



MXS Restricted Use Notification to Owners & Operators

Improper formatting of ADS-B message transmissions when configured for diversity operation (Dual Antenna)

SB07051

Products Affected

MXS 10-0000 with software part number SW06990 and MXS 10-0000 MOD A with software part number SW07027 are affected if the MXS transponder is installed in an aircraft configured for diversity operation.

Issue

The issue is with the transmission of ADS-B Out position messages when the transponder is configured for diversity operation. Instead of transmitting 'Odd' and 'Even' formats of the message on alternating antennas, the messages are transmitted such that only one format is transmitted on either antenna. The message formats are supposed to alternate between top and bottom antenna transmissions so that a receiver will receive both message formats even when it is only able to see transmissions from a single antenna. Reception of both formats are necessary to initiate an ADS-B track. This issue could cause an ADS-B receiver to delay or fail to initiate a target track.

The issue is present under the following conditions:

- The MXS is configured for Top and Bottom Antennas via Host Interface Install Message.
- The aircraft is airborne (Surface messages are only transmitted from the Top antenna when the aircraft is on ground).
- The aircraft receiving the ADS-B position messages has line of sight to transmissions from only one RF port (top or bottom) of the affected (transmitting) aircraft. Such as when the receiving aircraft is directly above or below the transmitting aircraft.

Owner or Operator Action

Do not use MXS or MXS MOD A in aircraft installations configured for antenna diversity (Dual Antenna). No action is required for aircraft installations configured for single antenna if the Installation settings are correctly set per the System Description and Installation Manual (UM06945).

Resolution

A fix for the issue has been identified and will be available as MXS 10-0000 MOD B. Contact our Customer Support Team to obtain MXS update.