



# Advisory Circular

**Subject: Prevention of Runway Incursions**

Issuing Office:	Standards	Document No.:	AC 700-029
File Classification No.:	Z 5000-34	Issue No.:	01
RDIMS No.:	8191687-V15	Effective Date:	2014-03-24

---

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>2</b>
1.1	Purpose .....	2
1.2	Applicability .....	2
1.3	Description of Changes.....	2
<b>2.0</b>	<b>REFERENCES AND REQUIREMENTS</b> .....	<b>2</b>
2.1	Reference Documents .....	2
2.2	Cancelled Documents .....	2
2.3	Definitions and Abbreviations .....	3
<b>3.0</b>	<b>BACKGROUND</b> .....	<b>3</b>
<b>4.0</b>	<b>ACTION</b> .....	<b>4</b>
<b>5.0</b>	<b>CONCLUSION</b> .....	<b>4</b>
<b>6.0</b>	<b>INFORMATION MANAGEMENT</b> .....	<b>4</b>
<b>7.0</b>	<b>DOCUMENT HISTORY</b> .....	<b>4</b>
<b>8.0</b>	<b>CONTACT OFFICE</b> .....	<b>5</b>

## 1.0 INTRODUCTION

- (1) This Advisory Circular (AC) is provided for information and guidance purposes. It describes an example of an acceptable means, but not the only means, of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements, nor does it establish minimum standards.

### 1.1 Purpose

- (1) The purpose of this AC is to inform air operators that a safety issue continues to exist regarding runway incursions and to encourage them to implement runway safety programmes taking into account best practices contained in the International Civil Aviation Organization (ICAO) Manual.

### 1.2 Applicability

- (1) This document applies to Transport Canada Civil Aviation (TCCA) employees and to all individuals, organizations and industries that are involved in aircraft operations at airports or aerodromes.

### 1.3 Description of Changes

- (1) Not applicable.

## 2.0 REFERENCES AND REQUIREMENTS

### 2.1 Reference Documents

- (1) It is intended that the following reference materials be used in conjunction with this document:
- (a) *Aeronautics Act* (R.S., 1985, c. A-2);
  - (b) Part VII of the *Canadian Aviation Regulations (CARs) – Commercial Air Services*;
  - (c) Manual on the prevention of runway incursions (First Edition – 2007) Doc 9870. AN/463 (ICAO). This manual is available on the ICAO site:  
<http://www.icao.int/Pages/default.aspx>

### 2.2 Cancelled Documents

- (1) As of the effective date of this document, the following document is cancelled:
- (a) **Commercial and Business Aviation Advisory Circular (CBAAC) 0205**, Issue 01, 2002-05-08 — *Runway Incursions*.
- (2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

### 2.3 Definitions and Abbreviations

- (1) The following **abbreviations** are used in this document:
- (a) **COM**: Company Operations Manual;
  - (b) **ICAO**: International Civil Aviation Organization;
  - (c) **SIRO**: Simultaneous Intersecting Runway Operations;
  - (d) **SOPs**: Standard Operating Procedures.

### 3.0 BACKGROUND

- (1) Nav Canada statistics on runway incursions demonstrate a continuing safety issue. (See table below) Although from 2003 to 2006 we saw an improvement, since 2007, the statistics show an increase in the number of runway incursions. The rate of incursions per 100 K movements is high and relatively static over the period tracked.

Year	Count of Runway Incursions	Movements*	Runway Incursion rate per 100,000 movements
2003	364	6,182,602	5.89
2004	351	6,040,073	5.81
2005	333	6,036,785	5.52
2006	321	6,157,623	5.21
2007	278	6,547,637	4.25
2008	367	6,468,667	5.67
2009	324	6,153,859	5.26
2010	337	5,976,482	5.64
2011	386	5,838,811	6.61
2012	355	5,825,756	6.09

**Note:** \*Movements include only arrivals, departures and touch and go practices at airports where Nav Canada provides control or advisory services

- (2) A number of factors contribute to runway incursions, including airport layouts and complexity, increase in traffic flow, visual meteorological conditions in low visibility or at night, and human factors. Simultaneous Intersecting Runway Operations (SIRO) account for a large portion of the potential conflicts.
- (3) Operators should take steps to reduce the risk of an incursion.

#### 4.0 ACTION

- (1) Recognizing that an increase in workload and potential distractions will increase the vulnerability to error, it is recommended that air operators develop procedures in their Standard Operating Procedures (SOPs) to reduce workload and potential distractions while the aircraft is taxiing. A sterile flight deck for the taxi phase should be adopted.
- (2) Many best practices and recommendations are given in International Civil Aviation Organization (ICAO) Doc 9870. Particular attention should be paid to Chapter 4, Appendices A and B when compiling the SOP meant to **prevent** runway incursions. It is recommended that the best practices and recommendations regarding communications and flight deck duties be included in the SOPs to enhance the preventive measures taken to mitigate runway incursions. SOPs should also contain clear and concise procedures. For example:
  - (a) which pilot is responsible for obtaining and reading back the clearances;
  - (b) the necessity for both pilots to mutually confirm they have fully understood the clearance *before* taxiing;
  - (c) actions to be taken when in doubt;
  - (d) who will be responsible for safe taxiing of the aircraft;
  - (e) who is responsible for monitoring the progress of the aircraft and traffic.

**Note:** *The other elements mentioned in the ICAO Doc. 9870, should also to be included in the SOP/ Company Operations Manual (COM), as applicable.*

- (3) Special care should be taken to ensure that the radio procedures in the COM and SOPs (if applicable) are updated with the current International Civil Aviation Organization (ICAO) standard phraseology. The ICAO language requirements for air-ground radiotelephony communications can be found in Annex 10 – Aeronautical telecommunications, Volume II, Chapter 5, and Annex I – Personnel Licensing, Chapter I and Appendix 1.
- (4) The COM and SOP (if applicable), should also contain considerations and procedures regarding SIRO, for improving pilot's familiarity with that type of operation and to mitigate the risk of runway incursions.

#### 5.0 CONCLUSION

- (1) The application of the recommendations in the ICAO manual will ensure consistency of safe operations on the manoeuvring area, and reduce the potential for runway incursions.

#### 6.0 INFORMATION MANAGEMENT

- (1) Not applicable.

#### 7.0 DOCUMENT HISTORY

- (1) Not applicable.

## 8.0 CONTACT OFFICE

For more information, please contact:

The Chief of Commercial Flight Standards (AARTF)

Fax: 613-990-6215  
E-mail: [arlo.speer@tc.gc.ca](mailto:arlo.speer@tc.gc.ca)

Suggestions for amendment to this document are invited, and should be submitted via:  
[AARTInfoDoc@tc.gc.ca](mailto:AARTInfoDoc@tc.gc.ca)

*Original signed by Aaron McCrorie on March 24, 2014*

Aaron McCrorie  
Director, Standards  
Civil Aviation  
Transport Canada

-----  
*Transport Canada documents or intranet pages mentioned in this document are available upon request through the Contact Office.*