

MASPS for ADS-B Rev. A

Tracking Information (committee secretary only)	
Change Issue Number	19
Submission Date	1/11/01
Status (open/closed/deferred)	DEFERRED
Last Action Date	8/30/01

Short Title for Change Issue:	Runway Incursion Alerting
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MASPS Document Reference:		Originator Information:	
Entire document (y/n)		Name	Gary Livack / FAA
Section number(s)		Phone	(202) 267-7954
Paragraph number(s)		E-mail	Garret.Livack@faa.gov
Table/Figure number(s)		Other	

Proposed Rationale for Consideration (originator should check all that apply):	
<input type="checkbox"/>	Item needed to support of near-term MASPS/MOPS development
X	DO-260/ED-102 1090 MHz Link MOPS Rev A
<input type="checkbox"/>	ASA MASPS
<input type="checkbox"/>	TIS-B MASPS
X	UAT MOPS
<input type="checkbox"/>	Item needed to support applications that have well defined concept of operation
<input type="checkbox"/>	Has complete application description
<input type="checkbox"/>	Has initial validation via operational test/evaluation
<input type="checkbox"/>	Has supporting analysis, if candidate stressing application
<input type="checkbox"/>	Item needed for harmonization with international requirements
<input type="checkbox"/>	Item identified during recent ADS-B development activities and operational evaluations
<input type="checkbox"/>	MASPS clarifications and correction item
<input type="checkbox"/>	Validation/modification of questioned MASPS requirement item
<input type="checkbox"/>	Military use provision item
X	New requirement item (must be associated with traffic surveillance to support ASAS)

Nature of Issue:	<input type="checkbox"/> Editorial	<input type="checkbox"/> Clarity	<input type="checkbox"/> Performance	X	Functional
<u>Issue Description:</u>					
<p>The attached comment requesting own aircraft’s brake “on” or “off” position or –alternatively - current percentage of engine power be broadcast for use in future runway incursion and other surface movement systems was presented to the SC-186 plenary in reference to the ballot on the 1090 MHz ADS-B MOPS (DO-260). It was agreed that this issue would be deferred from consideration in DO-260 until it was first considered for inclusion in a future revision of the ADS-B MASPS. Included with the attached comment is the official response from working group 3, which was charted with development of DO-260.</p> <p>Note: As a proposal to consolidate IPs 4, 6, 7, 13, 18, and 19 into a single Issue Paper discussing requested additional ADS-B message elements for various applications and users, Working Paper 242A-WP-5-02 was presented to the ad hoc group at their May 2001 meeting. It was the conclusion of the ad hoc group to not consolidate these Issue Papers so that they could each be addressed as separate issues. 242A-WP-5-02 is available for download from the May meeting materials on the WG6 page at http://adsb.tc.faa.gov/adsb/186-subf.htm</p>					

Issue Description (continued):

Administrative Action: Issue papers temporarily named 4a, 4b, and 4c were renumbered on February 13, 2001. This IP (4c) was renumbered IP19. IP 4a and 4b were renumbered IP4 and IP18, respectively.

Administrative Action: March, 2001: Performed minor editing to better reflect originator's alternate proposal of broadcasting percent of power at which engines are currently operating.

Originator's proposed resolution if any: Proposed resolution is attached with comment from DO-260 ballot.

Working Group 6 Deliberations:

January 24, 2001: This Issue Paper was discussed by the ad hoc group at their January 2001 meeting. It was agreed that this IP will remain open for consideration in Revision A.

May 24, 2001: This Issue Paper was discussed by the ad hoc group at their May 2001 meeting. It was agreed that this IP will be addressed in Revision A, and that the title would be changed from "Requesting Own Aircraft's Brake Position be Broadcast" to "Runway Incursion Alerting".

August 30, 2001: WG6 agreed at their August meeting that this issue paper needs some re-wording to properly reflect the broader context of runway incursion alerting mechanisms it has evolved into. This issue paper would then be deferred to a future revision of the MASPS.

**ADS-B 1090 MHz Rev A Comments Related to MASPS Changes
RTCA SC-186 WG-3/EUROCAE WG-51 SG-1**

#	Comment Author	DO-260 Section	Page	Comment / Rationale	Suggested Resolution
4	Livack (5)	1.3.5.2 Incursion Monitoring 4.1.1 General Operation	11 653	<p>Future surface movement application. Aircraft brake “on” or “off” position when operating on the airport surface or, alternatively, aircraft percentage power when operating on the airport surface. It is believed that either or both parameters, when integrated into the ADS-B position report, will give significant advance notification / alerting of a pending aircraft movement and thus could be used to provide alerts to a potential runway incursion.</p> <p>WG#3 Position: <i>Can this information be reliably derived?? Will it cause a bandwidth problems??</i></p>	<p>This may be a safety critical item. The merits of having this message set needs to be debated and if, by analysis, it is shown to provide advance warning of a runway incursion, it should be included in the MASPS and MOPS.</p>