

**RTCA Special Committee 186, Working Group 3, Meeting #28
EUROCAE WG-51, SG-1, Meeting #5**

ADS-B 1090ES MOPS Maintenance

**EUROCAE Headquarters, Malakoff near Paris, France
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**DO-260B Receiver Duplicate Address Tests
In Response to Action Item 27-07**

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Summary
This Working Paper proposes a duplicate address test for the 1090 ES Receiver for Surface Position Messages (BDS 0,6) and Airborne Position Messages (BDS 0,5). It is presented as the response to Action Item #25-04.

For reference, the attached Table 1 provides the ASAS MOPS Section references on which combinations of ADS-B In reports are tested by the traffic processor for duplicate address conditions.

Table 1 – ASAS MOPS Duplicate Address Test Requirements

Report Types	UAT Direct (Air to Air)	UAT ADS-R	UAT TIS-B (Surface Targets)	1090 Direct (Air to Air)	1090 ADS-R	1090 TIS-B (Surface Targets)
UAT Direct (Air to Air)	ASAS MOPS Sect. 2.2.3.1.3.2	No reqmts	ASAS MOPS Sect. 2.2.3.2.1	No reqmts	ASAS MOPS Sect. 1.5.1.6	No reqmts
UAT ADS-R	No reqmts	No reqmts	ASAS MOPS Sect. 2.2.3.2.1	ASAS MOPS Sect. 1.5.1.6	No reqmts	No reqmts
UAT TIS-B (Surface Targets)	ASAS MOPS Sect. 2.2.3.2.1	ASAS MOPS Sect. 2.2.3.2.1	No reqmts	No reqmts	No reqmts	No reqmts
1090 Direct (Air to Air)	No reqmts	ASAS MOPS Sect. 1.5.1.6	No reqmts	ASAS MOPS Sect. 1.5.1.4	No reqmts	ASAS MOPS Sect. 2.2.3.2.1
1090 ADS-R	ASAS MOPS Sect. 1.5.1.6	No reqmts	No reqmts	No reqmts	No reqmts	ASAS MOPS Sect. 2.2.3.2.1
1090 TIS-B (Surface Targets)	No reqmts	No reqmts	No reqmts	ASAS MOPS Sect. 2.2.3.2.1	ASAS MOPS Sect. 2.2.3.2.1	No reqmts

- Notes: 1. Section 1.5 in the ASAS MOPS contains assumptions, not requirements.
 2. In the FAA system, TIS-B Airborne Messages will not have ICAO 24 bit address.

It is proposed that duplicate address tests for the 1090 ES receiver be included as part of the Report Assembly Track State Maintenance requirements in DO-260B, Sections 2.2.10.4.1.2.a for Airborne messages and Section 2.2.10.4.2.2.a for Surface messages. The tests should only apply to the Airborne Position message (BDS 0,5) or to the Surface Position message (BDS 0,6).

Append the proposed new text for Section 2.2.10.4.1.2. (Airborne) to the end of subparagraph a.(1) as follows: “If the two separate tracks contain the same ICAO 24 bit address, the duplicate address flag shall be set in the “Report Mode” field of the State Vector Report for both tracks as detailed in Table 2-81.”

Append the proposed new text for Section 2.2.10.4.2.2. (Surface) to the end of subparagraph a.(1) as follows: “If the two separate tracks contain the same ICAO 24 bit address, the duplicate address flag shall be set in the “Report Mode” field of the State Vector Report for both tracks as detailed in Table 2-81.”