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Standardized Iranian Rules of the Air



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مقررات هواپیمایی کشوری جمهوری اسلامی ایران

Civil Aviation Regulation of IR. IRAN

قوانین استاندارد هوایی ایران

Standardized Iranian Rules of the Air (SIRA)



Rules

SERA

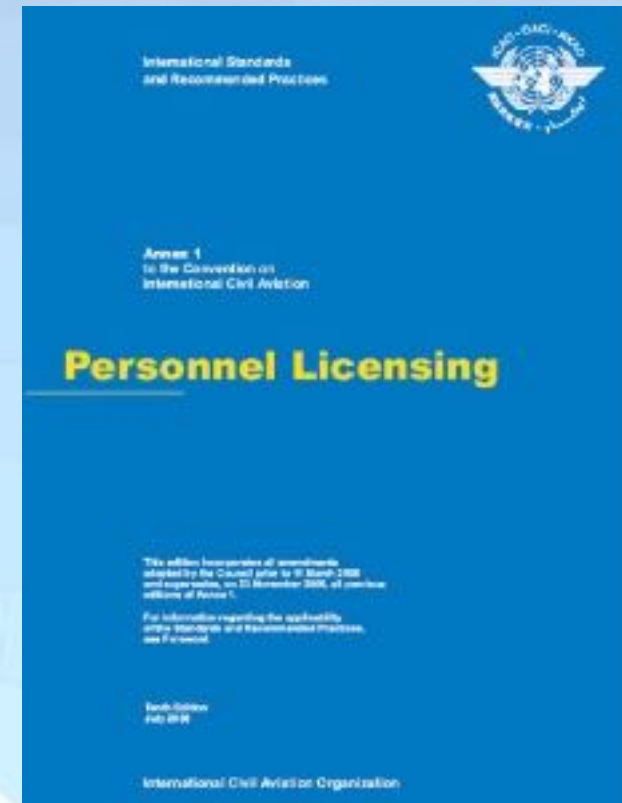
(IR + AMC/GM)



Standardised European Rules of the Air
(SERA)

SIRA

- Annex 1 – Personnel Licensing
- Annex 2 – Rules of the Air
- Annex 3 – Meteorological Service for International Air Navigation
- Annex 4 – Aeronautical Charts
- Annex 5 – Units of Measurement to be used in Air and Ground Operations
- Annex 6 – Operation of Aircraft
- Annex 7 – Aircraft Nationality and Registration Marks
- Annex 8 – Airworthiness of Aircraft
- Annex 9 – Facilitation
- Annex 10 – Aeronautical Telecommunications
- Annex 11 – Air Traffic Services
- Annex 12 – Search and Rescue
- Annex 13 – Aircraft Accident and Incident Investigation
- Annex 14 – Aerodromes
- Annex 15 – Aeronautical Information Services
- Annex 16 – Environmental Protection
- Annex 17 – Security:
- Annex 18 – The Safe Transport of Dangerous Goods by Air
- Annex 19 – Safety Management (Since 14 November 2013)



Annex 2 to the Convention on International Civil Aviation

Rules of the Air

Eleventh Edition, July 2024



Amendment 48

Annex 11 to the Convention on International Civil Aviation

Air Traffic Services

Air Traffic Control Service
Flight Information Service
Alerting Service

Advisory service?????

Fifteenth Edition, July 2018

Amendment 52, 5/11/2020

Cover regulation article

All elements (i.e. articles, IRs, AMC, CSs, and GM) are colour-coded and can be identified according to the illustration below.

Implementing rule annex

Acceptable means of compliance

Guidance material

Articles

[a separate clause or paragraph of a legal document or agreement, typically one outlining a single rule or regulation]



Article 1 Definitions

To be presented in due time.

Article 2 Subject matter

The objective of this Regulation is to establish the **rules of the air** and operational provisions regarding **services** and **procedures** in air navigation that shall be applicable to **general air traffic** within the scope in the airspace of the Islamic Republic of Iran (**Tehran FIR**).



Article 3 Scope

This Regulation shall apply in particular to airspace users and aircraft engaged in general air traffic:

- a) Operating **within Tehran FIR**;
- b) Bearing the **nationality** and **registration** marks of I.R. of IRAN, or registered in another country and used by an operator for which I.R. of **Iran exercises oversight of operations**; and operating in any airspace, to the extent that this regulation does not conflict with the rules published by the State **having jurisdiction** over the territory overflown; and
- c) Air Navigation Service Providers (**ANSP**), **aerodrome operators**, and the relevant **personnel** engaged in aircraft operations.



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Aircraft vs. Aeroplane

18. 'aircraft' means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface;

16. 'aeroplane' means a power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight;



Article 5 Exemptions for special operations

- a) **Scramble** and military **Special Missions**,
- b) **Police** and **custom** missions,
- c) **Environmental control** missions,
- d) **Search and Rescue**,
- e) **Medical** and **ambulance** flights,
- f) **Evacuation** of medical facilities, medicines, and injured,
- g) **Fire fighting**,
- h) **Flight Check**,
- i) **heads of States**.



Article 6 Coordination between military units and air traffic service providers



Any **military activities** potentially hazardous for the operation of civil aircraft shall be **coordinated** by the relevant **military** unit with the **Air Traffic Service Provider** at a certain time before the operation, in accordance with the rules of CAO.IRI.

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Service	Unit
Aerodrome Control Service Manoeuvring Area (RWY & TWY) Vicinity (Traffic Circuit) Aerodrome Traffic Zone (ATZ)	Aerodrome Control Tower
Approach Control Service Arriving & Departing Controlled Flights Control Zone (CTR)	Aerodrome Control Tower (OIKK, OINZ, OIBK, etc.) Approach Control Unit (OIFM, OIBB, OITT, OIII, etc.) Area Control Center (OIBV, OIMB, OICI, OISY, etc.)
Area control Service Control Areas (CTA)	Approach Control Unit (Isfahan TMA, Shiraz TMA, etc.) Area Control Center
Flight Information Service (FIS)	Flight Information Center (FIC)

4.1 RESPONSIBILITY FOR THE PROVISION OF AIR TRAFFIC CONTROL SERVICE

Doc 4444

4.1.1 Area control service

Area control service shall be provided:

- a) by an area control centre (ACC); or
- b) by the unit providing approach control service in a control zone or in a control area of limited extent which is designated primarily for the provision of approach control service, when no ACC is established.

4.1 RESPONSIBILITY FOR THE PROVISION OF AIR TRAFFIC CONTROL SERVICE

Doc 4444

4.1.2 Approach control service

Approach control service shall be provided:

- a) by an aerodrome control **tower** or an **ACC**, when it is necessary or desirable to combine under the responsibility of one unit the functions of the approach control service and those of the aerodrome control service or the area control service; or
- b) by an **approach** control unit, when it is necessary or desirable to establish a separate unit.



4.1 RESPONSIBILITY FOR THE PROVISION OF AIR TRAFFIC CONTROL SERVICE

Doc 4444

4.1.3 Aerodrome control service

Aerodrome control service shall be provided by an aerodrome control tower.

OINZ AD 2.17 ATS AIRSPACE

1	<i>Designation and lateral limits</i>	Sari / Dasht-e-Naz CTR: A circle, radius 30 NM centered at 363854.7N 0531120.0E (DVOR/DME).	Sari / Dasht-e-Naz ATZ: A circle, radius 7 NM centered at 363809N 0531137E (ARP)
2	<i>Vertical limits</i>	FL 175	3500 FT AMSL
3	<i>Airspace classification</i>	D	
4	<i>ATS unit call sign Language(s)</i>	Sari / Dasht-e-Naz TWR English / Persian	
5	<i>Transition altitude</i>	4000 FT AMSL	
6	<i>Remarks</i>	APP Service is provided by Dasht-e-Naz TWR on frequency 118.450 MHZ	

7.1.1 General

7.1.1.3 The functions of an aerodrome control tower may be performed by different control or working positions, such as:

- a) aerodrome controller, normally responsible for operations on the runway and aircraft flying within the area of responsibility of the aerodrome control tower;
- b) ground controller, normally responsible for traffic on the manoeuvring area with the exception of runways;
- c) clearance delivery position, normally responsible for delivery of start-up and ATC clearances to departing IFR flights.

4.2 RESPONSIBILITY FOR THE PROVISION OF FLIGHT INFORMATION SERVICE AND ALERTING SERVICE

Doc 4444

Flight information service and alerting service shall be provided as follows:

- a) within a flight information region (FIR): by a flight information centre, unless the responsibility for providing such services is assigned to an air traffic control unit having adequate facilities for the exercise of such responsibilities;
- b) within controlled airspace and at controlled aerodromes: by the relevant air traffic control units.

26. 'air traffic' means all aircraft in flight or operating on the manoeuvring area of an aerodrome;

9. 'aerodrome traffic' means all traffic on the manoeuvring area of an aerodrome and all aircraft flying in the **vicinity** of an aerodrome. An aircraft operating in the vicinity of an aerodrome includes but is not limited to aircraft entering or leaving an **aerodrome traffic circuit**;

32. 'air traffic service (ATS)' means a generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service);

77. 'flight information service' means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights;

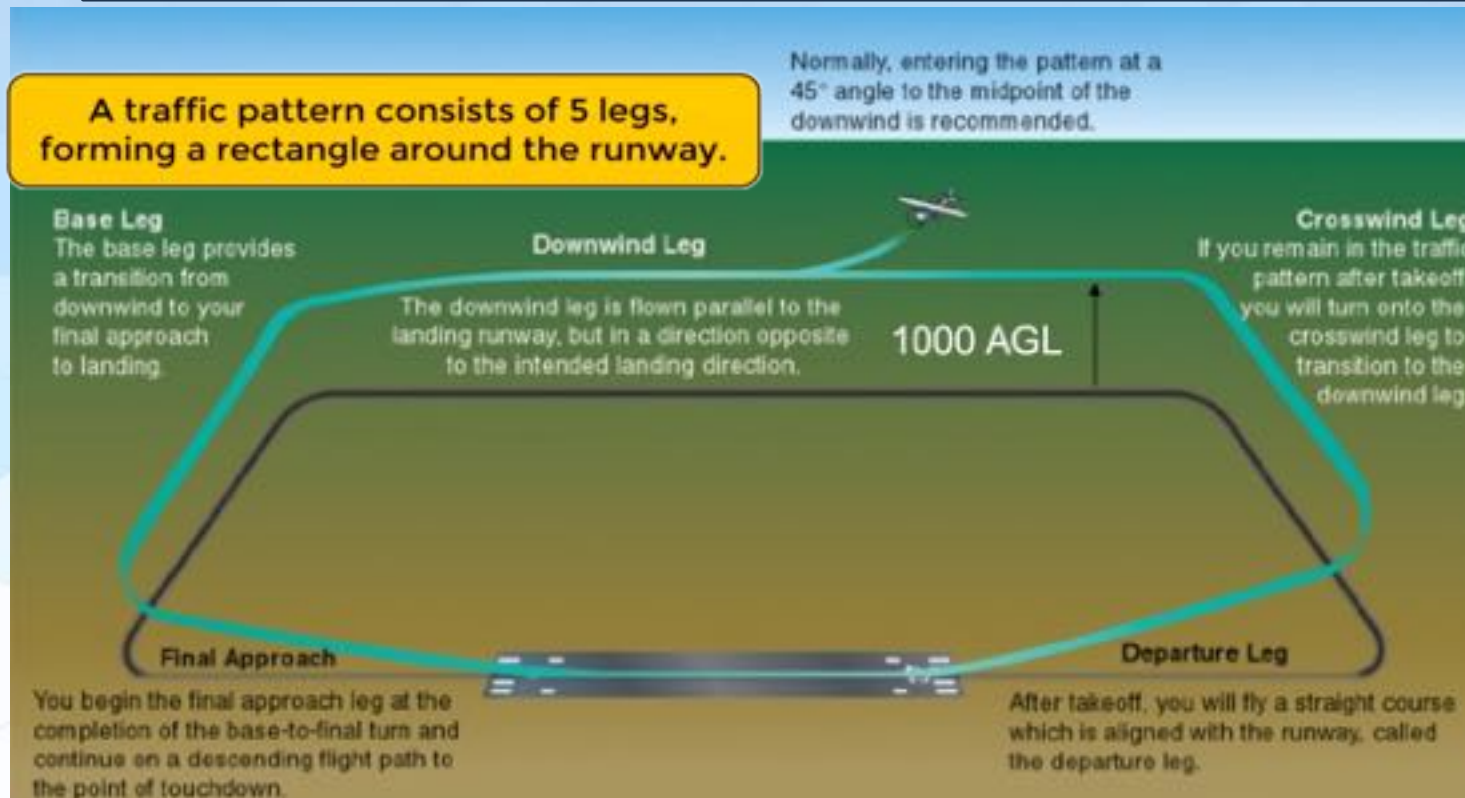
75. 'flight information centre' means a unit established to provide flight information service and alerting service;

37. 'alerting service' means a service provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required;

27. 'air traffic advisory service' means a service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on instrument flight rules (IFR) flight plans;

AVOIDANCE OF COLLISION

SIRA.3225 Operation on and in the vicinity of an aerodrome



10. 'aerodrome traffic circuit'

means the specified path to be flown by aircraft operating in the **vicinity** of an aerodrome;

Left-hand Pattern Runway 04:

Departure: 037°

Crosswind: 307°

Downwind: 217°

Base: 127°

Final: 037°

Right-hand Pattern Runway 04:

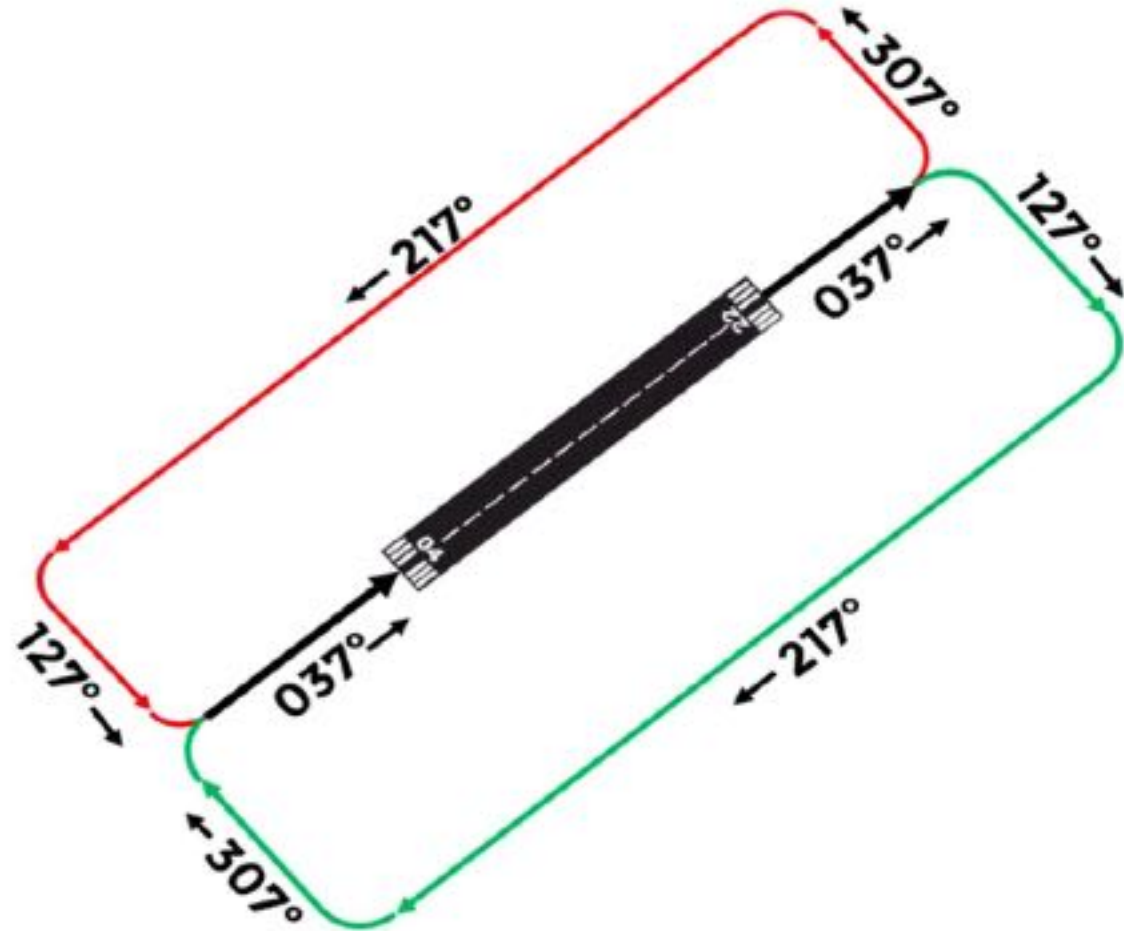
Departure: 037°

Right crosswind: 127°

Right downwind: 217°

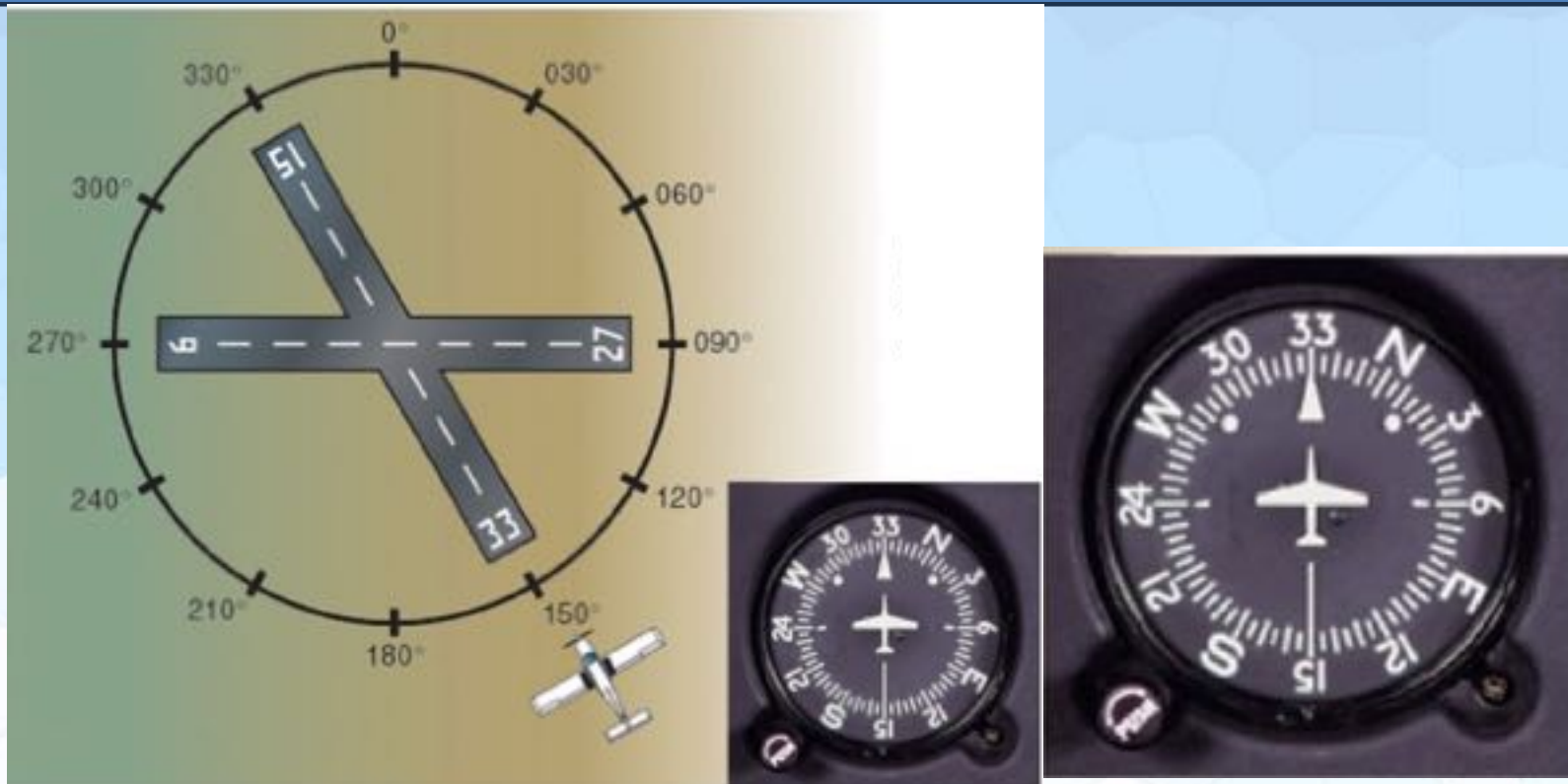
Right base: 307°

Final: 037°



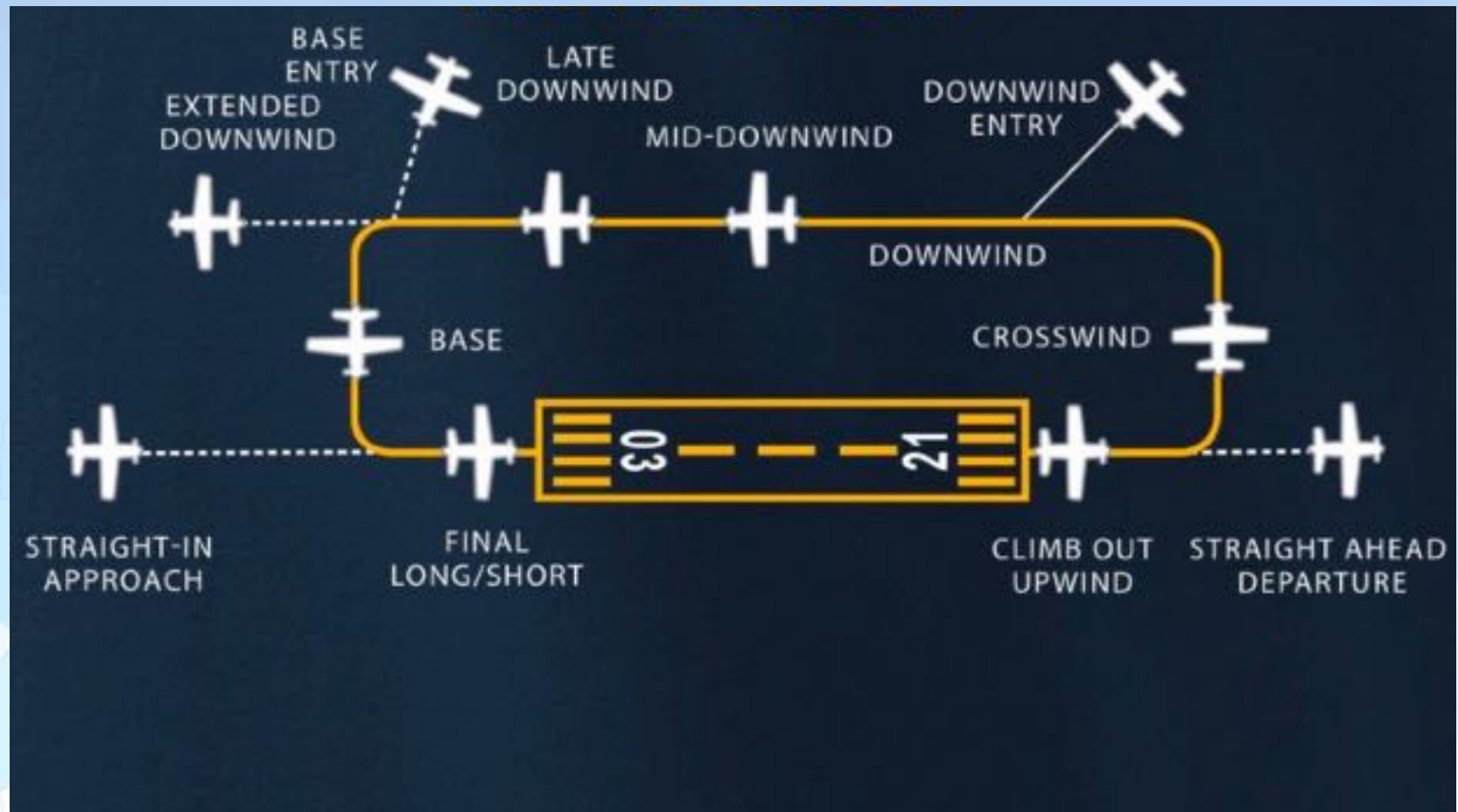
AVOIDANCE OF COLLISION

SIRA.3225 Operation on and in the vicinity of an aerodrome



Aerodrome Traffic Circuit

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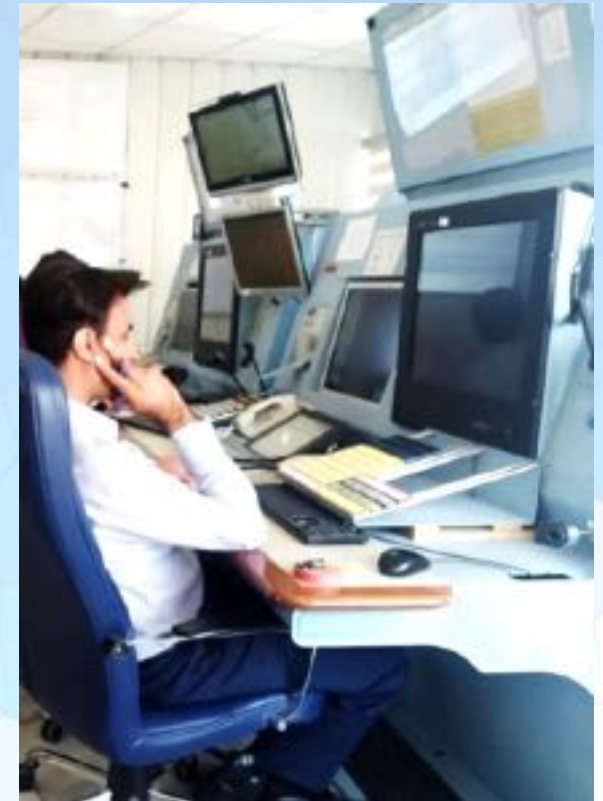


113. 'runway' means a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft;



35. 'air traffic services (ATS) unit' means a generic term meaning, variously,

- air traffic control unit,
- flight information centre,
- aerodrome flight information service unit or
- air traffic services reporting office;



34. 'air traffic services (ATS) reporting office (ARO)' means a unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure;

GM1 Definitions (34) Air traffic services reporting office



An air traffic services reporting office may be established as a separate unit or combined with an existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

30. 'air traffic control service' means a service provided for the purpose of:

(a) preventing collisions:

(1) between aircraft; and

(2) on the manoeuvring area between aircraft and obstructions; and

(b) expediting and maintaining an orderly flow of air traffic;

44. 'area control service' means air traffic control service for controlled flights in control areas;

43. 'area control centre (ACC)' means a unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction;

40. 'approach control service' means air traffic control service for arriving or departing controlled flights;

41. 'approach control unit' means a unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes;

7. 'aerodrome control service' means air traffic control service for aerodrome traffic;

8. 'aerodrome control tower' means a unit established to provide air traffic control service to aerodrome traffic;

clearance / instruction

28. 'air traffic control (ATC) clearance' means authorisation for an aircraft to proceed under conditions specified by an air traffic control unit;

GM1 Definitions (28) Air traffic control clearance

For convenience, the term 'air traffic control clearance' is frequently abbreviated to 'clearance' when used in appropriate contexts.

The abbreviated term 'clearance' may be prefixed by the word's 'taxi', 'take -off', 'departure', 'en route', 'approach' or 'landing' to indicate the particular portion of flight to which the air traffic control clearance relates.

29. 'air traffic control instruction' means directives issued by air traffic control for the purpose of requiring a pilot to take a specific action;

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6. **'aerodrome'** means a defined area (including any buildings, installations and equipment) on land or water or on a fixed, fixed off-shore or floating structure intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft;



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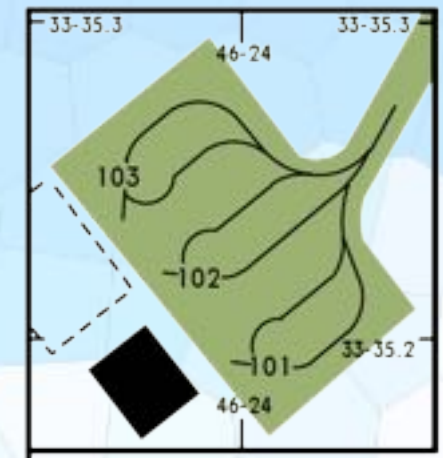
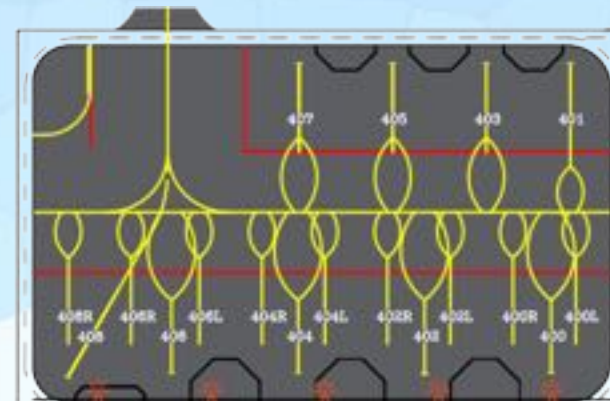
125. 'taxiing' means movement of an aircraft on the surface of an aerodrome or an operating site under its own power, excluding take-off and landing;

126. 'taxiway' means a defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

(a) **Aircraft stand taxilane** means a portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

(b) **Apron taxiway** means a portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.

(c) **Rapid exit taxiway** means a taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimising runway occupancy times;



Annex 14

Aircraft stand. A designated area on an apron intended to be used for **parking an aircraft**.

AIP ISLAMIC REPUBLIC OF IRAN Tehran / Imam Khomeini INTL. AD 2-5 011E WEF 5 DEC 19

IKA AIRCRAFT DOCKING GUIDANCE SYSTEM -SAFE DOCK

1. INTRODUCTION

1.1 The Aircraft Docking Guidance System is a fully automatic aircraft docking guidance system installed at the fixed gates in Terminal of Imam Khomeini INTL. Airport.

2. DESCRIPTION OF SYSTEM

2.1 The system is based on a laser scanning technique and

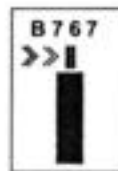
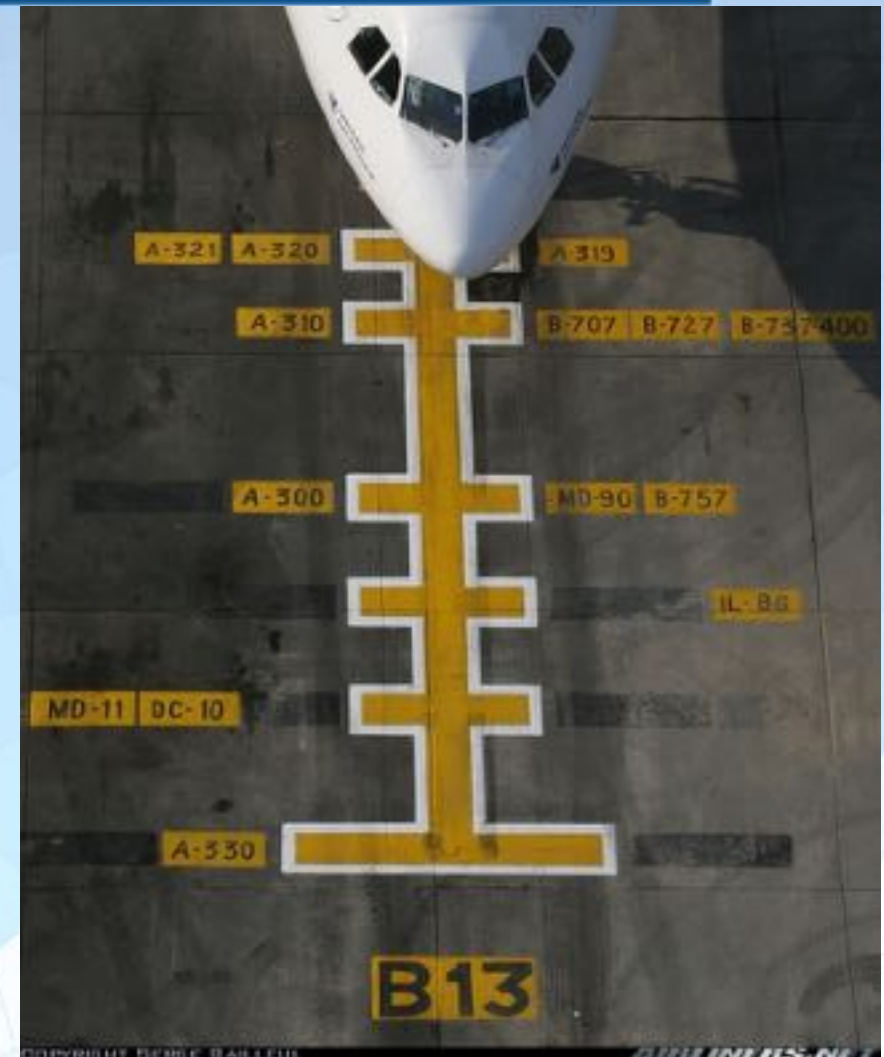


Figure 2
Aircraft tracked and identified correctly.



94. 'manoeuvring area' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons;

96. 'movement area' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s);

76. 'flight information region' means an airspace of defined dimensions within which flight information service and alerting service are provided;



Annex 11

CHAPTER 2. GENERAL

2.11 Specifications for flight information regions, control areas and control zones

2.11.1 Recommendation.— *The delineation of airspace, wherein air traffic services are to be provided, should be related to the nature of the route structure and the need for efficient service rather than to national boundaries.*

Note — Where delineation of airspace is made by reference to national boundaries there is a need for suitably sited transfer points to be mutually agreed upon.



Annex 11

CHAPTER 2. GENERAL

2.11.2 Flight information regions

2.11.2.1 Flight information regions shall be delineated to cover the whole of the air route structure to be served by such regions.

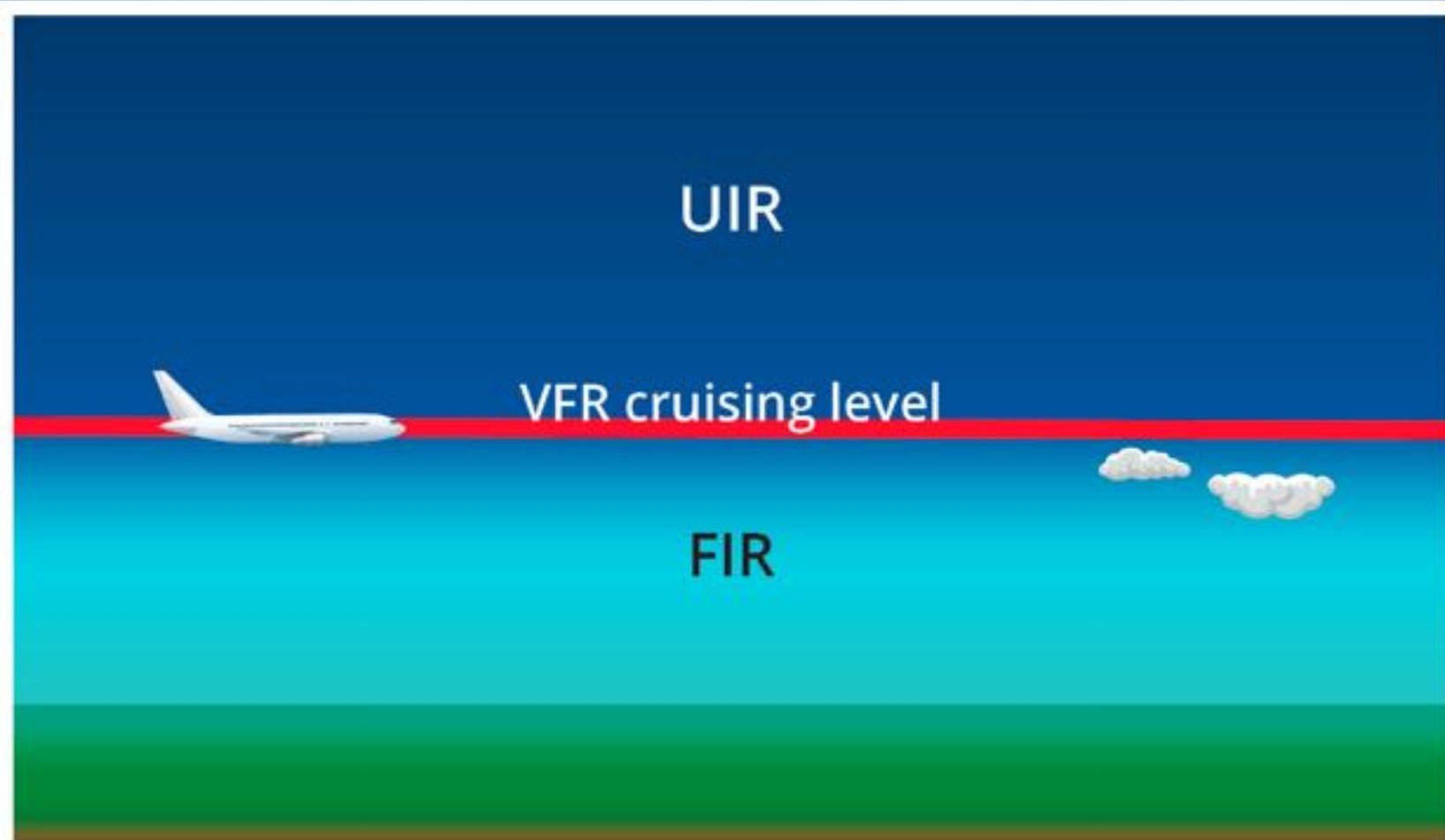
2.11.2.2 A *flight information region (FIR)* shall include all airspace within its lateral limits, except as limited by an *upper flight information region (UIR)*.

2.11.2.3 Where a flight information region is limited by an upper flight information region, ***the lower limit specified for the upper flight information region shall constitute the upper vertical limit of the flight information region*** and shall coincide with a VFR cruising level of the tables in Appendix 3 to Annex 2.

Note.— In cases where an upper flight information region is established the procedures applicable therein need not be identical with those applicable in the underlying flight information region.



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42. 'apron' means a defined area, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance;



GM1

58. 'controlled airspace' means an airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification;

Controlled airspace is a generic term which covers ATS airspace Classes **A**, **B**, **C**, **D** and **E**.

61. 'control zone' means a controlled airspace extending upwards from the surface of the earth to a specified upper limit;

56. 'control area' means a controlled airspace extending upwards from a specified limit above the earth;

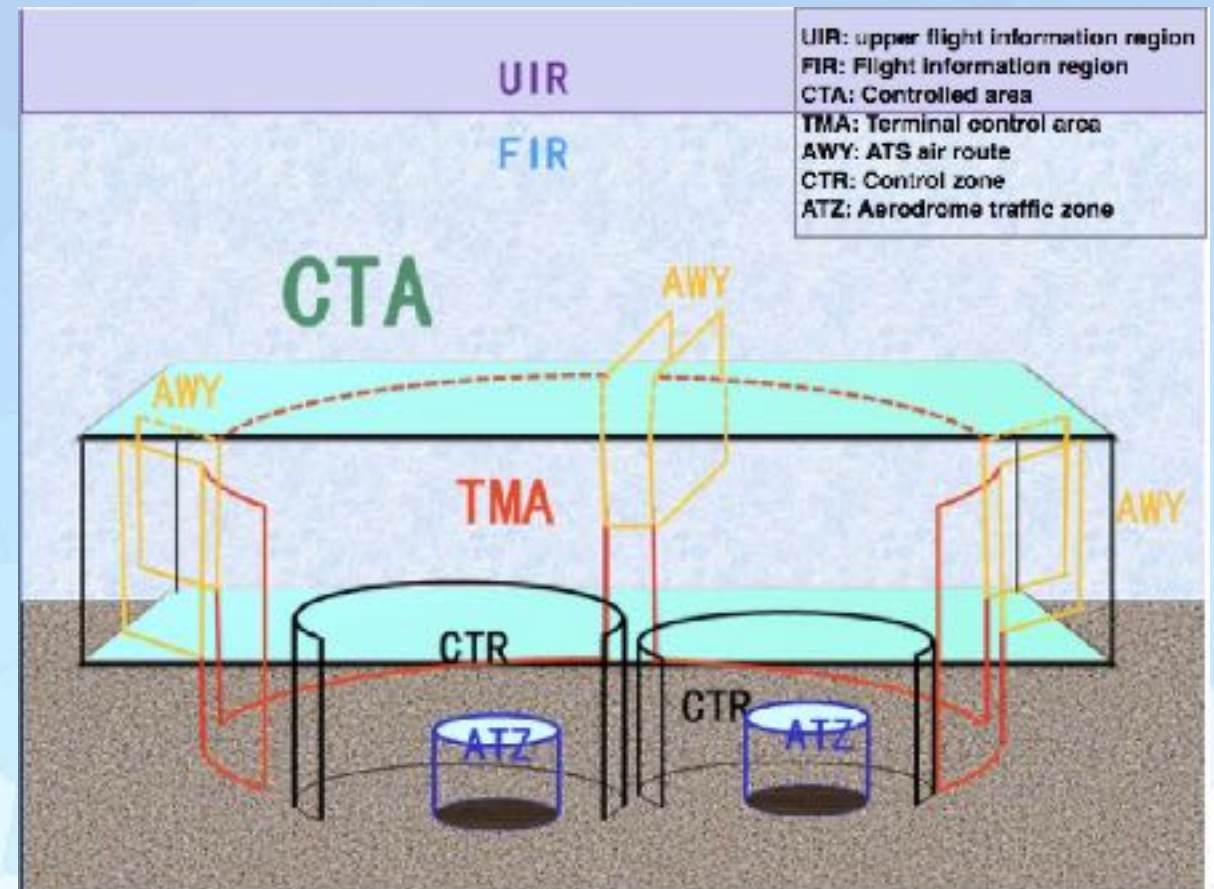
11. 'aerodrome traffic zone' means an airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic;

57. 'controlled aerodrome' means an aerodrome at which air traffic control service is provided to aerodrome traffic regardless whether or not a control zone exists;

56. 'control area'

36. 'airway' means a control area or portion thereof established in the form of a corridor;

Terminal control area. A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes.

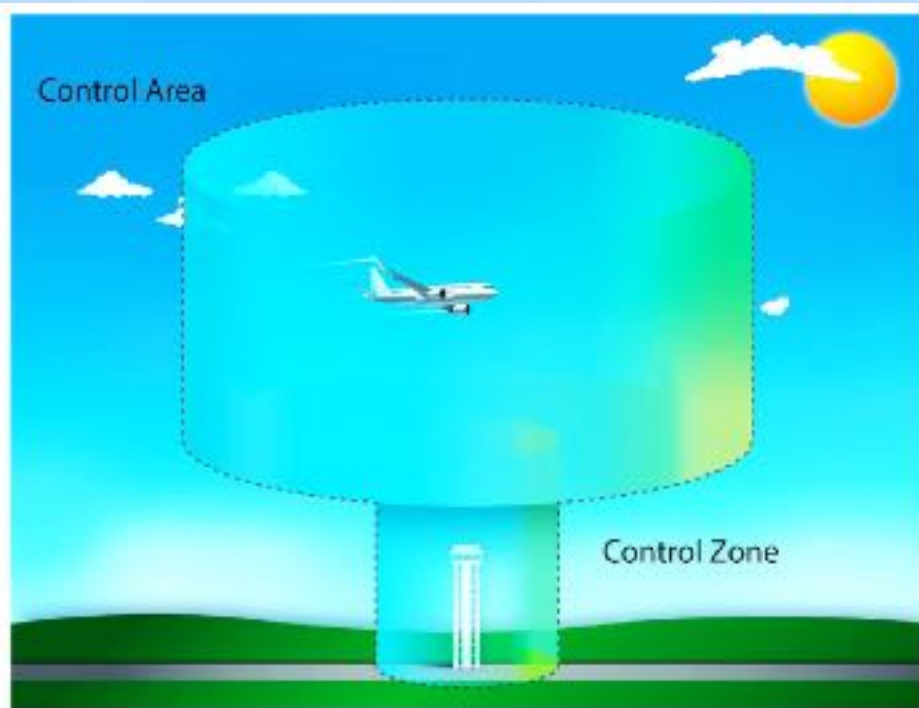


CTA: Control Area

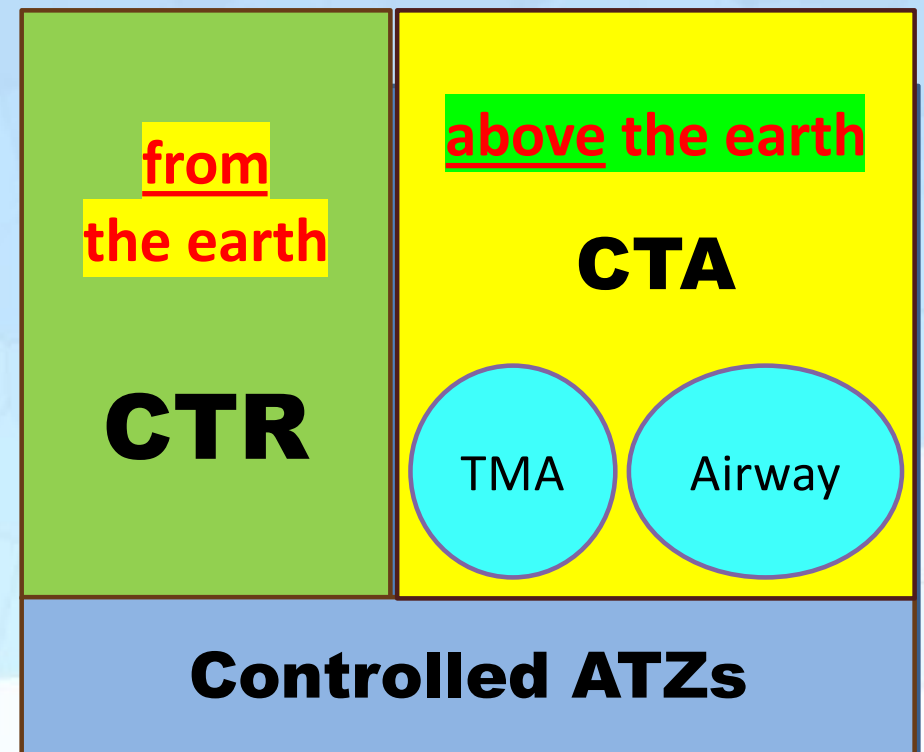
TMA: Terminal Control Area

CTR: Control Zone

ATZ: Aerodrome Traffic Zone



Controlled Airspaces (Classes A, B, C, D, E)



Annex 11

CHAPTER 2. GENERAL

2.11.3 Control areas

2.11.3.1 Control areas including, *inter alia*, **airways** and **terminal control areas** shall be delineated so as to encompass sufficient airspace to contain the flight paths of those IFR flights or portions thereof to which it is desired to provide the applicable parts of the air traffic control service, taking into account the capabilities of the navigation aids normally used in that area.

