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Report on Scoping Planned Changes to DO-367

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FOREWORD

This document was prepared by Special Committee 231 (SC-231) and approved by the RTCA Program Management Committee (PMC) on September 8, 2025.

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- developing consensus on the application of pertinent technology to fulfill user and provider requirements, including development of minimum operational performance standards for electronic systems and equipment that support aviation; and

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EXECUTIVE SUMMARY

SC-231, Terrain Awareness and Warning Systems (TAWS) submits this report as completion of the work specified by the current Terms of Reference. The committee addressed the path forward to updating the Terrain Awareness & Warning System MOPS, DO-367, with the following topics: Inhibition of the Forward Looking Terrain Awareness (FLTA) Function, Low Energy Alerting, TAWS harmonization with Ground Collision Avoidance System (GCAS), modification of Premature Descent Alerting (PDA) envelope, and consideration of the effects of GPS spoofing on TAWS performance.

The committee does not believe any of the topics listed above require an immediate update to the MOPS. Ideally, once the GCAS definition is solidified, a single MOPS revision can incorporate changes for GCAS, FLTA inhibition, and the PDA envelope. However, because the timeline for GCAS is not firm, the committee recommends that these changes be revisited within three years even if GCAS is not yet ready for incorporation in the TAWS MOPS.

This document is maintained by RTCA, and any questions or comments should be directed to the RTCA staff.

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1 INTRODUCTION

SC-231, Terrain Awareness and Warning Systems (TAWS) submits this report as completion of the work specified by the current Terms of Reference. The committee considered whether updates to the Terrain Awareness & Warning System MOPS, DO-367 were necessary regarding the following topics: Inhibition of the Forward Looking Terrain Awareness (FLTA) Function, Low Energy Alerting, TAWS harmonization with Ground Collision Avoidance System (GCAS), modification of Premature Descent Alerting (PDA) envelope, and consideration of the effects of GPS spoofing on TAWS performance. This paper provides the results of the committee's discussions and the recommendations of the committee.

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2 BACKGROUND

Revision 7 of the Terms of Reference for SC-231 requested the committee to consider five topics for potential inclusion in a future update of DO-367 (TAWS MOPS) or potential inclusion in an RTCA Report. This paper provides the results of the committee's discussions and the recommendations of the committee.

The TOR requested the committee to address the following topics:

1. Consider the white papers the Committee generated in 2020 regarding potential means of preventing operators from leaving the Forward Looking Terrain Awareness function inhibited indefinitely. Determine if appropriate to incorporate in DO-367.
2. Consider a Low-Energy Alerting mode and determine if this is an appropriate function for inclusion in the Terrain Awareness & Warning System MOPS.
3. Consider how TAWS requirements would be harmonized with requirements for a future Ground Collision Avoidance System (GCAS).
4. Consider modifications to the Premature Descent Alerting (PDA) envelope defined in the current TAWS MOPS and determine if the envelope could be made more sensitive to early descents due to a mis-set barometric altimeter without negatively impacting nuisance alert rates.
5. Consider the effects of GPS spoofing on TAWS equipment.

The special committee performed the following activities:

A. Reviewed the white papers that the committee generated in 2020 regarding the TAWS inhibit function.

B. Reviewed NTSB Recommendation A-14-43 regarding a low-energy alerting system.

C. Reviewed the work currently being performed by the FAA relative to a Ground Collision Avoidance System (GCAS).

D. Reviewed the BEA report regarding the Airhub A320 9H-EMU incident at Paris Charles de Gaule on 23May22.

E. Reviewed available data on GPS Spoofing.

Referenced material is available on the SC-231 Aeropus website.

The committee's recommendations for each of the five topics are listed in the following sections.

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3 INHIBITION OF THE FORWARD LOOKING TERRAIN AWARENESS FUNCTION

Topic: Consider the white papers the Committee generated in 2020 regarding potential means of preventing operators from leaving the Forward Looking Terrain Awareness function inhibited indefinitely. Determine if appropriate to incorporate in DO-367.

Recommendation: After review of the white papers generated by the committee in 2020 regarding the TAWS inhibit function and discussion amongst the group, the committee recommends that the requirements for Class B and C TAWS be updated the next time the TAWS MOPS is open to address the issue of permanent inhibition of the Forward Looking Terrain Awareness (FLTA) function.

The committee notes that any requirement to preclude a permanent inhibition should allow for either functionality implemented in the TAWS processor itself or appropriate accommodations at the installation level. It is felt that this will allow the most opportunity for system designers and installers to meet the requirement.

The committee recommends that only Class B and C TAWS should have their requirements updated. The concern raised by the NTSB is based on operations that use Class B TAWS. Part 121 operations benefit from more structured crew training and procedures and there does not appear to be a problem with Part 121 operators leaving Class A TAWS inhibited for extended periods.

The white papers generated by the committee in 2020 described various methods that could be used to prevent permanent inhibition of the FLTA function. Many of these methods could be managed at the installation level without requiring a change to the TSO'd TAWS product and are available to operators today. Based on this, the committee does not see a need to update the MOPS immediately. Rather, this change can be incorporated the next time the MOPS is open for mandatory updates.

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