were accepted with H-179 modifying the text from 97-99% to greater than 97%, and H-190 changing text from salt spray to Salt Fog. There were no proposals raised for section 14.

Section 16 – Keith Peavler, Change Coordinator (presented by Jake VanDyke)

Five proposals were reviewed for Section 16. Two were withdrawn as they were duplicates and existing proposals. CP H-198 was accepted as modified to add a definition of V_{test} . CP H-152 was discussed to modify Momentary Power Interrupts to be executed at V_{min} as opposed to V_{nom} . This proposal was deferred for research into industry impact.

Sections 19 and 20 – Jim Hatlestad, Change Coordinator

No new change proposals were submitted or discussed for Section 19. General discussion was held around the switching transients test. Renewed the call for comparative data between existing and potential replacement tests.



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For section 20, two proposals were discussed/reviewed. CP H-96 was accepted as modified which addressed applicability and application of additional frequency modulations and H-55 to address disconnection of equipment between CW and pulsed amplifiers was deferred.

Section 21 – Nick Conquest, Change Coordinator (presented by Jim Hatlestad)

Four proposals were reviewed for this section. Three were rejected and one was withdrawn. The topics discussed were around rearrangement of text and performing CE testing outside of an anechoic chamber.

Agenda Item 5/6 Review Schedule/Review and Approve TOR updates

Chairman McMullen announced that Lee Nguyen is retiring, and a new Government Authorized Representative will be assigned. Based on the Revised Terms of Reference (TOR), RTCA SC-135 has committed to presenting the first complete draft of DO160H by Q3 of 2024, to support final release by December 2024. The committee recommended to push DO-357A out by 2 years to allow for industry feedback for DO-160H. The scheduled release for DO-380A will be pushed to 2025.

Agenda Item 7 New/Unfinished Business

LISN Task Force has taken an action to review all existing CPs regarding LISN topics and schedule a separate meeting to discuss options and best path forward.

Agenda Item 8 Establish Date for Next SC-135 Meeting

The next SC-135 meeting will be held virtually. Dates of the meeting will be from Tuesday, October 19th through Thursday, October 21st, 2021.

Agenda Item 9 Closing and Adjourn

Kyle McMullen asked for a motion to adjourn the meeting. A motion was offered, seconded, and unanimously approved. The meeting was adjourned at 13:44 AM on Thursday, March 11th, 2021.



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Kyle McMullen
Chairman

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Jacob VanDyke
Secretary

Certified as a true and accurate summary of the meeting.