2.11.3.2 A lower limit of a control area shall be established at a height above the ground or water of ***not less than 200 m (700 ft)***.

Terminal control area. A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes.



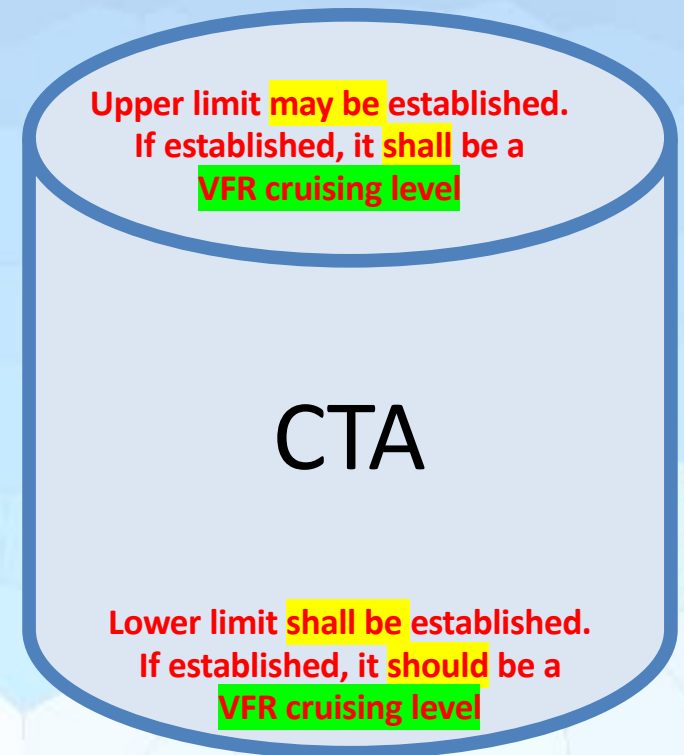
Annex 11

CHAPTER 2. GENERAL

2.11.3 Control areas

2.11.3.2.2 **Recommendation.**— When the **lower limit** of a control area is **above 900 m (3000ft) MSL** it should coincide with a **VFR cruising level** of the tables in Appendix 3 to Annex 2.

Note.— This implies that the selected VFR cruising level be such that expected local atmospheric pressure variations do not result in a lowering of this limit to a height of less than 200 m (700 ft) above ground or water.



CHAPTER 2. GENERAL

2.11.3 Control areas

2.11.3.3 An **upper limit of a control area** shall be established when either:

- a) air **traffic control service will not be provided above** such upper limit; or
- b) the control area is situated below an **upper control area**, in which case the upper limit shall **coincide** with the lower limit of the upper control area.

When established, such upper limit shall coincide with a **VFR cruising level** of the tables in Appendix 3 to Annex 2.

Annex 11

CHAPTER 2. GENERAL

2.11.5 Control zones

2.11.5.2 The lateral limits of a control zone shall extend to **at least 9.3 km (5 NM)** from the centre of the aerodrome or aerodromes concerned in the directions from which approaches may be made.

Note.— A control zone may include two or more aerodromes situated close together.



Annex 11

CHAPTER 2. GENERAL

2.2 Objectives of the air traffic services

The objectives of the air traffic services shall be to:

- a) prevent collisions between aircraft;
- b) prevent collisions between aircraft on the manoeuvring area and obstructions on that area;
- c) expedite and maintain an orderly flow of air traffic;
- d) provide advice and information useful for the safe and efficient conduct of flights;
- e) notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

15- What is the objective of the air traffic control service?

Annex 11

CHAPTER 2. GENERAL

2.3 Divisions of the air traffic services

The air traffic services shall comprise three services identified as follows.

2.3.1 **The *air traffic control service***, to accomplish objectives a), b) and c) of 2.2, this service being divided in three parts as follows:

- a) ***Area control service***: the provision of air traffic control service for controlled flights, except for those parts of such flights described in 2.3.1 b) and c), in order to accomplish objectives a) and c) of 2.2;
- b) ***Approach control service***: the provision of air traffic control service for those parts of controlled flights associated with arrival or departure, in order to accomplish objectives a) and c) of 2.2;
- c) ***Aerodrome control service***: the provision of air traffic control service for aerodrome traffic, except for those parts of flights described in 2.3.1 b), in order to accomplish objectives a), b) and c) of 2.2.

2.3.2 **The *flight information service***, to accomplish objective d) of 2.2.

2.3.3 The ***alerting service***, to accomplish objective e) of 2.2.

Annex 11

CHAPTER 2. GENERAL

2.10 Establishment and designation of the units providing air traffic services

The air traffic services shall be provided by units established and designated as follows:

2.10.1 **Flight information centres** shall be established to provide ***flight information service*** and ***alerting service*** within ***flight information regions***, unless the responsibility of providing such services within a flight information region is assigned to an air traffic control unit having adequate facilities for the discharge of such responsibility.

Note.— This does not preclude delegating to other units the function of providing certain elements of the flight information service.

2.10.2 **Air traffic control units** shall be established to provide **air traffic control service**, **flight information service** and **alerting service** within control areas, control zones and at controlled aerodromes.

Annex 11

CHAPTER 2. GENERAL

2.12 Identification of air traffic services units and airspaces

2.12.1 **Recommendation.**— An *area control centre* or *flight information centre* should be identified by the name of a *nearby town or city* or geographic feature.

2.12.2 **Recommendation.**— An *aerodrome control tower* or *approach control unit* should be identified by the name of the *aerodrome* at which it is located.

2.12.3 **Recommendation.**— A control zone, control area or flight information region should be identified by the name of the unit having jurisdiction over such airspace.



Annex 11

CHAPTER 2. GENERAL

2.4 Determination of the need for air traffic services

2.4.1 The need for the provision of air traffic services shall be determined by consideration of the following:

- a) the **types** of air traffic involved;
- b) the **density** of air traffic;
- c) the **meteorological** conditions;
- d) such **other factors** as may be relevant.



Article 7 Differences

AIP
ISLAMIC REPUBLIC OF IRAN

GEN 1.7-1
WEF 01 DEC 22

GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES

Further to the entry into force of **this Regulation** and at the latest by the date of its applicability, CAO.IRI. shall formally notify ICAO all differences with respect to ICAO Standards and Recommended Practices (**SARPs**) that are covered by this Regulation, with the exception of those relating to essential **security** and **defense policy** interests of I.R. of Iran.

Article 9 Transitional and additional measures

Until the approval and entry into force of **this regulation**, all **documents** and **annexes** of Chicago Convention will be used as valid regulations.

These regulations and technical requirements, developed by CAO.IRI, will **replace** all previous documents and annexes at the time of implementation.



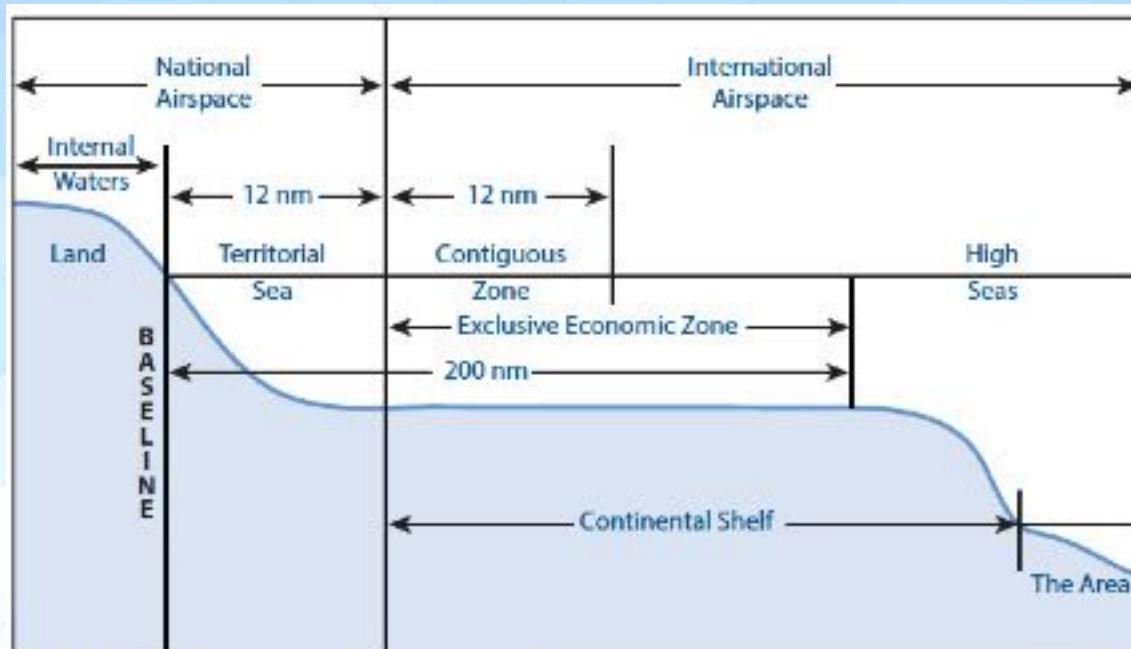
Article 11 Flight over high seas

- a) For flight over the high seas, the rules specified in **Annex 2** to the Chicago Convention shall apply without exception.
- b) Pursuant to ICAO regional air navigation agreement, for those **parts of the high seas where I.R. of Iran has accepted the responsibility of providing air traffic services**, CAO.IRI. shall designate the ATS provider for providing those services.



86. 'high seas airspace'

means airspace beyond land territory and territorial seas, as specified in the United Nations Convention on the Law of the Sea (Montego Bay, 1982);



Article 12 Designation of appropriate authorities

- a) **CAO.IRI.** has been designated as the **appropriate authority** in charge for legislation, supervision, policy-making, imposing restrictions, issuance of certificate, programming and planning, and issuance of relevant instructions on air navigation services, civil aviation regulations and the governance, on behalf of the government of I.R. of Iran.
- b) **CAO.IRI. shall designate Air Navigation Services provider.** CAO.IRI. is also responsible for issuance of certificate for ANSPs.



Article 14 National committee for airspace organization and management

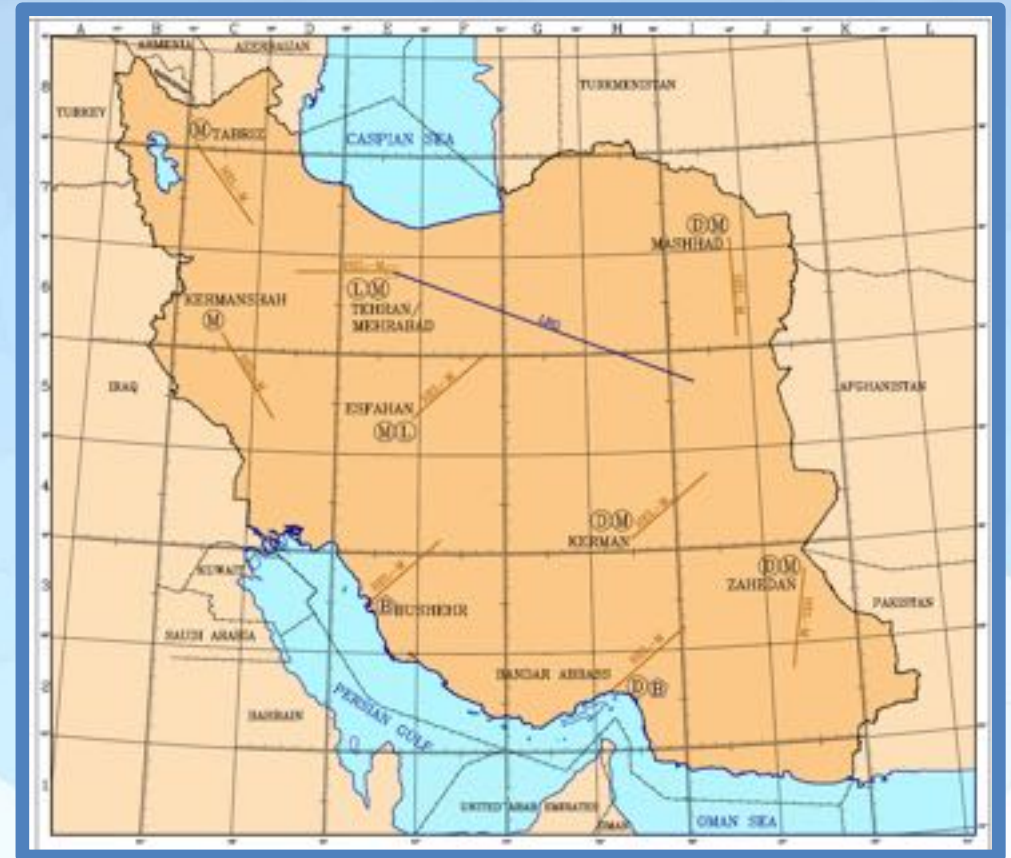
In order to coordinate the **airspace organization and management**, construction of aerodromes and establishment of airways, a committee will be established called **'national committee for airspace organization and management'**.

CAO.IRI, in coordination with the **Ministry of Defense** and the **General Staff of the Armed Forces** of I.R. of Iran, will submit the regulations of the committee to the **Supreme National Security Council** for approval.



Article 16 Aircraft in distress

- I.R. of Iran as a contracting state has responsible to provide measures of assistance and carry out **search and rescue** operations in respect of aircraft in distress in its territory.
- In search and rescue operations, CAO.IRI. as the **scene commander**, will lead the operation.
- Search and rescue aircraft of **neighboring countries**, if an agreement has been developed with CAO.IRI, will be allowed to operate solely over **high seas of Tehran FIR**.



Article 17 Entry into force

**This Regulation shall enter into force on
7th December 2021.**



PART: RULES OF THE AIR

SECTION 1

FLIGHT OVER THE HIGH SEAS

FLIGHT OVER THE HIGH SEAS

SIRA.1001 General

In accordance with Article 11 b) **Iran Airports and Air navigation company** is designated for providing Air Traffic **Control** service, **Alerting** service and **Flight Information** Service for those parts of the high seas where located over Tehran FIR according to **AIP** ENR 6-1.

13. 'Aeronautical Information Publication (AIP)' means a publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation;



وزارت راه و شهرسازی
شرکت فرودگاهها و ناوبری هوایی ایران

PART: RULES OF THE AIR

SECTION 2

APPLICABILITY AND COMPLIANCE

APPLICABILITY AND COMPLIANCE

SIRA.2001 Subject

Without prejudice to SIRA.1001 above, in accordance with

Article 3

This Regulation shall apply in particular to airspace users and aircraft engaged in general air traffic:

- a) Operating **within Tehran FIR**;
- b) Bearing the **nationality** and **registration** marks of I.R. of IRAN, or registered in another country and used by an operator for which I.R. of **Iran exercises oversight of operations**; and operating in any airspace, to the extent that this regulation does not conflict with the rules published by the State **having jurisdiction** over the territory overflown; and
- c) Air Navigation Service Providers (**ANSP**), **aerodrome operators**, and the relevant **personnel** engaged in aircraft operations.



APPLICABILITY AND COMPLIANCE

SIRA.2005 Compliance with the rules of the air

The operation of an aircraft either in **flight**, on the **movement area** of an **aerodrome** or at an operating site shall be in compliance with the **general rules**, the applicable **local provisions** and,

in addition, **when in flight**, either with:

- a) the visual flight rules (**VFR**); or
- b) the instrument flight rules (**IFR**).

42. '**apron**' means a defined area, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance;

96. '**movement area**' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s);

94. '**manoeuvring area**' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons;

6. '**aerodrome**' means a defined area (including any buildings, installations and equipment) on land or water or on a fixed, fixed off-shore or floating structure intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft;

APPLICABILITY AND COMPLIANCE

SIRA.2005 Compliance with the rules of the air

GM1 SIRA.2005(b) Compliance with the rules of the air

When determining whether to operate in accordance with the visual flight rules or the instrument flight rules, a pilot may elect to **fly in accordance with instrument flight rules in visual meteorological conditions**, or may be required to do so by the CAO.IRI.

Weather conditions	Type of navigation
IMC	IFR
VMC	VFR

87. 'IFR' means the symbol used to designate the instrument flight rules;

88. 'IFR flight' means a flight conducted in accordance with the instrument flight rules;

89. 'IMC' means the symbol used to designate instrument meteorological conditions;

139. 'VFR' means the symbol used to designate the visual flight rules;

140. 'VFR flight' means a flight conducted in accordance with the visual flight rules;

143. 'VMC' means the symbol used to designate visual meteorological conditions.

91. 'instrument meteorological conditions (IMC)' mean meteorological conditions expressed in terms of **visibility**, **distance from cloud**, and **ceiling**, **less** than the minima specified for visual meteorological conditions;

142. 'visual meteorological conditions (VMC)' mean meteorological conditions expressed in terms of **visibility**, **distance from cloud**, and **ceiling**, **equal to or better** than specified minima;

APPLICABILITY AND COMPLIANCE

SIRA.2010 Responsibilities



a) Responsibility of the pilot-in-command

The pilot-in-command of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft **in accordance with this Regulation**, except that the pilot-in-command may **depart** from these rules in circumstances that render such departure absolutely necessary in the **interests of safety**.

b) Pre-flight action

Before beginning a flight, the pilot-in-command of an aircraft shall become familiar with all available information appropriate to the intended operation. Pre-flight action for flights away from the vicinity of an aerodrome, and for all IFR flights, shall include a careful study of available current **weather reports** and **forecasts**, taking into consideration **fuel** requirements and an **alternative** course of action if the flight cannot be completed as planned.

100. 'pilot-in-command' means the pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight;

APPLICABILITY AND COMPLIANCE

SIRA.2015 Authority of pilot-in-command of an aircraft

The pilot-in-command of an aircraft shall have final authority as to the disposition of the aircraft while in command.

SIRA.2020 Problematic use of psychoactive substances



No person whose function is critical to the safety of aviation (**safety-sensitive personnel**) shall undertake that function while under the influence of any psychoactive substance, by reason of which human performance is impaired. No such person shall engage in any kind of problematic use of substances.

SIRA

- 116. **'safety-sensitive personnel'** means persons who might endanger aviation safety if they perform their duties and functions improperly, including **crew members**, aircraft **maintenance** personnel, **aerodrome operations personnel**, **rescue, fire-fighting** and maintenance personnel, personnel allowed **unescorted access to the movement area** and **air traffic controllers**;



PART: RULES OF THE AIR

SECTION 3

GENERAL RULES AND COLLISION AVOIDANCE

CHAPTER 1 PROTECTION OF PERSONS AND PROPERTY

PROTECTION OF PERSONS AND PROPERTY

SIRA.3101 Negligent or reckless operation of aircraft

An aircraft shall not be operated in a **negligent** or **reckless** manner so as to endanger life or property of others.



PROTECTION OF PERSONS AND PROPERTY

SIRA.3105 Minimum heights

Except when necessary for take-off or landing, or except by permission from CAO.IRI, aircraft shall not be flown over the congested areas of cities, towns or settlements or over an open - air assembly of persons, unless at such a height as will permit, **in the event of an emergency arising, a landing to be made without undue hazard** to persons or property on the surface.

The minimum heights for VFR flights shall be those specified in **SIRA.5005** and minimum levels for IFR flights shall be those specified in **SIRA.5015 (b)**.

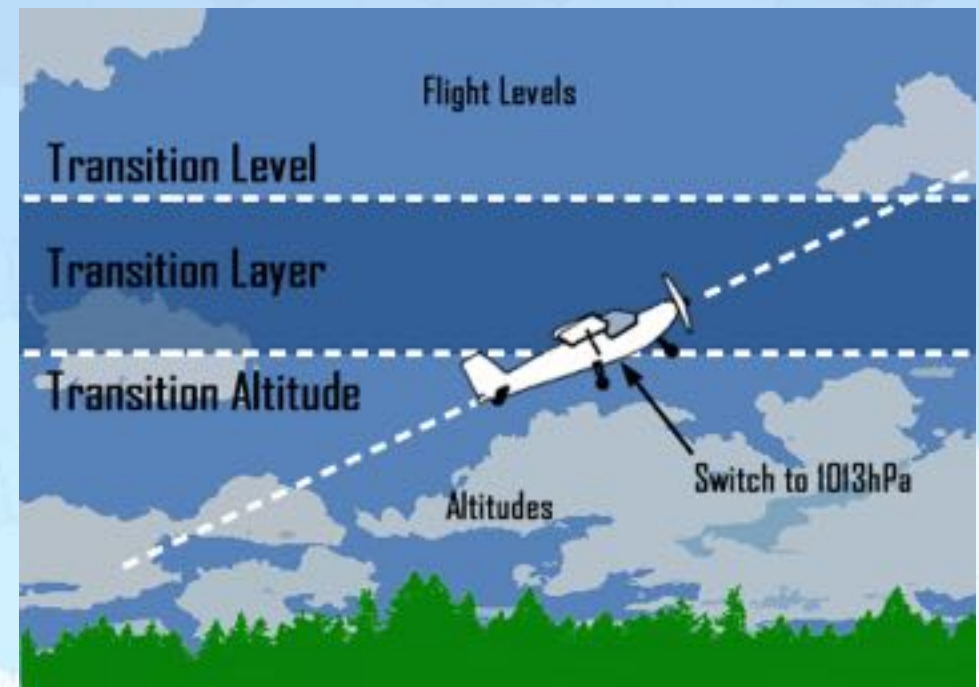


PROTECTION OF PERSONS AND PROPERTY

SIRA.3110 Cruising levels

The **cruising levels** at which a flight or a portion of a flight is to be conducted shall be in terms of:

- a) **flight levels**, for flights at or above the lowest usable flight level or, where applicable, above the **transition altitude**;
- b) **altitudes**, for flights below the lowest usable flight level or, where applicable, at or below the transition altitude.



63. 'cruising level' means a level maintained during a significant portion of a flight;

93. 'level' means a generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level;

84. 'height' means the **vertical distance** of a level, a point or an object considered as a point, measured from a specified datum;

39. 'altitude' means the **vertical distance** of a level, a point or an object considered as a point, measured from mean sea level (MSL);

101. 'pressure-altitude' means an atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere;

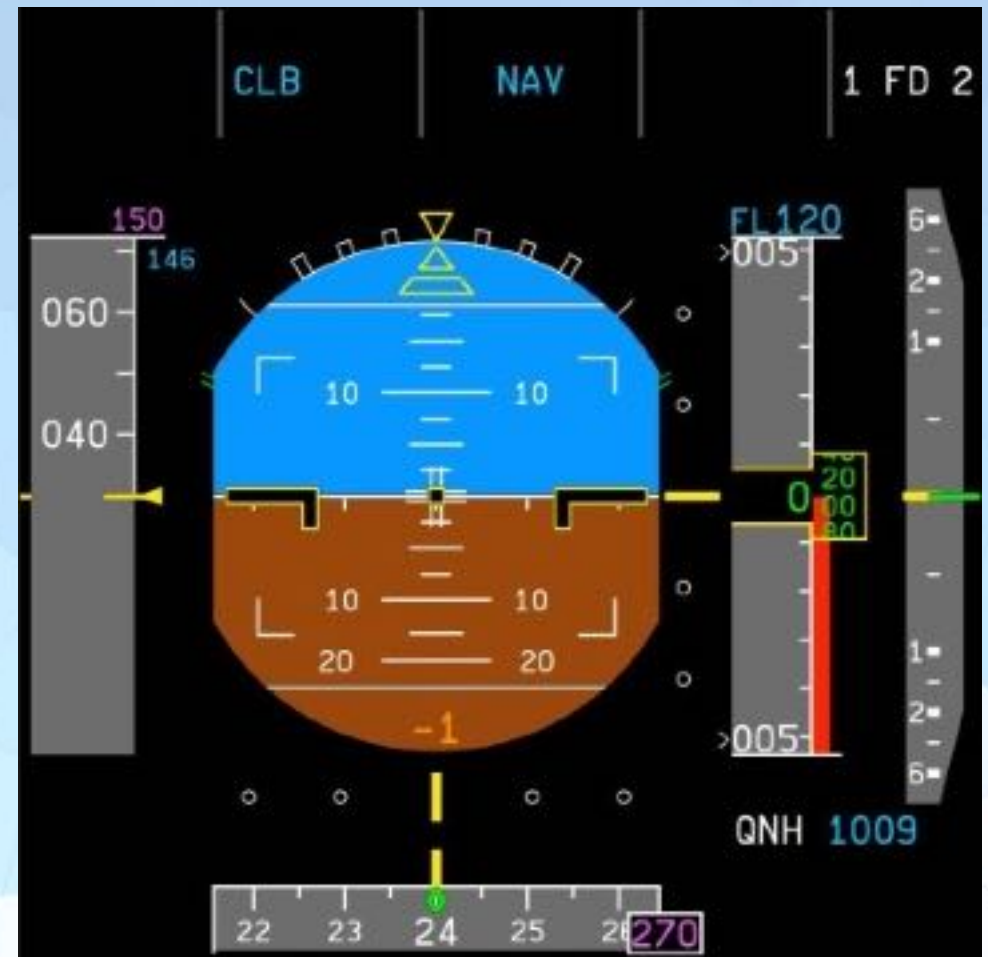
134. 'transition altitude' means the altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes;

135. 'transition level' means the lowest flight level available for use above the transition altitude;

Transition layer. The airspace between the transition altitude and the transition level.

SIRA

Aircraft Fly "Standard Baro"
In The Flight Levels



APPENDIX 3. TABLES OF CRUISING LEVELS

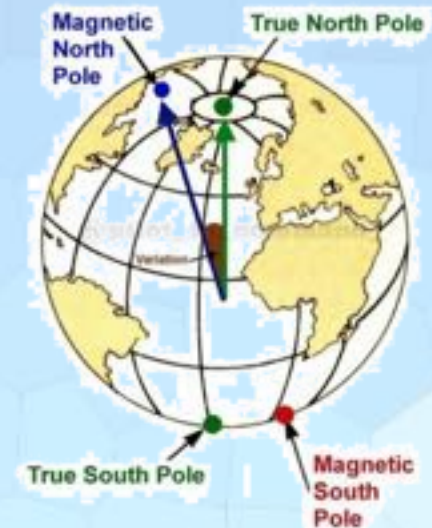
TRACK**

From 000 degrees to 179 degrees***

From 180 degrees to 359 degrees***

IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL.	Feet	Metres	FL.	Feet	Metres	FL.	Feet	Metres	FL.	Feet	Metres
010	1 000	300	035	3 500	1 050	020	2 000	600	045	4 500	1 350
030	3 000	900	055	5 500	1 700	040	4 000	1 200	065	6 500	2 000
050	5 000	1 500	075	7 500	2 300	060	6 000	1 850	085	8 500	2 600
070	7 000	2 150	095	9 500	2 900	080	8 000	2 450	105	10 500	3 200
090	9 000	2 750	115	11 500	3 500	100	10 000	3 050	125	12 500	3 800
110	11 000	3 350	135	13 500	4 100	120	12 000	3 650	145	14 500	4 400
130	13 000	3 950	155	15 500	4 700	140	14 000	4 250	165	16 500	5 050
150	15 000	4 550	175	17 500	5 350	160	16 000	4 900	185	18 500	5 650
170	17 000	5 200	195	19 500	5 950	180	18 000	5 500	205	20 500	6 250
190	19 000	5 800	215	21 500	6 550	200	20 000	6 100	225	22 500	6 850
210	21 000	6 400	235	23 500	7 150	220	22 000	6 700	245	24 500	7 450
230	23 000	7 000	255	25 500	7 750	240	24 000	7 300	265	26 500	8 100
250	25 000	7 600	275	27 500	8 400	260	26 000	7 900	285	28 500	8 700
270	27 000	8 250				280	28 000	8 550			
290	29 000	8 850				300	30 000	9 150			
310	31 000	9 450				320	32 000	9 750			
330	33 000	10 050				340	34 000	10 350			
350	35 000	10 650				360	36 000	10 950			
370	37 000	11 300				380	38 000	11 600			
390	39 000	11 900				400	40 000	12 200			
410	41 000	12 500				430	43 000	13 100			
450	45 000	13 700				470	47 000	14 350			
490	49 000	14 950				510	51 000	15 550			
etc.	etc.	etc.				etc.	etc.	etc.			

Variation



VAR East, Magnetic is LEAST
Variation West, Magnetic is BEST

The lowest flight level for VFR is FL35.

RVSM

Ali Erfanian

APPENDIX 3. TABLES OF CRUISING LEVELS

TRACK*

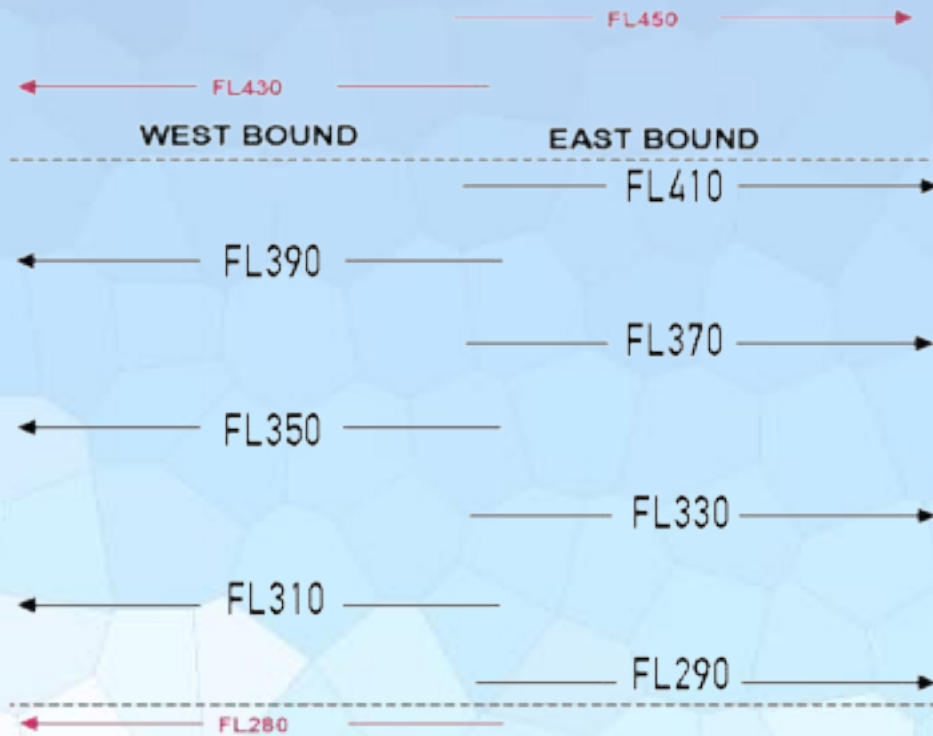
From 000 degrees to 179 degrees**

From 180 degrees to 359 degrees**

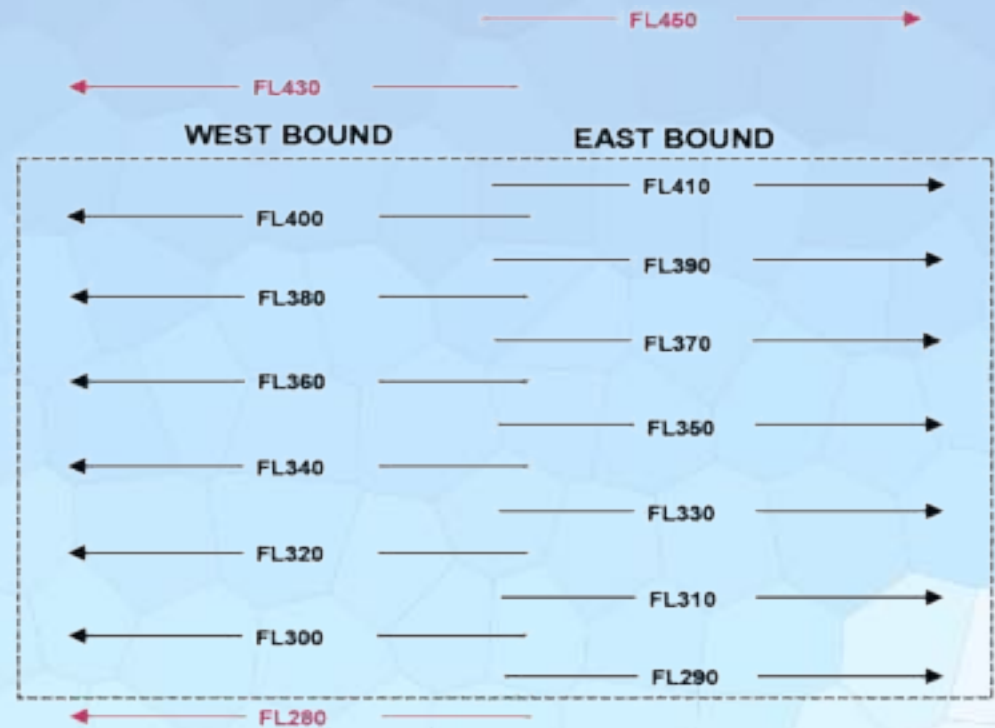
Non-RVSM

IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres
010	1 000	300	—	—	—	020	2 000	600	—	—	—
030	3 000	900	035	3 500	1 050	040	4 000	1 200	045	4 500	1 350
050	5 000	1 500	055	5 500	1 700	060	6 000	1 850	065	6 500	2 000
070	7 000	2 150	075	7 500	2 300	080	8 000	2 450	085	8 500	2 600
090	9 000	2 750	095	9 500	2 900	100	10 000	3 050	105	10 500	3 200
110	11 000	3 350	115	11 500	3 500	120	12 000	3 650	125	12 500	3 800
130	13 000	3 950	135	13 500	4 100	140	14 000	4 250	145	14 500	4 400
150	15 000	4 550	155	15 500	4 700	160	16 000	4 900	165	16 500	5 050
170	17 000	5 200	175	17 500	5 350	180	18 000	5 500	185	18 500	5 650
190	19 000	5 800	195	19 500	5 950	200	20 000	6 100	205	20 500	6 250
210	21 000	6 400	215	21 500	6 550	220	22 000	6 700	225	22 500	6 850
230	23 000	7 000	235	23 500	7 150	240	24 000	7 300	245	24 500	7 450
250	25 000	7 600	255	25 500	7 750	260	26 000	7 900	265	26 500	8 100
270	27 000	8 250	275	27 500	8 400	280	28 000	8 550	285	28 500	8 700
290	29 000	8 850	300	30 000	9 150	310	31 000	9 450	320	32 000	9 750
330	33 000	10 050	340	34 000	10 350	350	35 000	10 650	360	36 000	10 950
370	37 000	11 300	380	38 000	11 600	390	39 000	11 900	400	40 000	12 200
410	41 000	12 500	420	42 000	12 800	430	43 000	13 100	440	44 000	13 400
450	45 000	13 700	460	46 000	14 000	470	47 000	14 350	480	48 000	14 650
490	49 000	14 950	500	50 000	15 250	510	51 000	15 550	520	52 000	15 850
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

SIRA



non-RVSM



RVSM

SIRA

SIRA APPENDIX 3

TABLE OF CRUISING LEVELS

Track*											
From 000 degrees to 179 degrees						From 180 degrees to 359 degrees					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres
010	1000	300	—	—	—	020	2000	600	—	—	—
030	3000	900	035	3500	1050	040	4000	1200	045	4500	1350
050	5000	1500	055	5500	1700	060	6000	1850	065	6500	2000
070	7000	2150	075	7500	2300	080	8000	2450	085	8500	2600
090	9000	2750	095	9500	2900	100	10000	3050	105	10500	3200
110	11000	3350	115	11500	3500	120	12000	3650	125	12500	3800
130	13000	3950	135	13500	4100	140	14000	4250	145	14500	4400
150	15000	4550	155	15500	4700	160	16000	4900	165	16500	5050
170	17000	5200	175	17500	5350	180	18000	5500	185	18500	5650
190	19000	5800	195	19500	5950	200	20000	6100	205	20500	6250
210	21000	6400	215	21500	6550	220	22000	6700	225	22500	6850
230	23000	7000	235	23500	7150	240	24000	7300	245	24500	7450
250	25000	7600	255	25500	7750	260	26000	7900	265	26500	8100
270	27000	8250	275	27500	8400	280	28000	8550	285	28500	8700
290	29000	8850				300	30000	9150			
310	31000	9450				320	32000	9750			
330	33000	10050				340	34000	10350			
350	35000	10650				360	36000	10950			
370	37000	11300				380	38000	11600			
390	39000	11900				400	40000	12200			
410	41000	12500				430	43000	13100			
450	45000	13700				470	47000	14350			
490	49000	14950				510	51000	15550			
etc.	etc.	etc.				etc.	etc.	etc.			

- 78. 'flight level (FL)' means a **surface of constant atmospheric pressure** which is related to a specific pressure datum, 1013,2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals;

GM1 Definitions (78) Flight level

A pressure type altimeter calibrated in accordance with the Standard Atmosphere, when set to a pressure of 1 013, 2 hPa, may be used to indicate flight level.

GM1 Definitions (84) Height

A pressure type altimeter calibrated in accordance with the Standard Atmosphere, when set to a QFE altimeter setting, will indicate height (**above the QFE reference datum**).

The term 'height' indicates altimetry rather than geometric height.

GM1 Definitions (39) Altitude

A pressure type altimeter calibrated in accordance with the Standard Atmosphere when set to a QNH altimeter setting will indicate altitude (**above the mean sea level**).

The term 'altitude' indicates altimetry rather than geometric altitude.

SIRA

OISS/SYZ
SHAHID DASTGHAIB INTL


JEPPESEN
21 NOV 14 **(10-1R)**

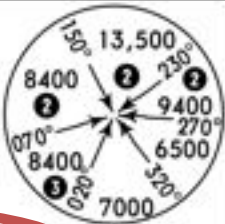
SHIRAZ, IRAN
RADAR MINIMUM ALTITUDES

*SHIRAZ Radar 119.0 125.4	Apt Elev 4927'	Alt Set: hPa Trans level: By ATC Trans alt: 13000'
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OIII/IIKA
IMAM KHOMAINI INTL


JEPPESEN
2 DEC 22 **(21-1)**

TEHRAN, IRAN
ILS Rwy 29R

ATIS 127.2	MEHRABAD Approach (R) 119.7 125.1	IKA Tower 118.7	Ground 121.825 121.6
LOC IIKA 110.3	Final Apch Crs 284°	D6.2 IIKA 5230' (1974')	ILS DA(H) Refer to Minimums
Apt Elev 3305' Rwy 3256'			
MISSED APCH: Climb on R-284 IKA to 4600', then turn LEFT to intercept R-140 IKA to join holding at 8000'. Missed apch requires a minimum climb gradient of 100'/NM.			
Alt Set: hPa	Rwy Elev: 114 hPa	Trans level: FL110	Trans alt: 9000'

MIA IKA VOR

SIRA

Symbol	Value	Unit of measurement
g_0	9.806 65	m/s ²
M_0 (see Note)	28.964 420	kg/kmol
N_A	602.257×10^{24}	kmol ⁻¹
P_0	101.325×10^3	Pa
	1 013.250	hPa
R^*	8 314.32	J/(K · kmol) or kg · m ² /(s ² · K · kmol)
R (see Note)	287.052 87	J/(K · kg) or m ² /(K · s ²)
S	110.4	K
T_i	273.15	K
T_0	288.15	K
t_i	0.00	°C
t_0	15.00	°C
β_s	1.458×10^{-6}	kg/(m · s · K ^{1/2})
κ	1.4	dimensionless
ρ_0	1.225	kg/m ³
σ	0.365×10^{-9}	m

Note.— Not a primary constant per se; derived from primary constants.

Doc. 7488: Primary constants and characteristics adopted for the calculation of the ICAO standard atmosphere

g_0 standard acceleration due to gravity.

