

### Overview

The DO-260B MOPS Test Option provides pre-loaded configuration files and special test screens that enable the user to easily perform specific MOPS required tests.

This option requires that Transponder Option (RGSNGOPT10) and Multi-Receiver Option (RGSNGOPT14) have been purchased and installed on the RGS-2000NG.

Below are descriptions of special test screens/capabilities included in the DO-260B MOPS test option. Where applicable, we have included the RTCA/DO-260B Test Section paragraph numbers, where the tests to be performed can be found.

### Special Test Screens Provided

- Normal
- Altered Preamble
- Bit Failures
- Overlapping Pulse
- Preamble Validation
- Confidence Test

### Description of Special Test Screens

#### Normal

Used for setting up multiple Mode A, Mode C or Mode S (Squitter) targets. Transmissions can be routed to either the top or bottom RF ports. This screen can be used to easily set up jamming scenarios or to test the limits of a multi-receiver receiving many messages at a time. Numerous squitter types are available. Mode A, C or Squitter data can be randomly generated.

The following pre-configured files can be loaded for use in Normal Test:

- ADS-B & Mode S
- ADS-B & ModeA-ModeC
- Dual ADS-B
- Single ADS-B

#### Altered Preamble

Used for performing the tests outlined in paragraph 2.3.2.4.6: Criteria for ADS-B Message Transmission Pulse Detection. The test procedures in 2.3.2.4.6 verify that the ADS-B reply processor correctly detects the presence of a valid ADS-B preamble whose pulse characteristics are within the allowable limits and rejects preambles having pulse spacing and position characteristics that are outside the allowable limits.

The following pre-configured files can be loaded for use in the Measurement Procedure in paragraph 2.3.2.4.6.

- ADS-B Preamble\_InputA
- ADS-B Preamble\_InputB
- ADS-B Preamble\_InputC
- ADS-B Preamble\_InputD

#### Bit Failures

Used for performing the tests outlined in paragraph 2.3.2.4.7: Criteria for Data Block Acceptance in ADS-B Message Signals (2.2.4.3.4.7.3). This test procedure verifies that ADS-B Messages are accepted when DF field is 17 or 18 and when no more than seven consecutive bits fail the confidence test, as specified by 2.2.4.3.4.7.3.

The following pre-configured files can be loaded for use in the Measurement Procedure in paragraph 2.3.2.4.7.

- ADS-B Bad Chips
- ADS-B Bad Chips DF17 Energy in chips 33 thru 39
- ADS-B Bad Chips DF17 Energy in chips 33 thru 40
- ADS-B Bad Chips DF18 Energy in chips 33 thru 39

### **Overlapping Pulse**

Used for performing verification of Re-Triggerable Reply Processor procedures (2.2.4.2.2), which verify the capability of the TCAS shared ADS-B receiver to detect overlapping Mode-S replies or ADS-B Messages in the TCAS level range.

The following pre-configured file(s) can be loaded for use in the Measurement Procedure in paragraph 2.2.4.2.2.

- ADS-B Pulse

### **Preamble Validation**

This screen can be used for setting up "Preamble Validation Tests" which can be found in the following MOPS paragraphs:

- 2.4.4.4.2.1.3 Extended Squitter Signal Source Requirements
- 2.4.4.4.2.3 Preamble Validation Tests

The user is given the capability to put "energy" in user defined blocks of chips (i.e. from chip 10 to 50, Delta Amplitude: 5 dB). Or the user can put "No energy" in user defined blocks of chips.

The User can also select the period, number of transmissions, random start or random width.

### **Confidence Test**

This screen can be used for setting up "Confidence Tests" which can be found in the following MOPS paragraphs:

- 2.2.4.3.4.7.3 Criteria for Data Block Acceptance in ADS-B Message Signals
- 2.3.2.4.7 Criteria for Data Block Acceptance in ADS-B Message Signals
- 2.4.4.3.4.7.3 Verification of Criteria for Data Block Acceptance in ADS-B Message Signals

From this screen energy can be placed in any 5 chips (1 thru 112) and Bad chips can be set for up to any 5 chips (1 thru 112).

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