Australian Government

Civil Aviation Safety Authority

I, JOHN FRANCIS McCORMICK, Director of Aviation Safety, on behalf of CASA, make this instrument under subregulation 139.015 and subparagraph 139.254 (3) (a) (i) of the *Civil Aviation Safety Regulations 1998*.

[Signed John F. McCormick]
John F. McCormick
Director of Aviation Safety

22 January 2012

Manual of Standards Part 139 Amendment Instrument 2012 (No. 1)

1 Name of instrument

This instrument is the *Manual of Standards Part 139 Amendment Instrument 2012 (No. 1).*

2 Commencement

This instrument commences on the day after registration.

3 Amendment of Manual of Standards Part 139

Schedule 1 amends Manual of Standards Part 139.

Schedule 1 Amendments

[1] After subsection 10.9.3

insert

10.9.4 Technical Standards for Electronic Surveillance Equipment Fitted to Vehicles

10.9.4.1 For subparagraph 139.254 (3) (a) (i) of CASR 1998, the technical standards for electronic surveillance equipment fitted to a vehicle that enters, or moves on, the manoeuvring area of a certified aerodrome that is designated as an aerodrome to which A-SMGCS applies, are set out in Table 10.9-1:

Table 10.9-1: Technical Standards for Electronic Surveillance Equipment Fitted to Vehicles

Item	Subject	Technical Standard
1	**Transmit Message Type**	Mode S Extended Squitter Downlink Format DF18 identification, surface position, and Navigation Integrity Category (NIC).

Item	Subject	Technical Standard
		Message protocol as per RTCA Inc (***RTCA***) DO-260A or RTCA DO-260B, or later versions as in force from time to time.
2	**Navigation Integrity Category (*NIC*)**	NIC is to be encoded and transmitted in accordance with RTCA DO-260A or RTCA DO-260B, or later versions as in force from time to time, using the Horizontal Protection Level (***HPL***) (the position containment radius) as determined by the GPS function in accordance with RTCA DO-229D or RTCA DO-316. The HPL calculation is not to assume that Selective Availability (SA) is ON.
3	**Navigation Accuracy Category (*NAC*)**	NAC is to be encoded and transmitted in accordance with RTCA DO-260A or RTCA DO-260B, or later versions as in force from time to time, using the Horizontal Figure of Merit (HFOM 95% horizontal accuracy) as determined by the GPS function in accordance with RTCA DO-229D or RTCA DO-316.
4	**Surveillance Integrity Level (*SIL*)**	SIL is to be encoded in accordance with RTCA DO-260A or RTCA DO 260B, or later versions as in force from time to time.
5	**ADS-B Transmit Periods**	*Surface position*: (a) if vehicle in motion — at least every 0.5 seconds; and (b) if vehicle not in motion — at least every 5 seconds. *Identification and type*: (a) if vehicle in motion — at least every 5 seconds; and (b) if vehicle not in motion — at least every 10 seconds. *NIC status:* whether vehicle in motion or not — at least every 0.5 seconds.
6	**Transmit Power**	20 watts peak power.
7	**Transmit Frequency**	1090 (+/-1) MHz.
8	**Pulse and Spectral Conformance**	In accordance with: (a) RTCA DO-260A or RTCA DO-260B, or later versions as in force from time to time; and

Item	Subject	Technical Standard
		(b) RTCA DO-181C.
9	**Vehicle Identification**	Field configurable by user.
10	**24-bit ICAO Address**	User configurable.
11	**Operating Temperature**	From -30^{o}C to +55^{o}C.
12	**Input Power**	From 9 to 32 volts DC, approximately 4 watts maximum.
13	**Transmit Antenna**	To be contained within the unit.
14	**Physical**	To be attachable to external roof surface of vehicle by magnetic attraction.
15	**GPS Receiver**	To be 12 channels or more.