M_0 sea level mean molar mass

N_A Avogadro constant

P_0 sea level atmospheric pressure

R^* universal gas constant

$R = R^*/M_0$ specific gas constant

S and β_s Sutherland's empirical constants

T_i temperature of the ice point at mean sea level

T_0 sea level temperature

t_i Celsius temperature of the ice point at mean sea level

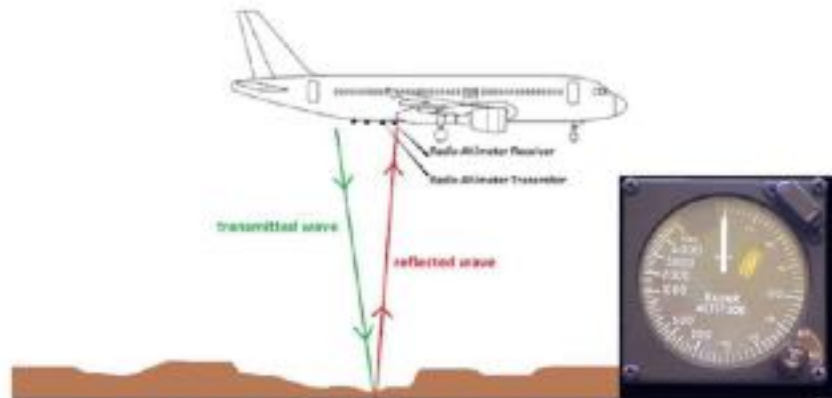
t_0 Celsius sea level temperature

$\kappa = c_p/c_v$ adiabatic index

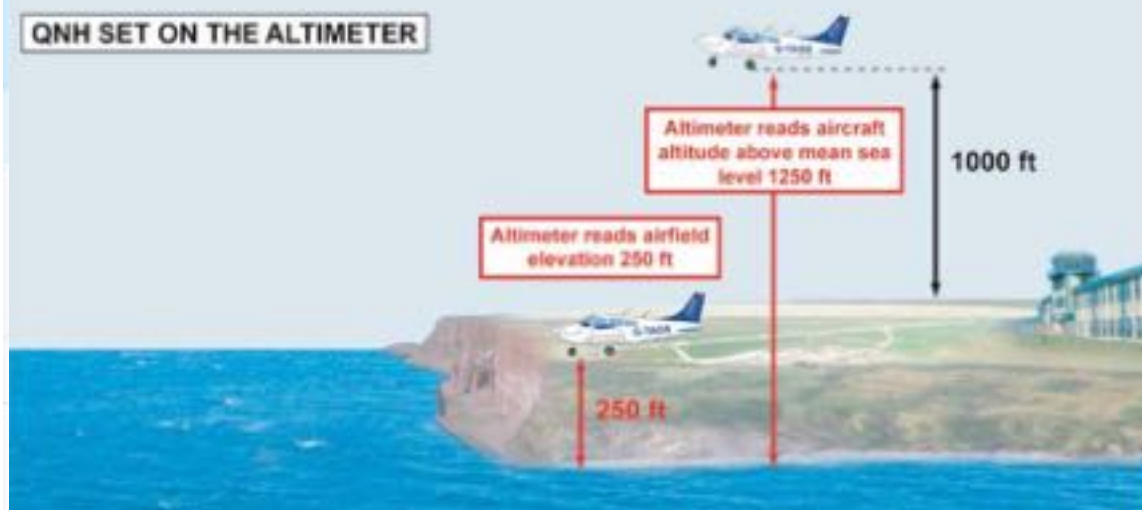
ρ_0 sea level atmospheric density

σ effective collision diameter of an air molecule

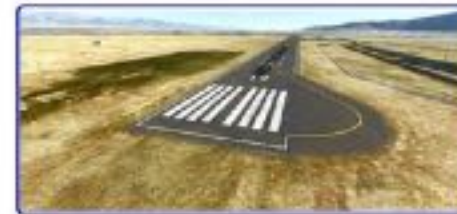
Radio Altimeter



QNH SET ON THE ALTIMETER



Airports at the highest and lowest altitudes in the world



Bar Yehuda Airfield (MTZ) is the lowest airport in the world, located 378 meters (1,240 feet) below sea level in the Judean Desert, Israel



Daocheng Yading Airport (DCY), also known as Kangding Airport, is the world's highest civilian airport, located at an elevation of 4,411 meters (14,472 feet) above sea level



11.9 QNE

- ❖ A situation can occur where the QNH is below the lowest altimeter subscale setting.
- ❖ For instance, if the altimeter subscale will not read below 940 hPa and the QNH is 930 hPa it would appear that the altimeter is useless.
- ❖ Assume that the aerodrome elevation is 100 ft AMSL.
- ❖ On touchdown the altimeter will read:
 - $1013 - 930 = 83$ (amount of pressure wound on)
 - $83 \times 27 \text{ ft (ISA interval)} = 2241 \text{ ft} + 100 \text{ ft} = 2341 \text{ ft}$.
- ❖ In this case, 2341 ft is the QNE.
- ❖ A pilot would be instructed by the ATCO:

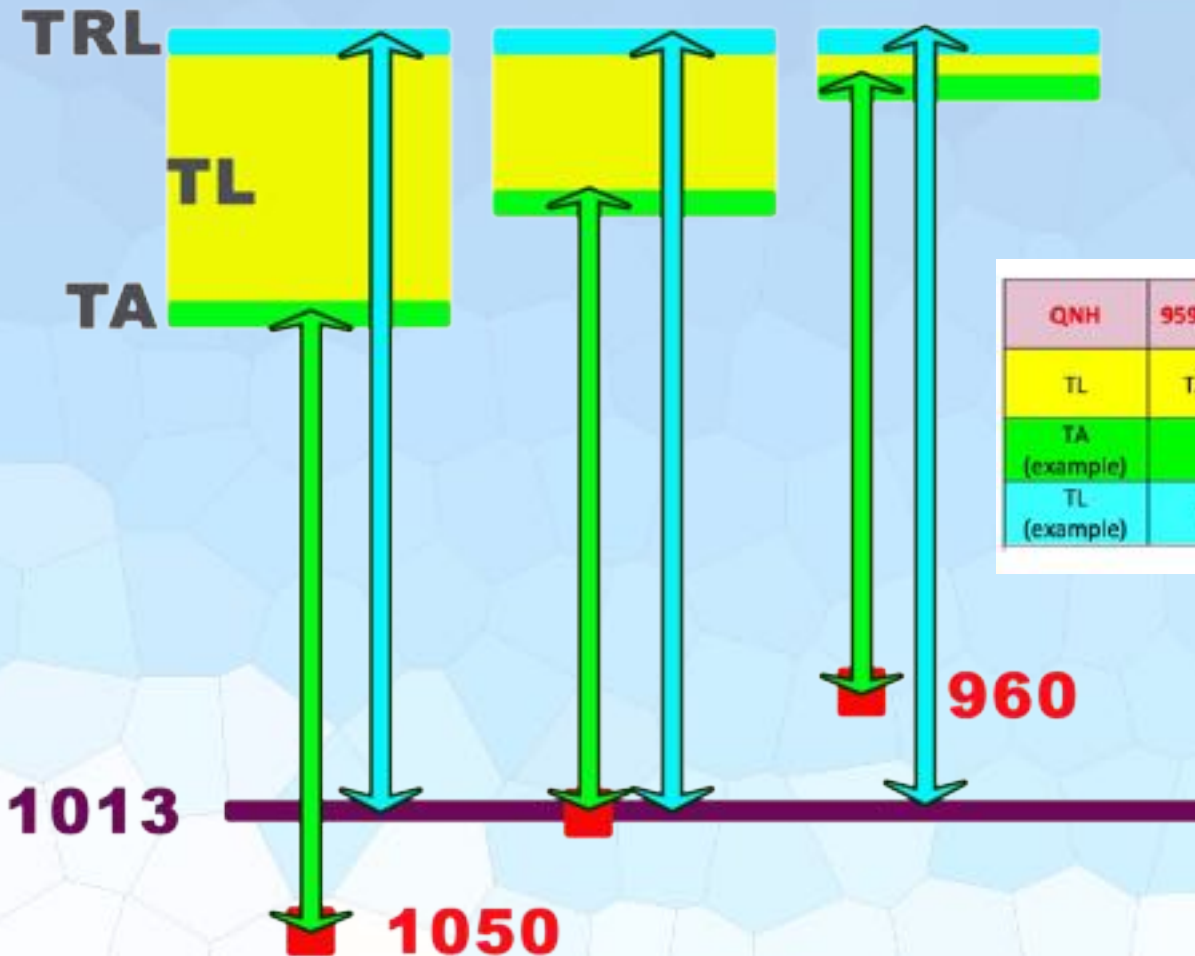
“G-CD set 1013 land with QNE 2340”

QNE is not 1013

There is a popular **misconception** amongst pilots that QNE is 1013 hPa. When used as a reference as opposed to a QNH, 1013 hPa is defined as the standard pressure setting (SPS).

Therefore QNE is what the altimeter will read at touchdown with SPS set.

Pressure setting	QFE	QNH	1013 hpa
Altimeter read out on threshold	0	elevation	QNE



Transition Layer

QNH	959.5 to 977.0	977.1 to 995.1	995.2 to 1013.1	1013.2 to 1031.7	1031.8 to 1050.4
TL	TA+2500ft	TA+2000ft	TA+1500ft	TA+1000ft	TA+500ft
TA (example)	4000ft				
TL (example)	FL065	FL060	FL055	FL050	FL045

The flight crew shall be provided with the transition level :

- prior to reaching **it** during the descent
- in the approach clearance
- when requested by the pilot

PROTECTION OF PERSONS AND PROPERTY

SIRA.3115 Dropping or spraying



Nothing shall be dropped or sprayed from an aircraft in flight except under conditions prescribed by the **appropriate authority** and as indicated by relevant information, advice and/or clearance from the appropriate **air traffic services unit**.



Appropriate authority.

- a) Regarding flight over the high seas: The relevant authority of the State of Registry.
- b) Regarding flight **other than over the high seas (= territory of a state)**: The relevant authority of the State having **sovereignty** over the territory being overflown.

PROTECTION OF PERSONS AND PROPERTY

SIRA.3120 Towing



No aircraft or other object shall be towed by an aircraft, except in accordance with requirements prescribed by the **appropriate authority** and as indicated by relevant information, advice and/or clearance from the appropriate **air traffic services unit**.

PROTECTION OF PERSONS AND PROPERTY

SIRA.3125 Parachute descents

Parachute descents, other than emergency descents, shall not be made except under conditions prescribed by the **appropriate authority** and as indicated by relevant information, advice and/or clearance from the appropriate **air traffic services unit**.



PROTECTION OF PERSONS AND PROPERTY

SIRA.3130 Aerobatic flight

No aircraft shall be flown acrobatically except under conditions prescribed by the **appropriate authority** and as indicated by relevant information, advice and/or clearance from the appropriate **air traffic services unit**.

5. 'aerobatic flight' means maneuvers **intentionally** performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed, not necessary for normal flight or for instruction for licenses or ratings other than aerobatic rating;



PROTECTION OF PERSONS AND PROPERTY

SIRA.3135 Formation flight

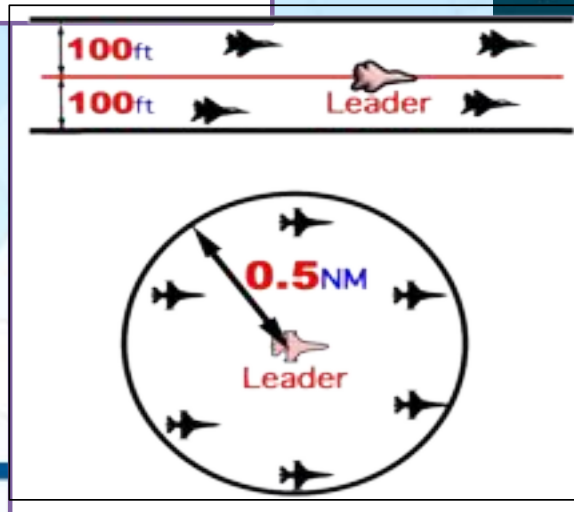
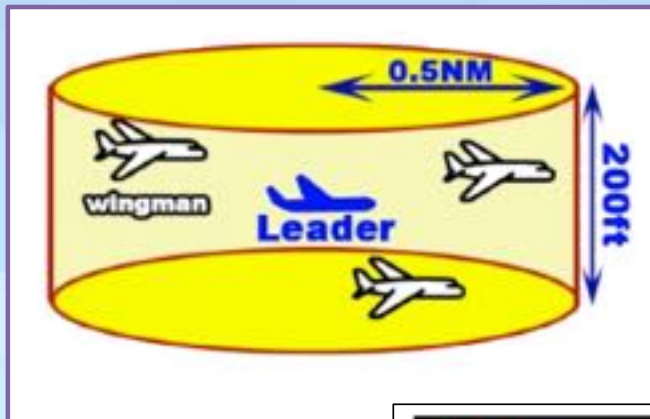
Aircraft shall not be flown in formation except by **pre-arrangement among the pilots-in-command** of the aircraft taking part in the flight and, for **formation flight in controlled airspace**, in accordance with the following conditions:

- a) **one** of the pilots-in-command shall be designated as the flight **leader**;
- b) the formation operates as a **single aircraft** with regard to **navigation** and **position reporting**;
- c) **separation** between aircraft in the flight shall be the responsibility of the flight **leader** and the pilots-in-command of the **other aircraft** in the flight and shall include periods of transition when aircraft are manoeuvring to attain their own separation within the formation and during join - up and breakaway; and
- d) **a distance not exceeding km (0.5 NM) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each aircraft.**

SIRA

PROTECTION OF PERSONS AND PROPERTY

SIRA.3135 Formation flight



PROTECTION OF PERSONS AND PROPERTY

SIRA.3140 Unmanned free balloons

An unmanned free balloon shall be operated in such a manner as to minimize hazards to persons, property or other aircraft and in accordance with the conditions specified in **appendix 2**.

1.1. Unmanned free balloons shall be classified as

- a) **light**: carries a payload with a combined mass of less than 4 kg;
- b) **medium**: carries a payload with a combined mass of 4 kg or more, but less than 6 kg;
- c) **heavy**: carries a payload which:
 - I. has a combined mass of 6 kg or more; or
 - II. includes a package of 3 kg or more



PROTECTION OF PERSONS AND PROPERTY

SIRA.3145 Prohibited areas and restricted areas

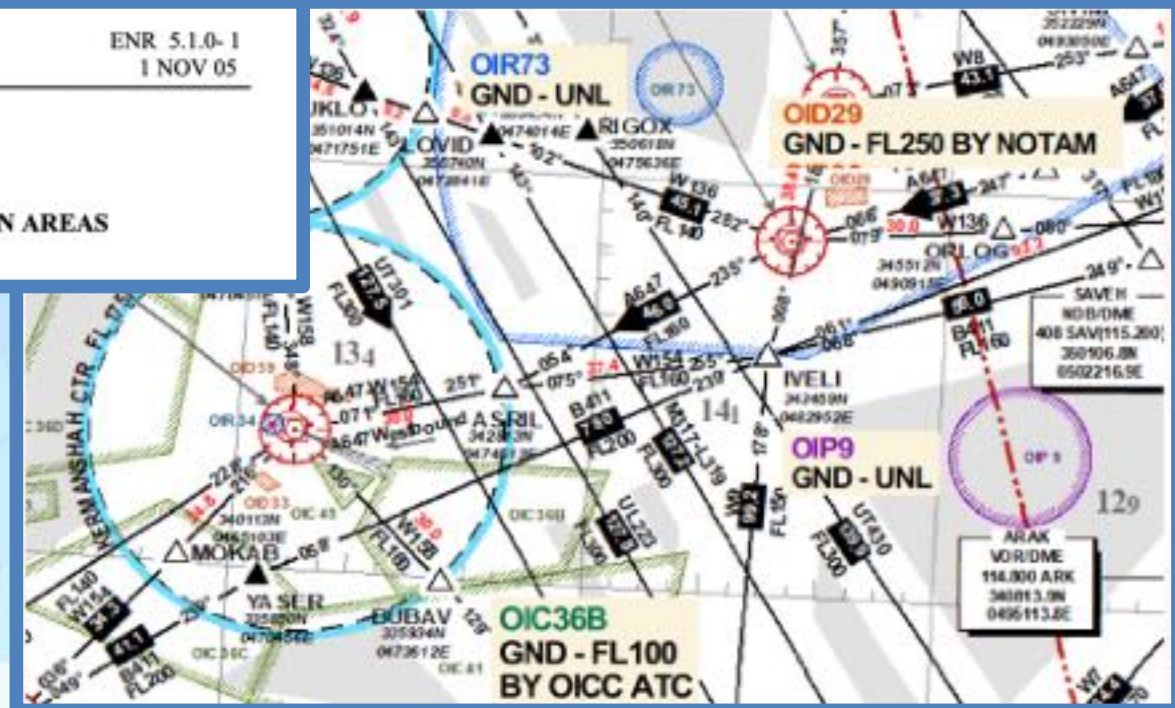
AIP
ISLAMIC REPUBLIC OF IRAN

ENR 5.1.0-1
1 NOV 05

ENR 5. NAVIGATION WARNINGS

ENR 5.1 PROHIBITED, RESTRICTED, DANGER AND CAUTION AREAS

Aircraft shall not be flown in a prohibited area, or in a restricted area, the particulars of which have been duly published in accordance with **AIP ENR 5**.



103. **'prohibited area'** means an airspace of defined dimensions, **above the land areas or territorial waters of a State**, within which the flight of aircraft is prohibited;

111. **'restricted area'** means an airspace of defined dimensions, **above the land areas or territorial waters of a State**, within which the flight of aircraft is restricted in accordance with certain specified conditions;

65. **'danger area'** means an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times;

Caution area: An airspace of defined dimensions within which uncontrolled and manoeuvring aircraft may be encountered, so it is necessary for the pilots "to use caution" when entering such airspace for avoidance of probable danger. Pilots of participating aircraft as well as pilots transiting the area are responsible for collision avoidance and pilots transiting Caution areas should coordinate with ATS units prior entering such areas. (AIP ENR 5.1)

PART: RULES OF THE AIR

SECTION 3

GENERAL RULES AND COLLISION AVOIDANCE

CHAPTER 2 AVOIDANCE OF COLLISION

AVOIDANCE OF COLLISION

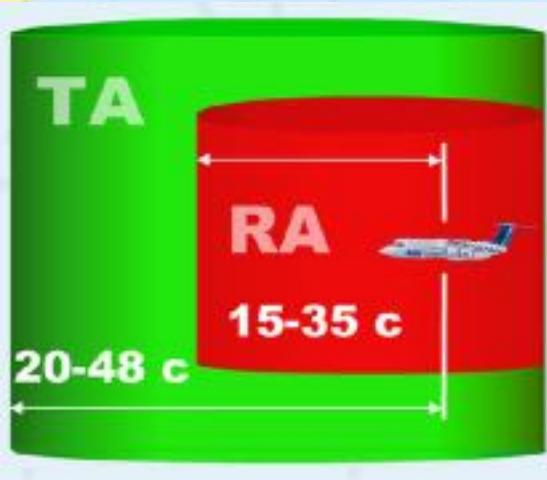
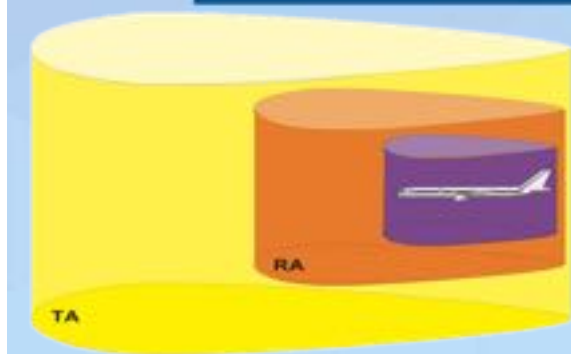
SIRA.3201 General

Nothing in this Regulation shall relieve the pilot -in-command of an aircraft from the responsibility of taking such action, including collision avoidance manoeuvres based on resolution advisories provided by **ACAS** equipment, as will best avert collision.

17. 'airborne collision avoidance system (ACAS)' means an aircraft system **based on secondary surveillance radar (SSR) transponder signals** which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders;



SIRA



AVOIDANCE OF COLLISION

SIRA.11014 ACAS resolution advisory (RA)

a) **ACAS II** shall be used during flight, except as provided in the minimum equipment list specified in CAO.IRI AIROPS, in a mode that **enables RA** indications to be produced for the flight crew when undue proximity to another aircraft is detected.

This shall not apply if inhibition of RA indication mode (using traffic advisory (TA) indication only or equivalent) is called for by an abnormal procedure or due to performance -limiting conditions.

ACAS I is a system that provides information as an aid to “see and avoid”. It **does not provide RAs**. ACAS I may or may not provide TAs. It is typically installed on **rotary wing** aircraft and **smaller**, turbine-powered, fixed-wing aircraft. ACAS I is not intended for international implementation and standardization by ICAO.

ACAS II. An ACAS which provides **vertical** resolution advisories (**RAs**) in addition to traffic advisories (**TAs**).

ACAS III. An ACAS which provides **vertical and horizontal** resolution advisories (**RAs**) in addition to traffic advisories (**TAs**).

AVOIDANCE OF COLLISION

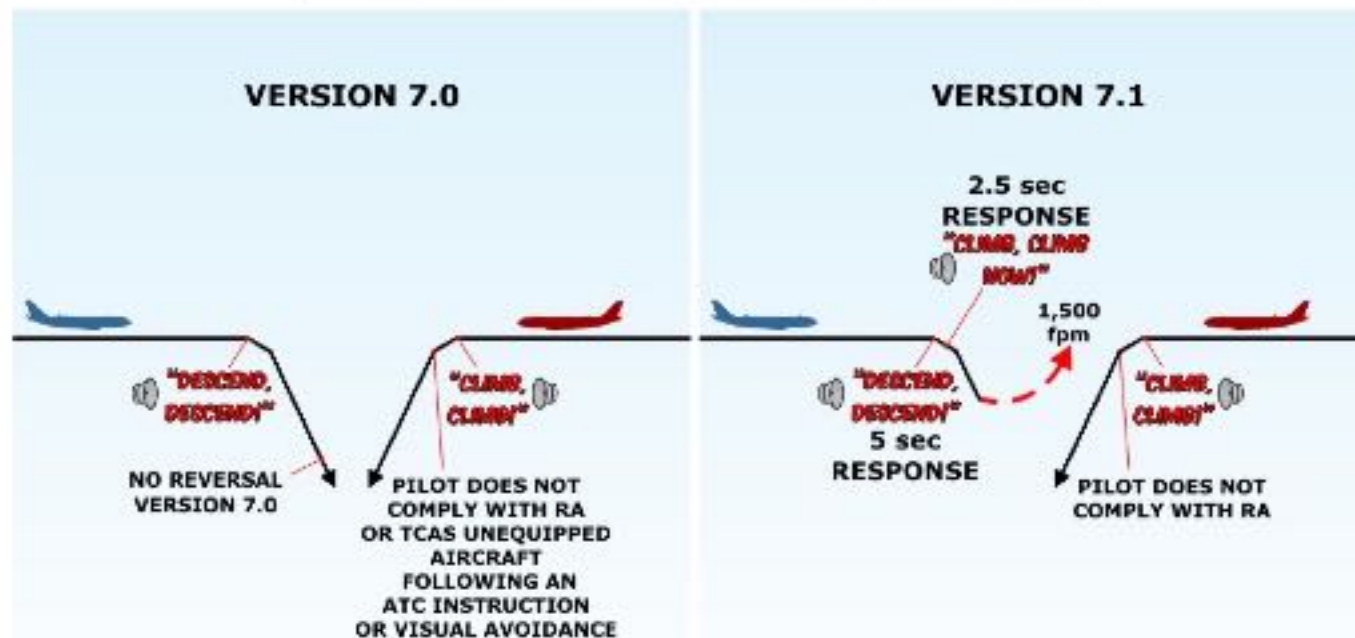
SIRA.11014 ACAS resolution advisory (RA)

b) In the event of an ACAS RA, pilots shall:

- 1) respond immediately by **following the RA**, as indicated, unless doing so would jeopardise the safety of the aircraft;
- 2) follow the RA even if there is a **conflict between the RA and an ATC instruction** to manoeuvre;
- 3) not manoeuvre in the opposite sense to an RA;**
- 4) as soon as possible, as permitted by flight crew workload, **notify the appropriate ATC unit** of any RA which requires a deviation from the current ATC instruction or clearance;
- 5) promptly **comply with any modified RAs**;
- 6) limit the alterations of the flight path to the **minimum extent necessary to comply with the RAs**;
- 7) promptly **return to the terms of the ATC instruction or clearance** when the conflict is resolved;
- 8) notify **ATC** when returning to the current clearance.

TCAS II version 7.1

IMPROVEMENT TO REVERSAL LOGIC



ICAO Annex 10 vol. IV states that all ACAS II units must be compliant with version 7.1 as of 1 January 2017.

AVOIDANCE OF COLLISION

SIRA.11014 ACAS resolution advisory (RA)

- c) When a pilot reports an **ACAS RA**, the controller shall not attempt to modify the aircraft flight path until the pilot reports '**CLEAR OF CONFLICT**'.
- d) Once an aircraft departs from its ATC clearance or instruction in compliance with an RA, or a pilot reports an RA, the **controller ceases to be responsible** for providing separation between that aircraft and any other aircraft affected as a direct consequence of the manoeuvre induced by the RA. **The controller shall resume responsibility** for providing separation to all the affected aircraft when:
 - 1) the controller acknowledges a report from the flight crew that the aircraft has resumed the current clearance; or
 - 2) the controller acknowledges a report from the flight crew that the aircraft is resuming the current clearance and issues an alternative clearance which is acknowledged by the flight crew.

AVOIDANCE OF COLLISION

SIRA.11014 ACAS resolution advisory (RA)

GM3 SIRA.11014 ACAS resolution advisory (RA)

Pilots should not manoeuvre their aircraft in response to traffic advisories (TAs) only.

GM5 SIRA.11014 ACAS resolution advisory (RA)

In the case of an **ACAS–ACAS coordinated encounter**, the RAs complement each other in order to reduce the potential for a collision.

GM5 SIRA.11014 ACAS resolution advisory (RA)

Unless informed by the pilot, **ATC does not know when ACAS issues RAs**. It is possible for ATC to issue instructions that are unknowingly contrary to ACAS RA indications. Therefore, it is important that **ATC be notified when an ATC instruction or clearance is not being followed** because it conflicts with an RA.

AVOIDANCE OF COLLISION

SIRA.11014 ACAS resolution advisory (RA)

GM7 SIRA.11014 ACAS resolution advisory (RA)

Pilots should use appropriate procedures by which an aeroplane climbing or descending to an assigned altitude or flight level may do so at a **rate less than 8 m/s (or 1 500 ft/min) throughout the last 300 m (or 1 000 ft) of climb or descent** to the assigned altitude or flight level when the pilot is made aware of another aircraft at or approaching an adjacent altitude or flight level, unless otherwise instructed by ATC.

These procedures are intended to avoid unnecessary ACAS II RAs in aircraft at or approaching adjacent altitudes or flight levels. For commercial operations, these procedures should be specified by the operator.

HVR

AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

- a) The aircraft that has the right-of-way shall maintain its **heading** and **speed**.
- b) An aircraft that is aware that the manoeuvrability of another aircraft is **impaired** shall give way to that aircraft.
- c) An aircraft that is obliged by the following rules to keep out of the way of another shall avoid passing over, under or in front of the other, unless it passes well clear and takes into account the effect of aircraft **wake turbulence**.



83. 'heading' means the direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid);

AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

- 1) **Approaching head-on**. When two aircraft are approaching head-on or approximately so and there is danger of collision, **each shall alter its heading to the right**.



AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

- 2) **Converging.** When two aircraft are converging at approximately the same level, **the aircraft that has the other on its right shall give way**, except as follows:
- i. power-driven heavier-than-air aircraft shall give way to airships, sailplanes and balloons;
 - ii. airships shall give way to sailplanes and balloons;
 - iii. sailplanes shall give way to balloons;
 - iv. Power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.



AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

3) **Overtaking.** An overtaking aircraft is an aircraft that approaches another from the **rear** on a line forming an angle of **less than 70 degrees** with the plane of symmetry of the latter, i.e. is in such a position with reference to the other aircraft that at **night** it should be unable to see either of the aircraft's **left (port) or right (starboard) navigation lights**.



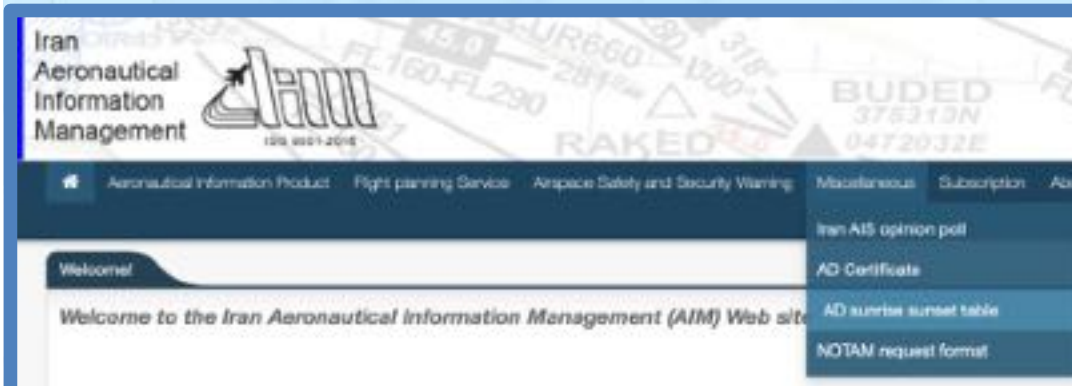
An **aircraft that is being overtaken has the right - of-way** and the overtaking aircraft, whether climbing, descending or in horizontal flight, shall keep out of the way of the other aircraft by **altering its heading to the right**, and no subsequent change in the relative positions of the two aircraft shall absolve the overtaking aircraft from this obligation until it is **entirely past and clear**.

97. 'night' means the hours between the end of evening civil twilight and the beginning of morning civil twilight. Civil twilight ends in the evening when the centre of the sun's disc is **6 degrees** below the horizon and begins in the morning when the centre of the sun's disc is **6 degrees** below the horizon;



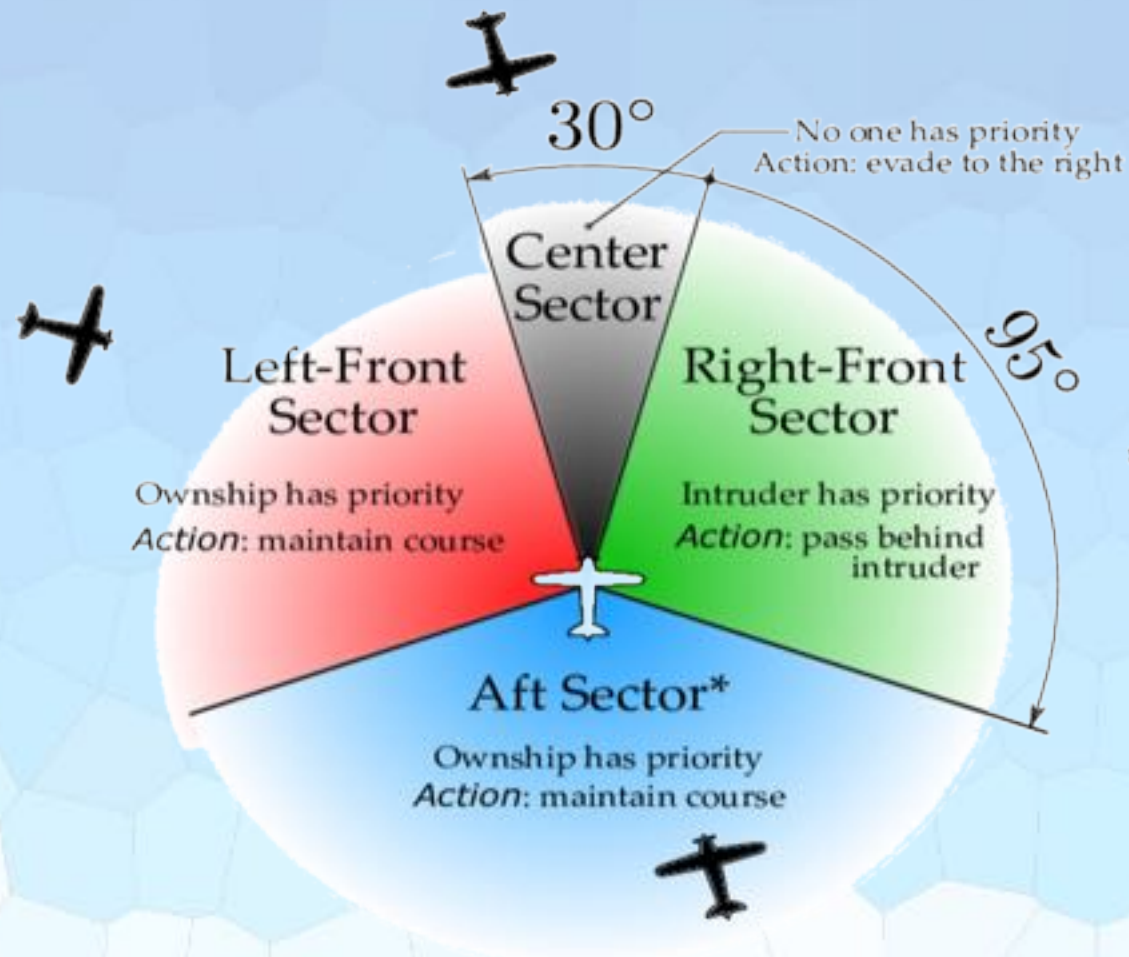
GM1 Definitions (97) Night

To enable practical application of the definition of night, evening and morning civil twilight may be promulgated pertinent to the date and position.



GEN 2.7 - SUNRISE/SUNSET TABLES				
MASJED SOLEIMAN / SHAHID ASYAEE				
OIAI				
320008N 0491607E				
Date	Morning Twilight	sunrise	Sunset	Evening Twilight
01-Jan-24	3:16	3:43	13:49	14:16
08-Jan-24	3:18	3:44	13:55	14:21
15-Jan-24	3:17	3:44	14:01	14:27
22-Jan-24	3:16	3:42	14:07	14:33
29-Jan-24	3:13	3:39	14:13	14:39
05-Feb-24	3:09	3:34	14:20	14:45
12-Feb-24	3:03	3:29	14:26	14:51
19-Feb-24	2:57	3:22	14:32	14:57
26-Feb-24	2:50	3:14	14:38	15:02
04-Mar-24	2:42	3:06	14:43	15:08
11-Mar-24	2:33	2:58	14:48	15:13

SIRA



AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

- 4) **Landing.** An aircraft in flight, or operating on the ground or water, shall give way to aircraft landing or in the final stages of an approach to land.
- i. When two or more heavier-than-air aircraft are approaching an aerodrome or an operating site for the purpose of landing, **aircraft at the higher level shall give way to aircraft at the lower level**, but the latter shall not take advantage of this rule to cut in front of another which is in the final stages of an approach to land, or to overtake that aircraft.
 - ii. **Emergency landing.** An aircraft that is aware that another is compelled to land shall give way to that aircraft.

SIRA

THIS AIRCRAFT HAS RIGHT OF WAY



This aircraft gives way



FRAL0004

AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

- 5) **Taking off.** An aircraft taxiing on the manoeuvring area of an aerodrome shall give way to aircraft taking off or about to take off.



AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

d) Surface movement of aircraft, persons and vehicles.

1) In case of danger of collision between two aircraft taxiing on the movement area of an aerodrome or equivalent part of an operating site, the following shall apply:

- I. when two aircraft are **approaching head on**, or approximately so, each shall **stop** or where practicable alter its course to the **right** so as to keep well clear;
- II. when two aircraft are on a **converging** course, **the one which has the other on its right shall give way**;
- III. an aircraft which is being **overtaken** by another aircraft **shall have the right -of-way** and the overtaking aircraft shall keep well clear of the other aircraft.

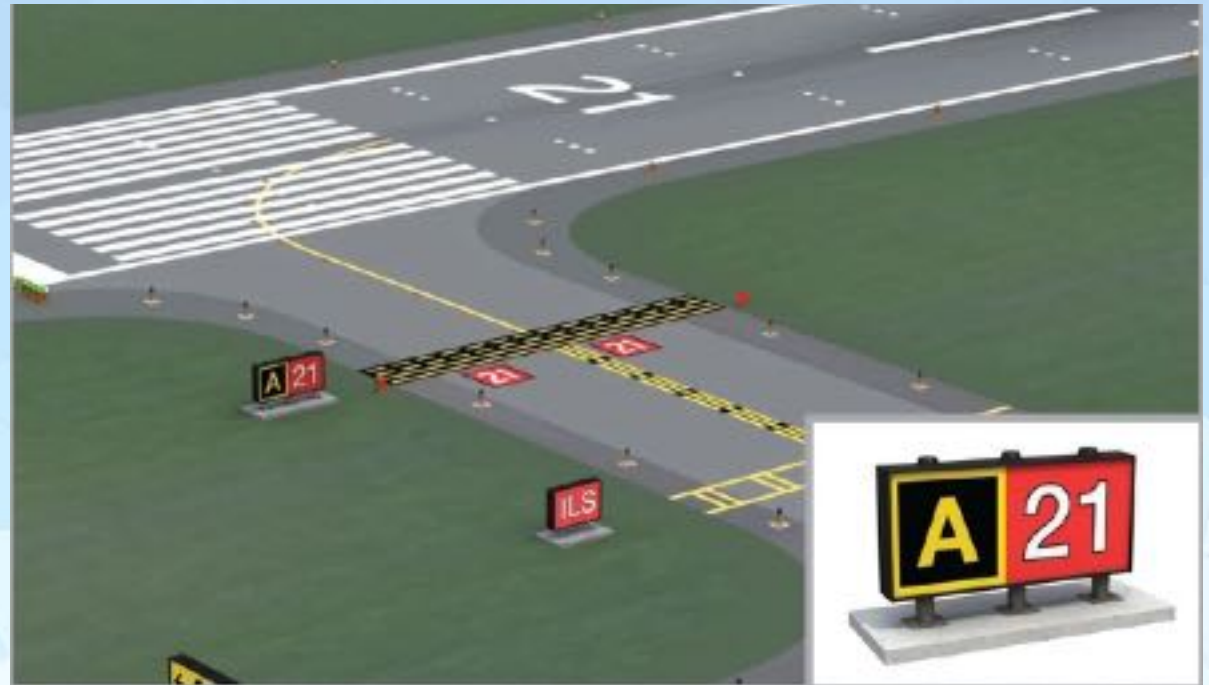


AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

d) **Surface movement of aircraft, persons and vehicles.**

2) At a **controlled aerodrome** an aircraft taxiing on the manoeuvring area shall stop and hold at all **runway-holding positions** unless an explicit clearance to **enter** or **cross** the runway has been issued by the aerodrome control tower.



Annex 11

CHAPTER 3. AIR TRAFFIC CONTROL SERVICE**3.8 Control of persons and vehicles at aerodromes**

3.8.1 The movement of **persons or vehicles** including **towed aircraft** on the **manoeuvring** area of an aerodrome shall be **controlled by the aerodrome control tower** as necessary to avoid hazard to them or to aircraft landing, taxiing or taking off.



Annex 11

CHAPTER 3. AIR TRAFFIC CONTROL SERVICE**3.8 Control of persons and vehicles at aerodromes**

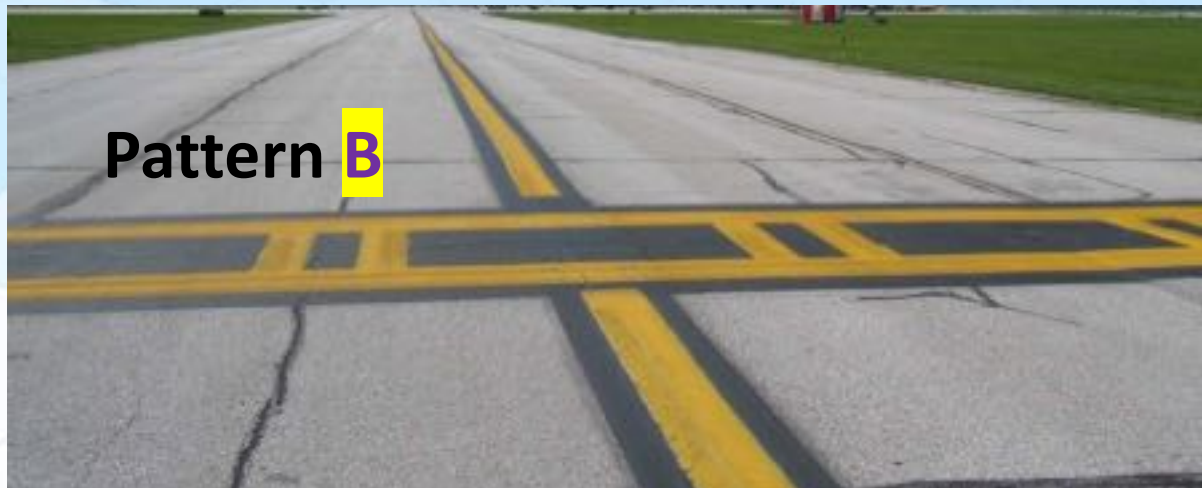
3.8.3 **Emergency vehicles** proceeding to the assistance of an aircraft in distress shall be afforded **priority** over **all other surface movement traffic**.



114. 'runway-holding position' means a designated position intended to protect a runway, an obstacle limitation surface, or an instrument landing system (ILS)/microwave landing system (MLS) critical/sensitive area at which taxiing aircraft and vehicles are to stop and hold, unless otherwise authorised by the aerodrome control tower;

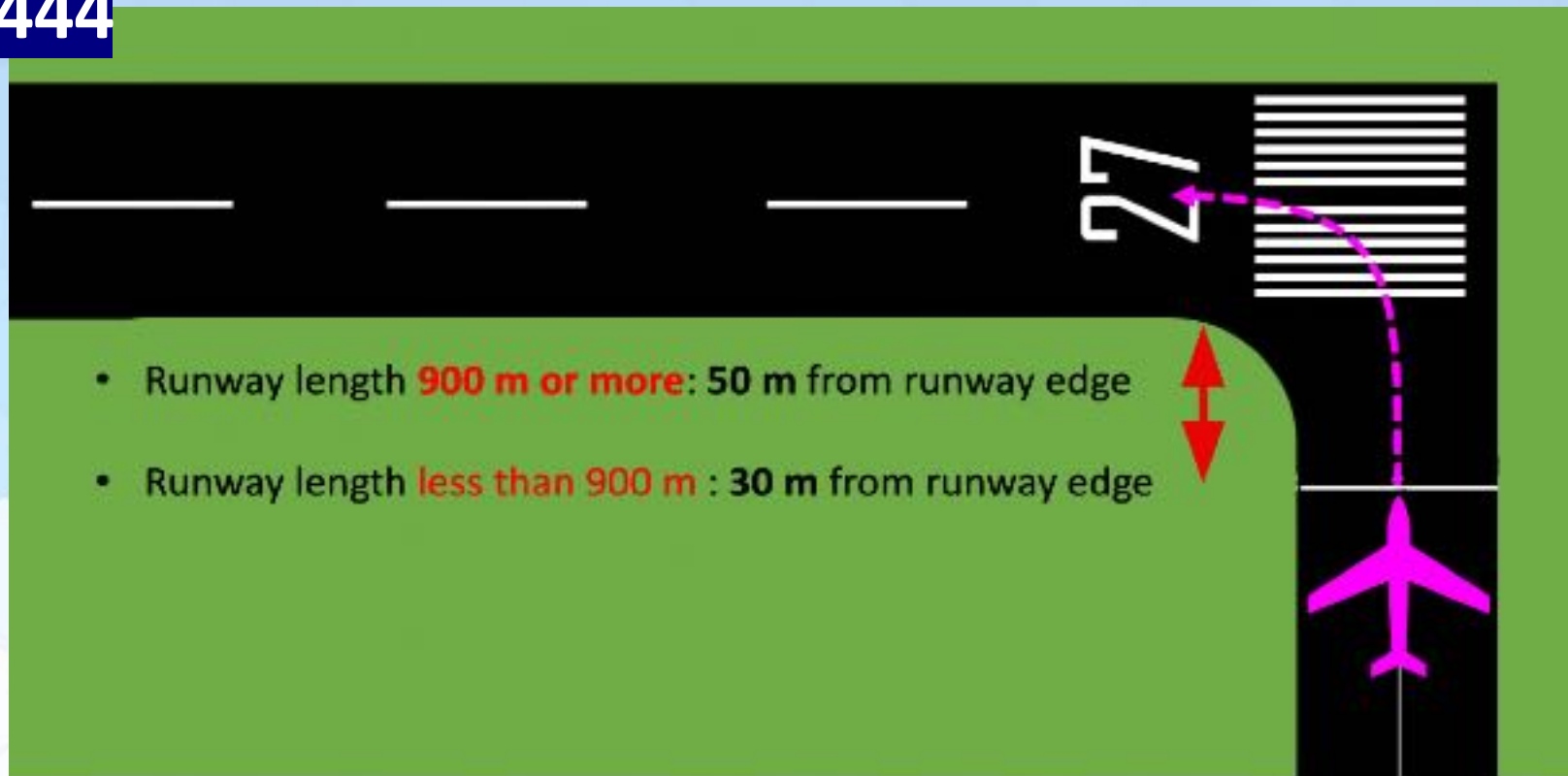
GM1 Definitions (114) Runway-holding position

In radiotelephony phraseology, the term 'holding point' is used to designate the runway holding position.



Absence of Runway-holding position

Doc 4444

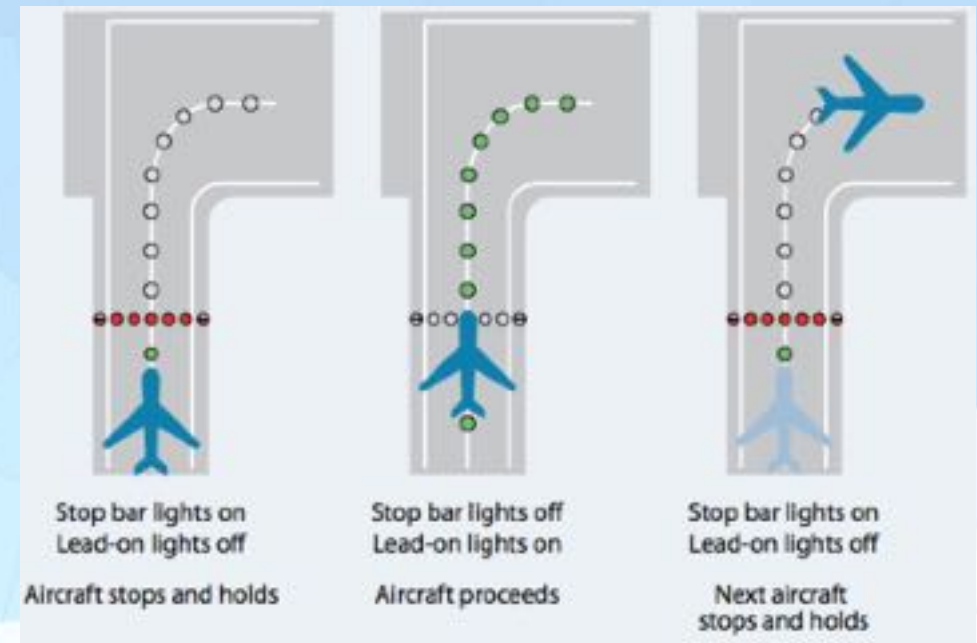


AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

d) Surface movement of aircraft, persons and vehicles.

3) An aircraft taxiing on the manoeuvring area shall stop and hold at all **lighted stop bars** and may proceed further in accordance with (2) when the lights are **switched off**.

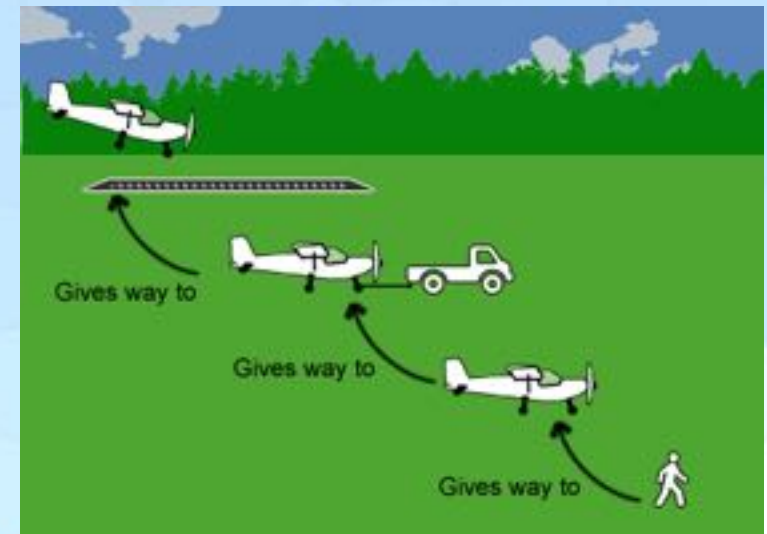


AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

d) Surface movement of aircraft, persons and vehicles.

