

**SAMPLE AERONAUTICAL INFORMATION CIRCULAR (AIC)  
RECOMMENDED TEXT OF STATE AIC**

Notes	ICAO 24-Bit Aircraft Addresses and Aircraft Identification Reporting
<p>1. State to insert date and reference of last circular issued for Mode S Surveillance, if applicable</p>	<p><b>1. INTRODUCTION</b></p> <p>1.1 The provision of air traffic services (ATS) using SSR Mode S will rely on a unique ICAO 24-bit aircraft address for selective interrogation of individual aircraft. The 24-bit aircraft address is also an essential element of the airborne collision and avoidance system, ACAS II. In addition, Mode S surveillance requires the reporting of aircraft identification as stated in previous circulars concerning Mode S airborne equipment requirements. (note 1).</p> <p>1.2 The aircraft address shall be one of 16 777 214 twenty-four-bit aircraft addresses allocated by ICAO to the State of Registry or common mark registering authority and assigned as prescribed in the Appendix to Chapter 9, Part I, Volume III, ICAO Annex 10.</p> <p>1.3 All Mode S equipped aircraft engaged in international civil aviation are required to have an aircraft identification feature as prescribed in ICAO Annex 10, Volume IV, Chapter 2, 2.1.5.2.</p> <p>1.4 This circular provides guidance to ensure consistency regarding 24-bit aircraft addresses and the reporting of aircraft identification relevant to the operational introduction of Mode S Elementary and Enhanced Surveillance. In particular:</p> <ul style="list-style-type: none"> <li>a) Adherence to the world-wide scheme for assignment of ICAO 24-bit Aircraft Addresses.</li> <li>b) Correct setting of Aircraft Identification by flight crew.</li> </ul>
<p>2. Insert name of State and title of applicable organization responsible for 24-bit aircraft address</p>	<p><b>2. THE ICAO 24-BIT AIRCRAFT ADDRESS</b></p> <p>2.1 Instances occur of incorrect 24-bit aircraft addresses being installed/hard-wired on individual aircraft. This has happened not only on first installation of a Mode S transponder but also when a major modification has been made to the Mode S equipment, and following a change of State of Registration. Incorrect installation, such as setting the address to all zeros, or, inadvertent duplication of an address can pose a severe risk to flight safety. In particular, the airborne collision avoidance system, ACAS II, performs on the assumption that only a single, unique 24-bit aircraft address per airframe exists. The performance of ACAS II can be seriously degraded and in some instances <u>disabled</u> if an incorrect or duplicate address is installed on an aircraft.</p> <p>2.2 Incorrect or duplicated 24-bit aircraft addresses will also undermine the effectiveness of surveillance services based on SSR Mode S.</p> <p>2.3 It is essential that aircraft operators comply with the aircraft address assignment procedures of the State regulatory authority to which blocks of addresses have been allocated by ICAO (note 2).</p> <p>2.4 The world-wide addressing scheme has been designed so that, at any one time, no address is assigned to more than one aircraft. Only one address can</p>

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assignment	be assigned to an aircraft and it cannot be changed except under exceptional circumstances authorized by the State regulatory authority concerned.
	2.5 When an aircraft changes its State of Registry, the previously assigned address is to be relinquished and a new address assigned by the new registering authority.
	2.6 It is essential that the aircraft address is periodically verified using ramp tests. Such checks must also be conducted when a major maintenance check has taken place and when the aircraft has changed registration, to ensure that a newly assigned address has been properly set.
	<p><b>3. CORRECT SETTING OF AIRCRAFT IDENTIFICATION</b></p> <p>3.1 To comply with European airborne equipment requirements, Mode S transponder equipped aircraft must incorporate an Aircraft Identification Feature. Correct setting of aircraft identification is essential for the correlation of radar tracks with flight plan data in the ATM and Airport Operator ground systems. Initial operational trials using SSR Mode S have shown that many aircraft are transmitting incorrect aircraft identification, e.g. BC_1234 instead of ABC1234. Such erroneous settings of aircraft identification prohibit automatic flight plan correlation and, if perpetuated, will severely limit the effectiveness of Mode S to relieve the shortage of SSR codes.</p> <p>3.2 In accordance with ICAO Doc 8168 [<i>PANS-OPS</i>] Vol. I, Part VIII, 1.3, flight crew of aircraft equipped with Mode S having an aircraft identification feature shall set the aircraft identification in the transponder. This setting shall correspond to the aircraft identification specified in item 7 of the ICAO flight plan, or, if no flight plan has been filed, the aircraft registration.</p> <p>3.3 Aircraft Identification, not exceeding 7 characters is to be entered in item 7 of the flight plan and set in the aircraft as follows:</p> <p>Either,</p> <p>a) The ICAO three-letter designator for the aircraft operating agency followed by the flight identification (e.g. KLM511, BAW213, JTR25), when:</p> <p>in radiotelephony the callsign used consists of the ICAO telephony designator for the operating agency followed by the flight identification (e.g. KLM 511, SPEEDBIRD 213, HERBIE 25).</p> <p>Or,</p> <p>b) The registration marking of the aircraft (e.g. EIAKO, 4XBCD, OOTEK), when:</p> <p>1) in radiotelephony the callsign used consists of the registration marking alone (e.g. EIAKO), or preceded by the ICAO telephony designator for the operating agency (e.g. SVENAIR EIAKO),</p> <p>2) the aircraft is not equipped with radio.</p> <p><u>Note 1</u> No zeros, dashes or spaces are to be added when the Aircraft Identification consists of less than 7 characters.</p>

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	<p><u>Note 2</u> Appendix 2 to ICAO Doc 4444 [<i>PANS-ATM</i>], refers. ICAO designators and telephony designators for aircraft operating agencies are contained in ICAO Doc 8585.</p>
<p>3. State to insert local points of contact</p>	<p><b>4. FURTHER INFORMATION</b>  Further information or guidance may be obtained from:  DGAC contact information or Website.</p>