

**RTCA Special Committee 186, Working Group 3  
ADS-B 1090ES MOPS Maintenance**

**Meeting #24**

**Honeywell Aerospace, Phoenix Arizona  
13 – 15 January 2009**

**ADS-B ON\_OFF CONTROL ISSUES**

**Presented by: Robert H. “Bob” Saffell  
Rockwell Collins, Inc.**

<b>Summary</b>
This working paper addresses the need to specifically either provide MOPs and SARPs requirements to provide for flight crew capability to Turn Off ADS-B Extended Squitter transmissions or to specifically provide requirements that prohibit the provision of such capability.

## **INTRODUCTION / DISCUSSION:**

Several documents relevant to ADS-B OUT implementation have alluded to the need to provide appropriate control by which ADS-B Extended Squitter transmissions can be turned off by the Flight Crew. In particular:

1. EASA AMC 20-24 provides:  
“8.9.4.2 Means should be provided to the flight crew to disable the ADS-B function on instruction from ATC without disabling the operation of the ATC transponder function.”
2. US NPRM, 14 CFR Part 91 [Docket No. FAA-2007-29305; Notice No. 07-15] RIN 2120-AI92, footnote 25 provides:  
“<sup>25</sup> If the Air Traffic Controller identifies that the aircraft avionics is not operating properly (such as providing erroneous or incomplete information), the pilot would be instructed to turn off the avionics. A simple switch or button in the cockpit to disable ADS-B avionics would provide this feature. Aircraft would then be controlled using the backup surveillance system or procedurally. This is similar to the methods used today in removing faulty transponder information from a controllers display. Pilots currently have the capability to turn off transponders. Aircraft are then handled procedurally or through primary radar returns.”
3. Draft US AC No: 20-ADS-B Out provides:  
“**9.e. On/Off Control:** A means of disabling ADS-B Out transmissions without impacting the installed transponder’s normal operation should be provided.”

During development of RTCA DO-181D by SC-209, the question was asked multiple times as to whether or not an appropriate statement needed to be made in DO-181D. The response was NO. Likewise, the issue was similarly posed to Eurocae WG-49 during the development of ED-73C. Again, the answer was NO. Similarly, the question has been posed to the ICAO ASP TSG multiple times recommending that the issue be addressed in ICAO ANNEX 10 Volume IV. Once more, the answer was NO. In all three cases, the reasoning by the associated panels was that ADS-B Out “**Should Not Be Turned Off**” if the transponder is functional.

Obviously there is a problem between the various organizations that generated items 1 through 3 and those groups that write the MOPS and International SARPs.

## **RECOMMENDATION:**

- A: If it is desired to provide the flight crew with the capability to Turn Off ADS-B Extended Squitters, then the appropriate requirements to provide such capability should be added to the appropriate MOPS (e.g., DO-181D, DO-260B, ED-73C, ED-102A, etc.) and to ICAO Annex 10 Volume IV.
- B: Due to the fact that various Airframe Manufacturers and Installers continue to question the need, if it is desired to NOT Turn Off ADS-B Extended Squitters, then appropriate requirements should be added to the MOPS and SARPs specifically stating that ADS-B Out should NOT be turned off by the flight crew.

The Working Group is invited to take the recommendation under consideration and hopefully resolve this lingering issue.