- i. **Emergency vehicles** proceeding to the assistance of an aircraft in distress shall be afforded priority over all other surface movement traffic.
- ii. **vehicles on the manoeuvring area** shall be required to comply with the following rules:
 - A. vehicles and vehicles **towing** aircraft shall give way to aircraft which are landing, taking off, taxiing;
 - B. vehicles shall give way to other vehicles **towing** aircraft;
 - C. vehicles shall give way to other vehicles in accordance with air traffic services unit instructions;
 - D. notwithstanding the provisions of (A), (B) and (C), vehicles and vehicles towing aircraft shall comply with instructions issued by the aerodrome control tower.



AVOIDANCE OF COLLISION

SIRA.3210 Right-of-way

GM1 SIRA.3210(d)(4)(iv)(A) Right-of-way

Tow means **push backward** or **pull forward** the aircraft.



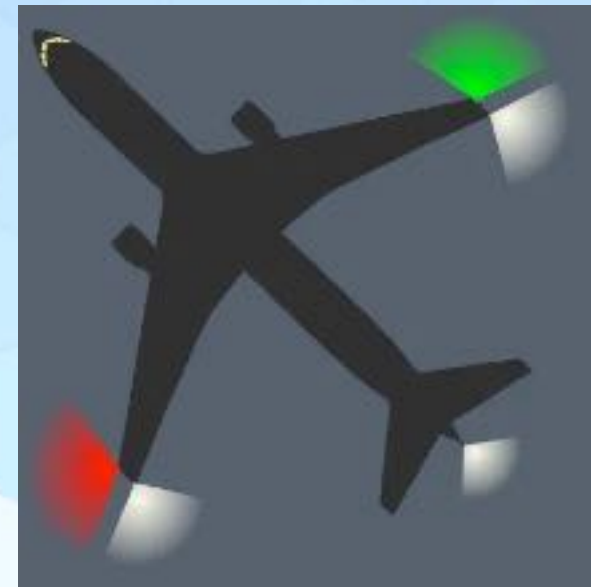
AVOIDANCE OF COLLISION

SIRA.3215 Lights to be displayed by aircraft

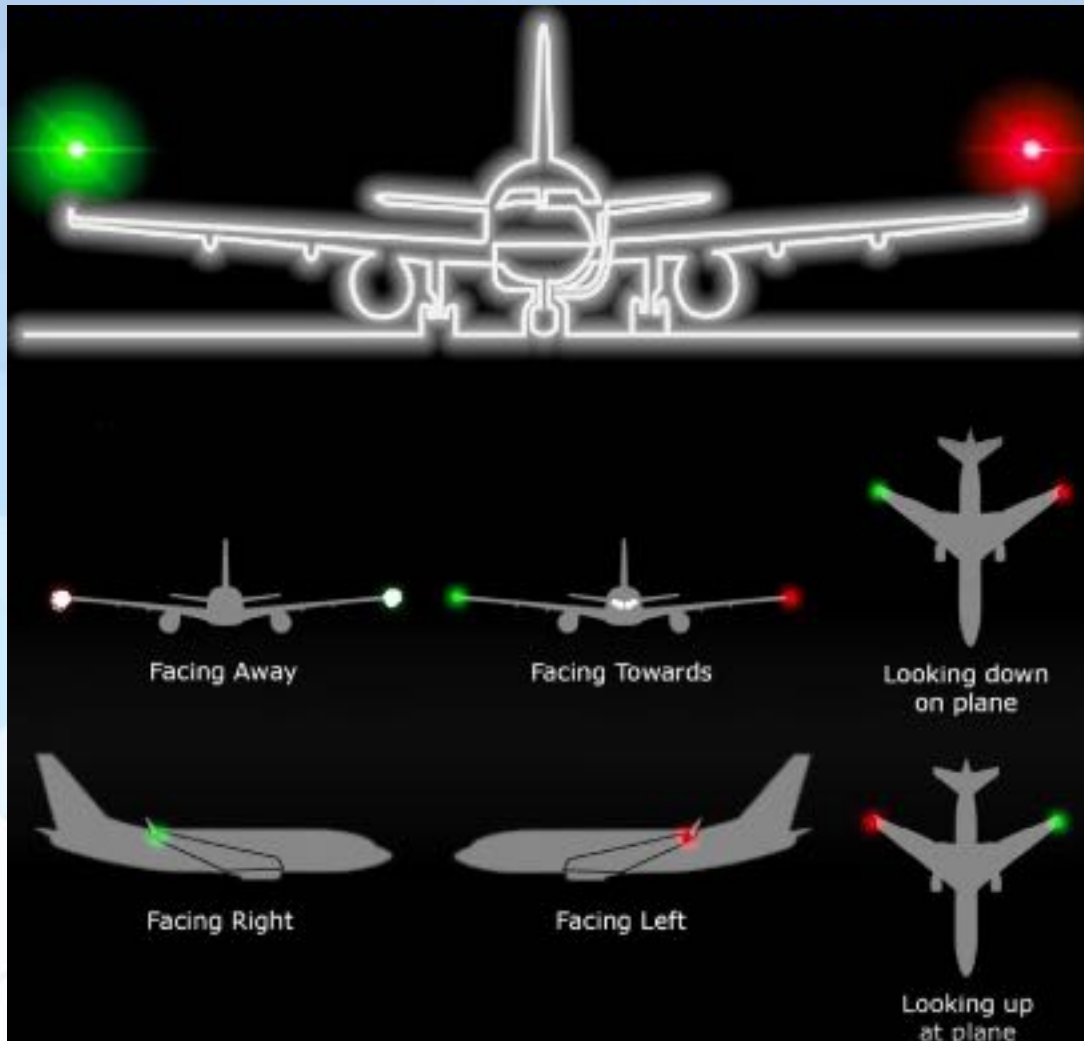
a) Except as provided by (e), at night all aircraft in flight shall display:

- 1) anti-collision lights intended to attract attention to the aircraft; and
- 2) navigation lights intended to indicate the relative path of the aircraft to an observer.

Other lights shall not be displayed if they are likely to be mistaken for these lights.



Relative Path



"Green to green all is serene"



"Green to red you could be dead"



AVOIDANCE OF COLLISION

SIRA.3215 Lights to be displayed by aircraft

b) Except as provided by (e), at night:

- 1) all aircraft **moving** on the movement area of an aerodrome shall display **navigation lights** intended to indicate the relative path of the aircraft to an observer;
- 2) **unless stationary and otherwise adequately illuminated**, all aircraft on the movement area of an aerodrome shall display lights intended to **indicate the extremities** of their structure, as far as practicable;
- 3) all aircraft **taxiing or being towed** on the movement area of an aerodrome shall display lights intended to **attract attention** to the aircraft; and
- 4) all aircraft on the movement area of an aerodrome whose **engines are running** shall display lights which indicate that fact.



AVOIDANCE OF COLLISION

SIRA.3215 Lights to be displayed by aircraft

GM1 SIRA.3215(a);(b) Lights to be displayed by aircraft

GENERAL

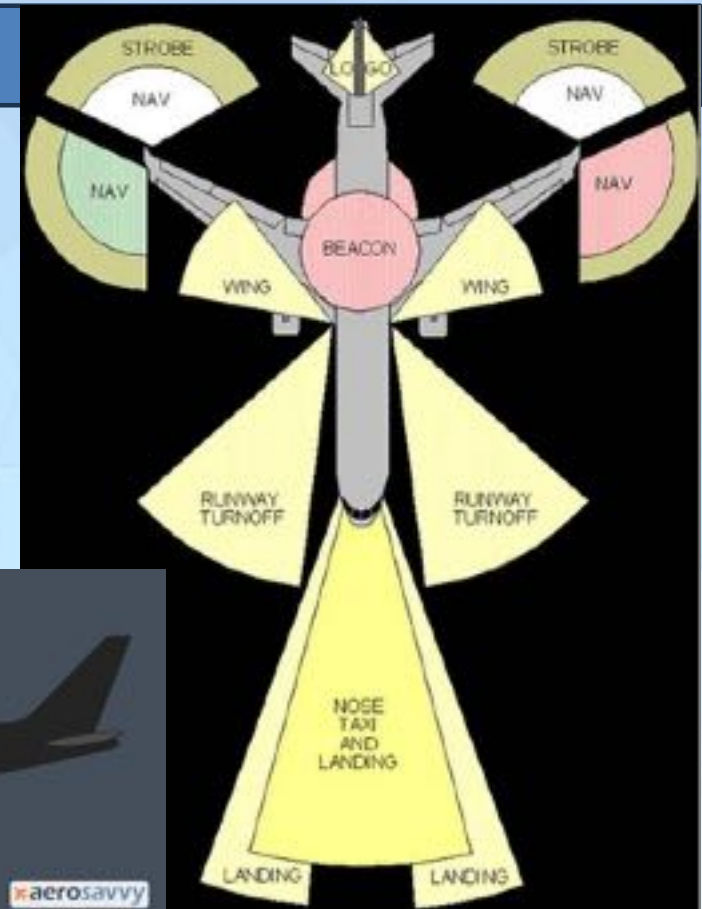
Lights fitted for other purposes, such as **landing lights** and **airframe floodlights**, may be used in addition to the anti-collision lights to enhance aircraft conspicuity.



AVOIDANCE OF COLLISION

SIRA.3215 Lights to be displayed by aircraft

c) Except as provided by (e), all aircraft in **flight** and fitted with **anti-collision lights** to meet the requirement of (a)(1) [to **attract attention** to the aircraft] shall display such lights also **during day**.



AVOIDANCE OF COLLISION

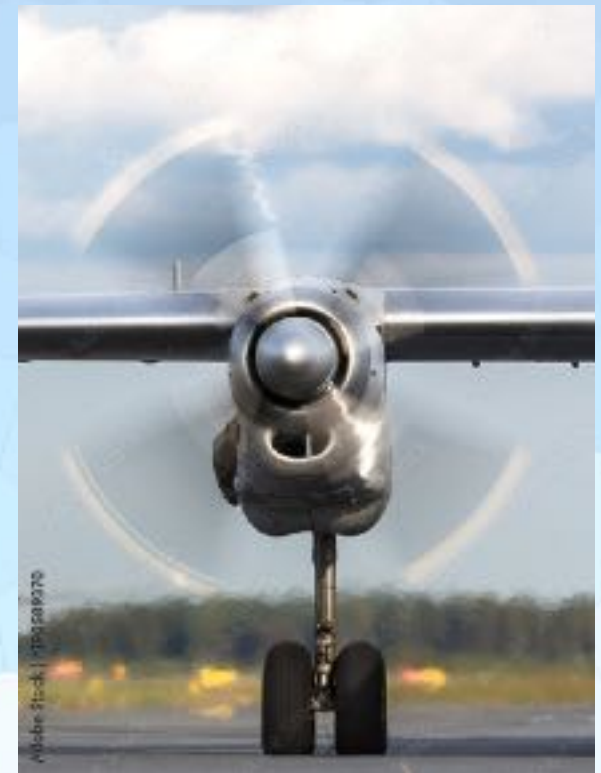
SIRA.3215 Lights to be displayed by aircraft

d) Except as provided by (e), all aircraft:

1) taxiing or being towed on the movement area of an aerodrome and fitted with **anti – collision lights**, to meet the requirement of (b)(3) [intended to **attract attention**]; or

2) on the movement area of an aerodrome and fitted with lights to meet the requirement of (b)(4) [**engines are running**];

shall display such lights also **during day**.



AVOIDANCE OF COLLISION

SIRA.3215 Lights to be displayed by aircraft

e) A pilot shall be permitted to **switch off or reduce the intensity** of any **flashing lights** fitted to meet the requirements of (a), (b), (c) and (d) if they do or are likely to:

- 1) **adversely affect** the satisfactory performance of duties; or
- 2) subject an outside observer to **harmful dazzle**.



AVOIDANCE OF COLLISION

SIRA.3220 Simulated instrument flights

An aircraft shall not be flown under simulated instrument flight conditions unless:

- a) fully functioning **dual controls** are installed in the aircraft; and
- b) an additional qualified pilot (in this rule called a safety pilot) occupies a control seat to act as **safety pilot** for the person who is flying under simulated instrument conditions. The safety pilot shall have **adequate vision forward** and to each side of the aircraft, or a competent observer in communication with the safety pilot shall occupy a position in the aircraft from which the observer's field of vision adequately supplements that of the safety pilot.



AVOIDANCE OF COLLISION

SIRA.3220 Simulated instrument flights

GM1 SIRA.3220(b) Simulated instrument flights

SAFETY PILOT

- a) For the purposes of this rule a **safety pilot** is a pilot who holds a licence which entitles him/her to act as pilot-in-command of the aircraft and is able and prepared to take control of the aircraft at any time during the flight. The safety pilot will maintain lookout, or a competent observer in case the safety pilot does not have full vision of each side of the aircraft, and avoid collisions on behalf of the person flying under simulated instrument conditions.
- b) A **control seat** is a seat which affords the person sitting in it sufficient access to the flying controls so as to enable him/her to fly the aircraft unimpeded.

AVOIDANCE OF COLLISION

SIRA.3220 Simulated instrument flights

c) a **VFR flight** may be cleared to fly **under simulated instrument flight conditions** for practice approaches when it is **requested by the pilot** and the related navigation aids are operational under the following conditions:

- 1) Controller shall ensure that a VFR flight simulating instrument approaches does not **disrupt the flow of other** arriving and departing IFR or VFR flights;
- 2) Air traffic controller is responsible to **provide standard separation** between IFR and VFR aircraft simulating instrument approaches according to airspace classification.
- 3) VFR aircraft are **not automatically authorized to execute the missed approach procedure**. This authorization must be specifically requested by the pilot and approved by the controller.

AVOIDANCE OF COLLISION

SIRA.3220 Simulated instrument flights

4) ATCO shall consider an aircraft cleared for a **touch-and-go, low approach, or simulated instrument approach as an arriving aircraft** until that aircraft touches down or crosses the **landing threshold**; **thereafter, consider the aircraft as a departing aircraft.**

Before the aircraft begins its final descent, issue the appropriate departure instructions the pilot is to follow upon completion of the approach. Climb-out instructions must include a specific heading or a route of flight and altitude, except when the aircraft will remain in traffic pattern.

128. 'threshold' means the beginning of that portion of the runway usable for landing;

AVOIDANCE OF COLLISION

SIRA.3225 Operation on and in the vicinity of an aerodrome

An aircraft operated on or in the vicinity of an aerodrome shall:

- a) **observe** other aerodrome traffic for the purpose of avoiding collision;
- b) **conform** with or **avoid** the pattern of traffic formed by other aircraft in operation;
- c) **except for balloons**, make all turns to the **left**, when approaching for a landing and after taking off, unless otherwise indicated, or instructed by **ATC**;
- d) **except for balloons**, **land and take off into the wind** unless safety, the runway configuration, or air traffic considerations determine that a different direction is preferable.

PART: RULES OF THE AIR

SECTION 3

GENERAL RULES AND COLLISION AVOIDANCE

CHAPTER 3 SIGNALS

SIRA

SIGNALS

SIRA.3301 General

APPENDIX 1

APPENDIX 1

1. DISTRESS AND URGENCY SIGNALS

1.1. General

1.1.1. Notwithstanding the provisions in a) and b), an aircraft in distress shall use any means at its disposal to attract attention, make known its position and obtain help.

1.1.2. The **telecommunication** transmission procedures for the distress and urgency signals shall be in accordance with **Section 14**.



APPENDIX 1



1. DISTRESS AND URGENCY SIGNALS



1.2. Distress signals

1.2.1. The following signals, used either together or separately, mean that **grave and imminent danger threatens, and immediate assistance is requested**:

- a) a signal made by radiotelegraphy or by any other signalling method consisting of the group **SOS** (.. — — — .. in the Morse Code);
- b) a radiotelephony distress signal consisting of the spoken word **MAYDAY**;
- c) a distress message sent via **data link** which transmits the intent of the word **MAYDAY**;
- d) **rockets** or shells throwing **red lights**, fired one at a time at short intervals;
- e) a **parachute flare** showing a red light;
- f) setting of the transponder to Mode A Code **7700**.



A flare gun

APPENDIX 1

1. DISTRESS AND URGENCY SIGNALS

1.3. Urgency signals

1.3.1. The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance:

- a) the repeated switching on and off of the landing lights; or
- b) the repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

1.3.2. The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight:

- a) a signal made by radiotelegraphy or by any other signalling method consisting of the group XXX (— ..— — ..— — ..— in the Morse Code);
- b) a radiotelephony urgency signal consisting of the spoken words PAN, PAN;
- c) an urgency message sent via data link which transmits the intent of the words PAN, PAN.

APPENDIX 1



2. VISUAL SIGNALS USED TO WARN AN UNAUTHORISED AIRCRAFT FLYING IN OR ABOUT TO ENTER A RESTRICTED, PROHIBITED OR DANGER AREA

2.1. When visual signals are used to warn unauthorised aircraft flying in or about to enter a restricted, prohibited or danger area by day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars shall indicate to an unauthorised aircraft that it is flying in or about to enter a restricted, prohibited or danger area, and that the aircraft is to take such remedial action as may be necessary.

3. SIGNALS FOR AERODROME TRAFFIC

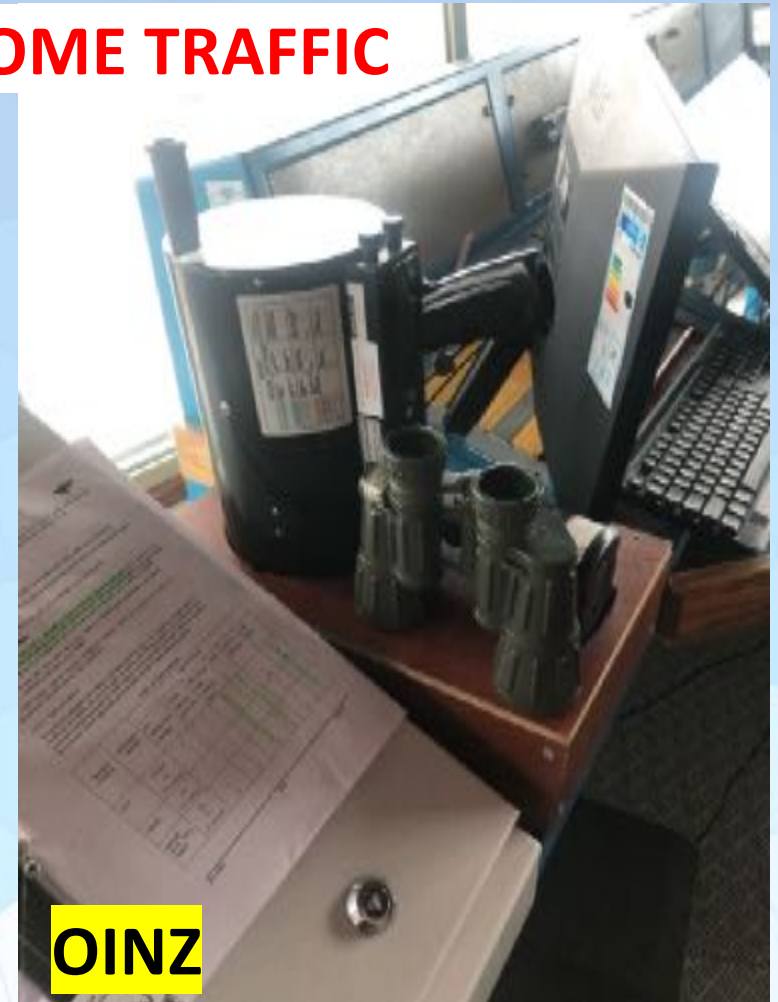


Table AP 1-1

Light		From Aerodrome Control to:	
		Aircraft in flight	Aircraft on the ground
Directed towards aircraft concerned (see Figure A1-1).	Steady green	Cleared to land	Cleared for take-off
	Steady red	Give way to other aircraft and continue circling	Stop
	Series of green flashes	Return for landing*	Cleared to taxi
	Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
	Series of white flashes	Land at this aerodrome and proceed to apron**	Return to starting point on the aerodrome
Red pyrotechnic		Notwithstanding any previous instructions, do not land for the time being	

‘*’ Clearances to land and to taxi will be given in due course.

‘**’ Clearances to land and to taxi will be given in due course.

3. SIGNALS FOR AERODROME TRAFFIC



OISS

ATC LIGHT GUN SIGNALS			
IN FLIGHT		ON LAND	
GREEN STEADY	Cleared to land	GREEN STEADY	Cleared for takeoff
G G FLASHING	Return for landing (followed by steady green)	G G FLASHING	Cleared for taxi
RED STEADY	Give way to other aircraft (and continue circling)	RED STEADY	STOP!
R R FLASHING	Do not land airport unsafe	R R FLASHING	Taxi clear of runway in use
R G FLASHING	Exercise extreme caution	R G FLASHING	Exercise extreme caution
		W W FLASHING	Return to starting point on airport
PILOT RESPONSE			
DAY	NIGHT	DAY	NIGHT
Move ailerons/rudder	Flash lights (ldg or nav)	Move ailerons/rudder	Flash lights (ldg or nav)

3. SIGNALS FOR AERODROME TRAFFIC

3.1.2. Acknowledgement by an aircraft

a) When in flight:

- i. during the hours of **daylight**: by **rocking** the aircraft's wings, except for the base and final legs of the approach;
- ii. during the hours of **darkness**: by flashing on and off **twice** the aircraft's **landing** lights or, if not so equipped, by switching on and off **twice** its **navigation** lights.

b) When on the ground:

- i. during the hours of **daylight**: by moving the aircraft's **ailerons** or **rudder**;
- ii. during the hours of **darkness**: by flashing on and off **twice** the aircraft's **landing** lights or, if not so equipped, by switching on and off **twice** its **navigation** lights.

3.2. Visual ground signals



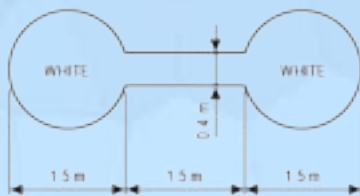
120. 'signal area' means an area on an aerodrome used for the display of ground signals;



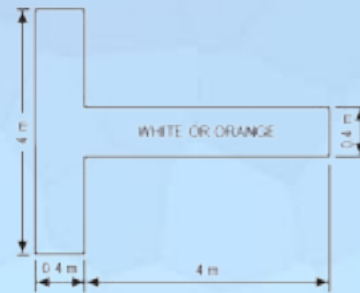
APPENDIX 1. SIGNALS

3.2.1 Prohibition of landing

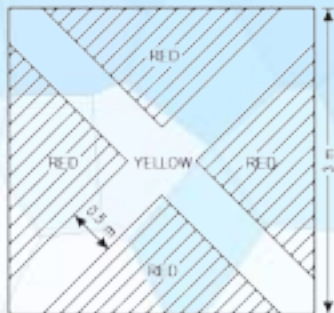
A horizontal red square panel with yellow diagonals when displayed in a signal area indicates that **landings are prohibited** and that the prohibition is liable to be **prolonged**.



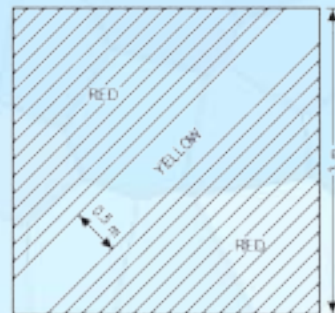
A. Dumb-bell signal



B. Landing "T"



C. Red square with yellow cross



D. Red square with yellow diagonal



APPENDIX 1. SIGNALS

3.2.2 Need for special precautions while approaching or landing

A horizontal red square panel with one yellow diagonal when displayed in a signal area indicates that owing to the ***bad state of the manoeuvring area***, or for any other reason, ***special precautions*** must be observed in approaching to land or in landing.

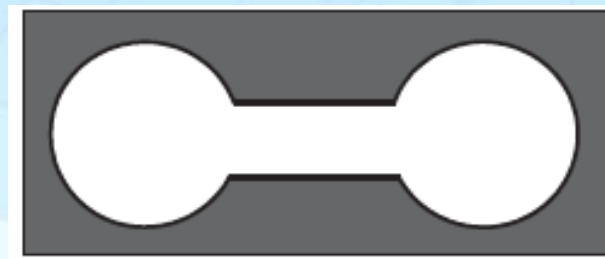


APPENDIX 1. SIGNALS

3.2.3 Use of runways and taxiways

3.2.3.1 A horizontal white dumb-bell when displayed in a signal area indicates that *aircraft are required to land, take off and taxi on runways and taxiways only.*

(**Air law:** Aircraft movement on the ground is confined to paved, metalled or similar hardened surfaces.)



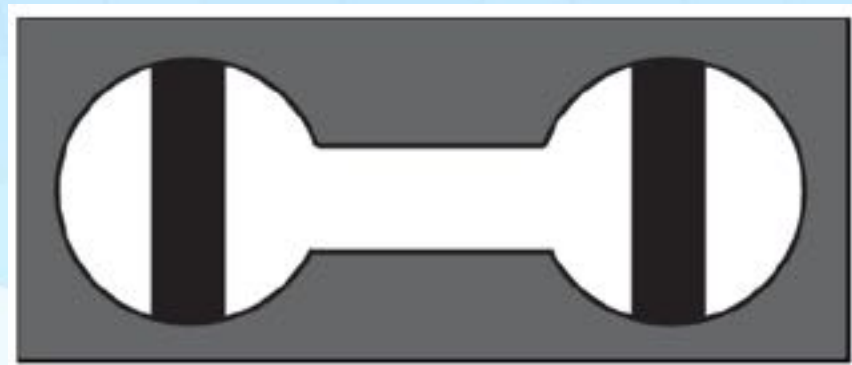
APPENDIX 1. SIGNALS

3.2.3 Use of runways and taxiways

3.2.3.2 The same horizontal white dumb-bell as in 4.2.3.1 but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure A1-5) when displayed in a signal area indicates that ***aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways.***

Air law:

(take-offs and landings are to be on a runway, but movement on the ground is not confined to pavements.)



APPENDIX 1. SIGNALS

3.2.4 Closed runways or taxiways

Crosses of a single contrasting colour, yellow or white (Figure A1-6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

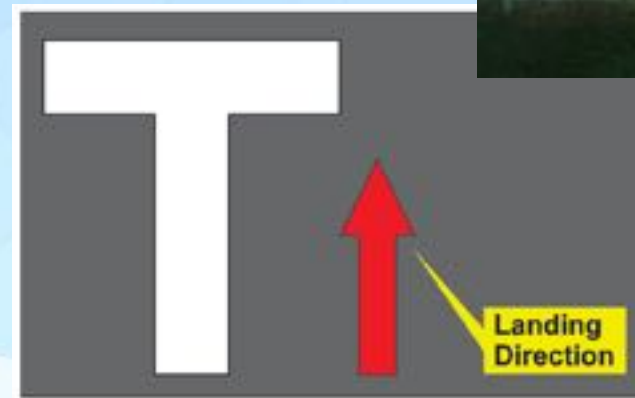


APPENDIX 1. SIGNALS

3.2.5 Directions for landing or take-off

3.2.5.1 A horizontal white or orange landing T (Figure A1-7) indicates the ***direction to be used by aircraft for landing and take-off***, which shall be in a direction parallel to the shaft of the T towards the cross arm.

Note.— When used at night, the landing T is either illuminated or outlined in white lights.



APPENDIX 1. SIGNALS

3.2.5 Directions for landing or take-off

3.2.5.2 A set of two digits (Figure A1-8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.



APPENDIX 1. SIGNALS

3.2.6 Right-hand traffic

When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure A1-9) indicates that turns are to be made to the right before landing and after take-off.

(Air law: A red and yellow striped arrow signifies that a right hand circuit is in force.)



APPENDIX 1. SIGNALS

3.2.7 Air traffic services reporting office

The letter C displayed vertically in black against a yellow background (Figure A1-10) indicates the location of the air traffic services reporting office.



APPENDIX 1. SIGNALS

3.2.8 Glider flights in operation

A double white cross displayed horizontally (Figure A1-11) in the signal area indicates that *the aerodrome is being used by gliders* and that glider flights are being performed.



SIRA: Sailplane flights in operation



APPENDIX 1

4. MARSHALLING SIGNALS

4.1. From a signalman/marshaller to an aircraft

4.1.1. The signals for use by the signalman/ marshaller, with hands illuminated as necessary to facilitate observation by the pilot, and facing the aircraft in a position shall be:

- a) for fixed-wing aircraft, on left side of aircraft, where best seen by the pilot; and
- b) for helicopters, where the signalman/marshaller can best be seen by the pilot.

4.1.2. Prior to using the following signals, the signalman/marshaller shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft, in complying with SIRA.3301(a), might otherwise strike.

APPENDIX 1. SIGNALS

1. Wingwalker/guide

Raise right hand above head level with wand pointing up; move left-hand wand pointing down toward body.

Note.— This signal provides an indication by a person positioned at the aircraft wing tip, to the pilot/ marshaller/push-back operator, that the aircraft movement on/off a parking position would be unobstructed.



APPENDIX 1. SIGNALS

2. Identify gate

Raise fully extended arms straight above head with wands pointing up.



APPENDIX 1. SIGNALS

3. Proceed to next signalman or as directed by tower/ground control

Point both arms upward; move and extend arms outward to sides of body and point with wands to direction of next signalman or taxi area.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

4. Straight ahead

Bend extended arms at elbows and move wands up and down from chest height to head.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

5 a). Turn left

(from pilot's point of view)

With right arm and wand extended at a 90-degree angle to body, make "come ahead" signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

5 b). Turn right

(from pilot's point of view)

With left arm and wand extended at a 90-degree angle to body, make "come ahead" signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.



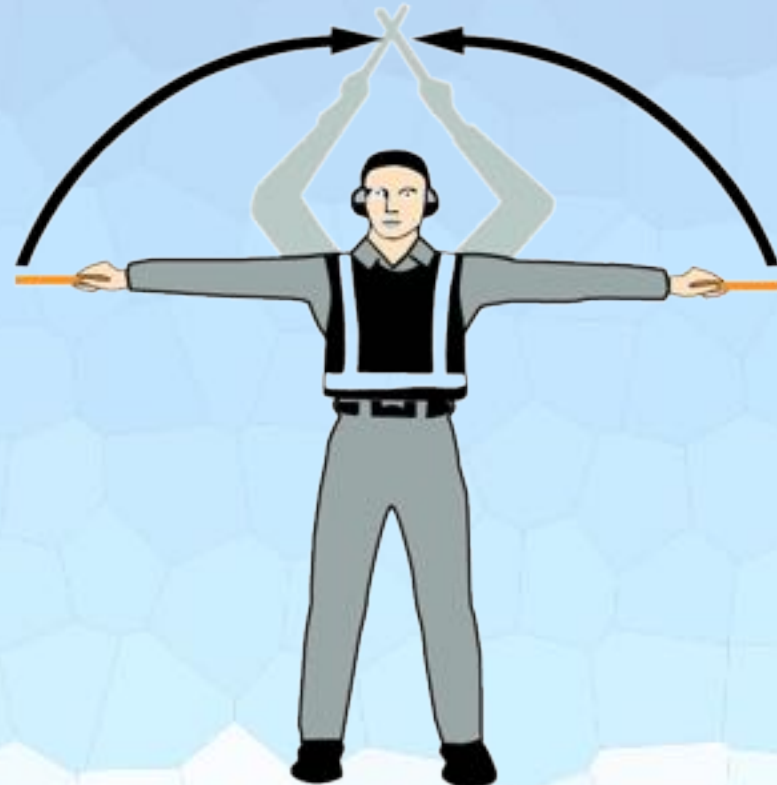
APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

6 a). Normal stop

Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

6 b). Emergency stop

Abruptly extend arms and wands to top of head, crossing wands.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

7 a). Set brakes

Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. Do not move until receipt of “thumbs up” acknowledgement from flight crew.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

7 b). Release brakes

Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. Do not move until receipt of “thumbs up” acknowledgement from flight crew.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

8 a). Chocks inserted

With arms and wands fully extended above head, move wands inward in a “jabbing” motion until wands touch. Ensure acknowledgement is received from flight crew.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

8 b). Chocks removed

With arms and wands fully extended above head, move wands outward in a “jabbing” motion. Do not remove chocks until authorized by flight crew.



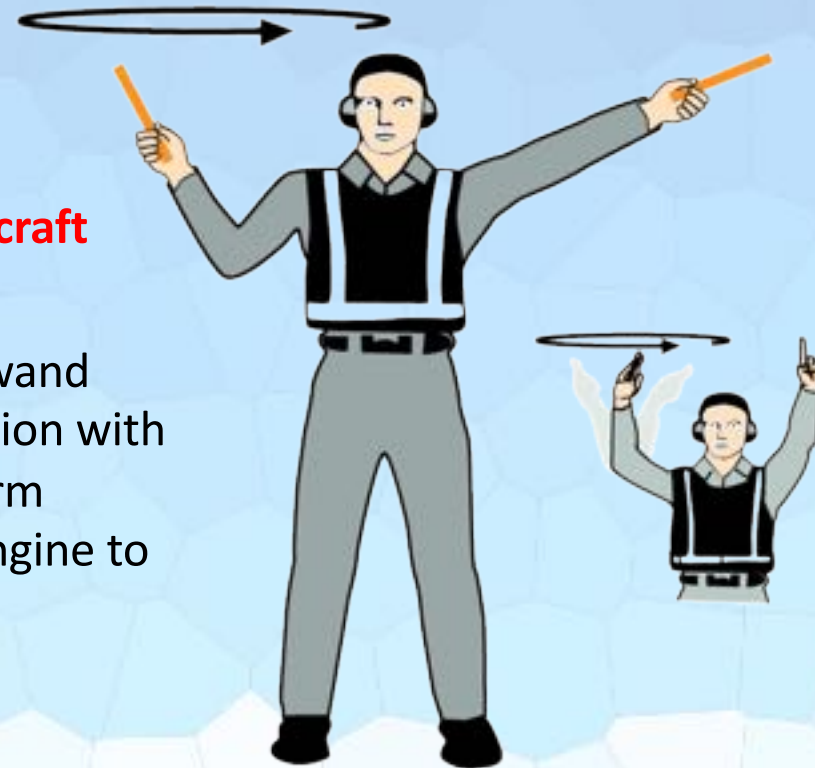
APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

9. Start engine(s)

Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.



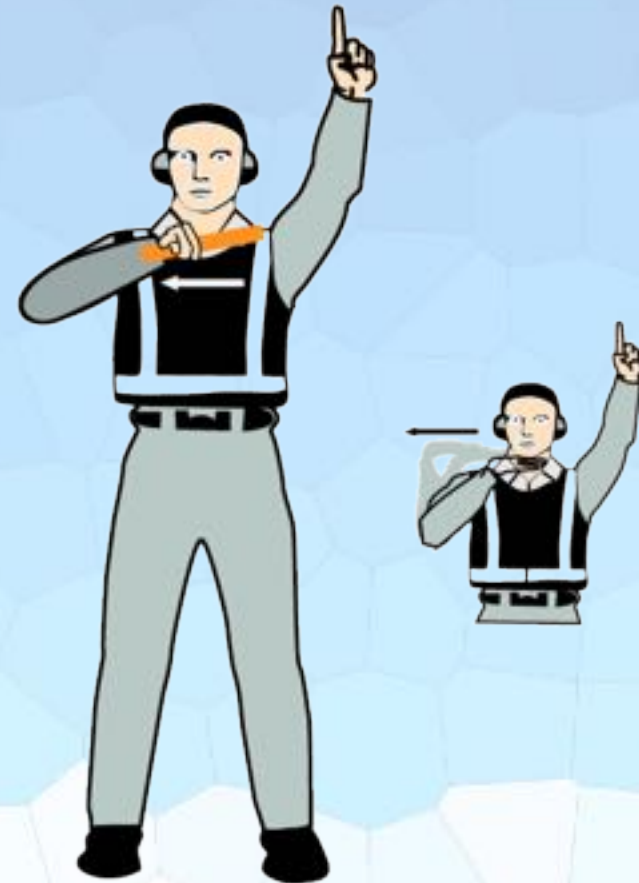
APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

10. Cut engines

Extend arm with wand forward of body at shoulder level; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

11. Slow down

Move extended arms downwards in a “patting” gesture, moving wands up and down from waist to knees.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

12. Slow down engine(s) on indicated side

With arms down and wands toward ground, wave either right or left wand up and down indicating engine(s) on left or right side respectively should be slowed down.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

13. Move back

With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6 a) or 6 b).



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

14 a). Turns while backing (for tail to starboard)

Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

14 b). Turns while backing (for tail to port)

Point right arm with wand down and bring left arm from overhead vertical position to horizontal forward position, repeating left-arm movement.



APPENDIX 1. SIGNALS

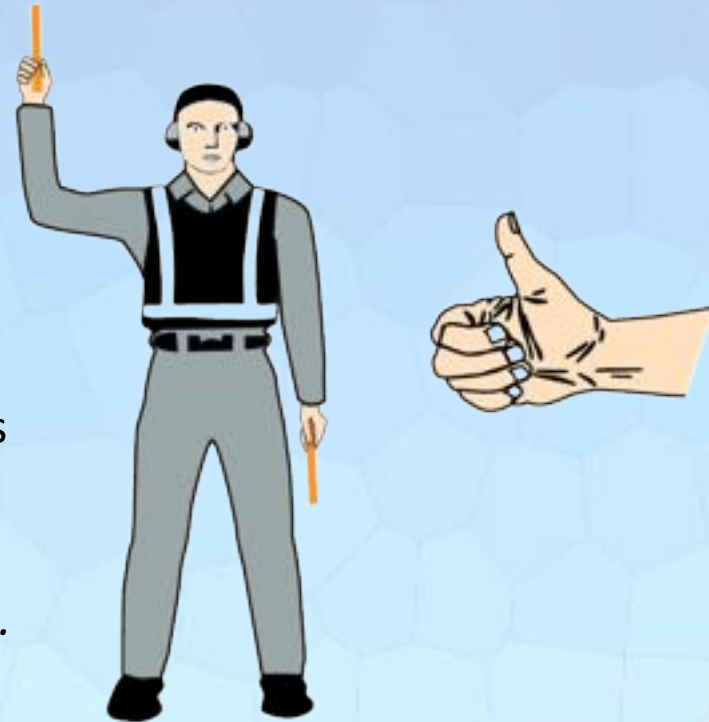
5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

15. Affirmative/all clear

Raise right arm to head level with wand pointing up or display hand with “thumbs up”; left arm remains at side by knee.

Note. — This signal is also used as a technical/servicing communication signal.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

21. Hold position/stand by

Fully extend arms and wands downwards at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

22. Dispatch aircraft

Perform a standard salute with right hand and/or wand to dispatch the aircraft.
Maintain eye contact with flight crew until aircraft has begun to taxi.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

23. Do not touch controls

(technical/servicing communication signal)

Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.



APPENDIX 1. SIGNALS

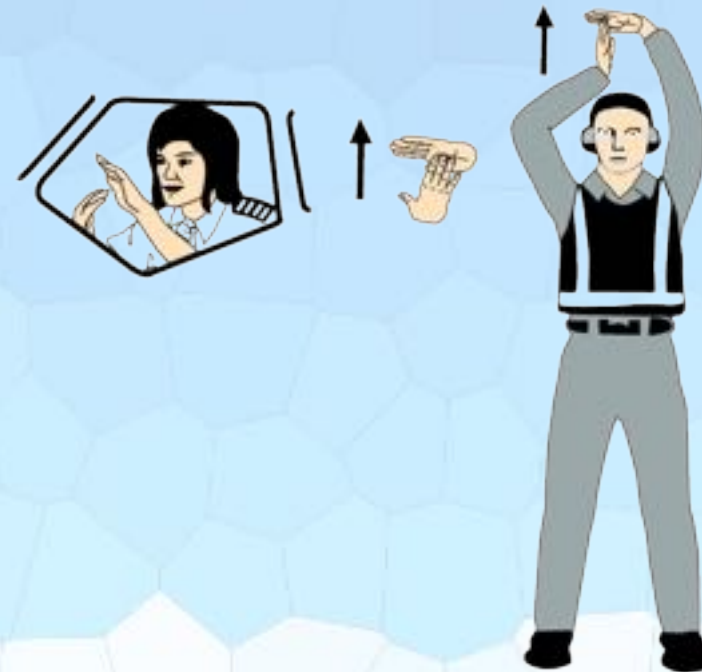
5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

24. Connect ground power

(technical/servicing communication signal)

Hold arms fully extended above head; open left hand horizontally and move finger tips of right hand into and touch open palm of left hand (forming a “T”). At night, illuminated wands can also be used to form the “T” above head.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

25. Disconnect power

(technical/servicing communication signal)

Hold arms fully extended above head with finger tips of right hand touching open horizontal palm of left hand (forming a “T”); then move right hand away from the left.

Do not disconnect power until authorized by flight crew. At night, illuminated wands can also be used to form the “T” above head.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

27. Establish communication via interphone (technical/servicing communication signal)

Extend both arms at 90 degrees from body
and move hands to cup both ears.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.1 From a signalman to an aircraft

28. Open/close stairs

(technical/servicing communication signal)

With right arm at side and left arm raised above head at a 45-degree angle, move right arm in a sweeping motion towards top of left shoulder.

Note.— This signal is intended mainly for aircraft with the set of integral stairs at the front.



APPENDIX 1

4. MARSHALLING SIGNALS

4.2. From the pilot of an aircraft to a signalman/marshaller

4.2.1. These signals shall be used by a pilot in the cockpit with hands plainly visible to the signalman/marshaller, and illuminated as necessary to facilitate observation by the signalman/marshaller.

APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.2 From the pilot of an aircraft to a signalman

5.2.1 Brakes

Note.— The moment the fist is **clenched** or the fingers are **extended** indicates, respectively, the moment of brake engagement or release.

- a) **Brakes engaged**: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.
- b) **Brakes released**: raise arm, with fist clenched, horizontally in front of face, then extend fingers.



APPENDIX 1. SIGNALS

5. MARSHALLING SIGNALS

5.2 From the pilot of an aircraft to a signalman

5.2.2 Chocks

- a) **Insert chocks**: arms extended, palms outwards, move hands inwards to cross in front of face.
- b) **Remove chocks**: hands crossed in front of face, palms outwards, move arms outwards.



APPENDIX 1. SIGNALS



5. MARSHALLING SIGNALS

5.2 From the pilot of an aircraft to a signalman

5.2.3 Ready to start engine(s)

Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

APPENDIX 1

5. STANDARD EMERGENCY HAND SIGNALS

5.1. The following hand signals are established as the minimum required for emergency communication between the ARFF incident commander/ARFF firefighters and the cockpit and/or cabin crews of the incident aircraft. ARFF emergency hand signals should be given from the left front side of the aircraft for the cockpit crew.

APPENDIX 1. SIGNALS

6. STANDARD EMERGENCY HAND SIGNALS

1. Recommend evacuation

Evacuation recommended based on ARFF and incident commander's assessment of external situation.

Arm extended from body and held horizontal with hand upraised at eye level. Execute **beckoning** arm motion angled backward. Non-beckoning arm held against body.

- Night — same with wands.



APPENDIX 1. SIGNALS

6. STANDARD EMERGENCY HAND SIGNALS

2. Recommended stop

Recommend evacuation in progress be halted.

Stop aircraft movement or other activity in progress.

Arms in front of head, crossed at wrists.

Night — same with wands.

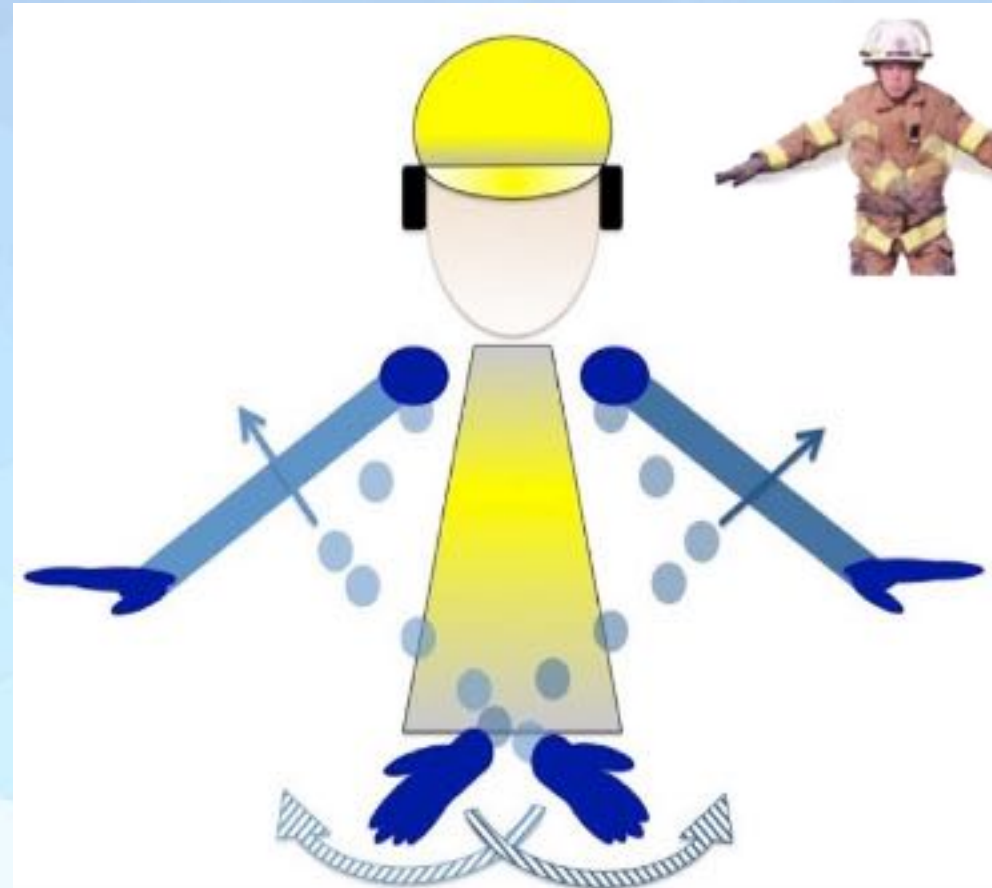


APPENDIX 1. SIGNALS

6. STANDARD EMERGENCY HAND SIGNALS

3. Emergency contained

- No outside evidence of dangerous conditions or “allclear.”
- Arms extended outward and down at a 45-degree angle.
- Arms moved inward below waistline simultaneously until wrists crossed, then extended outward to starting position (umpire’s “safe” signal).
- Night — same with wands.



