

RTCA Special Committee 186, Working Group 3

ADS-B 1090 MOPS, Revision A

Meeting #6

Proposed Changes to Tables 2-3, 2-4 and 2-5

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SUMMARY

The State Vector (SV) and Mode Status (MS) information contained in Tables 2-3 and 2-4 of DO-260 does not accurately represent the DO-242 MASPS requirements for Class A0 and B1 equipment.

1.0 Background

The State Vector (SV) and Mode Status (MS) information contained in Tables 2-3 and 2-4 of DO-260 does not accurately represent the DO-242 MASPS requirements for Class A0 and B1 equipment.

Paragraph 3.2.3.2 of DO-242 states, "Class B1: Two types of equipage, corresponding to equivalent transmit powers and information capabilities as those of class A0 and A1, are permitted within this class. Use of the lower power alternative is determined by the same aircraft operational limits as those given for class A0."

This means the SV and MS information capabilities for B1 must be the same as those for either A0 or A1. Table 2-4 of DO-260 erroneously indicates that the information requirements are different. (Note: The information contained in Table 2-4 of DO-260 came from Table 3-9 of DO-242, but Table 3-9 is not a complete list of SV and MS information elements required by class B1. It is just a list of those elements required for the applications indicated in the table.)

DO-260A must reflect the DO-242 requirements stated in paragraphs 3.2.3.2 and 3.4.3.2 and tables 2-2 and 3-2(a & b). Those requirements are:

Class A0, A1, and B1 equipment must be capable of broadcasting SV elements 1-15 and MS elements 1-6, as currently defined in DO-242, Tables 3-5 and 3-6.

2.0 Proposal

It is proposed that:

1. In Table 2-3, we specify only MS-P and delete the MS-P_{VFR} and MS-P_{IFR} for A0 and A1 classes.
2. In Table 2-3, we have previously agreed to add Aircraft Operational Status Messages to the Required Minimum Messages column for A0 class. I propose also adding "Extended Squitter Aircraft Status Messages" to the Required Minimum Messages column for A0. This message is needed in order to broadcast MS element 5 (Emergency/Priority Status). MS element 5 is needed by ATC and is currently supplied by the transponder. MS element 5 is required for A0 by DO-242, paragraph 3.4.3.2 and tables 2-2 and 3-2.
3. In Table 2-4, change all of the columns for Class B1 to say, "Same as A0 or A1."
4. Change Note 1 following Table 2-4 to delete MS-P_{IFR} and MS-P_{VFR} and only define MS-P as "Partial Mode Status".
5. Change Note 5 following Table 2-4 from MS-P_{IFR} to only "MS-P".
6. Delete Notes 6, 8, 10 and 11, as they are no longer required or defined.
7. In Table 2-5, for A1 class in the MASPS Requirements column, and also in the Notes following Table 2-6, change MS-P_{IFR} to only "MS-P".