



# AIRPORTS AUTHORITY OF INDIA

## Directorate of Air Traffic Management

RAJIV GANDHI BHAWAN, NEW DELHI-110003

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# ATMC

## AIR TRAFFIC MANAGEMENT CIRCULAR NO. 2 of 2009

### SSR identification procedure & Mode C Accuracy Verification

#### 1. Introduction

1.1 SSR identification procedure and Mode C accuracy verification is contained in Doc 4444 PANS-ATM/501, Chapter 8 Para 8.6.2.3 & 8.5.5.1. and also in MATS Part 1 Chapter 8 Para 8.5.1.2 & 8.3.8.1. It has been observed that radar controllers at various airports follow different procedures and phraseology for identification of aircraft on secondary surveillance radar.

#### 2. Purpose

2.1 The purpose of this ATMC is to ensure uniformity of practice and phraseology associated with SSR identification procedure and Mode C accuracy verification.

#### 3. Scope

3.1 This ATMC is addressed to all ATC units of Airports Authority of India where Secondary Surveillance Radar is in operation.

#### 4. Terms

4.1 **Identification.** The situation which exists when the position indication of a particular aircraft is seen on a situation display and positively identified.

4.2 **Radar contact.** The situation which exists when the radar position of a particular aircraft is seen and identified on a situation display.

4.3 **Handoff.** An action taken to transfer the radar identification of an aircraft from one controller to another controller if the aircraft will enter the receiving controller's airspace and radio communications with the aircraft will be transferred.

#### 5. SSR Identification Procedure

5.1 In automated system an aircraft may be considered identified when the full data block is automatically associated with the SSR target symbol of an aircraft that is squawking a discrete code assigned by the system/computer and one of the following conditions exist:

- a) Radar identification procedure contained in Doc 4444 PANS-ATM/501, Chapter 8 Para 8.6.2.3 & 8.5.5.1. and MATS Part 1 Chapter 8 Para 8.5.1.2 & 8.3.8.1 have been used to confirm the identity of the tagged target; and
- b) Coasting or duplicate code indication does not appear along with radar position symbol.

The aircraft so identified shall be informed that it is identified using the following phraseology: **“(Aircraft identification) IDENTIFIED”**

*Note: While using this procedure, utmost care shall be taken to ensure that when a discrete code has been assigned to an aircraft, a check shall be made at the earliest opportunity to ensure that the code set by the pilot is identical to that assigned for the flight. Only after this check has been made shall the discrete code be used as a basis for identification.*

- 5.2 The phraseology **“CONFIRM SQUAWK”** or **“CONFIRM SQUAWK (code)”** may be used to confirm the code selected on the aircraft’s transponder.

Controllers transmission : **JAI345 CONFIRM SQUAWK**  
Pilots transmission : **JAI345 SQUAWKING 0235**

- 5.3 If the direction, level, speed, track or any other displayed information of an aircraft raises doubt about its identification, additional checks may be made to ensure correctness of identification.

## **6. Transfer of Radar identification:**

- 6.1 To provide continuous radar service to an aircraft and facilitate a safe, orderly, and expeditious flow of traffic, it is often necessary to transfer radar identification of an aircraft from one controller to another. Transfer of identification from one controller to another should only be attempted when it is considered that the aircraft is within the accepting controller’s surveillance coverage by using methods contained in Doc 4444 PANS-ATM/501, Chapter 8 Para 8.6.3 and also in MATS Part 1 Chapter 8 Para 8.7.

- 6.2 Transfer the radar identification of an aircraft shall be effected by at least one of the following methods:

- i) Physically pointing to the target on the receiving controller's display.
- ii) Using voice communications.
- iii) Using ‘radar handoff’ in automated system.

- 6.3 If transfer of radar identification between two ATS units is done in automated system by using ‘radar handoff’ where full data block is displayed in the situation display of the receiving controller then no verbal coordination is required between the units.

### **Note:**

*Under no circumstances may one controller permit an aircraft to enter another's airspace without proper coordination. Coordination can be accomplished by several means; i.e., radar handoff, verbal, point-out, and by existing coordination procedures for transfer of radar identification between ATS units. Airspace boundaries should not be permitted to become barriers to the efficient movement of traffic. In addition, complete coordination, awareness of traffic flow, and understanding of each unit's responsibility concerning penetration of another's airspace cannot be overemphasized.*

- 6.4 When a receiving controller accepts a 'radar handoff', he identifies the aircraft by 'transfer of radar identification' method. The aircraft so identified shall be informed that it is identified before providing radar services by using the following phraseology:

**“(Aircraft identification) RADAR CONTACT”**

**or**

**“(Aircraft identification) IDENTIFIED”**

## **7. MODE 'C' ACCURACY VERIFICATION**

- 7.1 The tolerance value used to determine that Mode C-derived information displayed to the controller is accurate shall be  $\pm 200$  ft in RVSM airspace and in other airspace, it shall be  $\pm 300$  ft.
- 7.2 Verification of the accuracy of Mode C derived level information displayed to the controller shall be effected at least once by each suitably equipped ATC unit on initial contact with the aircraft concerned or, if this is not feasible, as soon as possible thereafter.
- 7.3 The verification shall be effected by simultaneous comparison with altimeter-derived level information received from the same aircraft by radiotelephony.

**PHRASEOLOGY:**

Controller's transmission	:	<b>AIC101 VERIFY LEVEL</b>
Pilot's transmission	:	<b>AIC101 MAINTAINING F350</b>
Pilot's transmission	:	<b>PASSING 2600 Feet AIC101</b>

## **8. Queries**

- 8.1 Any queries or further guidance required on the contents of this ATMC should be addressed to:

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## **9. Validity**

- 9.1 This ATMC will remain in force until further notice and ATMIC 2 of 2009 is hereby cancelled.

  
[V.K. YADAVA]

**EXECUTIVE DIRECTOR [ATM]  
AIRPORTS AUTHORITY OF INDIA**

**Dated: 29-07-2009**