APPENDIX 1. SIGNALS

6. STANDARD EMERGENCY HAND SIGNALS

4. Fire

- Move right-hand in a “fanning” motion from shoulder to knee, while at the same time pointing with left hand to area of fire.
- Night — same with wands.



SIGNALS

SIRA.3301 General

- a) Upon observing or receiving any of the signals given in **Appendix 1**, aircraft **shall take such action** as may be required by the interpretation of the signal given in that Appendix.
- b) The signals of **Appendix 1** shall, when used, have the meaning indicated therein. They shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.
- c) A **signalman/marshaller** shall be responsible for providing standard **marshalling signals** to aircraft in a clear and precise manner using the signals shown in **Appendix 1**.
- d) Only persons trained, qualified and approved as required by CAO.IRI shall carry out the functions of a signalman/marshaller.
- e) The signalman/marshaller shall **wear a distinctive fluorescent identification vest** to allow the flight crew to identify that he or she is the person responsible for the marshalling operation.
- f) **Daylight-fluorescent wands**, **table-tennis bats** or **gloves** shall be used for all signalling by all participating ground staff during daylight hours.
Illuminated wands shall be used at night or in low visibility.

PART: RULES OF THE AIR

SECTION 3

GENERAL RULES AND COLLISION AVOIDANCE

CHAPTER 4 TIME

SIRA.3301 General

- a) **Coordinated Universal Time (UTC)** shall be used and shall be expressed in **hours and minutes** and, when required, seconds of the **24-hour** day **beginning at midnight**.
- b) A time check shall be obtained **prior to operating a controlled flight** and at such other times during the flight as may be necessary.
- c) Wherever time is utilised in the application of data link communications, it shall be accurate to within 1 second of UTC.
- d) **Time in air traffic services**
- 1) Aerodrome control towers shall, **prior to an aircraft taxiing for take-off**, provide the pilot with the correct time, unless arrangements have been made for the pilot to obtain it from other sources.
 - 2) Air traffic services units shall, in addition, provide aircraft with the correct time on request.
 - 3) Time checks shall be given at least to the nearest **half minute** [In Tehran ACC OM it is **full minute**.].

02:34:05 --- > 0234

02:34:20 --- > 0234 and a half

02:34:40 --- > 0234 and a half

02:34:50 --- > 0235

PART: RULES OF THE AIR

SECTION 4

FLIGHT PLANS

Integrated initial flight plan processing system



Iran Airports and Air Navigation Company provides AFTN within Tehran FIR as well as an online service called “**Electronic Flight Planning (eFPL)** system”.

<https://efpl.airport.ir>

79. 'flight plan' means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;

73. 'filed flight plan (FPL)' means the flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes;

109. 'repetitive flight plan' means a flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units;

64. 'current flight plan (CPL)' means the flight plan, including changes, if any, brought about by subsequent clearances;

Annex 2

Flight plan. Specified information relative to an intended flight or portion of a flight of an aircraft.

Note 1.— The term flight plan may be prefixed by the words “preliminary”, “filed”, “current” or “operational” to indicate the context and different stages of a flight.

Filed flight plan (FPL or eFPL). The latest flight plan as submitted by the pilot, an operator or a designated representative for use by ATS units.

Note.— The FPL denotes a filed flight plan exchanged using aeronautical fixed service, while eFPL denotes a filed flight plan exchanged using FF-ICE services. The eFPL allows for the exchange of additional information not contained within the FPL.

Repetitive flight plan (RPL). A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

Current flight plan (CPL). The flight plan that reflects changes to the filed flight plan, if any, by subsequent ATC clearances.

FLIGHT PLANS

SIRA.4001 Submission of a flight plan

a) Information relative to an intended flight or portion of a flight, to be provided to air traffic services units, shall be in the form of a **flight plan**.

PRIORITY Priority		ADDRESS/TO Adressé/à			
FF		E H A A Z Q Z X E B U R Z Q Z X E D D Y Z Q Z X L F F F Z Q Z X L F R R Z Q Z X L F B B Z Q Z X L E C M Z Q Z X L P P C Z Q Z X			
FILING TIME Heure de dépôt		ORIGINATOR Expéditeur			
9 0 8 3 6		E H A M Z P Z X			
SPECIFIC IDENTIFICATION OF ADDRESS/SENDER ORIGINATOR Identificateur précis d'ad. destinataire/émetteur					
MESSAGE TYPE Type de message		AIRCRAFT IDENTIFICATION Identification de l'appareil		FLIGHT RULES Règles de vol	
(FPL)		A C F 4 0 2		I	
NUMBER Numéro		TYPE OF AIRCRAFT Type d'appareil		WAKE TURBULENCE CAT. Cat. de turbulence de sillage	
E A 3 0		E A 3 0		H	
DEPARTURE AERODROME Aérodrome de départ		TIME Heure		EQUIPMENT Équipement	
E H A M		0 9 4 0		S / C	
CRUISING SPEED Vitesse croisière		LEVEL Niveau		ROUTE	
K 0 8 3 0		F 2 9 0		L E K 2 8 L E K U A 6 X M M / W 0 7 8 F 3 3 0	
A 6 P O N U R I O N C H W U A 5 N T S D C T 4 6 1 1 N D 0 4 1 2 W					
D C T S T G U A 5 F T M F A T I M 1 A					
DESTINATION AERODROME Aérodrome de destination		TOTAL EST Durée totale estimée		ALTN AERODROME Aérodrome de dépayement	
L P P T		0 2 3 0		L P P R	
OTHER INFORMATION Remarques/autres					
R E G / F B V G A S E L / E J F L E E T / L P P C 0 1 5 8					
SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES) Renseignements complémentaires (À NE PAS TRANSMETTRE DANS LES MESSAGES DE PLAN DE VOL DÉPOSÉ)					
ENDURANCE Autonomie		PERSONS ON BOARD Personnes à bord		EMERGENCY RADIO Radio de secours	
E / 0 3 4 5		P / 3 0 0		R / U V E	
SURVIVAL EQUIPMENT Équipement de survie		JACKET/COLOUR Jaquette/Couleur		LIGHT Lampes	
S / P D M X		J / L F		FLUORESC Fluores	
NUMBER Nombre		CAPACITY Capacité		COLOUR Couleur	
D / 1 1		3 3 0		C / YELLOW	
AIRCRAFT COLOUR AND MARKINGS Couleur et marquage de l'appareil					
A / WHITE					
REMARKS Remarques					
X /					
PILOT-IN-COMMAND Pilot commandant de bord					
C / DENKE					
FILED BY / Déposé par		SPACE RESERVED FOR ADDITIONAL REQUIREMENTS Espace réservé à des fins supplémentaires			
S CHARTER INT					

ISLAMIC REPUBLIC OF IRAN
CIVIL AVIATION ORGANIZATION
AIR TRAFFIC SERVICES

جمهوری اسلامی ایران
سازمان هواپیمایی کشوری
سرویس ترافیک هوایی

FLIGHT PLAN

PRIORITY
<<= PP =>

REGISTRATION
OIIXZQZX OIIXRZX OIIIJTX OIYZTX OIKKZTX

FLIGHT TIME
162100

DEPARTURE
O111ZPX

MESSAGE TYPE
(FPL)

MESSAGE IDENTIFICATION
I.R.A.298

FLIGHT RULES
I

TYPE OF CLIMB
S

WEIGHT
A306

TIME OF DEPARTURE
0700

WEIGHT AND COMBUSTIBLES
SDFHIRWY/S

DEPARTURE ADDRESS
OIII

ROUTE
N0470 F310 RADAL2A RADAL UL125 ANK W32 BONOL BONOL1F

DEPARTURE ADDRESS
OIIY

ROUTE
O100

DEPARTURE ADDRESS
OIII

DEPARTURE ADDRESS
OIKK

PBN/A1B4B5O4D4 REG/EPIBA SEL/AQFJ PER/C

EQUIPMENT
E/0230

PERSONNEL
P/TBN

EMERGENCY AIDS
R/V X V E

EQUIPMENT
S/D X D X X

EQUIPMENT
J/L X X X

EQUIPMENT
D/B 320 C Y

EQUIPMENT
A/W WITH B STRIP AND COMPANY LOGO ON THE TAIL

EQUIPMENT
C/NAME OF PILOT-IN-COMMAND

EQUIPMENT
C/NAME OF PILOT-IN-COMMAND

EQUIPMENT
C/NAME OF PILOT-IN-COMMAND

SIRA

- (FPL-1RA298-IS
- A306/H-SDFHIRWY/S
- OIII0700
- N0470F310 RADAL2A RADAL UL125 ANK W32 BONOL BONOL1F
- OIYY0100 OIII OIKK
- PBN/A1B4B5O4D4 REG/EPIBA SEL/AQFJ PER/C)

FLIGHT PLANS

GM2 SIRA.4015 Changes to a flight plan

- a) In the case of a change to aircraft **type** and/or aircraft **registration** (if not identical to aircraft call sign), a modification (**CHG**) message can be sent.
- b) In the event of a **delay of 30 minutes** in excess of the **estimated off-block time** for an **IFR** flight or a delay of **one hour** for a **VFR** flight for which a flight plan has been submitted, a delay (**DLA**) message must be sent or the old flight plan cancelled and a new flight plan submitted, whichever is applicable.
- c) Time limits for flight plan originators to remain eligible to send revision message (**DLA/CHG**) is maximum 30 minutes and 60 minutes after EOBT for IFR and VFR flights, respectively provided that FPL is not ATS activated i.e. **prior to start up request**. The number of revisions can be accepted, **shall not exceed one revision message per flight plan**.

70. 'estimated off-block time' means the estimated time at which the aircraft will commence movement associated with departure;

FLIGHT PLANS

GM2 SIRA.4015 Changes to a flight plan

Any changes to a flight plan such as **change** to:

- aircraft call sign,
- equipment,
- point of departure and/or destination,
- route of flight,
- alternate airport
- etc.

will require the original full or repetitive flight plan to be cancelled and a **new** flight plan submitted.

SIRA

A OPERATOR										B ADDRESSEE(S)										C DEPARTURE AERODROME(S)										D		E		F	
										ISLAMIC REPUBLIC OF IRAN IRANIAN AIRPORTS COMPANY AIR TRAFFIC SERVICES										OIAH OIAW OIBK OIBP OICI OICK OIFM OIFS OIII OITL OIKB OIKJ OIEK OIKM OIKY OIMB OIMM OIMN OIMT OISS OISY OITT OIZB OIZI OIYY OEZH										DATE 220421 yyymmdd		SERIAL NO. 22-1 YY-...		PAGE OF .../... XXX/XXX	
																														G SUPPLEMENTARY DATA (Item 19) AT:					
H + -	I VALID FROM yyymmdd	J VALID UNTIL yyymmdd	K DAYS OF OPERATION							L AIRCRAFT IDENTIFICATION (ITEM 7)	M TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY (Item 9)		N DEPARTURE AERODROME AND TIME (Item 13)		O ROUTE (Item 15)										P DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME (Item 16)		Q REMARKS								
			CRUISING	SID	ROUTE	STAR	SPEED	LEVEL	ALTN		RNA V 5	RVSM																							
													1	2	3	4	5	6	7																
+	220421	221029	1	0	0	0	0	6	0	IRM4521	B463	M	OIAH	0610	N0374	F240	YSJ1A	YSJ W144 GESIP R659 BOXAM				BOXAM1R	OIII	0130	OIFM OIIE	R									
+	220421	221029	1	2	0	4	5	6	7	IRM4587	B463	M	OIAW	0250	N0374	F250	EGVAX1D	EGVAX G667 SAV				SAV1N	OIII	0110	OIYY OIFM	R									
+	220421	221029	0	2	0	4	0	0	7	IRM4563	B463	M	OIAW	0530	N0374	F250	GODMO1A	GODMO W30 VATAN G665 KAVIL				KAVIL1R	OISS	0105	OIAW OIYY	R									
+	220421	221029	0	0	0	0	5	0	0	IRM1097	B463	M	OIAW	0600	N0374	F250	EGVAX1D	EGVAX G667 SAV				SAV1N	OIII	0110	OIYY OIFM	R									
+	220421	221029	0	0	0	0	0	0	7	IRM4565	A310	H	OIAW	0940	N0470	F310	GODMO1A	GODMO W30 VATAN G665 EGSIR T217 LAM				LAM1R	OIBP	0115	OIKB OISS	R	W								
+	220421	221029	0	0	3	0	0	0	0	IRM1097	B463	M	OIAW	1045	N0374	F250	EGVAX1D	EGVAX G667 SAV				SAV1N	OIII	0110	OIYY OIFM	R									
+	220421	221029	0	2	0	4	0	0	7	IRM1097	B463	M	OIAW	1100	N0374	F250	EGVAX1D	EGVAX G667 SAV				SAV1N	OIII	0110	OIYY OIFM	R									
+	220421	221029	1	0	0	0	0	0	0	IRM1097	B463	M	OIAW	1115	N0374	F250	EGVAX1D	EGVAX G667 SAV				SAV1N	OIII	0110	OIYY OIFM	R									
+	220421	221029	0	0	3	0	0	0	0	IRM1061	B463	M	OIAW	1740	N0374	F250	EGVAX1D	EGVAX G667 SAV				SAV1N	OIII	0110	OIYY OIFM	R									

ISLAMIC REPUBLIC OF IRAN
CIVIL AVIATION ORGANIZATION
AIR TRAFFIC SERVICES

جمهوری اسلامی ایران
سازمان هواپیمایی کشور
خدمات ترافیک پرواز

FLIGHT PLAN

PRIORITY
FF

REGISTRATION
OIIXZQZX OIIXRZX OIII2TX OIYZ2TX OIKK2TX

FLIGHT TIME
162100

DEPARTURE
O111ZPX

MESSAGE TYPE
(FPL)

MESSAGE IDENTIFICATION
I.R.A.298

FLIGHT RULES
I

TYPE OF CLIMB
S

WEIGHT
A306

TIME OF DEPARTURE
0700

DEPARTURE AIRPORT
OIII

WEIGHT
N0470

LEVEL
F310

ROUTE
RADAL2A RADAL UL125 ANK W32 BONOL BONOL1F

DEPARTURE AIRPORT
OIIY

TIME OF DEPARTURE
0100

DEPARTURE AIRPORT
OIII

DEPARTURE AIRPORT
OIKK

WEIGHT
PBN/A1B4B5O4D4

LEVEL
REG/EPIBA

ROUTE
SEL/AQFJ

ROUTE
PER/C

WEIGHT
E/0230

TIME OF DEPARTURE
P/T8N

DEPARTURE AIRPORT
R/V

DEPARTURE AIRPORT
V

DEPARTURE AIRPORT
E

WEIGHT
S

TIME OF DEPARTURE
D

DEPARTURE AIRPORT
J

DEPARTURE AIRPORT
L

DEPARTURE AIRPORT
X

WEIGHT
D/B

TIME OF DEPARTURE
320

DEPARTURE AIRPORT
C

DEPARTURE AIRPORT
Y

WEIGHT
A/W WITH B STRIP AND COMPANY LOGO ON THE TAIL

TIME OF DEPARTURE
X

WEIGHT
C/NAME OF PILOT-IN-COMMAND

TIME OF DEPARTURE
C/NAME OF PILOT-IN-COMMAND

WEIGHT
C/NAME OF PILOT-IN-COMMAND

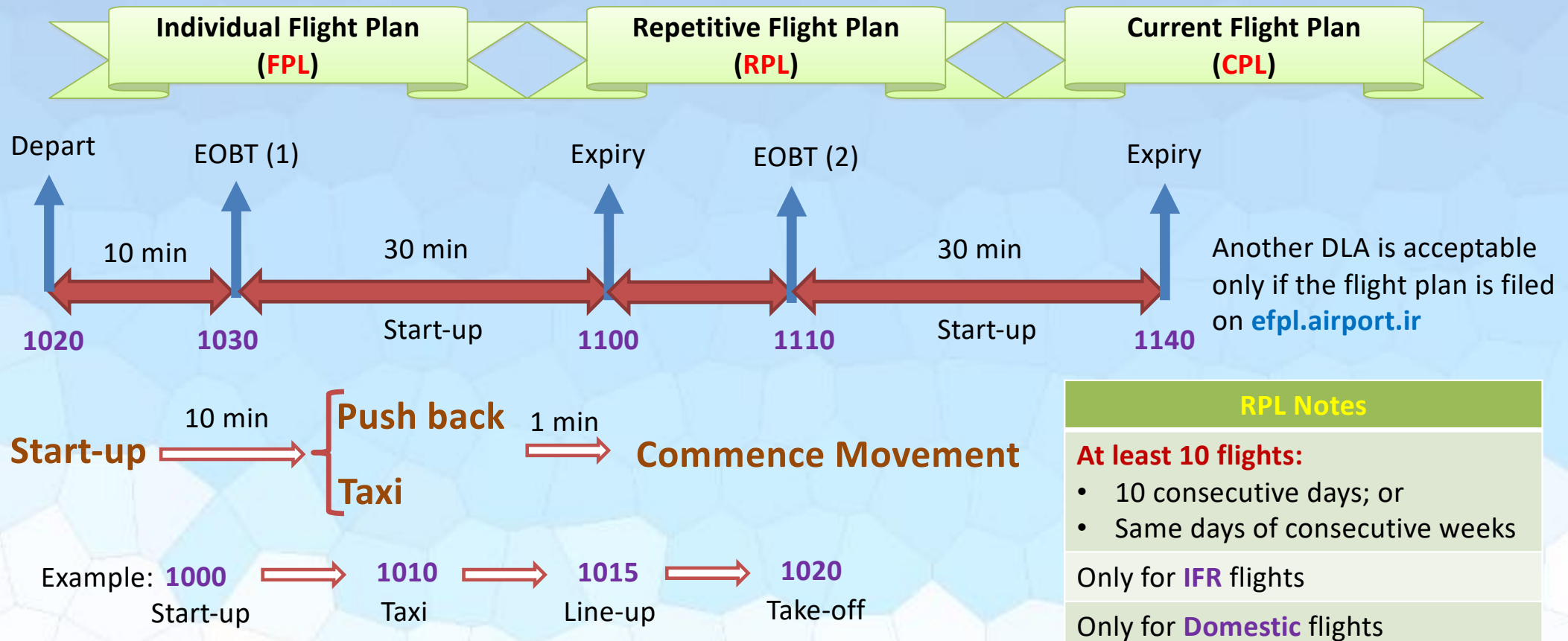
TIME OF DEPARTURE
C/NAME OF PILOT-IN-COMMAND

SIRA

(FPL-1RA298-IS

- A306/H-SDFHIRWY/S
- OIII0700
- N0470F310 RADAL2A RADAL UL125 ANK W32 BONOL BONOL1F
- OIYY0100 OIII OIKK
- PBN/A1B4B5O4D4 REG/EPIBA SEL/AQFJ PER/C)

Flight Plan Criteria in Iran



Flight plan in Iran

- A flight plan shall be submitted for **all IFR/VFR** flight prior to operating (in Annex 2 only controlled and advisory).
- All types of operations within Tehran FIR shall not be submitted more than **120 hours** and at least **60 minutes** before EOBT.
- If a flight plan is filed **more than 24 hours** in advance of the estimated off block time of the flight to which it refers, **date of flight (DOF)** shall be inserted in **item 18** of the flight plan.
- flight Plan validity time: 30min for IFR, 60min for VFR.
- Only one revision is acceptable up to 30 minutes after EOBT for IFR flights/60 minutes after EOBT for VFR flights (**for eFPL: 2 revisions**).
- Change is possible only for EOBT (at least 30min) and aircraft type.

Repetitive Flight plan in Iran

- Repetitive Flight Plans (RPL) should be used for all scheduled **IFR** flights operated regularly on the same day(s) of consecutive weeks and **at least ten occasions** or every day, over a period of at least ten consecutive days.
- Initial submission of complete RPL listing and any subsequent seasonal resubmission of complete listing and any changes thereto shall be made with **a minimum lead time of three weeks** since the reception by the Aeronautical Information Service (AIS).
- **4444**: minimum lead time: 2 weeks, permanent changes: 1 week, temporary changes: 30min.
- Note: only one RPL Amendment (RMDT) is acceptable during validity time of RPL.
- Repetitive Flight Plans (RPL) is acceptable for domestic IFR flights.

FLIGHT PLANS

SIRA.4001 Submission of a flight plan

GM2 SIRA.4001 Submission of a flight plan

- Repetitive Flight Plans (RPL) should be used for all **domestic** scheduled **IFR** flights operated regularly on the **same day(s) of consecutive weeks** and on at least **ten occasions** or **every day over a period of at least ten consecutive days**.
- The elements of each flight plan shall have a high degree of stability.
- RPLs shall be submitted in the form of listings containing the required flight plan data using an **RPL listing form**.

FLIGHT PLANS

SIRA.4001 Submission of a flight plan

AMC2 SIRA.4001(d) Submission of a flight plan

FPL with the following STS/ or RMK/ indicators will be provided with exemption from time restriction:

- (1) STS/HOSP
- (2) STS/HEAD
- (3) STS/SAR
- (4) STS/MEDEVAC
- (5) STS/FFR
- (6) STS/FLTCK
- (7) STS/HAZMAT
- (8) RMK/MILITARY HEL
- (9) RMK/LOCAL FLIGHT (For a flight operating in the vicinity of an aerodrome and subject to pre-arrangement with relevant ATS unit)
- (10) RMK/SM (For a flight operating on a special mission e.g. Scramble flight)
- (11) RMK/RESCUE (For a flight engaged in a rescue mission e.g. mountain or road rescue with helicopter)

GM1 to (b)(4) of AMC2 SIRA.4001(d) Submission of a flight plan

MEDEVAC is evacuation of injured persons from the scene of an accident or a low level care facility to a better equipped facility or hospital using medically equipped helicopter or aeroplane (Aeromedical Service).

FLIGHT PLANS

SIRA.4001 Submission of a flight plan

GM1 SIRA.4001(d) Submission of a flight plan

Submitting a FPL via eFPL system

- FPL may be submitted through this system on-line forms (<https://efpl.airport.ir>) by account holders.
- Responsibility for filing an accurate FPL still rests with the account holders.

FLIGHT PLANS

SIRA.4020 Closing a flight plan

- a) A **report of arrival** shall be made at the earliest possible moment after landing to the ATS unit of the arrival aerodrome by all flight except when the arrival has been acknowledged by the local ATS unit.
- b) In the **absence of an ATS unit** at the destination aerodrome, the **pilot** is responsible for passing the arrival report to the **nearest ATS unit** by the most expeditious means.



FLIGHT PLANS

SIRA.4020 Closing a flight plan

- c) After landing at an aerodrome which is not the destination aerodrome (**diversionary landing**) the local ATS unit shall be specifically informed accordingly.
- d) In the **absence of a local ATS unit at the aerodrome of diversionary landing** the pilot is responsible for passing the arrival report to the destination aerodrome by the most expeditious means.
- e) Arrival reports shall contain the following elements of information:
 - 1) Aircraft identification
 - 2) Departure aerodrome
 - 3) Destination aerodrome (only in the case of diversionary landing)
 - 4) Arrival aerodrome
 - 5) Time of arrival

PART: RULES OF THE AIR

SECTION 5

- *VISUAL METEOROLOGICAL CONDITIONS,*
- *VISUAL FLIGHT RULES,*
- *SPECIAL VFR,*
- *INSTRUMENT FLIGHT RULES*

141. 'visibility' means visibility for aeronautical purposes which is the greater of:

- (a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognised when observed against a bright background;
- (b) the greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background;

80. 'flight visibility' means the visibility forward from the cockpit of an aircraft in flight;

82. 'ground visibility' means the visibility at an aerodrome, as reported by an accredited observer or by automatic systems;

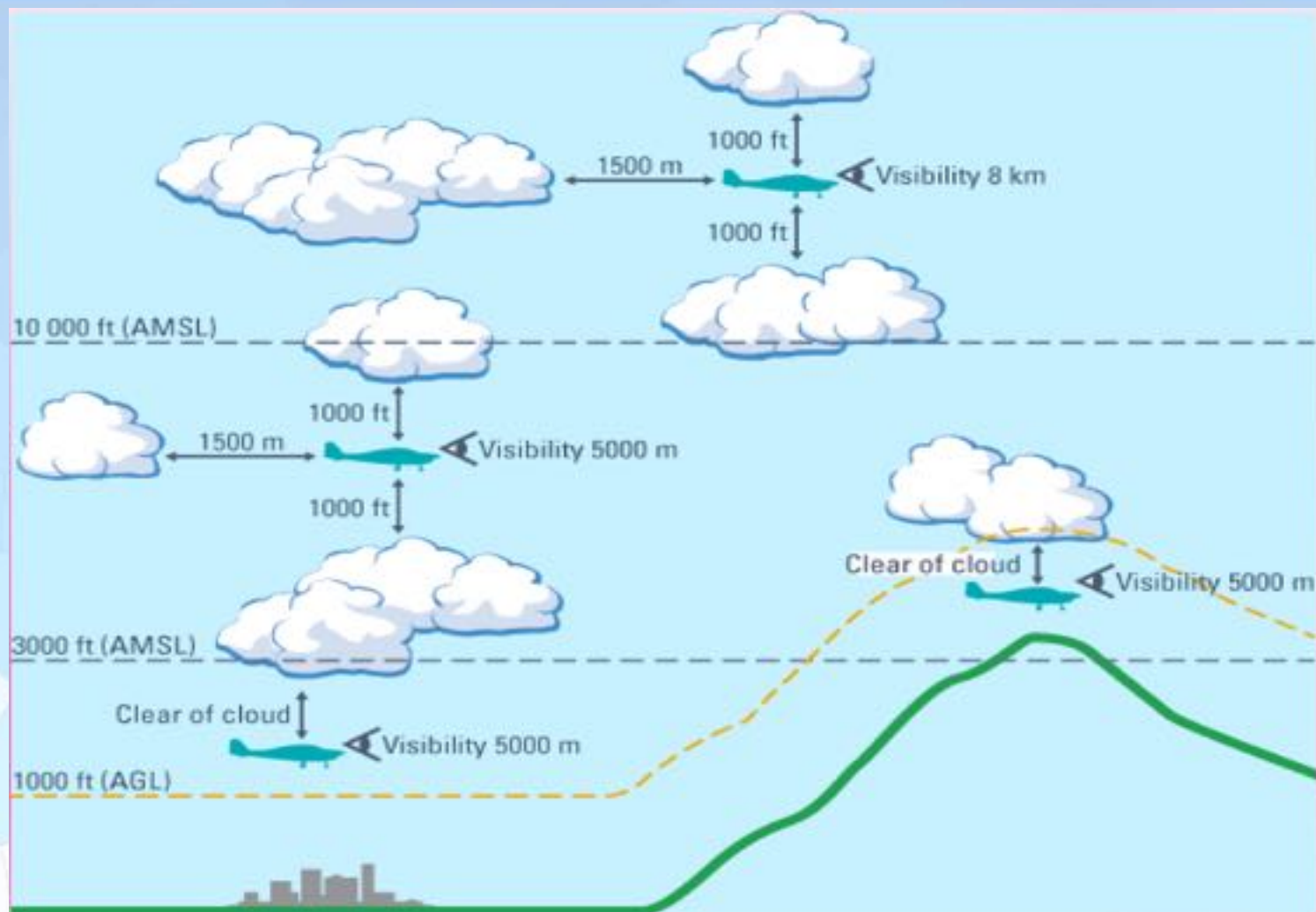
VISUAL METEOROLOGICAL CONDITIONS

SIRA.5001 VMC visibility and distance from cloud minima

Table S5-1: Fixed Wings Aircraft

Altitude band*	Airspace class	Flight visibility	Distance from cloud
At and above 10000FT AMSL	A**,B,C,D,E,F G	8 km	1500M horizontally 1000FT vertically
Below 10000FT AMSL and above 3000FT AMSL, or above 1000FT above terrain, whichever is the higher.	A**,B,C,D,E,F G	5 km	1500M horizontally 1000FT vertically
At and below 3000FT AMSL, or 1000FT above terrain, whichever is the higher.	A**,B,C,D,E	5 km	1500M horizontally 1000FT vertically
	F,G***	5 km	Clear of cloud and with the surface in sight

SIRA



VISUAL METEOROLOGICAL CONDITIONS

SIRA.5001 VMC visibility and distance from cloud minima

Table S5-2: Helicopters operation

Altitude band*	Airspace class	Flight visibility	Distance from cloud
At and above 10000FT AMSL	A**,B,C,D,E,F G	8 km	1500M horizontally 1000FT vertically
Below 10000FT AMSL and above 3000FT AMSL, or above 1000FT above terrain, whichever is the higher.	A**,B,C,D,E,F G	5 km	1500M horizontally 1000FT vertically
At and below 3000FT AMSL, or 1000FT above terrain, whichever is the higher.	A**,B,C,D,E	3000 m**** in daylight	1500M horizontally 1000FT vertically
		5 km at night	
	F,G***	1500 m**** in daylight	Clear of cloud and with the surface in sight
		5 km at night	

VISUAL METEOROLOGICAL CONDITIONS

SIRA.5001 VMC visibility and distance from cloud minima

Helicopters **may be permitted** for operating in flight visibility reduced to not less than **3000m** in classes B, C, D, E and **1500m** in classes F and G:

- (1) at **speeds of 140 kts IAS or less** to give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
- (2) in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for **aerial work** at low levels.



12. 'aerial work' means an aircraft operation in which an aircraft is used for specialised services such as **agriculture**, **construction**, **photography**, **surveying**, **observation** and **patrol**, **search and rescue**, aerial **advertisement**, etc.;



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(1) Except when operating as a **special VFR flight**, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds **equal to or greater than those specified in Table S5-1.**

Altitude band*	Airspace class	Flight visibility	Distance from cloud
At and above 10000FT AMSL	A**,B,C,D,E,F,G	8 km	1500M horizontally 1000FT vertically
Below 10000FT AMSL and above 3000FT AMSL, or above 1000FT above terrain, whichever is the higher.	A**,B,C,D,E,F,G	5 km	1500M horizontally 1000FT vertically
At and below 3000FT AMSL, or 1000FT above terrain, whichever is the higher.	A**,B,C,D,E	5 km	1500M horizontally 1000FT vertically
	F,G***	5 km	Clear of cloud and with the surface in sight

Table S5-1: Fixed Wings Aircraft

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(2) Except when a **special VFR** clearance is obtained from an air traffic **control** unit, VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:

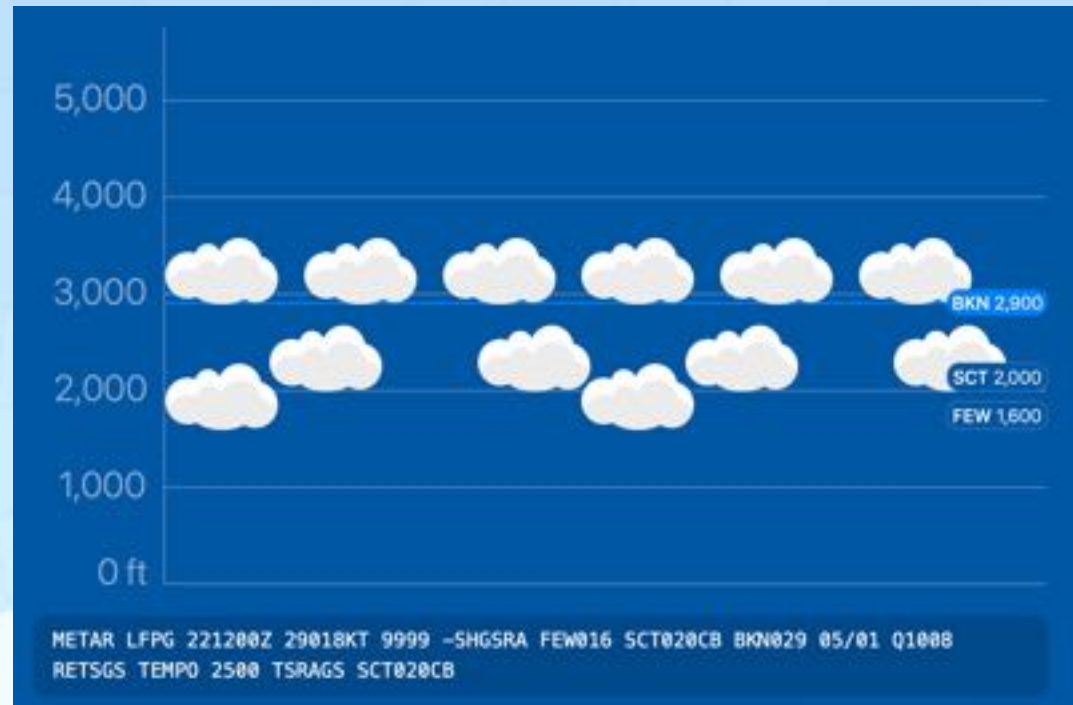
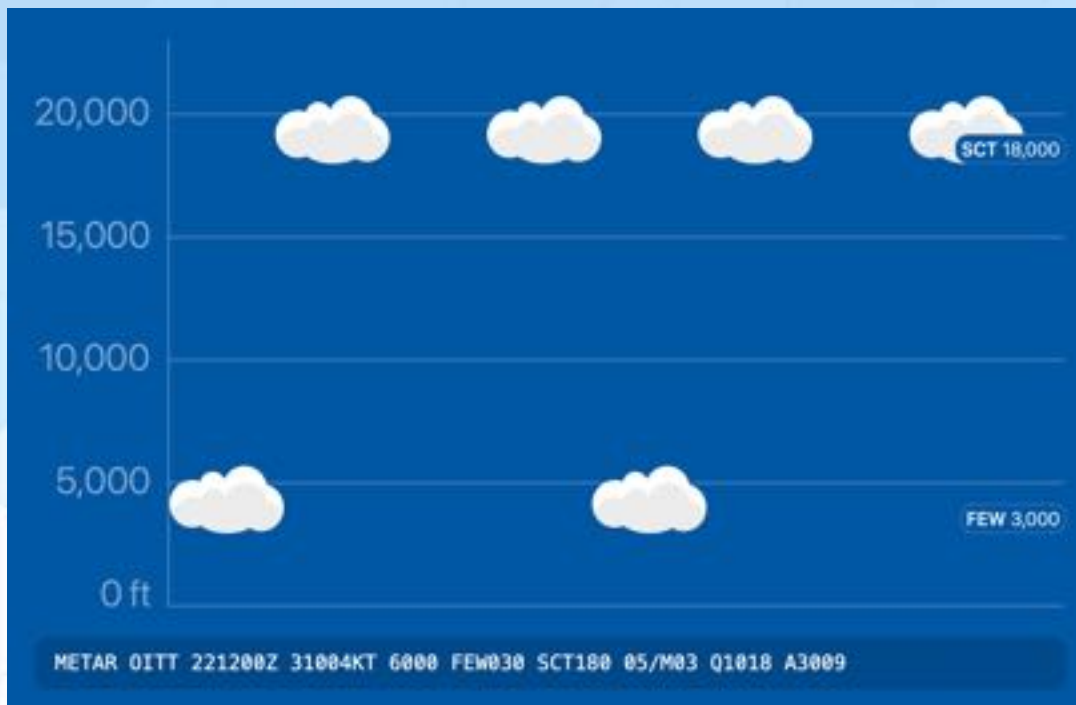
- (i) the ceiling is less than 450 m (1 500 ft); or
- (ii) the **ground** visibility is less than 5 km.



SIRA

50. 'ceiling' means the **height** above the ground or water of the base of the **lowest** layer of cloud **below 6 000 m (20 000 ft)** covering **more than half** the sky;

<https://metar-taf.com>



CLOUD COVER

0 oktas		SKC	5 oktas		
1 oktas			6 oktas		BKN
2 oktas		FEW	7 oktas		
3 oktas			8 oktas		OVC
4 oktas		SCT			

SKC	Sky clear	0 oktas
FEW	Few	1 – 2 oktas
SCT	Scattered	3 – 4 oktas
BKN	Broken	5 – 7 oktas
OVC	Overcast	8 oktas

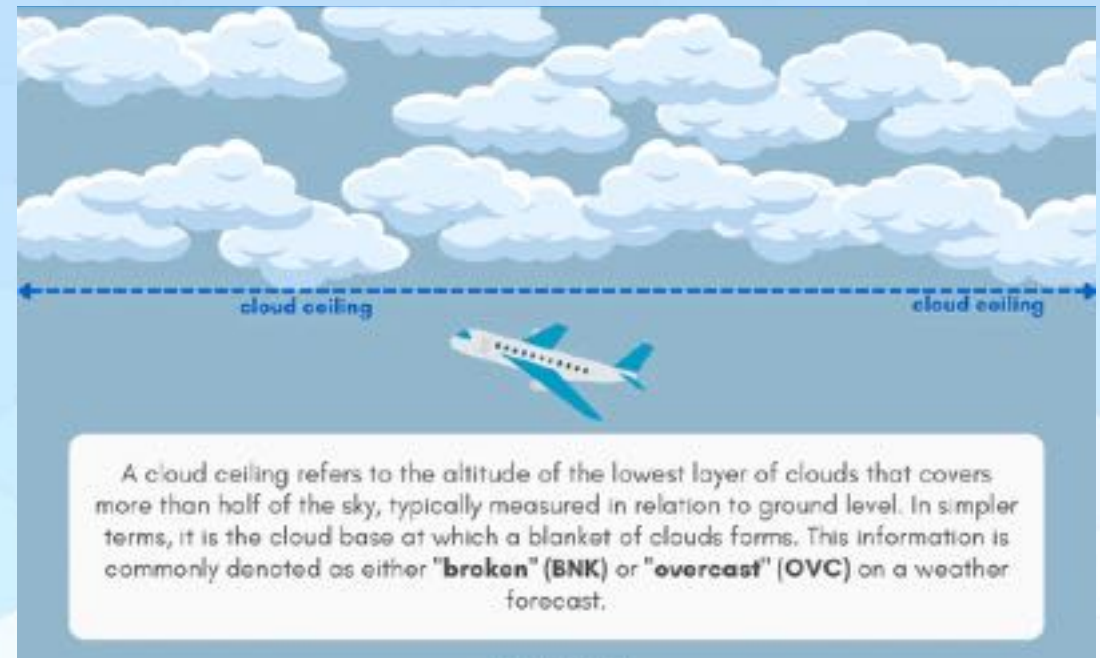
VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(3) In **controlled aerodromes with only ATZ [OIBP, OIHH, OIFS, OISL]**, fixed wing VFR flights shall not take off or land, enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:

- (i) **the ceiling is less than 450 m (1 500 ft); or**
- (ii) **the ground visibility is less than 5 km.**



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(4) VFR flights shall not be operated at night.

VFR flights may be authorized to operate during night subject to prior coordination with the CAO.IRI.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

AMC1 SIRA.5005(a)(4) Visual flight rules

(a) For Fixed Wing Aircraft:

VFR flights wish to operate at night shall send their request for each flight **at least 48 hours** before EOBT to CAO.IRI. and specify:

- a) the operator
- b) number of flight(s)
- c) Call sign,
- d) Register(s),
- e) Type of aircraft,
- f) Date(s) of operation,
- g) Duration of operation,
- h) Departure and Destination aerodrome,
- i) area of operation.

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(5) Unless **authorized by CAO.IRI**, VFR flights shall not be operated:

- (i) Above FL 200;
- (ii) At transonic and supersonic speeds.

(6) VFR flights shall not operate into RVSM airspace.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(7) Except when necessary for take-off or landing, or except by permission from the CAO.IRI, a VFR flight **during daylight** shall not be flown:

- I. Over the **congested areas of cities**, towns or settlements or over an open-air assembly of persons at a height less than 300m (**1000 FT**) above the highest obstacle within a radius of **600 M** from the aircraft;
- II. **Elsewhere** than as specified above at a height less than 150m (**500 FT**) above the ground or water, or 150m (500 FT) above the highest obstacle within a radius of **150m** [**NOT IN ANNEX 2**] from the aircraft.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(8) Except when necessary for take-off or landing, or except by permission from CAO.IRI, a **VFR flight at night** shall not be flown:

- I. over **high terrain or in mountainous areas**, at a level which is at least 600 m (**2 000 FT**) above the highest obstacle located within **8 km** of the **estimated position of the aircraft**;
- II. **elsewhere** than as specified in i), at a level which is at least 300 m (**1 000 FT**) above the highest obstacle located within **8 km** of the **estimated position of the aircraft**.



95b. 'mountainous area' means an area of changing terrain profile where the changes of terrain elevation exceed 900 m (3 000 ft) within a distance of 18,5 km (10,0 NM);

ENR 1.2 VISUAL FLIGHT RULES

- **Fixed Wings Aircraft: daylight**
 - congested areas: **radius** of **600** m, (1 000 ft)
 - elsewhere: **radius** of **150** m, (500 ft)
- **Fixed Wings Aircraft: night**
 - mountainous areas: **8 km** of **estimated position**, (2 000 ft)
 - elsewhere: **8 km** of **estimated position**, (1 000 ft)

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(9) Except where otherwise indicated in air traffic control clearances or specified by the ANSP VFR flights in **level cruising** flight when operated **above 3000 FT** from the ground or water shall be conducted at a flight level appropriate to the track as specified in the **tables of cruising levels**.

From 000 degrees to 179 degrees***						TRACK**						From 180 degrees to 359 degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level			Level			Level		
FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres
010	1 000	300				020	2 000	600				040	4 000	1 200	045	4 500	1 350
030	3 000	900	035	3 500	1 050	040	4 000	1 200	045	4 500	1 350	050	5 000	1 500	055	5 500	1 650
050	5 000	1 500	075	7 500	2 300	060	6 000	1 800	085	8 500	2 600	080	8 000	2 400	105	10 500	3 200
070	7 000	2 100	095	9 500	2 900	100	10 000	3 000	125	12 500	3 800	100	10 000	3 000	145	14 500	4 400
090	9 000	2 700	115	11 500	3 500	120	12 000	3 600	165	16 500	5 050	140	14 000	4 200	185	18 500	5 650
110	11 000	3 300	135	13 500	4 100	140	14 000	4 200	205	20 500	6 250	160	16 000	4 900	225	22 500	6 850
130	13 000	3 900	155	15 500	4 700	180	18 000	5 500	245	24 500	7 450	180	18 000	5 500	265	26 500	8 100
150	15 000	4 500	175	17 500	5 300	200	20 000	6 100	285	28 500	8 700	190	19 000	5 800	300	30 000	9 150
170	17 000	5 200	215	21 500	6 550	220	22 000	6 700	320	32 000	9 750	210	21 000	6 400	340	34 000	10 350
190	19 000	5 800	235	23 500	7 150	240	24 000	7 300	360	36 000	10 950	230	23 000	7 000	380	38 000	11 600
210	21 000	6 400	255	25 500	7 750	260	26 000	7 900	400	40 000	12 200	250	25 000	7 600	430	43 000	13 100
230	23 000	7 000	275	27 500	8 400	280	28 000	8 550	470	47 000	14 350	270	27 000	8 250	510	51 000	15 550
250	25 000	7 600				300	30 000	9 150	etc.	etc.	etc.	290	29 000	8 850			
270	27 000	8 250				320	32 000	9 750				310	31 000	9 450			
290	29 000	8 850				340	34 000	10 350				330	33 000	10 050			
310	31 000	9 450				360	36 000	10 950				350	35 000	10 650			
330	33 000	10 050				380	38 000	11 600				370	37 000	11 300			
350	35 000	10 650				400	40 000	12 200				390	39 000	11 900			
						430	43 000	13 100				410	41 000	12 500			
						470	47 000	14 350				450	45 000	13 700			
						510	51 000	15 550				490	49 000	14 950			
						etc.	etc.	etc.				etc.	etc.	etc.			

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

CVFR

(10) VFR flights shall comply with the provisions of air traffic **control** service:

- I. When operated within Classes B, C and D airspace;
- II. when forming part of aerodrome traffic at controlled aerodromes; or
- III. when operated as special VFR flights.

