



**Australian Government**  
**Civil Aviation Safety Authority**

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

John F. McCormick  
Director of Aviation Safety

Date

**Manual of Standards Part 139 Amendment Instrument (No. x) 2011**

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**1 Name of instrument**

This instrument is the *Manual of Standards Part 139 Amendment Instrument (No. x) 2011*.

**2 Commencement**

This instrument commences on the day after it is registered.

**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**

<b>Item</b>	<b>Subject</b>	<b>Technical standard</b>
1	<b>Transmit Message Type</b>	Mode S Extended Squitter DF18 identification, surface position, and Navigation Integrity Category (NIC). Message protocol as per RTCA Inc ( <i>RTCA</i> )

Item	Subject	Technical standard
		DO-260A or RTCA DO-260B, or later versions as in force from time to time.
2	<b>Navigation Integrity Category (NIC)</b>	<p>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 (<b>HPL</b>) (the position containment radius) as determined by the GPS function in accordance with RTCA DO-229D or RTCA DO-316.</p> <p>The HPL calculation is not to assume that Selective Availability (SA) is ON.</p>
3	<b>Navigation Accuracy Category (NAC)</b>	<p>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.</p>
4	<b>Surveillance Integrity Level (SIL)</b>	<p>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.</p>
5	<b>ADS-B Transmit Periods</b>	<p><i>Surface position:</i></p> <ul style="list-style-type: none"> <li>(a) if vehicle in motion — at least every 0.5 seconds; and</li> <li>(b) if vehicle not in motion — at least every 5 seconds.</li> </ul> <p><i>Identification and type:</i></p> <ul style="list-style-type: none"> <li>(a) if vehicle in motion — at least every 5 seconds; and</li> <li>(b) if vehicle not in motion — at least every 10 seconds.</li> </ul> <p><i>NIC status:</i></p> <p>whether vehicle in motion or not — at least every 0.5 seconds.</p>
6	<b>Transmit Power</b>	20 watts peak power.
7	<b>Transmit Frequency</b>	1090 (+/-1) MHz
8	<b>Pulse and Spectral Conformance</b>	<p>In accordance with:</p> <ul style="list-style-type: none"> <li>(a) RTCA DO-260A or RTCA DO-260B, or later versions as in force from time to time; and</li> </ul>

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

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