6.9 ALL AEROPLANES OPERATED IN ACCORDANCE WITH IFR [and controlled VFR] shall be equipped with:

- a) a **magnetic compass**;
- b) an accurate **timepiece** indicating the time in **hours, minutes** and **seconds**;
- c) **two sensitive pressure altimeters** with **counter drum-pointer** or equivalent presentation;
- d) an **airspeed** indicating system with means of preventing malfunctioning due to either condensation or icing;
- e) a **turn and slip indicator**;
- f) an **attitude indicator** (artificial horizon);
- g) a **heading indicator** (directional gyroscope);
- h) a means of indicating whether the **power** supply to the **gyroscopic** instrument is adequate (**Suction Gauge**);
- i) a means of indicating in the flight crew compartment the **outside air temperature**;
- j) a **rate-of-climb and descent** indicator; and
- k) such **additional** instruments or equipment as may be prescribed by the appropriate authority.

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(11) An aircraft operated in accordance with the visual flight rules which wish to **change** to compliance with the instrument flight rules shall communicate the necessary changes to be effected to its current flight plan **for the approval**.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(1) Except when operating as a **special VFR** flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in **Table S5-2**.

Altitude band*	Airspace class	Flight visibility	Distance from cloud
At and above 10000FT AMSL	A**,B,C,D,E,F,G	8 km	1500M horizontally 1000FT vertically
Below 10000FT AMSL and above 3000FT AMSL, or above 1000FT above terrain, whichever is the higher.	A**,B,C,D,E,F,G	5 km	1500M horizontally 1000FT vertically
At and below 3000FT AMSL, or 1000FT above terrain, whichever is the higher.	A**,B,C,D,E	3000 m**** in daylight 5 km at night	1500M horizontally 1000FT vertically
	F,G***	1500 m**** in daylight 5 km at night	Clear of cloud and with the surface in sight

Table S5-2: Helicopters operation

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(2) Except when a **special VFR** clearance is obtained from an air traffic control unit, helicopter VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:

- I. the ceiling is less than 450 m (1 500 FT); or
- II. the ground visibility is less than 3000m during daylight and 5 km at night.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(3) In **controlled aerodromes with only ATZ** [OIBP, OIHH, OIFS, OISL], helicopter VFR flights shall not take off or land, enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:

- I. The ceiling is less than 450 m (1 500 FT); or
- II. The **ground visibility** is less than **3000m** during daylight and **5 km** at night.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(4) Helicopters **are not required** to effect prior coordination with CAO.IRI. for VFR operations at **night**.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(5) Except when necessary for take-off or landing, or except by permission from the CAO.IRI, a VFR flight in **daylight** shall not be flown:

- (i) Over the **congested areas** of cities, towns or settlements or over an open-air assembly of persons at a height less than 300m (**1000 FT**) above the highest obstacle within a radius of **600 M** from the aircraft;
- (ii) Over the **historical buildings and ancient monuments** at a height less than **2000 FT** above the highest obstacle within a radius of **600 M** from the aircraft;
- (iii) **Elsewhere** than as specified above at a height less than 150m (**500 FT**) above the ground or water, or 150m (**500 ft**) above the highest obstacle within a radius of **150m** from the aircraft.

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(6) Except when necessary for take-off or landing, or except by permission from the CAO.IRI, a VFR flight at **night** shall not be flown:

- (i) over **high terrain** or in mountainous areas, at a level which is at least 600 m (**2 000 FT**) above the highest obstacle located within 8 km of the **estimated position of the aircraft**;
- (ii) over the **historical buildings and ancient monuments** at a height less than **2000 FT** above the highest obstacle within a radius of **600 M** from the aircraft;
- (iii) **elsewhere** than as specified above, at a level which is at least 300 m (1 000 ft) above the highest obstacle located within **8 km** of the **estimated position of the aircraft**.

ENR 1.2 VISUAL FLIGHT RULES

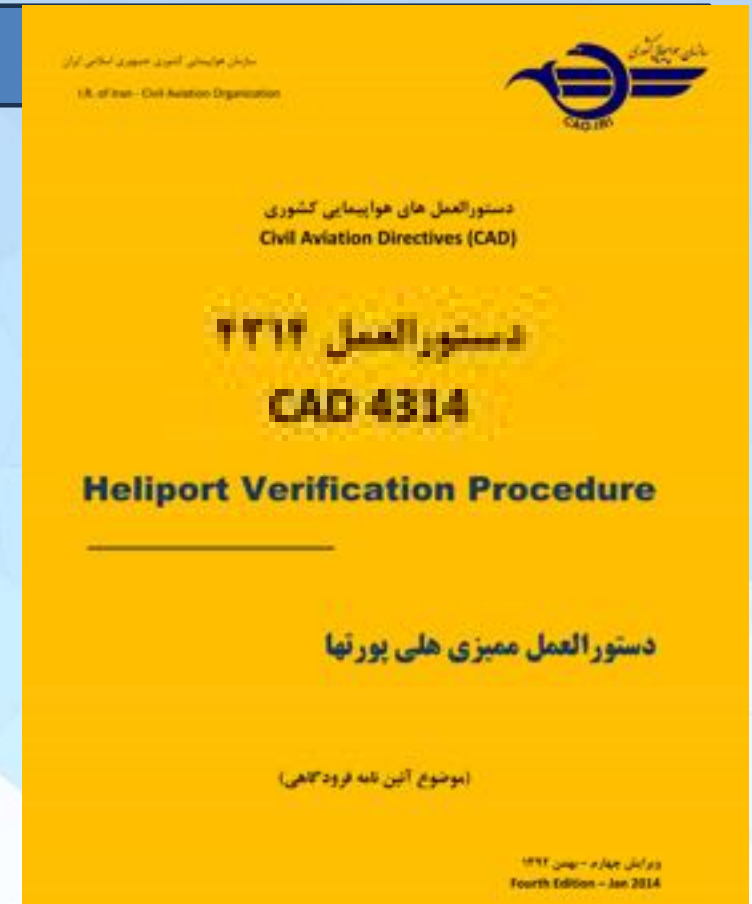
- **Helicopters: daylight**
 - congested areas: **radius** of **600** m, (1 000 ft) [JUST LIKE FIXED WINGS]
 - Historical buildings and ancient monuments: **radius** of **600** m, (2 000 ft)
 - elsewhere: **radius** of **150** m, (500 ft) [JUST LIKE FIXED WINGS]
- **Helicopters Aircraft: night**
 - mountainous areas: **8 km** of **estimated position**, (2 000 ft) [JUST LIKE FIXED WINGS]
 - Historical buildings and ancient monuments: **radius** of **600** m, (2 000 ft)
 - elsewhere: **8 km** of **estimated position**, (1 000 ft) [JUST LIKE FIXED WINGS]

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(7) All requirements in CAO.IRI.ADR and **CAD 4314** regarding heliport lighting system for night VFR operations shall be met.



VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(b) For Helicopters:

(8) Except where otherwise indicated in air traffic control clearances or specified by the ANSP, VFR flights in **level cruising** flight when operated above **3000 FT** from the ground or water shall be conducted at a flight level appropriate to the track as specified in the **tables of cruising levels**.

TRACK**											
From 000 degrees to 179 degrees***						From 180 degrees to 359 degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres
010	1 000	300				020	2 000	600			
030	3 000	900	035	3 500	1 050	040	4 000	1 200	045	4 500	1 350
050	5 000	1 500	055	5 500	1 700	060	6 000	1 850	065	6 500	2 000
070	7 000	2 150	075	7 500	2 300	080	8 000	2 450	085	8 500	2 600
090	9 000	2 750	095	9 500	2 900	100	10 000	3 050	105	10 500	3 200
110	11 000	3 350	115	11 500	3 500	120	12 000	3 650	125	12 500	3 800
130	13 000	3 950	135	13 500	4 100	140	14 000	4 250	145	14 500	4 400
150	15 000	4 550	155	15 500	4 700	160	16 000	4 900	165	16 500	5 050
170	17 000	5 200	175	17 500	5 350	180	18 000	5 500	185	18 500	5 650
190	19 000	5 800	195	19 500	5 950	200	20 000	6 100	205	20 500	6 250
210	21 000	6 400	215	21 500	6 550	220	22 000	6 700	225	22 500	6 850
230	23 000	7 000	235	23 500	7 150	240	24 000	7 300	245	24 500	7 450
250	25 000	7 600	255	25 500	7 750	260	26 000	7 900	265	26 500	8 100
270	27 000	8 250	275	27 500	8 400	280	28 000	8 550	285	28 500	8 700
290	29 000	8 850				300	30 000	9 150			
310	31 000	9 450				320	32 000	9 750			
330	33 000	10 050				340	34 000	10 350			
350	35 000	10 650				360	36 000	10 950			
370	37 000	11 300				380	38 000	11 600			
390	39 000	11 900				400	40 000	12 200			
410	41 000	12 500				430	43 000	13 100			
450	45 000	13 700				470	47 000	14 350			
490	49 000	14 950				510	51 000	15 550			
etc.	etc.	etc.				etc.	etc.	etc.			

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

CVFR

- (9) VFR flights shall comply with the provisions of air traffic **control** service:
- (i) when operated within Classes B, C and D airspace;
 - (ii) when forming part of aerodrome traffic at controlled aerodromes; or
 - (iii) when operated as special VFR flights.

6.9 ALL AEROPLANES OPERATED IN ACCORDANCE WITH IFR [and controlled VFR] shall be equipped with:

- a) a **magnetic compass**;
- b) an accurate **timepiece** indicating the time in **hours, minutes** and **seconds**;
- c) **two sensitive pressure altimeters** with **counter drum-pointer** or equivalent presentation;
- d) an **airspeed** indicating system with means of preventing malfunctioning due to either condensation or icing;
- e) a **turn and slip indicator**;
- f) an **attitude indicator** (artificial horizon);
- g) a **heading indicator** (directional gyroscope);
- h) a means of indicating whether the **power** supply to the **gyroscopic** instrument is adequate (**Suction Gauge**);
- i) a means of indicating in the flight crew compartment the **outside air temperature**;
- j) a **rate-of-climb and descent** indicator; and
- k) such **additional** instruments or equipment as may be prescribed by the appropriate authority.

VISUAL FLIGHT RULES

SIRA.5005 Visual flight rules

(a) For Fixed Wing Aircraft:

(10) Helicopters operated in accordance with the visual flight rules which wish to **change** to compliance with the instrument flight rules shall communicate the necessary changes to be effected to its current flight plan for the **approval**.

(11) All helicopter operations shall be subject to rules and procedures approved by Iran Civil Aviation Organization including CAD **4314**, CAOIRI AIROPS.

(12) Helicopter operators are required to provide **individual flight plan** or **flight schedule for all operations**, taking into account procedures contained in Iran AIP ENR 1.10.

SPECIAL VFR

SIRA.5010 Special VFR in control zones

122. 'special VFR flight' means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC;

a) In aerodrome which is located within **CTR**, special VFR flights may be authorized to enter a control zone for the purpose of **landing, take off** and **depart** from a control zone, **cross** a control zone or **operate locally** within a control zone the following provisions:

- 1) during **daylight**;
- 2) **ground** visibility, in intended direction of flight is not less than **1500 meters** ;
- 3) the **ceiling** is not less than 180 m (**600 ft**).
- 4) **requested** individually by the **Pilot**;
- 5) traffic conditions permit; and
- 6) approved by unit providing **approach** control service.
- 7) fly at a speed of **140 kts IAS** or less to give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision;
- 8) the **flight** visibility is not less than **1 500 m** or, for **helicopters**, not less than **800 m**

SIRA

SPECIAL VFR

SIRA.5010 Special VFR in control zones

GM1 SIRA.5010(a) Special VFR in control zones

When the reported **ground** visibility at the aerodrome is **less than 1 500 m**, ATC may issue a special VFR clearance for a flight **crossing** the control zone and **not** intending to **take off** or **land** at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit when the **flight** visibility reported by the pilot is **not less than 1500 m**, or, for helicopters, not less than 800 m.



SPECIAL VFR**SIRA.5010 Special VFR in control zones****GM1 SIRA.5010(a)(7) Special VFR in control zone****SPEED LIMIT TO BE APPLIED BY HELICOPTER PILOTS**

The 140 kt speed is to be considered as an absolute maximum acceptable speed in order to maintain an acceptable level of safety when the visibility is 1 500 m or more. Lower speeds should be applied according to elements such as local conditions, number and experience of pilots on board, using the guidance of the table below:

Visibility (m)	Advisory speed (kt)
800	50
1500	100
2000	120

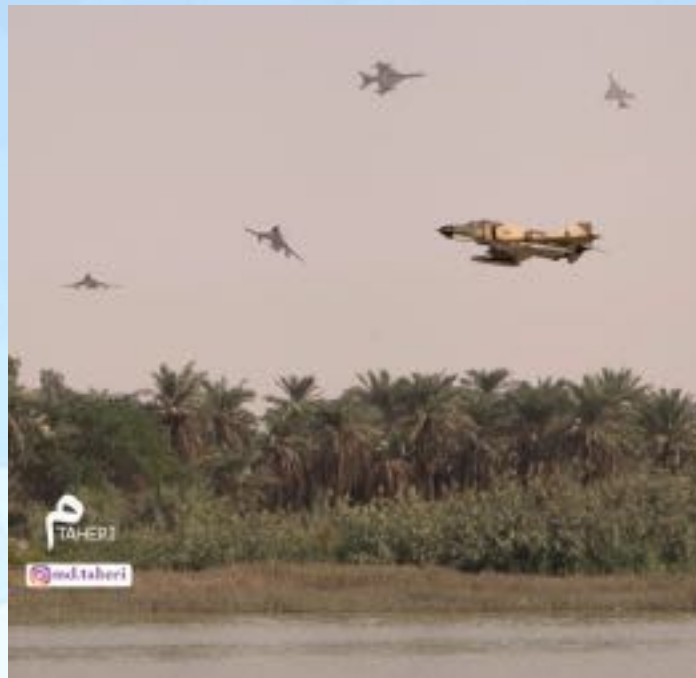
SIRA

SPECIAL VFR

SIRA.5010 Special VFR in control zones

GM1 SIRA.5010(a)(7) Special VFR in control zone

Military operations
are exempted from
speed limitation.



 Iranian Air Force 

GRUMMAN F-14 TOMCAT



DASSAULT MIRAGE F1



MCDONNELL DOUGLAS F-4 PHANTOM II



NORTHROP F-5



MIKOYAN MIG-29



SPECIAL VFR**SIRA.5010 Special VFR in control zones**

- b) The pilots of VFR flights, when operating on a special clearance, shall comply with ATC instructions and remain at all times in flight conditions, which enable the pilot to determine his flight path and to keep clear of obstacles and cloud with the **surface in sight**.
- c) A special VFR clearance within a control zone does not absolve the pilot from the responsibility for **avoiding an aerodrome traffic zone** unless prior permission to penetrate the **ATZ** has been obtained from the relevant ATC unit.
- d) **No** special VFR operation shall be authorized in any **aerodrome traffic circuit**.
- e) Except when permitted by the CAO.IRI for **helicopters** in special cases such as, but not limited to, police, medical, search and rescue operations and fire-fighting flights are **exempted** from conditions prescribed in a).

Phraseologies for SVFR

- a) when the destination is located outside the control zone

(CALL-SIGN) CLEARED SPECIAL VFR UPTO CTR BOUNDARY TOWARD (DESTINATION) VIA [SECTOR] NOT ABOVE (LEVEL) INSIGHT OF SURFACE.

- b) when the destination is located within the control zone

(CALL-SIGN) CLEARED SPECIAL VFR WITHIN CONTROL ZONE TO (DESTINATION) VIA [SECTOR] NOT ABOVE (LEVEL) INSIGHT OF SURFACE.

*CLEARED TO ENTER/OUT OF/THROUGH, (name)
CTR, MAINTAIN SPECIAL V-F-R CONDITIONS, AT OR
BELOW (altitude below 10,000 feet MSL)*

INSTRUMENT FLIGHT RULES

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

a) Aircraft equipment

Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown and in accordance with the applicable air operations legislation.



CHAPTER 6. AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

6.9 ALL AEROPLANES OPERATED IN ACCORDANCE WITH IFR [and controlled VFR]

shall be equipped with:

- a) a **magnetic compass**;
- b) an accurate **timepiece** indicating the time in **hours**, **minutes** and **seconds**;
- c) **two** sensitive pressure altimeters with **counter drum-pointer** or equivalent presentation;
- d) an **airspeed** indicating system with means of preventing malfunctioning due to either condensation or icing;
- e) a **turn and slip indicator**;
- f) an **attitude indicator** (artificial horizon);
- g) a **heading indicator** (directional gyroscope);
- h) a means of indicating whether the **power** supply to the **gyroscopic** instrument is adequate (**Suction Gauge**);
- i) a means of indicating in the flight crew compartment the **outside air temperature**;
- j) a **rate-of-climb and descent** indicator; and
- k) such **additional** instruments or equipment as may be prescribed by the appropriate authority.

INSTRUMENT FLIGHT RULES

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

b) Minimum levels

Except when necessary for take-off or landing or when specifically authorized by the appropriate authority, an IFR flight shall be flown at a level that is **not below the minimum flight level established by the State** whose territory is overflown, or, where no such minimum flight level has been established at a level which is at least **2500 FT** above the highest obstacle located within **8 km** of the **estimated position** of the aircraft.



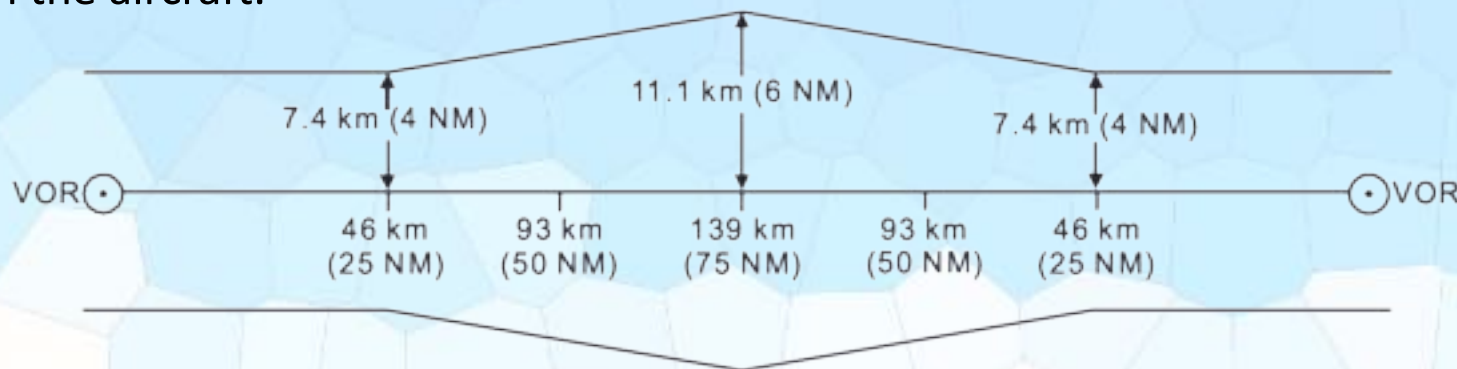
INSTRUMENT FLIGHT RULES

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

GM1 SIRA.5015(b) Instrument flight rules (IFR) — Rules applicable to all IFR flights

MINIMUM LEVELS

When determining which are the highest obstacles within 8 km of the **estimated position of the aircraft**, the estimate will take account of the **navigation accuracy** which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.



INSTRUMENT FLIGHT RULES

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

c) Change from IFR flight to VFR flight

- 1) An aircraft electing to **change** the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules **shall notify** the appropriate air traffic services unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.
- 2) When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a **reasonable period of time in uninterrupted visual meteorological conditions**.
- 3) Change from IFR flight to VFR flight shall only be acceptable when a message **initiated by the pilot-in-command** containing the specific expression '**CANCELLING MY IFR FLIGHT**', together with the changes, if any, to be made to the current flight plan, is received by an ATS unit.
No invitation to change from IFR flight to VFR flight shall be made by ATS either directly or by inference.

INSTRUMENT FLIGHT RULES

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

GM1 SIRA.5015(c)(3) Instrument flight rules (IFR) — Rules applicable to all IFR flights

No reply, other than the acknowledgment '**IFR FLIGHT CANCELLED AT** ... (time)', should normally be made by an ATS unit.



INSTRUMENT FLIGHT RULES

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

d) Following the introduction of area navigation requirements (RNAV), aircraft wishing to operate within the specified airspace shall be appropriately equipped. If the aircraft is unable to comply with the RNAV requirements, then the pilot will advise the ATSU on initial contact using the phrase “**NEGATIVE UNABLE RNAV**”.

12.3.1.15 DEGRADATION OF AIRCRAFT
NAVIGATION PERFORMANCE

UNABLE RNP (*specify type*) (or **RNAV**) [DUE TO (*reason, e.g.*
LOSS OF RAIM or RAIM ALERT)].

*c) **NEGATIVE** TRANSPONDER.

*d) **NEGATIVE** ADS-B.

a) **NEGATIVE** RVSM

NEGATIVE UNABLE RNAV



INSTRUMENT FLIGHT RULES

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

AMC1 SIRA.5015 Instrument flight rules – rules applicable to all IFR

IFR flights should disregard any navigation indication of a navigation aid and are not authorised to use that navigation aid when its **flight check reported to be expired**, or it is **unserviceable** or **inoperative**.

شرکت افسی اس ال (FCSL) که یک شرکت انگلیسی است، در شکایت خود از شرکت فرودگاه‌ها به سازمان بازرسی کل کشور آورده است: این شرکت مدتی قبل در مکاتبه با وزارت راه و شهرسازی اعلام آمادگی کرد که می‌تواند یک دستگاه هواپیمای فلایت چک (DA62 آکبند) مورد نیاز شرکت فرودگاه‌ها را به قیمت ۲ میلیون و ۸۸۵ هزار و ۱۲۳ یورو تامین کند؛ حال آنکه شرکت فرودگاه‌ها این هواپیما را در نهایت با واسطه‌گری یک شرکت آلمانی به نام «ایرو دیتا» به مبلغ ۱۱ میلیون یورو می‌خرد که نتیجه این اقدام هدررفت ۸ میلیون یورو از منابع ارزی ایران شد.

آقای با اشاره به اینکه قیمت این هواپیما جهانی و قیمت خرید بسیار خوب است، می‌گوید: «چیزی که در آن خبرگزاری مطرح شده هواپیمای تفریحی است و تخصصی نیست. هواپیمای فلایت چک بسیار تخصصی و با تأیید سازمان هواپیمایی کشوری انجام می‌شود.



INSTRUMENT FLIGHT RULES

SIRA.5020 IFR — Rules applicable to IFR flights within controlled airspace

- a) IFR flights shall comply with the provisions of **Section 8** when operated in controlled airspace.
- b) An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level, selected from the **table of cruising levels in Appendix 3**, **except** that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearances or specified by the CAO.IRI. in aeronautical information publications.
- c) **Cruise climb** is not permitted in Tehran FIR.

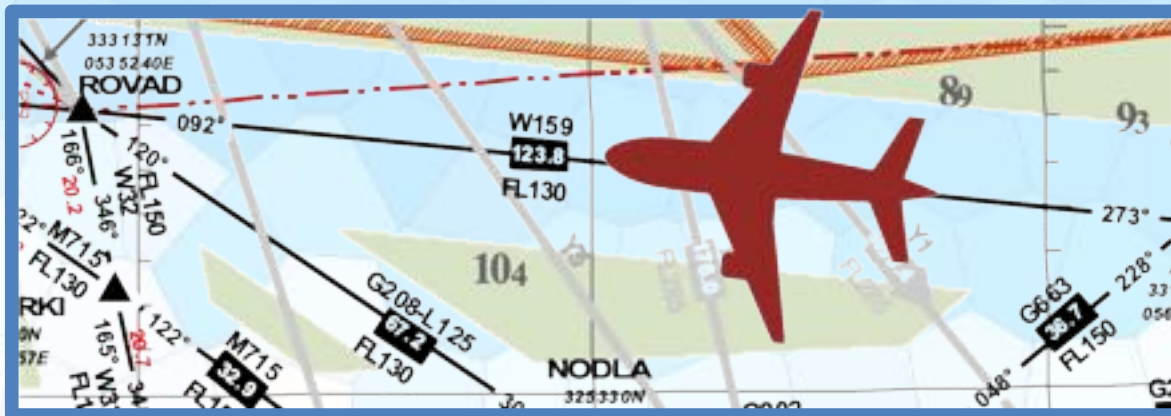
62. 'cruise climb' means an aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases;

INSTRUMENT FLIGHT RULES

SIRA.5020 IFR — Rules applicable to IFR flights within controlled airspace

GM1 SIRA5020(b) IFR — Rules applicable to IFR flights within controlled airspace

When the air traffic control clearances for **cruising level** does not apply the correlation of levels to track, the phrase " Non-Standard" shall be used before the cleared level (e.g. **CIMB TO NON-STANDARD FLIGHT LEVEL ONE NINE ZERO**)



63. 'cruising level' means a level maintained during a significant portion of a flight;

INSTRUMENT FLIGHT RULES

SIRA.5025 IFR — Rules applicable to IFR flights outside controlled airspace

a) Cruising levels

An IFR flight operating in level cruising flight outside of controlled airspace shall be flown at a cruising level appropriate to its track as specified in the **table of cruising levels** in Appendix 3.

b) Communications

An IFR flight operating outside controlled airspace **but within or into areas, or along routes**, shall maintain a **listening watch** on the appropriate radio frequency and **establish two-way communication**, as necessary, with the air traffic services unit providing flight information service.

c) Position reports

An IFR flight operating outside controlled airspace shall maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the air traffic services unit providing flight information service and **report position** as specified in SIRA.8025 for controlled flights.

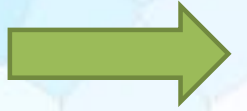
5.3.2 Communications

An IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATS authority in accordance with 3.3.1.2 c) or d) shall maintain an air-ground voice communication watch on the appropriate

AIP ENR 1.3

2.2 Visual approach within controlled airspaces

Visual approach is an approach by an **IFR flight** when either part or all of an instrument approach procedure is not completed and the approach is executed in **visual reference to terrain**.

2.2.1 A Controlled IFR flight may be cleared to execute a visual approach **after commencing** the instrument approach procedure (from the initial approach fix or where applicable, from the beginning of a defined arrival route (STAR)), provided that: 

AIP ENR 1.3

2.2 Visual approach within controlled airspaces

- a) The reported weather at aerodrome has a **ceiling** above the level of the beginning of the initial approach segment for the aircraft so cleared;
- b) The reported **ground** visibility is **3000** meters or more and;
- c) The pilot can maintain **visual reference to the terrain** and ensures that the meteorological conditions are such that with reasonable assurance a visual approach and landing can be completed.

*Note1- A request for Visual Approach implies that the pilot can maintain visual reference to the terrain and landing can be completed so **it is not necessary for the controller to verify it.***

AIP ENR 1.3

2.2 Visual approach within controlled airspaces

2.2.2 Clearance for an IFR flight to execute a visual approach may be requested by a flight crew or initiated by the controller. In the latter case, the concurrence of the flight crew shall be required.

2.2.5 Separation shall be provided between an aircraft cleared to execute a visual approach and other IFR and /or Special VFR aircraft.

- **CLEARED VISUAL APPROACH RUNWAY (number);**
- **ADVISE ABLE TO ACCEPT VISUAL APPROACH RUNWAY (number);**
- **CLEARED VISUAL APPROACH RUNWAY (number), MAINTAIN OWN SEPARATION FROM PRECEDING (aircraft type and wake turbulence category as appropriate) [CAUTION WAKE TURBULENCE];**

AIP ENR 1.3

MISSED APPROACH IN VISUAL APPROACH

- 2.2.7 A visual approach is not an IAP and therefore **has no missed approach** segment, If a go around is necessary for any reason under the reported **ground visibility** condition of **less than 5 KM**, aircraft operating at controlled airports will be issued an appropriate clearance/instruction by the air traffic controller to join the initial approach fix of the approach procedure which **had already been cleared** or any other fixes as appropriate.
- 2.2.8 In case of a go-around of a flight executing a visual approach under the reported **ground visibility** condition of **5 KM or more**, it may be cleared by air traffic controller to **join the aerodrome traffic circuit** or may receive the ATC clearance/instructions to join the initial approach fix of the approach procedure which had already been cleared or any other fixes as appropriate.

PART: RULES OF THE AIR

SECTION 6

AIRSPACE CLASSIFICATION

Class	Type of flight	Separation provided	Service provided	Speed limitation*	Radio communication requirement	Subject to an ATC clearance
A	IFR only	All aircraft	Air traffic control service	Not applicable	Yes	Yes
B	IFR	All aircraft	Air traffic control service	Not applicable	Yes	Yes
	VFR	All aircraft	Air traffic control service	Not applicable	Yes	Yes
C	IFR	IFR from IFR	Air traffic control service	Not applicable	Yes	Yes
	VFR	VFR from IFR	1) Air traffic control service for separation from IFR; 2) VFR/VFR traffic information (and traffic avoidance advice on request)	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
D	IFR	IFR from IFR	Air traffic control service, traffic information about VFR flights (and traffic avoidance advice on request)	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
	VFR	Nil	IFR/VFR and VFR/VFR traffic information (and traffic avoidance advice on request)	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
E	IFR	IFR from IFR	Air traffic control service and, as far as practical, traffic information about VFR flights	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
	VFR	Nil	Traffic information as far as practical	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	No
F	IFR	IFR from IFR as far as practical	Air traffic advisory service; flight information service if requested	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	No
	VFR	Nil	Flight information service if requested	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	No
G	IFR	Nil	Flight information service if requested	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	No
	VFR	Nil	Flight information service if requested	250 kt IAS below 3 050 m (10 000 ft) AMSL	Yes	No

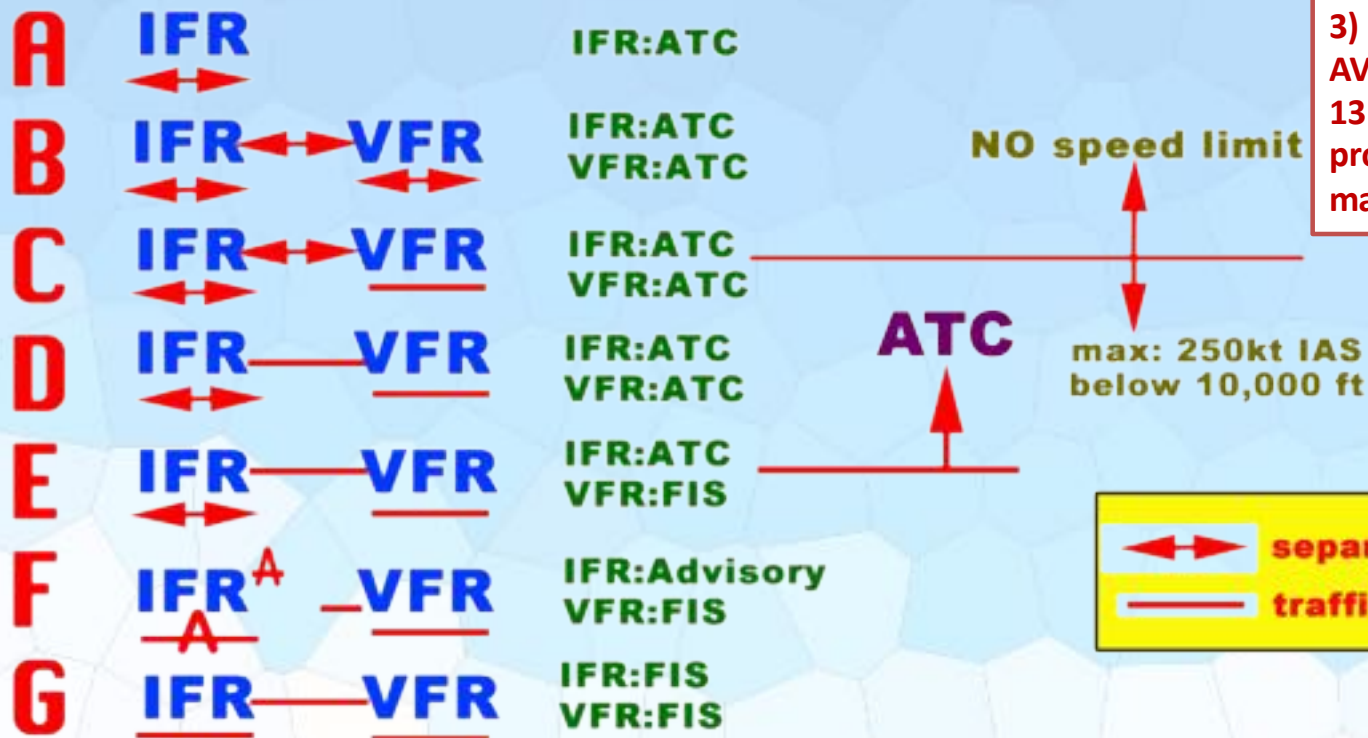
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APPENDIX 4

ATS AIRSPACE CLASSES – SERVICES PROVIDED AND FLIGHT REQUIREMENTS

AIRSPACE CLASSIFICATION

SIRA.6001 Classification of airspace



answer to traffic information:

- 1) TRAFFIC IN SIGHT
 - 2) LOOKING OUT
 - 3) NEGATIVE CONTACT, REQUEST TRAFFIC AVOIDANCE
131. 'traffic avoidance advice' means an advice provided by an air traffic services unit specifying maneuvers to assist a pilot to avoid a collision;.

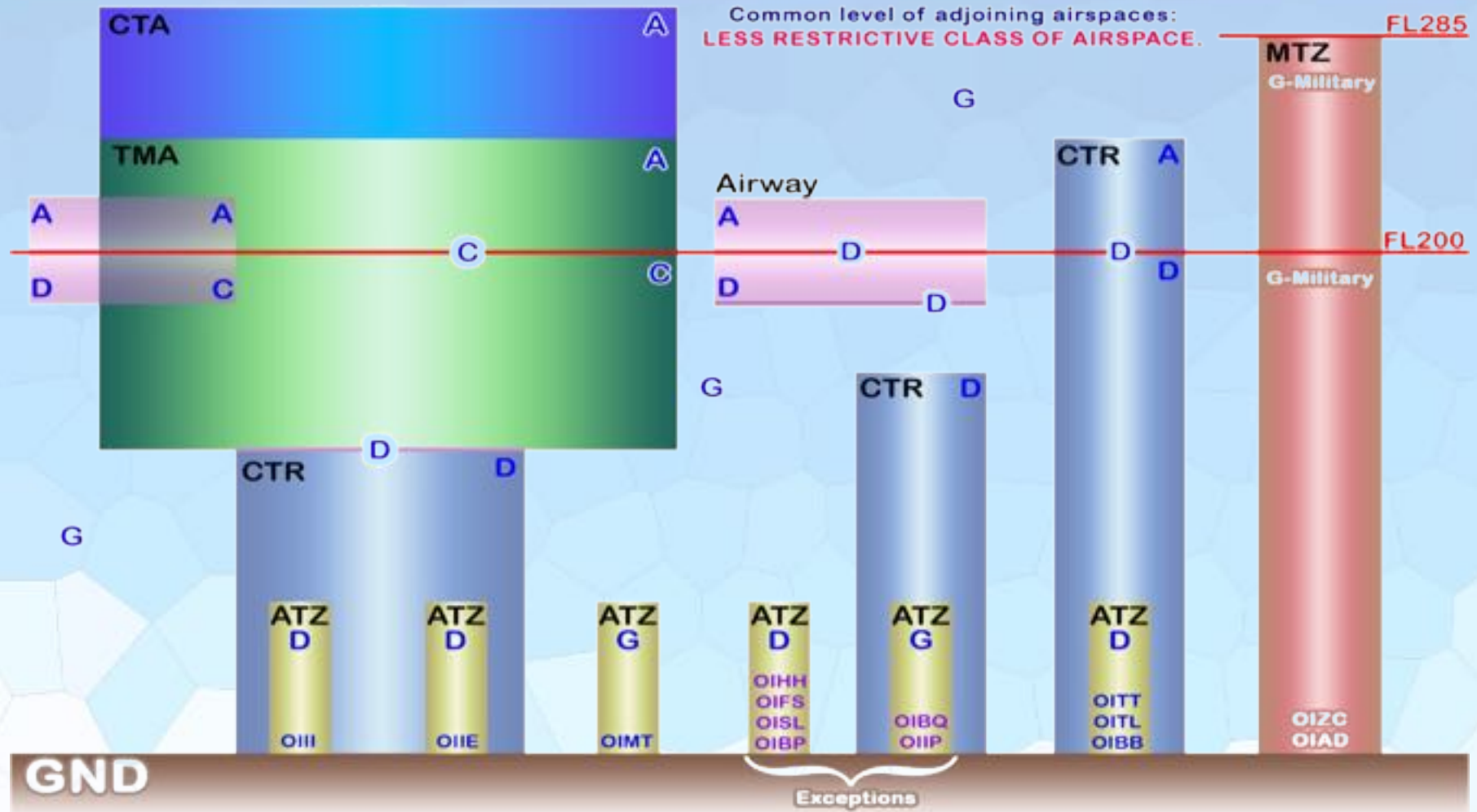
AMC: Military flights are exempted from speed limitations.

33. 'air traffic services (ATS) airspaces' mean airspaces of defined dimensions, **alphabetically** designated, within which specific **types of flights** may operate and for which air traffic services and rules of operation are specified;

131. 'traffic avoidance advice' means an advice provided by an air traffic services unit specifying maneuvers to assist a pilot to avoid a collision;

132. 'traffic information' means information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision;

SIRA



AIRSPACE CLASSIFICATION WITHIN TEHRAN FIR

- Airways, TMAs, CTAs and CTRs above FL 200 class A,
- Airways, CTAs and CTRs at FL 200 and below class D,
- TMAs at FL 200 and below class C,
- Controlled AD ATZ class D, Uncontrolled AD ATZ class G,
- Remaining parts of FIR class G.

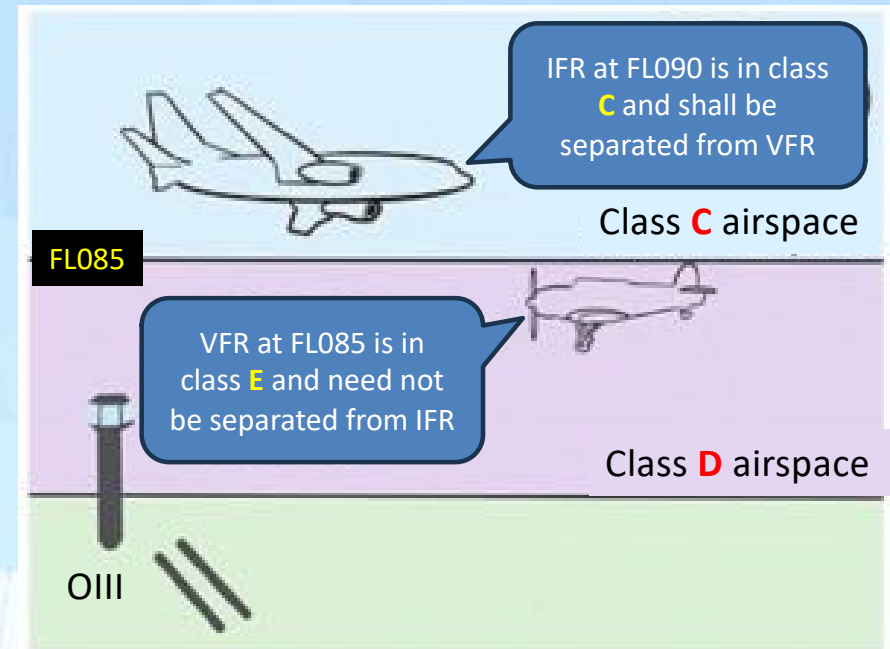
B, E, F are NOT USED in Iran

AIRSPACE CLASSIFICATION

SIRA.6001 Classification of airspace

AMC1 SIRA.6001 Classification of airspaces

Where ATS airspaces **adjoin vertically**, i.e. one above the other, flights at a common level should comply with the requirements of, and be given services applicable to, the **less restrictive class of airspace**.



AIRSPACE CLASSIFICATION

SIRA.6001 Classification of airspace

AMC1 SIRA.6001(a)(8) Classification of airspaces

Class F airspace should only be implemented where the air traffic services are inadequate for the provision of air traffic control, and the limited advice on collision hazards otherwise provided by flight information service will not be adequate.

Where air traffic advisory service is implemented, this should be considered as a **temporary** measure only until such time as it can be replaced by air traffic **control** service or, in cases where the traffic situation changes such that advisory service is no longer required, replaced by flight **information** service.

AIRSPACE CLASSIFICATION

SIRA.6001 Classification of airspace

GM1 SIRA.6001(a)(8) Classification of airspaces



DURATION OF TEMPORARY MEASURE

- a) When establishing Class F airspace, its intended temporary duration after which it should be **replaced** by an alternative classification should be specified in the I.R.I. of IRAN AIP.
- b) The intended temporary duration of Class F airspace **should not be longer than 3 years**.

EXAMPLE

- c) Certain CTR airspace may change its classification on a daily basis (e.g. from 06:00 to 20:00 the airspace is classified as Class A, and from 20:00 until 23:59 and from 00:00 until 05:59 is classified as Class F). In this case, the duration of these arrangements should not exceed 3 years.

AIRSPACE CLASSIFICATION

SIRA.6005 Requirements for communications and SSR transponder

- a) All aircraft are required to [be] equipped and have **two-way communication** with ATS units in Tehran FIR.
- b) All aircraft flying within Tehran FIR are required to be equipped with **SSR transponder** having a combined Mode A/3, 4096 Codes capability and a Mode C automated altitude reporting capability.

The use of SSR transponder is **mandatory** for all aircraft flying **within controlled airspaces**, unless otherwise agreed by prior coordination or instructed by ATS unit.

AMC1 SIRA.6001(a)(8) Classification of airspaces

Military flights are exempted from SSR capability.



PART: RULES OF THE AIR

SECTION 7

AIR TRAFFIC SERVICES

AIR TRAFFIC SERVICES

SIRA.7001 General — Objectives of the air traffic services



The objectives of the air traffic services shall be to:

- a) **prevent collisions** between aircraft;
- b) prevent collisions between aircraft on the **maneuvering** area and **obstructions** on that area;
- c) **expedite** and **maintain** an orderly flow of air traffic;
- d) provide **advice** and **information** useful for the safe and efficient conduct of flights;
- e) **notify** appropriate organisations regarding aircraft in need of search and rescue aid, and **assist** such organisations as required.

AIR TRAFFIC SERVICES

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

a) When an **identified controlled flight** is observed to be on a conflicting path with an **unknown aircraft**, deemed to constitute a collision hazard, the pilot of the controlled flight shall, **whenever practicable**:

- 1) be **informed** of the unknown aircraft, and, if the pilot so requests, or if the situation so warrants in the opinion of the controller, **avoiding action** shall be **suggested**; and
- 2) be notified when the conflict no longer exists.



AIR TRAFFIC SERVICES

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

AMC1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

Information regarding traffic on a conflicting path should be given, whenever practicable, in the **following form**:

- 1) relative bearing of the conflicting traffic in terms of the 12-hour clock;
- 2) distance from the conflicting traffic in kilometers or nautical miles;
- 3) direction in which the conflicting traffic appears to be proceeding; and
- 4) level and type of aircraft or, if unknown, relative speed of the conflicting traffic, e.g. slow or fast.

Example:

ATC: (Call sign), TRAFFIC 10 O'CLOCK, 6 MILES, CROSSING LEFT TO RIGHT, FL250, B734.

ATC: (Call sign), TRAFFIC 10 O'CLOCK, 6 MILES, EASTBOUND, NO LEVEL INFORMATION, SLOW MOVING.

AIR TRAFFIC SERVICES

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

GM1 to (a)(1) of AMC1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

In cases where using the terms of the 12-hour clock is not practicable, like when the aircraft is turning, the direction of the unknown aircraft may be given by compass points, e.g. northwest, south, etc.;

Example from Tehran ACC OM:

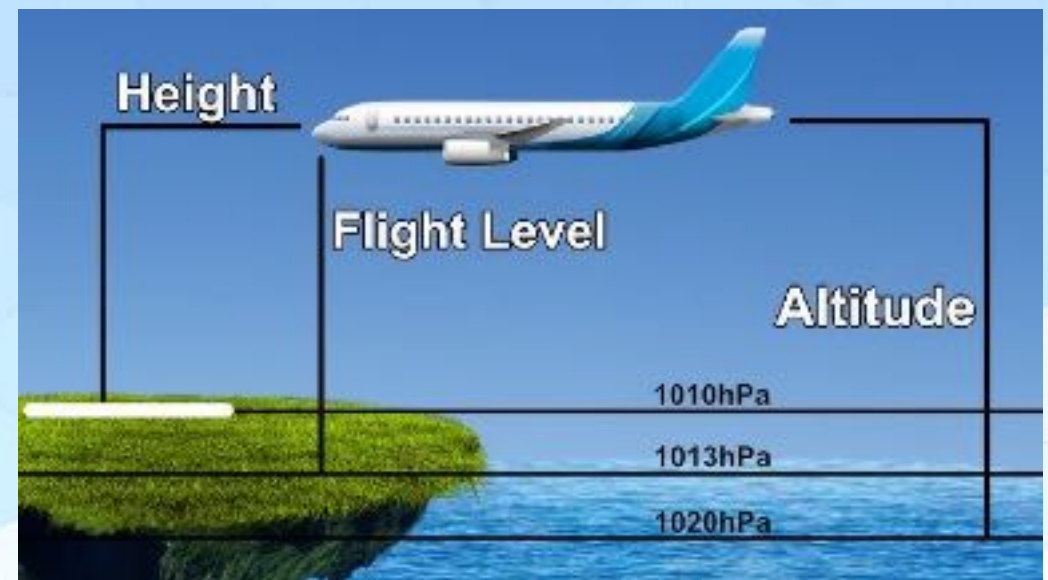
- “TRAFFIC, SOUTH EAST BOUND, BOEING SEVEN SEVEN SEVEN, AT FL330, ESTIMATED ALNER 2341”.
- “TRAFFIC, OPPOSITE DIRECTION, AIRBUS THREE TWO ZERO, DESCENDING THROUGH YOUR LEVEL, TWELVE O’CLOCK, FIVE ZERO MILES”.

AIR TRAFFIC SERVICES

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

GM1 to (a)(4) of AMC1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

The level may be described either as a flight level, altitude or height, or as a relative vertical distance from the aircraft provided with traffic information (e.g. 1 000 ft above or 1 000 ft below).



AIR TRAFFIC SERVICES

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

GM1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

INFORMATION REGARDING TRAFFIC ON CONFLICTING PATH OUTSIDE CONTROLLED AIRSPACE

When an **identified IFR flight** operating **outside controlled airspace** is observed to be on a conflicting path with **another aircraft**, the pilot should be:

- a) **informed** of the traffic, and if so, requested by the pilot or if, in the opinion of the controller, the situation warrants, a course of **avoiding action** should be **suggested**; and
- c) notified when the conflict no longer exists.

AIR TRAFFIC SERVICES

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

GM1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

The provision of collision hazard information does not absolve pilots of **VFR flights** from their responsibilities for avoiding **terrain obstacles** and for maintaining **VMC**.



AIR TRAFFIC SERVICES

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

b) **Pressure-altitude-derived level information**, even when unverified, should be used in the provision of collision hazard information because such information, particularly if available from an otherwise unknown aircraft (e.g. a VFR flight) and given to the pilot of a known aircraft, could facilitate the location of a collision hazard. If the level information has not been verified, the accuracy of the information should be considered uncertain and the pilot should be informed accordingly.

Example from Tehran ACC OM:

**“UNKNOWN TRAFFIC, ELEVEN O'CLOCK, ONE ONE MILES, EASTBOUND,
UNVERIFIED LEVEL 10000 (one zero thousand) FEET, SLOW MOVING”.**

AIR TRAFFIC SERVICES

SIRA.7005 Coordination between the aircraft **operator** and **air traffic services**

When so requested by an aircraft operator, messages (**including position reports**) received by air traffic services units and relating to the operation of the aircraft for which operational control service is provided by that aircraft operator **shall**, so far as practicable, be **made available immediately to the aircraft operator** or a designated representative in accordance with locally agreed procedures.

Annex 6:

Operational control. The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

PART: RULES OF THE AIR

SECTION 8

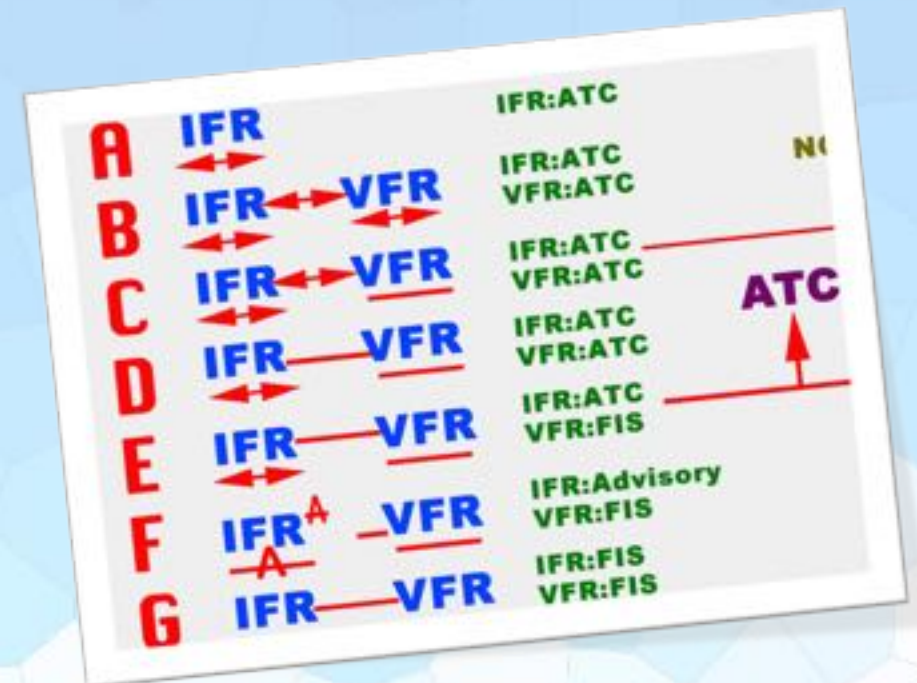
AIR TRAFFIC CONTROL SERVICE

AIR TRAFFIC CONTROL SERVICE

SIRA.8001 Application

Air traffic **control** service shall be provided:

- a) to all IFR flights in airspace Classes A, B, C, D and E;
- b) to all VFR flights in airspace Classes B, C and D;
- c) to all **special VFR** flights;
- d) to all aerodrome traffic at **controlled aerodromes**



AIR TRAFFIC CONTROL SERVICE

SIRA.8005 Operation of air traffic control service

- a) In order to provide air traffic **control** service, an air traffic control **unit** shall:
- 1) be provided with information on the **intended movement** of each aircraft, or variations therefrom, and with current information on the **actual progress** of each aircraft;
 - 2) determine from the information received, the **relative positions** of known aircraft to each other;
 - 3) issue **clearances** and **information** for the purpose of preventing collision between aircraft under its control and of expediting and maintaining an orderly flow of traffic;
 - 4) **coordinate** clearances as necessary with other units:
 - i. whenever an aircraft might otherwise conflict with traffic operated under the control of such other units;
 - ii. before transferring control of an aircraft to such other units.

AIR TRAFFIC CONTROL SERVICE

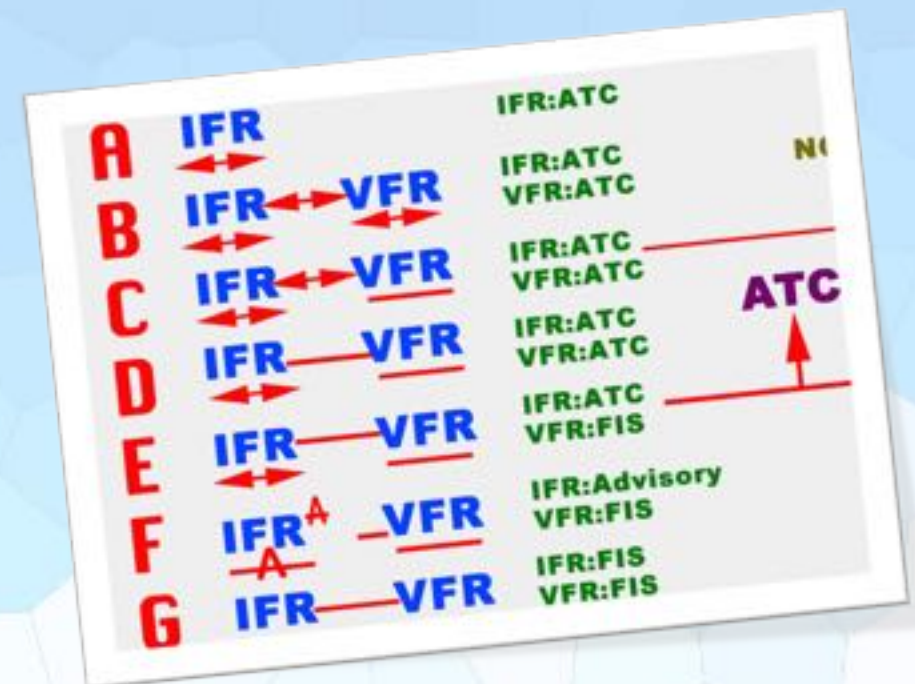
SIRA.8005 Operation of air traffic control service

b) Clearances issued by air traffic control units shall **provide separation**:

- 1) between all flights in airspace Classes A and B;
- 2) between IFR flights in airspace Classes C, D and E;
- 3) between IFR flights and VFR flights in airspace Class C;
- 4) between IFR flights and special VFR flights;
- 5) between special VFR flights;

except that, a flight may be cleared subject to **maintaining own separation** when:

- **requested by the pilot** of an aircraft and
- **agreed** by the pilot of the other aircraft
- in airspace **Classes D and E**,
- **below 3 050 m (10 000 ft)**
- during **climb** or **descent**,
- during **daylight**
- in **visual meteorological conditions**.



AIR TRAFFIC CONTROL SERVICE

SIRA.8005 Operation of air traffic control service

GM1 SIRA.8005(b) Operation of air traffic control service

CLEARANCES TO MAINTAIN OWN SEPARATION

Clearances for a pilot to maintain own separation in respect of a specific portion of the flight in airspace Classes D and E below 3 050 m (10 000 ft) during climb or descent, during day in visual meteorological conditions are based on the fact that in those airspace classes a **speed restriction of 250 kt is applied** to all flights, allowing pilots of both aircraft to observe other flights in time to avoid collision.

except that, a flight may be cleared subject to **maintaining own separation** when:

- **requested by the pilot** of an aircraft and
- **agreed** by the pilot of the other aircraft
- in airspace **Classes D and E**,
- **below 3 050 m (10 000 ft)**
- during **climb** or **descent**,
- during **daylight**
- in **visual meteorological conditions**.

AIR TRAFFIC CONTROL SERVICE

SIRA.8005 Operation of air traffic control service

c) Except for cases when a reduction in separation minima in the vicinity of aerodromes can be applied, **separation by an air traffic control unit shall be obtained by at least one of the following:**

1) vertical separation, obtained by assigning different levels selected from the **table of cruising levels** in Appendix 3 to this Regulation, except that the correlation of levels to track as prescribed therein shall not apply whenever otherwise indicated in appropriate **aeronautical information publications** or air traffic control **clearances**. **The vertical separation minimum shall be a nominal 300 m (1 000 ft) up to and including FL 410 and a nominal 600 m (2 000 ft) above this level;**

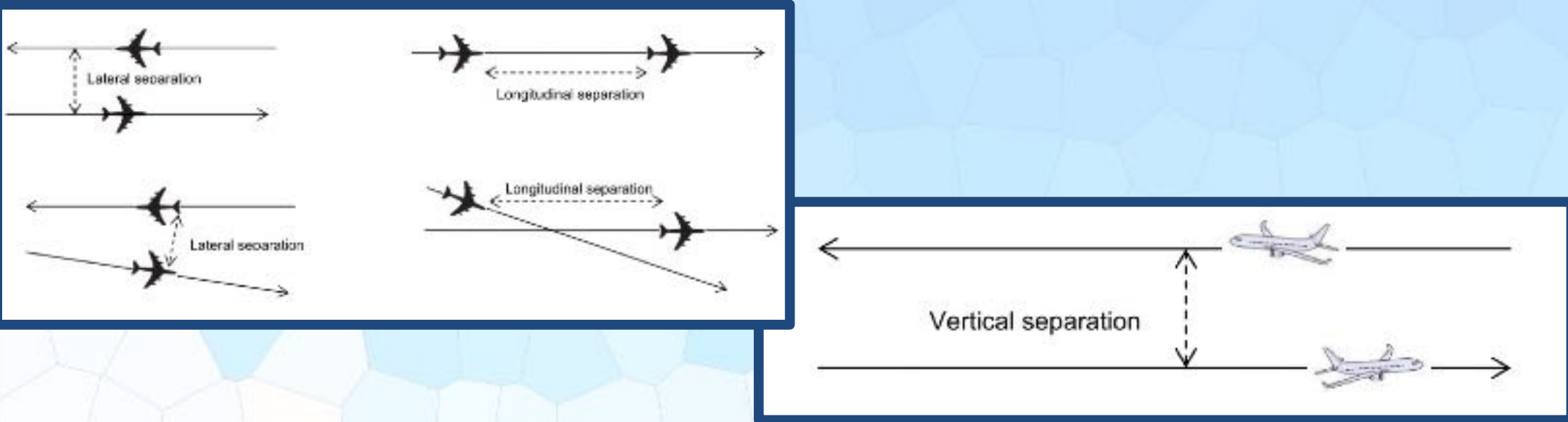
2) horizontal separation, obtained by providing:

- i. **longitudinal separation**, by maintaining an interval between aircraft operating along the same, converging or reciprocal tracks, expressed in time or distance; or
- ii. **lateral separation**, by maintaining aircraft on different routes or in different geographical areas.

AIR TRAFFIC CONTROL SERVICE

SIRA.8005 Operation of air traffic control service

- c) Except for cases when a reduction in separation minima in the vicinity of aerodromes can be applied, **separation by an air traffic control unit shall be obtained by at least one of the following:**



Annex 11**CHAPTER 3. AIR TRAFFIC CONTROL SERVICE****3.4 Separation minima**

3.4.2 Details of the selected separation minima and of their areas of application shall be notified:

- a) to the ATS units concerned; and
- b) to pilots and operators through aeronautical information publications, where separation is based on the use by aircraft of specified navigation aids or specified navigation techniques.

To provide separation, ATC uses two forms of control: **procedural** and **radar**. (Doc.9689 manual of airspace methodology)

Procedural control. the application of separation based **solely on position information received from the aircraft(pilot reports)**.

Radar contact. The situation which exists when the radar position of a particular aircraft is seen and identified on a situation display. [The radar identity of the aircraft has been established]



AIR TRAFFIC CONTROL SERVICE

SIRA.8010 Separation minima

- a) The **selection of separation minima** for application within a given portion of airspace shall be made by the appropriate **ANSP** and approved by the **CAO.IRI**.
- b) For traffic that will pass from one into the other of neighbouring airspaces and for routes that are closer to the common boundary of the neighbouring airspaces than the separation minima applicable in the circumstances, the **selection of separation minima** shall be made in **consultation between the ANSPs** responsible for the provision of air traffic services in neighbouring airspace.
- c) Details of the selected separation minima and of their areas of application shall be notified:
 - 1) to the **air traffic services units** concerned; and
 - 2) to **pilots** and aircraft operators through **aeronautical information publications**, where separation is based on the use by aircraft of specified navigation aids or specified navigation techniques.

AIR TRAFFIC CONTROL SERVICE

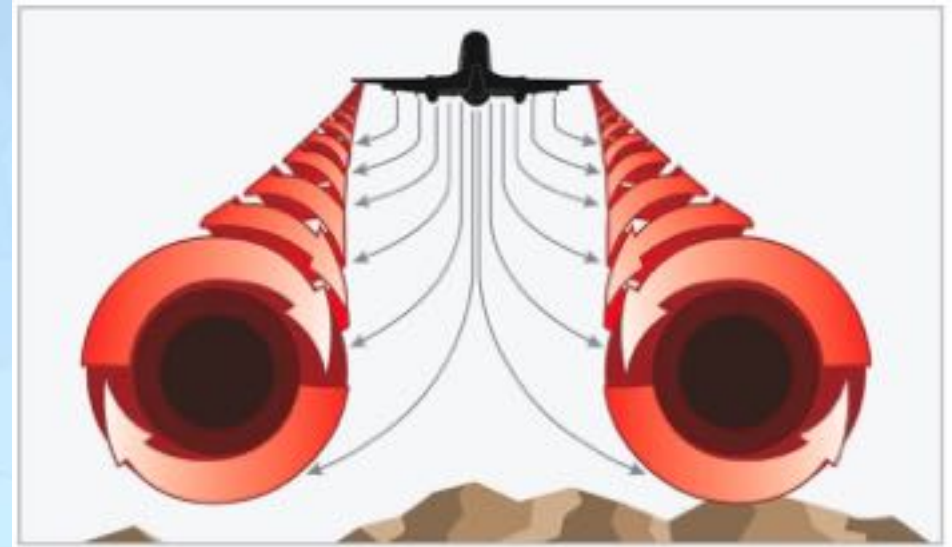
SIRA.8012 Application of **wake turbulence** separation



a) **Wake turbulence separation** minima shall be applied to aircraft in the **approach** and **departure** phases of flight under the following circumstances:

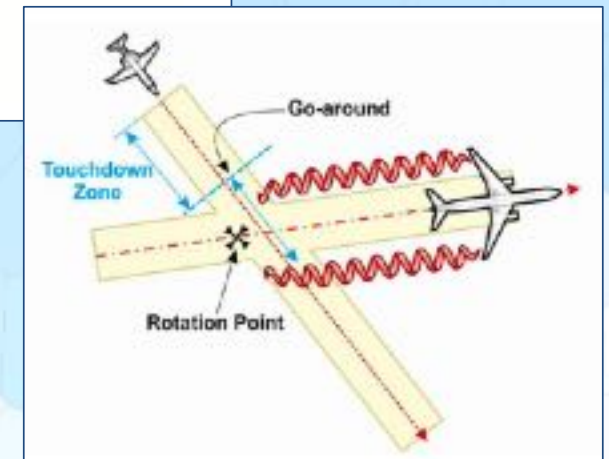
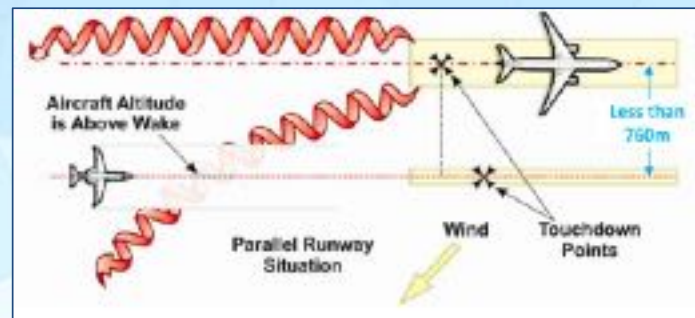
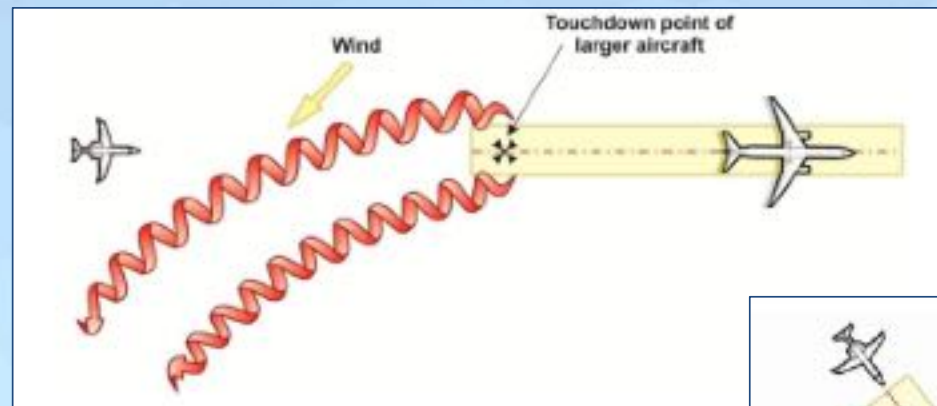
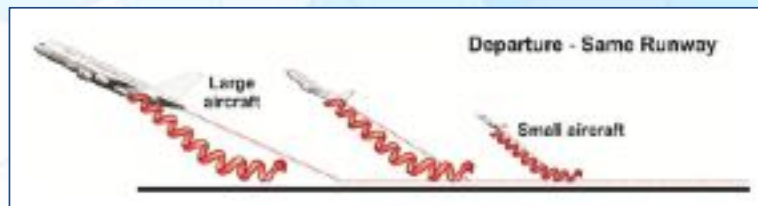
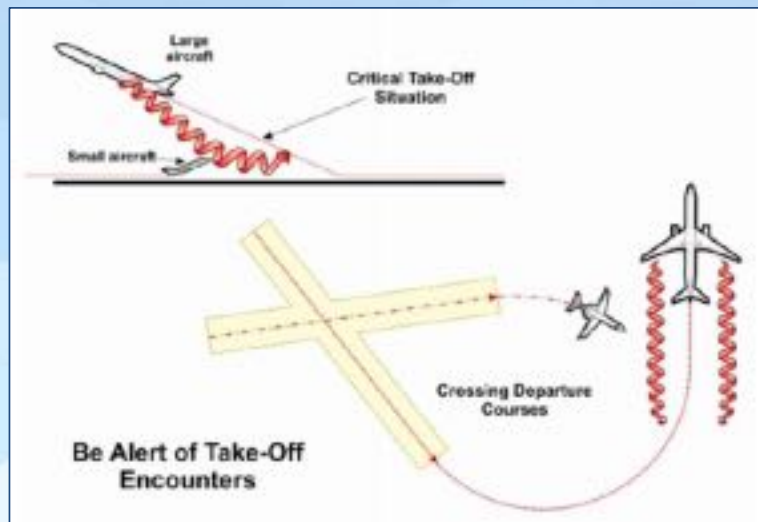
- 1) an aircraft is operating directly behind another aircraft at the **same altitude** or **less than 300 m (1 000 ft) below** it; or
- 2) both aircraft are using the **same runway** or **parallel runways separated by less than 760 m (2 500 ft)**; or
- 3) an aircraft is **crossing behind** another aircraft at the **same altitude** or **less than 300 m (1 000 ft) below** it.

b) ?



AIR TRAFFIC CONTROL SERVICE

SIRA.8012 Application of **wake turbulence** separation



AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

a) Air traffic control clearances shall be based solely on the following requirements for providing air traffic **control** service:

- 1) Clearances shall be issued solely for **expediting** and **separating** air traffic and be based on **known** traffic conditions which affect safety in aircraft operation. Such traffic conditions include not only aircraft in the **air** and on the **manoeuvring area** over which control is being exercised, but also any **vehicular** traffic or other **obstructions not permanently installed** on the manoeuvring area in use.
- 2) ATC units shall issue such ATC clearances as necessary to **prevent collisions** and to **expedite** and maintain an **orderly flow** of air traffic.
- 3) ATC clearances shall be issued **early enough** to ensure that they are transmitted to the aircraft in sufficient time for it to **comply** with them.

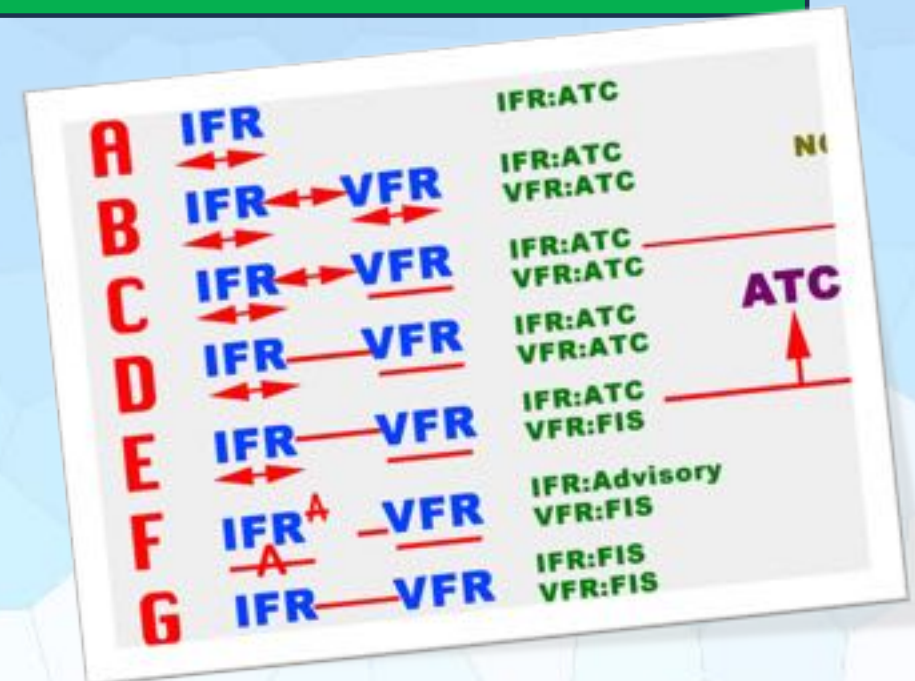
AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

GM1 SIRA.8015(a) Air traffic control clearances

Clearances to VFR flights in airspace classes **C** and **D** do not imply any form of separation:

- a) in Class C — between VFR flights; and
- b) in Class D — between IFR and VFR flights or between VFR flights.



AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

b) Operation subject to clearance

- 1) An air traffic control clearance **shall be obtained prior to operating a controlled flight**, or a portion of a flight as a controlled flight. Such clearance shall be **requested through the submission of a flight plan** to an air traffic control unit.
- 2) The **pilot-in-command** of an aircraft shall inform ATC if an air traffic control clearance is **not satisfactory**. In such cases, ATC will issue an **amended clearance**, if practicable.
- 3) Whenever an aircraft has requested a clearance involving **priority**, a report explaining the **necessity** for such priority shall be submitted, if requested by the appropriate air traffic control unit.
- 4) **Potential reclearance in flight**. If, prior to departure, it is anticipated that, depending on fuel endurance and subject to reclearance in flight, a decision may be taken to proceed to a **revised destination aerodrome**, the appropriate air traffic control units shall be so notified by the insertion in the flight plan of information concerning the revised **route** (where known) and the revised **destination**.
- 5) An aircraft operated on a **controlled aerodrome shall not taxi** on the manoeuvring area without clearance from the aerodrome control tower and shall comply with any instructions given by that unit.

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

GM1 SIRA.8015(b)(4) Air traffic control clearances

OPERATION SUBJECT TO CLEARANCE — POTENTIAL RECLEARANCE IN FLIGHT

The intent of the provision relating to potential reclearance is to facilitate reclearance to a revised destination, normally beyond the filed destination aerodrome.

E.g. Item 18 of Flight Plan: **RIF/LAM G666 LVA W147 OIBK.**

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

d) Contents of clearances

An air traffic control clearance shall indicate:

- 1) aircraft identification as shown in the flight plan;
- 2) clearance limit;
- 3) route of flight, ...
 - i. the route of flight shall be detailed in each clearance when deemed necessary; and
 - ii. the phrase '**CLEARED VIA FLIGHT PLANNED ROUTE**' shall not be used when granting a re - clearance;
- 4) level(s) of flight for the entire route or part thereof and changes of levels if required;
- ⇒ 5) any necessary instructions or information on other matters such as approach or departure manoeuvres, communications and the time of expiry of the clearance.

QSM1251, CLEARED OISS, VIA P574, FL330, SQUAWK 1573, AFTER DEPARTURE MEHRABAD 1A, RELEASED NOT BEFORE 1043.

52. 'clearance limit' means the point to which an aircraft is granted an air traffic control clearance;

Doc 4444

A clearance limit shall be described by specifying the name of the appropriate **significant point**, or **aerodrome**, or **controlled airspace boundary**.

Normally, the **clearance limit** shall be the **destination aerodrome** or, if not practicable, an **appropriate intermediate point**, and coordination shall be expedited so that a clearance to the destination aerodrome may be issued as soon as possible.



AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

GM1 SIRA.8015(d)(5) Air traffic control clearances

CONTENT OF THE CLEARANCES — TIME OF EXPIRY

The time of expiry of the clearance indicates the time after which the clearance will be automatically cancelled **if the flight has not been commenced**.



AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

e) Read-back of clearances and safety-related information

- 1) The flight crew shall read back to the air traffic controller safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items shall always be read back:
 - I. ATC route clearances;
 - II. clearances and instructions to enter, land on, take off from, hold short of, cross, taxi and backtrack on any runway; and
 - III. runway-in-use, altimeter settings, SSR codes, newly assigned communication channels, level instructions, heading and speed instructions; and
 - IV. transition levels, whether issued by the controller or contained in ATIS broadcasts.
- 2) Other clearances or instructions, including **conditional clearances** and **taxi instructions**, shall be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.
- 3) The **controller shall listen to the read-back** to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and shall take immediate action to **correct** any discrepancies revealed by the read-back.

SIRA

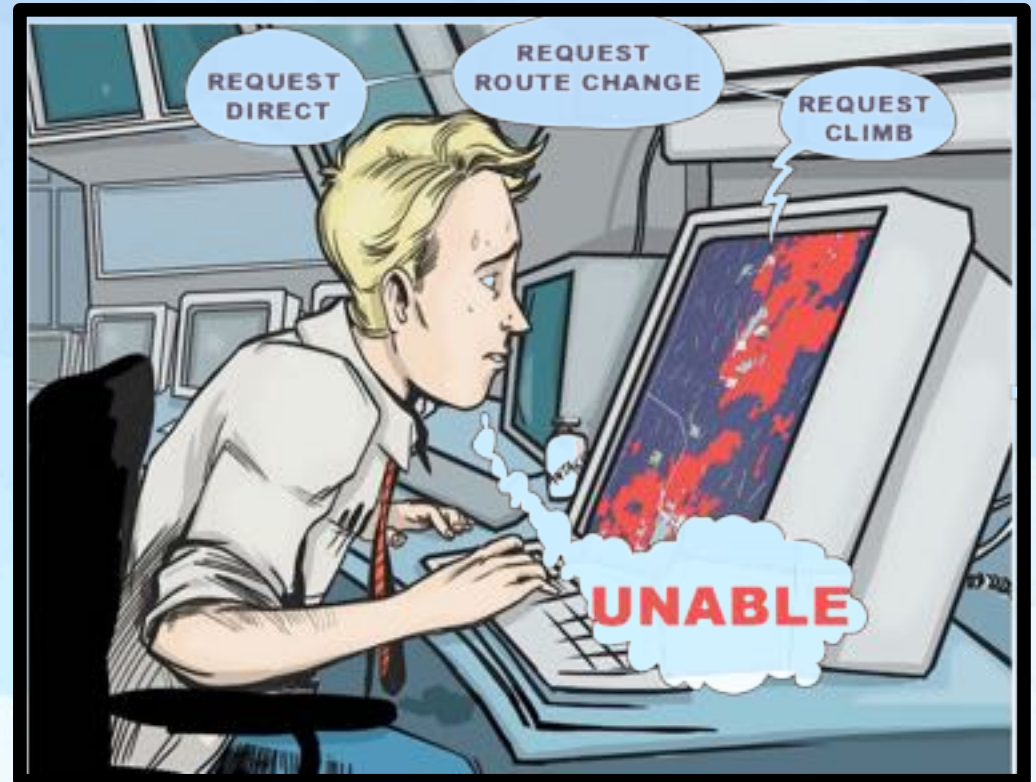
- OFG01, LINE UP RWY 29L. ✈ **LINING UP RWY 29L, OFG01.**
- OFG01, RWY 29L CLEARED TO LAND, WIND CALM. ✈ **RWY 29L CLEARED TO LAND, OFG01.**
- OFG01, RWY 29L CLEARED FOR TAKE OFF, WIND CALM. ✈ **RWY 29L CLEARED FOR TAKE OFF, OFG01.**
- OFG01, HOLD SHORT OF RWY 29L. ✈ **HOLDING SHORT OF RWY 29L, OFG01.**
- OFG01, CROSS RWY 29L. ✈ **CROSSING, OFG01. / CROSSING RWY 29L, OFG01.**
- OFG01, BACKTRACK RWY 29L. ✈ **BACKTRACK RWY 29L, OFG01. (NOT BACKTRACKING)**
- **OFG01, SQUAWK 3001.** ✈ 3001, OFG01. (**NOT SQUAWKING**)
- **OFG01, CONFIRM SQUAWK 3001?** ✈ **OFG01, SQUAWKING 3001.**
- **OFG01, RESET SQUAWK 3001.** ✈ **RESETTING 3001, OFG01.**
- OFG01, JOIN RIGHT HAND DOWNWIND. ✈ **JOIN RIGHT HAND DOWNWIND, OFG01. (NOT JOINING)**
- OFG01, REPORT FINAL. ✈ **OFG01, WILCO.**
- OFG01, EXTEND DOWNWIND. ✈ **EXTENDING DOWNWIND, OFG01.**
- OFG01, ORBIT RIGHT, REPORT AGAIN ON FINAL. ✈ **ORBITING RIGHT, WILCO, OFG01.**
- OFG01, MAKE SHORT APPROACH. ✈ **SHORT APPROACH, OFG01.**
- OFG01, TURN LEFT HEADING 060. ✈ **LEFT HEADING 060, OFG01. (NOT TURNING)**
- OFG01, FLY HEADING 060. ✈ **HEADING 060, OFG01. (NOT FLYING)**
- OFG01, CONTINUE PRESENT HEADING. ✈ **CONTINUING PRESENT HEADING, OFG01.**

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

ea) Changes in clearance regarding route or level

- 1) When issuing a clearance covering a requested change in route or level, the exact nature of the change shall be included in the clearance.
- 2) When traffic conditions will not permit clearance of a requested change, the word '**UNABLE**' shall be used. When warranted by circumstances, an alternative route or level shall be offered.



AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

GM1 SIRA.8015(ea)(1) Air traffic control clearances

The nature of the change should include a description of the route and levels to the point where it joins the previously cleared route, or, if the aircraft will not re-join the previous route, to the destination.



AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

eb) Clearance related to altimetry

1) For flights in areas where a **transition altitude** is established, the vertical position of the aircraft shall, except as provided for in (5) below, be expressed in terms of **altitudes at or below the transition altitude** and in terms of **flight levels at or above the transition level**.

While passing through the transition layer, the vertical position shall be expressed in terms of flight levels when climbing and in terms of altitudes when descending.

2) The flight crew shall be provided with the **transition level** in due time prior to reaching it during descent.

3) A **QNH** altimeter setting shall be included in the **descent clearance** when first cleared at an altitude below the transition level, in approach clearances or clearances to enter the traffic circuit, and in taxi clearances for departing aircraft except when it is known that the aircraft has already received the information in a directed transmission.

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

eb) Clearance related to altimetry

4) A **QFE** altimeter setting shall be provided to aircraft on **request** or on a regular basis in accordance with local arrangements.

5) When an aircraft which has been given clearance to land is completing its approach using atmospheric pressure at aerodrome elevation (**QFE**), the vertical position of the aircraft shall be expressed in terms of **height above aerodrome elevation** during that portion of its flight for which QFE may be used, except that it shall be expressed in terms of **height above runway threshold elevation**:

- I. for instrument runways if the threshold is 2 m **(7 ft) or more** below the aerodrome elevation; and
- II. for precision approach runways.

Annex 6:
more than 2 m (7 ft)

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

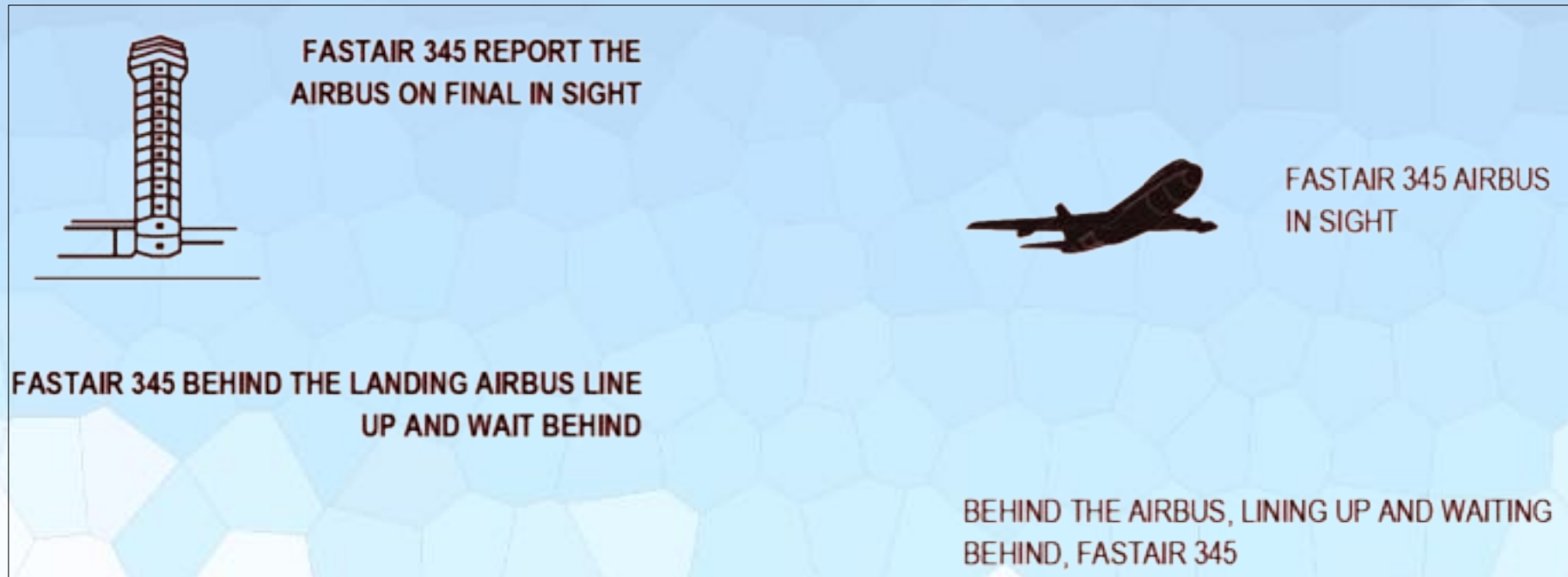
ec) Conditional clearances

- 1) Air traffic controller shall not issue conditional clearances that are dependent upon the movement of an arrival aircraft on or approaching the runway or a departure aircraft established on a take-off roll. **Do not say**, “LINE UP AND WAIT BEHIND LANDING TRAFFIC,” or “CROSS RUNWAY TWO-NINER BEHIND DEPARTING/LANDING A30B”. The above requirements do not preclude issuing instructions to **follow an aircraft observed to be operating on the movement area** in accordance with an ATC clearance/instruction and in such a manner that the instructions to follow are not ambiguous.
- 2) Conditional phrases such as “BEHIND LANDING TRAFFIC” or “AFTER THE DEPARTING AIRCRAFT” shall not be issued.



AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances



In a readback the last thing you say is your call sign.

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

f) Coordination of clearances

- 1) An air traffic control clearance shall be coordinated between air traffic control units to **cover the entire route** of an aircraft or a specified portion thereof as described in provisions (2) to (6).
- 2) An aircraft shall be cleared for the entire route **to the aerodrome of first intended landing**:
 - I. when it has been possible, prior to departure, to coordinate the clearance between all the units under whose control the aircraft will come; or
 - II. when there is reasonable assurance that prior coordination will be affected between those units under whose control the aircraft will subsequently come.
- 3) When coordination as in **(2) has not been achieved** or is not anticipated, the aircraft shall be cleared only to that point where coordination is reasonably assured; **prior** to reaching such point or **at** such point, the aircraft shall receive **further clearance, holding instructions** being issued as appropriate.

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

f) Coordination of clearances

4) When prescribed by the ATS unit, aircraft shall contact a **downstream air traffic control unit** for the purpose of receiving a **downstream clearance** prior to the transfer of control point.

- I. Aircraft shall **maintain the necessary two-way communication with the current** air traffic control unit whilst obtaining a downstream clearance.
- II. A clearance issued as a downstream clearance shall be **clearly identifiable as such** to the pilot.
- III. Unless coordinated, downstream clearances **shall not affect the aircraft's original flight profile** in any airspace, other than that of the air traffic control unit responsible for the delivery of the downstream clearance.

133. 'transfer of control point' means a defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next;

AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

GM1 SIRA.8015(f)(4) Air traffic control clearances

COORDINATION OF CLEARANCES — DOWNSTREAM CLEARANCE

a) In such cases it is assumed that contact of a downstream ATC unit is initiated by the pilot. Therefore, the rules require that the aircraft **maintain the necessary two-way communication with the current ATC unit.**

b) In cases where an aircraft **cannot maintain two-way communication** whilst obtaining a downstream clearance, the pilot needs to seek the acceptance to **leave momentarily** the communication channel of the current ATC unit prior to contacting a downstream ATC unit.

68. 'downstream clearance' means a clearance issued to an aircraft by an air traffic control unit that is not the current controlling authority of that aircraft;

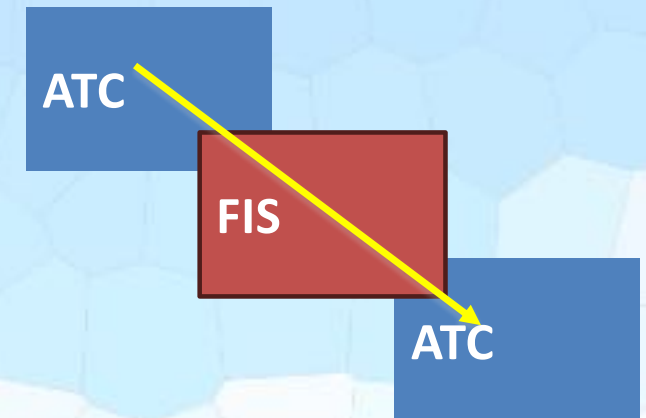
AIR TRAFFIC CONTROL SERVICE

SIRA.8015 Air traffic control clearances

f) Coordination of clearances

5) When an aircraft intends to **depart** from an aerodrome **within a control area to enter another control area** within a period of **thirty minutes**, or such other specific period of time as has been agreed between the area control centres concerned, coordination with the subsequent area control centre shall be affected **prior to issuance of the departure clearance**.

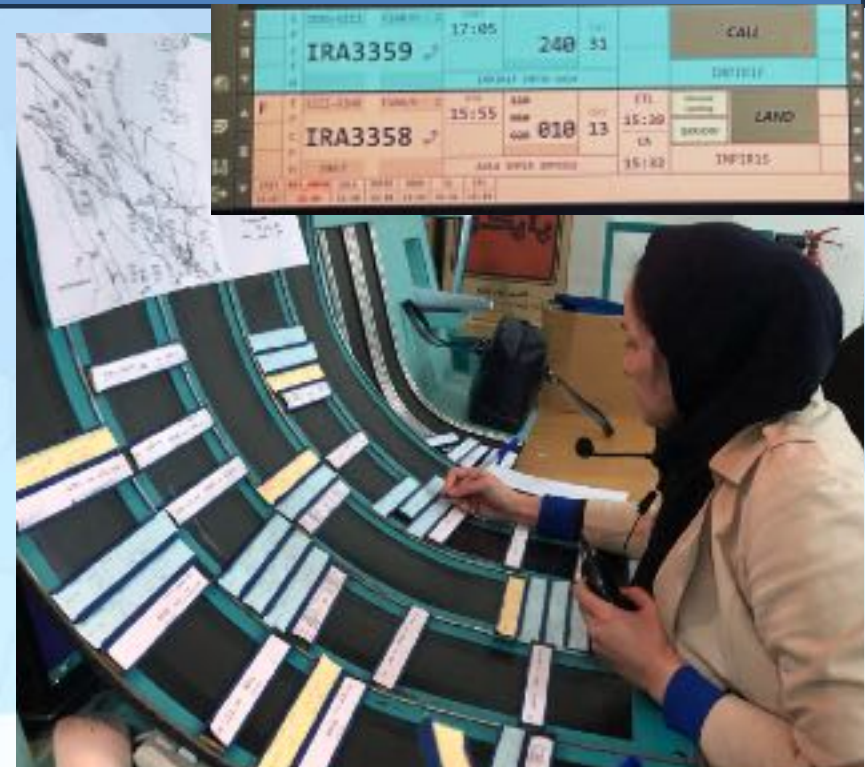
6) When an aircraft intends to **leave a control area for flight outside controlled airspace**, and will subsequently **re-enter the same or another control area**, a clearance from the point of departure to the aerodrome of first intended landing may be issued. Such clearance or revisions thereto shall apply only to those portions of the flight conducted within controlled airspace.



AIR TRAFFIC CONTROL SERVICE

SIRA.8020 Adherence to flight plan

a) Except as provided for in (b) and (d) an aircraft shall adhere to the current flight plan or the applicable portion of a current flight plan submitted for a controlled flight unless a request for a change has been made and clearance obtained from the appropriate air traffic control unit, or unless an emergency situation arises which necessitates immediate action by the aircraft, in which event as soon as circumstances permit, after such emergency authority is exercised, the appropriate air traffic services unit shall be notified of the action taken and that this action has been taken under emergency authority.



AIR TRAFFIC CONTROL SERVICE

SIRA.8020 Adherence to flight plan

- 1) Unless otherwise authorised by CAO.IRI. or directed by the appropriate air traffic control unit, controlled flights shall, in so far as practicable:
 - i. when on an established ATS route, **operate along the defined centre line** of that route; or
 - ii. when on any other route, operate **directly between** the navigation facilities and/or points defining that route.
- 2) Unless otherwise authorised by CAO.IRI., or directed by the appropriate air traffic control unit, an aircraft operating along an ATS route segment defined by reference to **very high frequency omnidirectional radio ranges** shall change over for its primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the **changeover point**, where established.
- 3) Deviation from the requirements in point (1) shall be notified to the appropriate ATS unit.

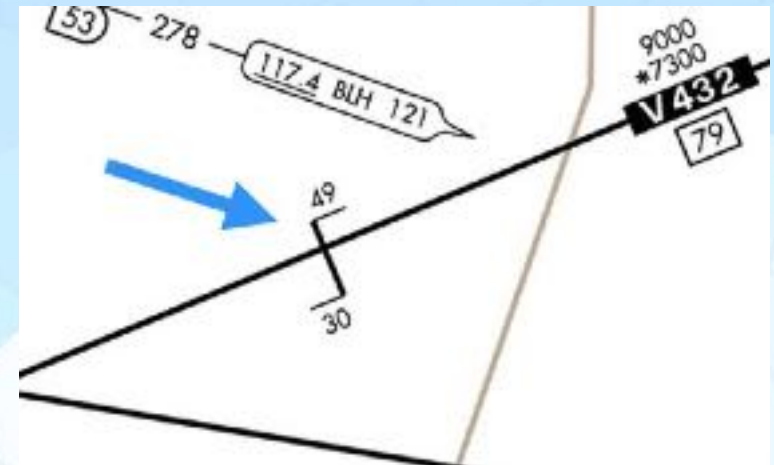
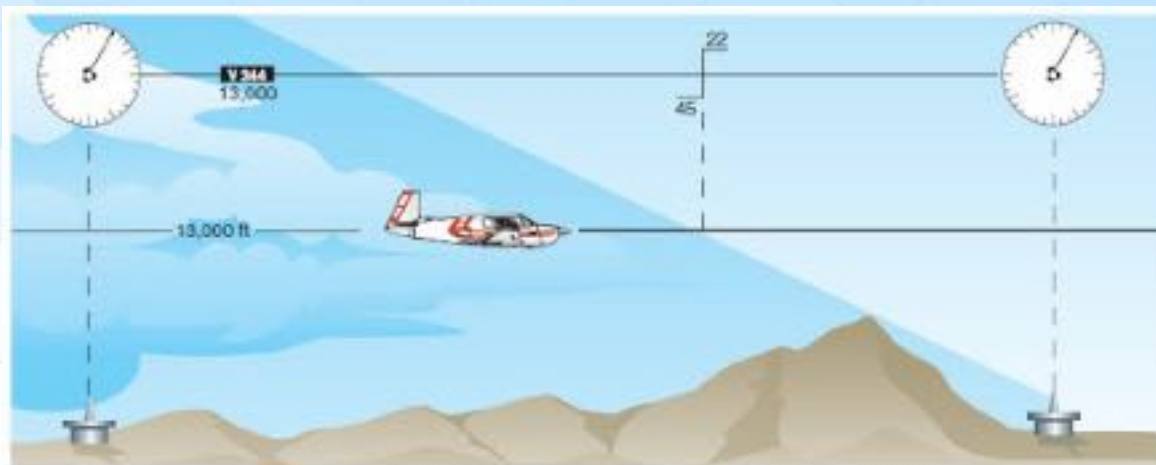


SIRA

51. 'change-over point' means the point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omnidirectional radio ranges is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft;

GM1 Definitions (51) Change-over point

Change-over points are established to provide the optimum balance in respect of signal strength and quality between ground facilities at all levels to be used and to ensure a common source of azimuth guidance for all aircraft operating along the same portion of a route segment.



CHAPTER 2. GENERAL

2.14 Establishment of change-over points

2.14.1 Recommendation.— *Change-over points should be established on ATS route segments defined by reference to very high frequency omnidirectional radio ranges where this will assist accurate navigation along the route segments. The establishment of change-over points should be limited to route segments of 110 km (60 NM) or more, except where the complexity of ATS routes, the density of navigation aids or other technical and operational reasons warrant the establishment of change-over points on shorter route segments.*

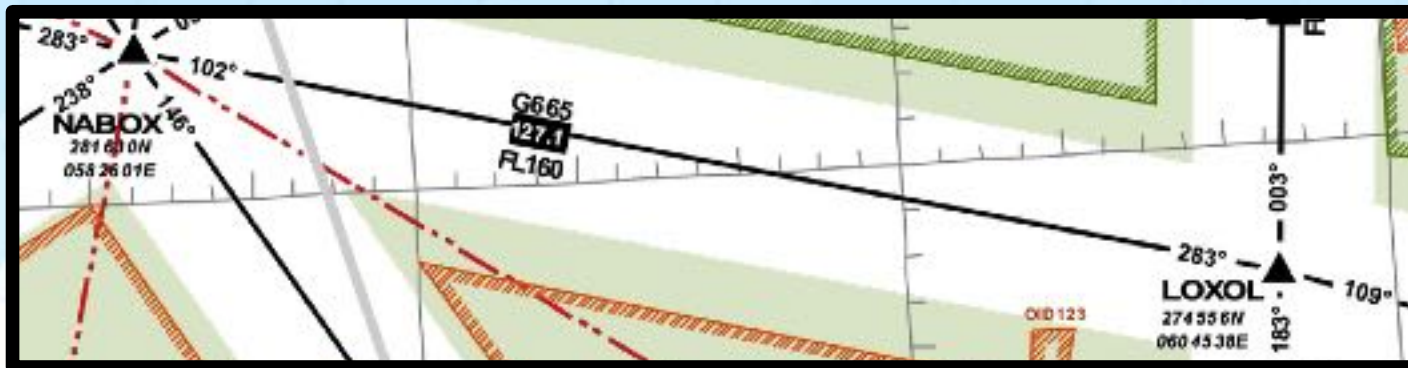
2.14.2 Recommendation.— *Unless otherwise established in relation to the performance of the navigation aids or frequency protection criteria, the change-over point on a route segment should be the mid-point between the facilities in the case of a straight route segment or the intersection of radials in the case of a route segment which changes direction between the facilities.*

46. 'ATS route' means a specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services;

GM1 Definitions (46) ATS route

The term 'ATS route' is used to mean variously **airway**, advisory route, controlled or uncontrolled route, arrival or departure route, etc.

An ATS route is defined by route specifications which include an ATS route **designator**, the track **to** or **from significant points (waypoints)**, **distance** between significant points, **reporting requirements** and the **lowest safe altitude**.



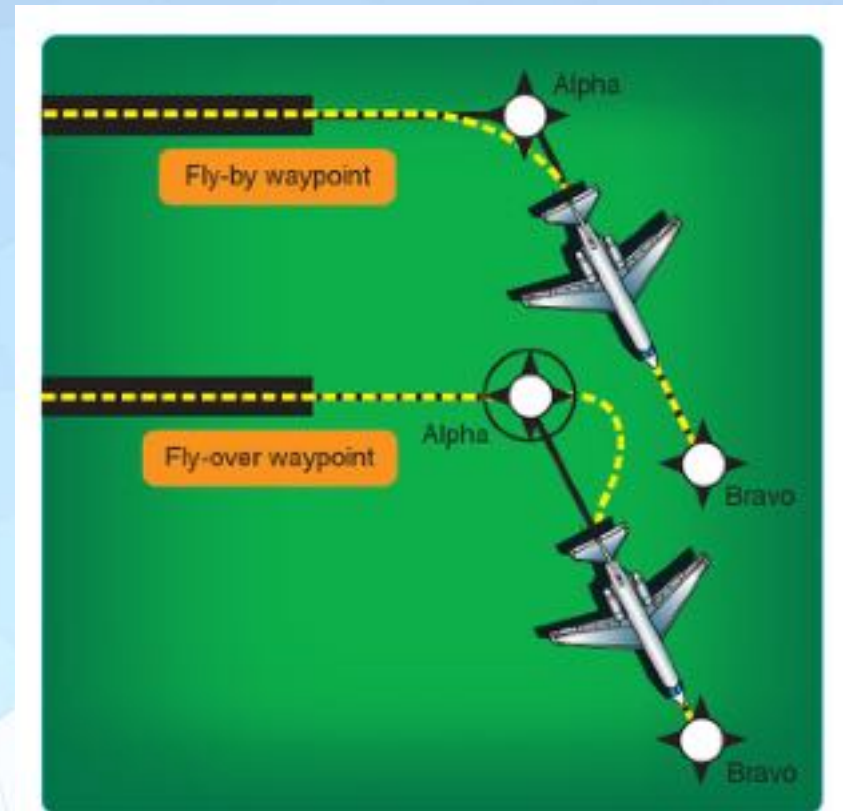
45. 'area navigation (RNAV)' means a method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these;

Waypoint. A specified geographical location used to define an area navigation route or the flight path of an aircraft employing **area navigation**. Waypoints are identified as either:

Fly-by waypoint. A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure, or

Flyover waypoint. A waypoint at which a turn is initiated in order to join the next segment of a route or procedure.

Track. The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

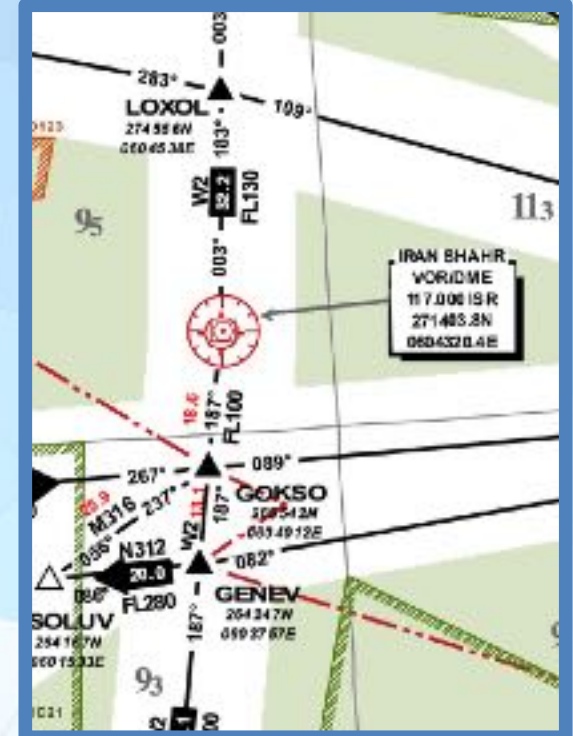
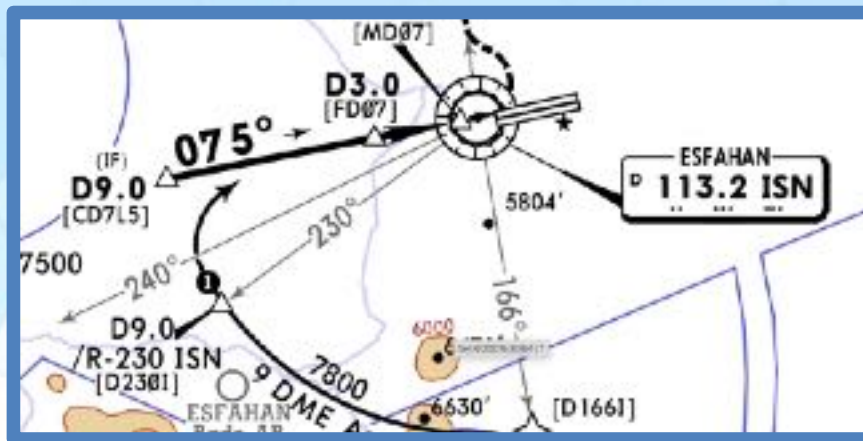


	Non-REGIONAL	REGIONAL
Non-RNAV	HJVV	BARG
RNAV	QTYZ	LMPN

121. 'significant point' means a specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes;

GM1 Definitions (121) Significant point

There are **three** categories of significant points: **ground-based navigation aid**, **intersection**, and **waypoint**. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids.



AIR TRAFFIC CONTROL SERVICE

SIRA.8020 Adherence to flight plan

b) Inadvertent changes.

In the event that a controlled flight inadvertently deviates from its current flight plan, the following action shall be taken:

- 1) **Deviation from track:** if the aircraft is off track, action shall be taken forthwith to **adjust** the **heading** of the aircraft to regain track as soon as practicable.
- 2) **Variation in true airspeed:** if the average **true** airspeed at cruising level between reporting points varies or is expected to vary by plus or minus **5 per cent** of the true airspeed, from that given in the flight plan, the appropriate air traffic services unit shall be so informed.
- 3) **Change in time estimate:** if the time estimate for the next applicable **reporting point**, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error **in excess of 2 minutes** from that notified to ATS, a revised estimated time shall be notified as soon as possible to the appropriate ATS unit.

110. 'reporting point' means a specified geographical location in relation to which the position of an aircraft can be reported;

ANNEX 2

3.6.2.2 **Deviations from the current flight plan.** In the event that a controlled flight deviates from its current flight plan, the following action shall be taken:

- a) **Deviation from track:** if the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain track as soon as practicable.
- b) **Deviation from ATC assigned Mach number/*indicated* airspeed:** the appropriate air traffic services unit shall be informed immediately.
- c) **Deviation from Mach number/*true* airspeed:** if the sustained Mach number/true airspeed at cruising level varies by **plus or minus Mach 0.02** or more, or **plus or minus 10kt** true airspeed or more from the current flight plan, the appropriate air traffic services unit shall be so informed.
- d) **Change in time estimate:** except where ADS-C is activated and serviceable in airspace where ADS-C services are provided, if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, changes **in excess of 2 minutes** from that previously notified to air traffic services, or such other period of time as is prescribed by the appropriate ATS authority or on the basis of regional air navigation agreements, the flight crew shall notify the appropriate air traffic services unit as soon as possible.

AIR TRAFFIC CONTROL SERVICE

SIRA.8020 Adherence to flight plan

c) Intended changes.

Requests for flight plan changes shall include information as indicated hereunder:

1) **Change of cruising level**: aircraft identification; requested new cruising level and cruising speed at this level, revised time estimates (when applicable) at subsequent flight information region boundaries.

2) **Change of route**:

- i. **Destination unchanged**: aircraft identification; flight rules; description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence; revised time estimates; any other pertinent information.
- ii. **Destination changed**: aircraft identification; flight rules; description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which requested change of route is to commence; revised time estimates; **alternate aerodrome(s)**; any other pertinent information.

38. 'alternate aerodrome' means an aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing, where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate aerodromes include the following:

- (a) **take-off alternate**: an alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure;
- (b) **en-route alternate**: an alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route;
- (c) **destination alternate**: an alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing;

GM1

The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

AIR TRAFFIC CONTROL SERVICE

SIRA.8020 Adherence to flight plan

VFR encountering IMC

d) Weather deterioration below the VMC.

When it becomes evident that flight in VMC in accordance with its current flight plan will not be practicable, a **VFR** flight operated as a **controlled** flight shall:

- 1) request an amended clearance enabling the aircraft to **continue in VMC to destination or to an alternative aerodrome**, or to leave the airspace within which an ATC clearance is required; or
- 2) if no clearance in accordance with a) can be obtained, continue to operate in VMC and notify the appropriate ATC unit of the action being taken either to **leave the airspace concerned or to land at the nearest suitable aerodrome**; or
- 3) if operated within a control zone, request authorisation to operate as a **special VFR** flight; or
- 4) request clearance to operate in accordance with the **instrument flight rules**.

AIR TRAFFIC CONTROL SERVICE

SIRA.8025 Position reports

a) Unless exempted by the ANSP or by the appropriate air traffic services unit under conditions specified by that authority, a **controlled** flight shall report to the appropriate air traffic services unit, as soon as possible, the time and level of passing each designated **compulsory reporting point**, together with any other required information.

Position reports shall similarly be made in relation to **additional points** when requested by the appropriate air traffic services unit.

In the absence of designated reporting points, position reports shall be made at intervals prescribed by the ANSP or specified by the appropriate air traffic services unit.

MATS

3.8.1.2 For flights operating in uncontrolled airspaces or in designated areas, position reports shall be made by the aircraft at half hour intervals of flight or at shorter intervals of time as requested by the ATS unit.

4444

4.11.1.2 On routes not defined by designated significant points, position reports shall be made by the aircraft as soon as possible after the first half hour of flight and at hourly intervals thereafter, except as provided in 4.11.1.3. Additional reports at shorter intervals of time may be requested by the appropriate ATS unit.

AIR TRAFFIC CONTROL SERVICE

SIRA.8025 Position reports

- 1) Controlled flights providing position information to the appropriate air traffic services unit via data link communications shall only provide voice position reports when requested.
- 2) When a controlled flight has been **exempted** from the requirement to report at compulsory reporting points, pilots shall, unless automated position reporting is in effect, **resume** voice or CPDLC position reporting:
 - i. when so **instructed**;
 - ii. when advised that the **ATS surveillance service has been terminated**; or
 - iii. when advised that the **ATS surveillance identification is lost**.
- 3) The format of position reports shall be in accordance with **Appendix 5, Point A**.



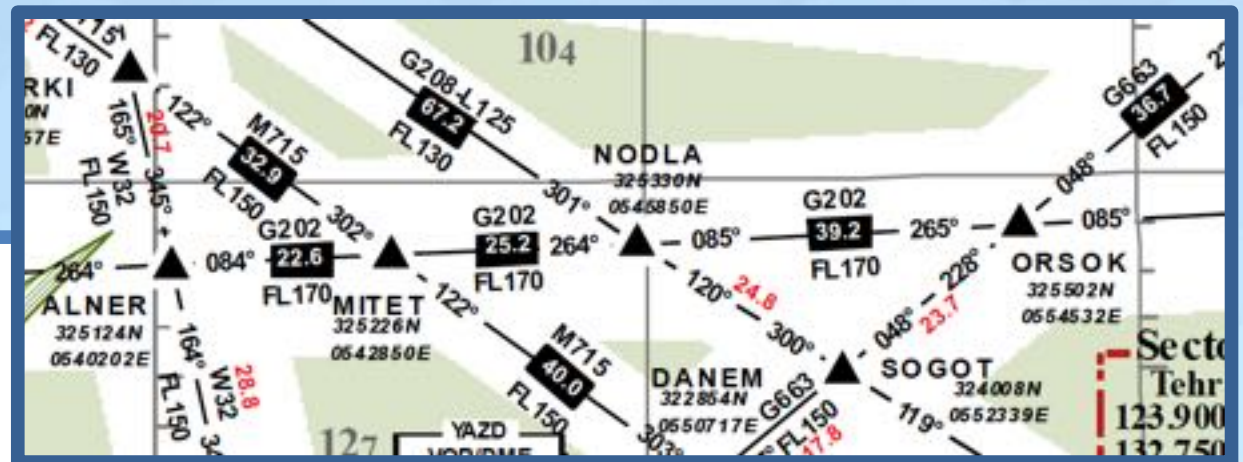
24. 'air-report' means a report from an aircraft in flight prepared in conformity with requirements for **position**, and **operational** and/or **meteorological** reporting;

Position report

CALL SIGN

- 1) POSITION – TIME – LEVEL
- 2) NEXT POSITION – ESTIMATE
- 3) ENSUING POINT

EXAMPLE: **IRB921**, ORSOK 20 FL300, NODLA 25, MITET NEXT.



AIR TRAFFIC CONTROL SERVICE

SIRA.8025 Position reports

Appendix 5, Point A

Section 1	1	Aircraft identification	<i>(aircraft identification)</i>
	2	Position	POSITION <i>(latitude and longitude)</i> OVER <i>(significant point)</i> ABEAM <i>(significant point)</i> <i>(significant point) (bearing) (distance)</i>
	3	Time	<i>(time)</i>
	4	Level	FLIGHT LEVEL <i>(number)</i> or <i>(number)</i> METRES or FEET CLIMBING TO FLIGHT LEVEL <i>(number)</i> or <i>(number)</i> METRES or FEET DESCENDING TO FLIGHT LEVEL <i>(number)</i> or <i>(number)</i> METRES or FEET
	5	Next position and estimated time over	<i>(position) (time)</i>
	6	Ensuing significant point	<i>(position)</i> NEXT

SIRA



**FASTAIR 345 NEXT
REPORT COLIN**



FASTAIR 345 WILCO

**FASTAIR 345 OMIT POSITION
REPORTS UNTIL FIR BOUNDARY,
NEXT REPORT COLIN**

FASTAIR 345 WILCO

**FASTAIR 345 RESUME POSITION
REPORTING**

FASTAIR 345 WILCO

AIR TRAFFIC CONTROL SERVICE

SIRA.8035 Communications

a) All aircraft operating within Tehran FIR shall maintain continuous air-ground voice communication watch on the appropriate communication channel of, and establish two-way communication with the appropriate air traffic service unit.

1) The requirement for an aircraft to maintain an air-ground voice communication watch shall remain in effect when CPDLC has been established.

b) Procedures related to radio communication failure contained in MATS 12.1.5 and related pages of AIP AD2.22 for each aerodrome.

12.1.5 Air-ground communications failure

12.1.5.1 Complete Aircraft Communication Failure procedure when providing ATS surveillance services:

12.1.5.1.1 When a controlled aircraft experiencing complete communication failure is operating or expected to operate in an area and at flight levels where an ATS surveillance service is applied, separation specified in Para 8.2.13 may continue to be used. However, if the aircraft experiencing the communication failure is not identified, separation shall be applied between identified aircraft and all unidentified aircraft observed along the expected route of the aircraft with the communication failure, until such time as it is known, or can safely be assumed, that the aircraft with radio communication failure has passed through the airspace concerned, has landed, or has proceeded elsewhere.

Note: an aircraft equipped with an SSR transponder is expected to operate the transponder on Mode A Code 7600 to indicate that it has experienced air-ground communication failure.

12.1.5.2 Communication failure procedure concerning departing aircraft:

12.1.5.2.1 Clearances for departing aircraft may specify a cleared level other than that indicated in the filed flight plan for the En-route phase of flight, without a time or geographical limit for the cleared level. Such clearances will normally be used to facilitate the application of tactical control methods by ATC, normally through the use of an ATS surveillance system.

AIR TRAFFIC CONTROL SERVICE

SIRA.8035 Communications

AMC1 SIRA.8035 Communications

ESTABLISHMENT OF PILOT-CONTROLLER COMMUNICATIONS

Direct pilot-controller communications should be established **prior** to the provision of **ATS surveillance services** unless special circumstances, such as emergencies, dictate otherwise.



PART: RULES OF THE AIR

SECTION 9

FLIGHT INFORMATION SERVICE

FLIGHT INFORMATION SERVICE

SIRA.9001 Application

- a) Flight information service shall be provided by the appropriate air traffic services units to all aircraft which are likely to be affected by the information and which are:
 - 1) provided with air traffic **control** service; or
 - 2) otherwise **known** to the relevant air traffic services units.
- b) Flight information service does not relieve the pilot-in-command of an aircraft of any responsibilities and the **pilot-in-command** has to make the **final decision** regarding any suggested alteration of flight plan
- c) Where air traffic services units provide **both** flight information service and air traffic control service, the provision of air traffic control service **shall have precedence** over the provision of flight information service whenever the provision of air traffic control service so requires.

FLIGHT INFORMATION SERVICE

SIRA.9005 Scope of flight information service

- a) Flight information service shall include the provision of pertinent:
- 1) **weather** conditions reported or forecast at departure, destination and as appropriate, alternate aerodromes such as “METAR”, “SPECI”, “AIRMET” “SIGMET”, “AREA FORCAST”, “TAF”, etc.;
 - 2) information on changes in the serviceability of **navigation aids**;
 - 3) information on changes in **condition of aerodromes** and associated facilities, including information on the state of the aerodrome movement areas when they are affected by snow, ice or significant depth of water;
 - 4) information on unmanned free **balloons**;
 - 5) information concerning pre-eruption **volcanic** activity, volcanic eruptions and volcanic ash clouds;

FLIGHT INFORMATION SERVICE

SIRA.9005 Scope of flight information service

- a) Flight information service shall include the provision of pertinent:
- 6) information concerning the release into the atmosphere of **radioactive** materials or **toxic chemicals**;
 - 7) **collision hazards**, to aircraft operating in airspace Classes **C, D, E, F, and G**;
 - 8) any **other information** likely to affect safety;
 - 9) for flight over **water** areas, in so far as practicable and when requested by a pilot, any available information such as radio call sign, position, true track, speed, etc., of surface **vessels** in the area.
- b) Flight information service provided to **VFR flights** shall include, in addition to that outlined in (a), the provision of available information concerning **traffic and weather conditions along the route of flight** that are likely to make operation under the visual flight rules impracticable.

FLIGHT INFORMATION SERVICE

SIRA.9005 Scope of flight information service

GM1 SIRA.9005 (b)(7) Scope of flight information service

INFORMATION RELATED TO COLLISION HAZARDS

Information relating to **collision hazards** in respect of **unknown aircraft** might constitute a collision hazard to the aircraft informed, will sometimes be **incomplete** and air traffic services cannot assume responsibility for its **issuance** at all times or for its **accuracy**.



49. 'automatic terminal information service (ATIS)' means the automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:

- (a) **'Data link-automatic terminal information service (D-ATIS)'** means the provision of ATIS via data link;
- (b) **'Voice-automatic terminal information service (Voice-ATIS)'** means the provision of ATIS by means of continuous and repetitive voice broadcasts;

ATIS† *(to be pronounced "AY-TIS")*
Automatic terminal information service

D-ATIS† *(to be pronounced "DEE-ATIS")* Data link automatic terminal information service

Doc 8400

PROCEDURES FOR AIR NAVIGATION SERVICES

ICAO Abbreviations and Codes

Ninth Edition, 2016

Automatic Terminal
Information Service (ATIS)



FLIGHT INFORMATION SERVICE

SIRA.9010 Automatic terminal information service (ATIS)

a) Use of the ATIS messages in directed request/reply transmissions

- 1) When requested by the pilot, the applicable ATIS message(s) shall be transmitted by the appropriate air traffic services unit.
- 2) Whenever Voice-ATIS and/or D-ATIS is provided:
 - i. **aircraft shall acknowledge** receipt of the information upon establishing communication with the ATS unit providing approach control service, the aerodrome control tower or Aerodrome Flight Information Service (AFIS), as appropriate; and
 - ii. the appropriate **air traffic services unit** shall, when replying to an aircraft acknowledging receipt of an ATIS, provide the aircraft with the **current altimeter setting**.



FLIGHT INFORMATION SERVICE

SIRA.9010 Automatic terminal information service (ATIS)

a) **Use of the ATIS messages in directed request/reply transmissions**

3) Information contained in a current ATIS, the receipt of which has been acknowledged by the aircraft concerned, **need not be included in a directed transmission to the aircraft**, with the exception of the **altimeter setting**, which shall be provided in accordance with (2).

4) If an aircraft acknowledges receipt of an **ATIS that is no longer current**, any element of information that needs updating shall be transmitted to the aircraft without delay.

OING ATIS Display

ATIS Client - Version 2.2.2.14
 File Command Settings Window About

Date: 2024/12/18 UTC Time: 15:31:12 Local Time: 15:01:12
 User Name: 1

Information: Designator: **B** ☒ METAR ☐ SPECI Delay: 0

Airport Name: **GORGAN INTERNATIONAL AIRPORT**

Instrument Approach: **EXPECT ILS Z APP RWY 13**

Runway(s) in use:

Arr RWY:	RWY Condition:	Braking Action:	Arr SHOWTIME:
13	?	?	RUNWAY 13:
Dep RWY:	RWY Condition:	Braking Action:	Dep SHOWTIME:
31	?	?	RUNWAY 31 SUR

Visibility: **9999** Wind Dir: 110 Wind Speed: 05 Wind Gust: None
 Prev Vis: None Prev Wh: None

Amount: Height: Type: Amount: Height: Type: ☐ SKC ☐ NSC ☐ CAVOK
 FEW 2500 BKN 8000 None

Temp: **8** Dew point: **6** T L: **160** qref: (qpa) **1025** qfm: (qsk) **?**

Wind Shear: Trend Forecast: **NOSIG**

Specific ATIS Instructions: Pronunciation:

ATIS Information Transmitting

GORGAN INTERNATIONAL AIRPORT, Information Bravo, time 1500 zulu. EXPECT ILS Z APP RWY 13. RWY 13 for arrivals, RUNWAY 13 SURFACE CONDITION REPORT CODES 6, 6, 6, ISSUED AT 1457, FIRST PART DRY, DEPTH NOT REPOERTED, COVERAGE 100 PERCENT, SECOND PART DRY, DEPTH NOT REPOERTED, COVERAGE 100 PERCENT, THIRD PART DRY, DEPTH NOT REPOERTED, COVERAGE 100 PERCENT, RWY 31 for departures, RWY 31 SURFACE CONDITION REPORT CODES 6, 6, 6, ISSUED AT 1457, FIRST PART DRY, DEPTH NOT REPOERTED, COVERAGE 100 PERCENT, SECOND PART DRY, DEPTH NOT REPOERTED,

Status Board
 Manual Voice Record
 Recorded: None
 Just Recorded
 Append recorded to text
 Just Text
 Send Message
 Send to Forward (ATIS)

FLIGHT INFORMATION SERVICE

SIRA.9010 Automatic terminal information service (ATIS)

b) ATIS for arriving and departing aircraft

ATIS messages containing both arrival and departure information shall contain the following elements of information **in the order listed**:

- (1) name of aerodrome;
- (2) arrival and/or departure indicator;
- (3) contract type, if via D-ATIS;
- (4) designator;
- (5) time of observation, if appropriate;
- (6) type of approach(es) to be expected;
- (7) the runway(s) in use; status of arresting system constituting a potential hazard, if any;
- (8) significant runway surface conditions and, if appropriate, braking action;
- (9) holding delay, if appropriate;
- (10) transition level, if applicable;
- (11) other essential operational information;

Shiraz international airport, information Echo, time 1700 Zulu. Expect VOR/DME approach runway 29 left. Runway 29 left for arrivals. Runway 29 right for departures. Transition level 145. ILS off the air. Wind 060 degrees 4 knots. CAVOK. Temperature 33. Dew point Minus 06. QNH 1012 Hectopascals equal 29.91 inches. Acknowledge information Echo.

FLIGHT INFORMATION SERVICE

SIRA.9010 Automatic terminal information service (ATIS)

b) ATIS for arriving and departing aircraft

- (12) surface wind direction (in degrees magnetic) and speed,
- *(13) visibility and, when applicable, RVR
- *(14) present weather;
- *(15) cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility;
- (16) air temperature;
- (17) dew point temperature;
- (18) altimeter setting(s);
- (19) any available information on significant meteorological phenomena in the approach and climb-out areas including wind shear, and information on recent weather of operational significance;
- (20) trend forecast, when available; and
- (21) specific ATIS instructions.

FLIGHT INFORMATION SERVICE

SIRA.9010 Automatic terminal information service (ATIS)

c) ATIS for arriving aircraft

...

d) ATIS for departing aircraft

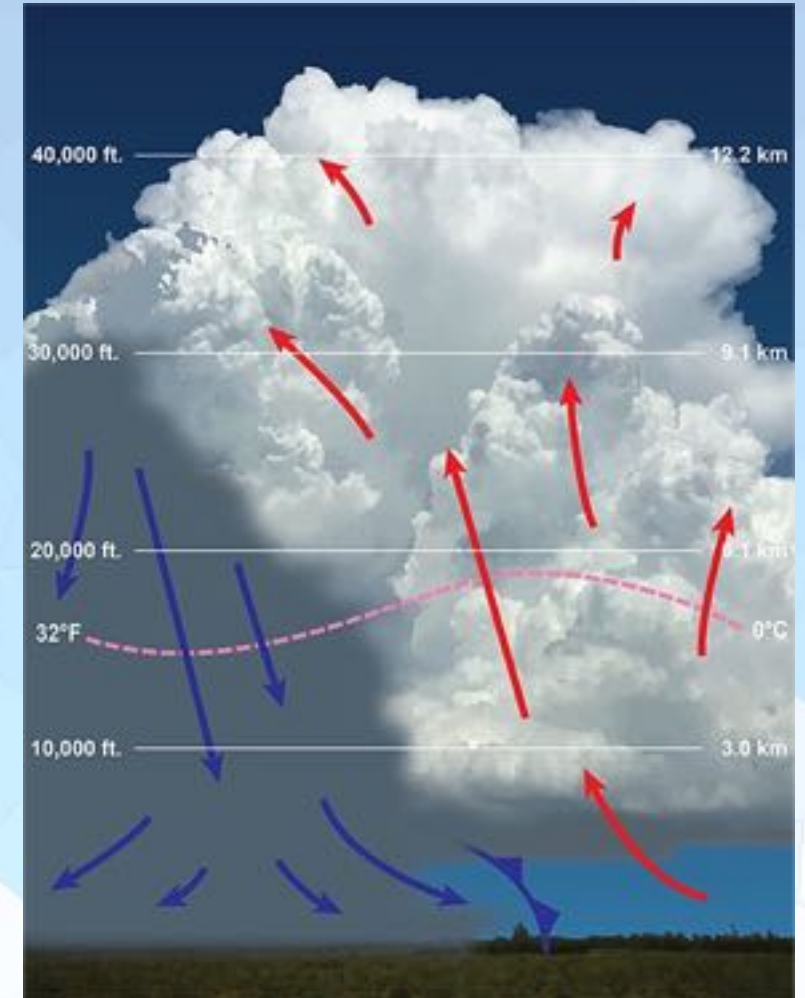
...

These elements are replaced by the term '**CAVOK**' when the following conditions occur simultaneously at the time of observation:

- (a) visibility: 10 km or more, and the lowest visibility not reported;
- (b) no cloud of operational significance; and
- (c) no weather of significance to aviation.

SIRA

53. 'cloud of operational significance' means a cloud with the height of cloud base **below 1 500 m (5 000 ft)** or **below the highest minimum sector altitude**, whichever is **greater**, or a **cumulonimbus** cloud or a **towering cumulus** cloud at any height;



PART: RULES OF THE AIR

SECTION 10

ALERTING SERVICE

ALERTING SERVICE

SIRA.10001 Application

- a) Alerting service shall be provided **by the air traffic services units**:
- 1) for all aircraft provided with air traffic **control** service;
 - 2) in so far as practicable, to all aircraft **having filed a flight plan** or otherwise known to the air traffic services; and
 - 3) to any aircraft known or believed to be the subject of **unlawful interference**.
- b) aircraft shall report during the period **ten to forty minutes** [**Doc. 4444: twenty to forty minutes**] following the time of last contact, whatever the purpose of such contact, merely to indicate that the flight is progressing according to plan, such report to comprise identification of the aircraft and the words “**OPERATIONS NORMAL**” or the signal “**QRU**”.
The ‘Operations normal’ message shall be transmitted air-ground to an appropriate ATS unit.

ALERTING SERVICE

SIRA.10001 Application

GM1 SIRA.10001(b) Application

- The absence of an '**operations normal**' message does not constitute a situation of **urgency**.
- In the absence of such a report, ATS should endeavour to contact the aircraft on available frequencies.
- A failure to contact the aircraft could lead to any type of measure including the declaration of '**uncertainty phase**'.

ALERTING SERVICE

SIRA.10005 Information to aircraft operating in the vicinity of an aircraft in a state of emergency

a) When it has been established by an air traffic services unit that an aircraft is in a state of emergency, **other aircraft** known to be in the **vicinity** of the aircraft involved shall, except as provided in (b), **be informed of the nature of the emergency** as soon as practicable.

b) When an air traffic services unit knows or believes that an aircraft is being subjected to **unlawful interference**, no reference shall be made in ATS air-ground communications to the nature of the emergency unless it has first been referred to in communications from the aircraft involved and it is certain that such reference **will not aggravate** the situation.



CHAPTER 5.

ALERTING SERVICE



Alerting service. A service provided to **notify** appropriate organizations regarding aircraft in need of *search and rescue* aid, and **assist** such organizations as required.

Annex 11

CHAPTER 5. ALERTING SERVICE

5.1 Application

5.1.1 Alerting service shall be provided:

- a) for all aircraft provided with air traffic **control** service;
- b) in so far as practicable, to all other aircraft having **filed a flight plan** or otherwise **known** to the air traffic services; and
- c) to any aircraft known or believed to be the subject of **unlawful interference**.

5.1.2 Flight information centres or area control centres shall serve as the central point for collecting all information relevant to a state of emergency of an aircraft operating within the flight information region or control area concerned and for forwarding such information to the appropriate **rescue coordination centre**.

Rescue coordination centre. A unit responsible for **promoting efficient organization** of search and rescue services and for **coordinating the conduct** of search and rescue operations within a search and rescue region.'

Annex 11

Emergency phase

A generic term meaning, as the case may be, **uncertainty** phase, **alert** phase or **distress** phase.



Annex 11

Phase	RCC Code	When...
Uncertainty	INCERFA	No communication from an aircraft 30 minutes after it was expected to do so. No communication from an aircraft 30 minutes after an attempt to make contact with it. An aircraft does not arrive within 30 minutes of its ETA or time estimated by ATS.
Alert	ALERFA	The uncertainty phase and subsequent events fail to reveal news. An aircraft fails to land within 5 minutes of its estimated landing time following a landing clearance and communication cannot be re-established. Evidence suggests that the aircraft's operating efficiency is impaired, but not to make a forced landing likely. An aircraft is the subject of unlawful interference, or believed to be so.
Distress	DETRESFA	The alert phase passes and further attempts to contact the aircraft as well as other enquiries have failed. The fuel on-board is considered exhausted (to have run out) or insufficient to reach safety. Evidence suggests that the aircraft's operating efficiency is impaired, and a forced landing is likely. Information suggests a forced landing has been, or will be, made.

Annex 11

CHAPTER 5. ALERTING SERVICE

5.2 Notification of rescue coordination centres

5.2.1 Without prejudice to any other circumstances that may render such notification advisable, air traffic services units shall, except as prescribed in 5.5.1, notify rescue coordination centres immediately an aircraft is considered to be in a state of emergency in accordance with the following:

a) Uncertainty phase when:

- 1) **no communication** has been received from an aircraft within a period of **thirty minutes** after the time a communication should have been received, or from the time an unsuccessful attempt to establish communication with such aircraft was first made, whichever is the earlier, or when
- 2) an aircraft **fails to arrive** within **thirty minutes** of the estimated time of arrival last notified to or estimated by air traffic services units, whichever is the later, except when no doubt exists as to the safety of the aircraft and its occupants.

Uncertainty phase. A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

INCERFA. The code word used to designate an uncertainty phase.

Annex 11

CHAPTER 5. ALERTING SERVICE

5.2 Notification of rescue coordination centres

b) Alert phase when:

- 1) following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have **failed to reveal any news** of the aircraft, or when
- 2) an aircraft has been cleared to land and **fails to land within five minutes** of the estimated time of landing and communication has not been re-established with the aircraft, or when
- 3) information has been received which indicates that the operating efficiency of the aircraft has been impaired, but **not** to the extent that a **forced landing** is likely, except when evidence exists that would allay apprehension as to the safety of the aircraft and its occupants, or when
- 4) an aircraft is known or believed to be the subject of **unlawful interference**.

Alert phase. A situation wherein **apprehension** exists as to the safety of an aircraft and its occupants.

ALERFA. The code word used to designate an alert phase.

Annex 11

CHAPTER 5. ALERTING SERVICE

5.2 Notification of rescue coordination centres

c) Distress phase when:

- 1) following the alert phase, further unsuccessful attempts to establish communication with the aircraft and more widespread unsuccessful inquiries point to the **probability that the aircraft is in distress**, or when
- 2) the **fuel** on board is considered to be **exhausted**, or to be insufficient to enable the aircraft to reach safety, or when
- 3) information is received which indicates that the operating efficiency of the aircraft has been impaired to the extent that a **forced landing is likely**, or when
- 4) information is received or it is reasonably certain that the aircraft **is about to make or has made a forced landing**, except when there is reasonable certainty that the aircraft and its occupants are not threatened by grave and imminent danger and do not require immediate assistance.

Distress phase. A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

DETRESFA. The code word used to designate a distress phase.

CHAPTER 5. ALERTING SERVICE

5.5 Information to the operator

5.5.1 When an area control or a flight information centre decides that an aircraft is in the uncertainty or the alert phase, it shall, when practicable, advise the operator prior to notifying the rescue coordination centre.

5.5.2 All information notified to the rescue coordination centre by an area control or flight information centre shall, whenever practicable, also be communicated, without delay, to the operator.

CHAPTER 5. ALERTING SERVICE

5.6 Information to aircraft operating in the vicinity of an aircraft in a state of emergency

5.6.1 When it has been established by an air traffic services unit that an aircraft is in a state of **emergency**, *other aircraft known to be in the vicinity of the aircraft involved shall, except as provided in 5.6.2, be informed* of the nature of the emergency as soon as practicable.

5.6.2 When an air traffic services unit knows or believes that an aircraft is being subjected to **unlawful interference**, no reference shall be made in ATS air-ground communications to the nature of the emergency unless it has first been referred to in communications from the aircraft involved and it is certain that such reference will not **aggravate the situation**.

PART: RULES OF THE AIR

SECTION 11

[UNLAWFUL] INTERFERENCE, EMERGENCY, CONTINGENCIES AND INTERCEPTION

SIRA.11001 General

- a) In case of an aircraft known or believed to be in a state of **emergency**, including being subjected to **unlawful interference**, ATS units shall give the aircraft **maximum consideration, assistance** and **priority** over other aircraft, as may be necessitated by the circumstances.
- b) Subsequent ATC actions shall be based on the **intentions of the pilot**, the overall air traffic situation and the real-time dynamics of the contingency.



EMERGENCY DESCENT PROCEDURES

SIRA.11001 General

EMERGENCY DESCENT PROCEDURES

a) When an **aircraft** operated as a controlled flight experiences sudden decompression or a malfunction requiring an emergency descent, the aircraft should, if able:

- 1) navigate as deemed appropriate by the pilot;
- 2) advise the appropriate ATC unit as soon as possible of the emergency descent;
- 3) set transponder to **Code 7700**;
- 4) turn on aircraft exterior lights;
- 5) watch for conflicting traffic both visually and by reference to ACAS; and
- 6) coordinate its further intentions with the appropriate ATC unit.



EMERGENCY DESCENT PROCEDURES

SIRA.11001 General

EMERGENCY DESCENT PROCEDURES

b) The aircraft is not to descend below the lowest published minimum altitude that will provide a minimum vertical clearance of 300 m (1 000 ft) or, in designated mountainous terrain, of 600 m (2 000 ft) above all obstacles located in the area specified.

MOCA

AMA (grid MORA)

MORA

MSA

EMERGENCY DESCENT PROCEDURES

SIRA.11001 General

c) Immediately upon recognising that an emergency descent is in progress, **ATC units** are to acknowledge the emergency on radiotelephony. **[ROGER MAYDAY]**

ATC may, as required by the situation:

- 1) suggest a **heading** to be flown, if able, **by the aircraft carrying out the emergency descent** in order to achieve separation from other aircraft concerned;
- 2) state the **minimum altitude** for the area of operation, only if the level-off altitude stated by the pilot is below such minimum altitude, together with the applicable **QNH** altimeter setting; and
- 3) as soon as possible, provide **separation** from conflicting traffic, or issue **essential traffic information**, as appropriate.

When deemed necessary, ATC will broadcast an emergency message, or cause such message to be broadcast, to other aircraft concerned to warn them of the emergency descent.

EMERGENCY DESCENT PROCEDURES

SIRA.11001 General



FASTAIR 345 POSITION NORTH CROSS
NDB
EMERGENCY DESCENT TO FL 100
DUE TO DECOMPRESSION

ATTENTION ALL AIRCRAFT IN THE VICINITY OF NORTH
CROSS NDB, **EMERGENCY DESCENT** IN PROGRESS
FROM FL 350 TO FL 100, LEAVE A1 TO
THE NORTH IMMEDIATELY

EMERGENCY DESCENT PROCEDURES

SIRA.11001 General

d) Unless specifically instructed by the ATC unit to clear the area or threatened by immediate danger, the **pilot of the aircraft receiving emergency descent broadcast** shall take the following actions:

- 1) continue according to **current clearance** and maintain **listening watch** on the frequency in use for any further instructions from the ATC unit; and
- 2) **watch for conflicting traffic** both visually and by reference to ACAS (if equipped).



UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

- a) An aircraft which is being subjected to **unlawful interference** shall endeavour to set the transponder to **Code 7500** and **notify** the appropriate ATS unit of any significant circumstances associated therewith and any **deviation from the current flight plan** necessitated by the circumstances, in order to enable the ATS unit to give priority to the aircraft and to **minimise conflict** with other aircraft.
- b) If an aircraft is subjected to unlawful interference, the pilot -in-command shall attempt to **land as soon as practicable** at the nearest suitable aerodrome or at a dedicated aerodrome assigned by the CAO.IRI. unless considerations aboard the aircraft dictate otherwise.



UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

c) When an occurrence of unlawful interference with an aircraft takes place or is suspected, air **traffic services units** shall **attend promptly to requests** by the aircraft. Information pertinent to the safe conduct of the flight shall continue to be transmitted and necessary action shall be taken to **expedite the conduct of all phases of the flight**, especially the **safe landing** of the aircraft.

d) When an occurrence of unlawful interference with an aircraft takes place or is suspected, **ATS units** shall, in accordance with locally agreed procedures, immediately **inform the appropriate authority** designated by the State and exchange necessary information with the aircraft **operator** or its designated representative.



UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

AMC1 SIRA.11005 Unlawful interference

a) Whenever unlawful interference with an aircraft is known or suspected or a **bomb threat** warning has been received, **ATS units** should promptly **attend to requests** by, or to anticipated needs of, the aircraft, including requests for relevant **information** relating to air navigation facilities, procedures and services along the route of flight and at any aerodrome of intended landing, and should take such action as is necessary to **expedite the conduct of all phases of the flight**, especially the **safe landing** of the aircraft.



UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

AMC1 SIRA.11005 Unlawful interference

a) **ATS units should also:**

- 1) transmit, and continue to transmit, **information** pertinent to the safe conduct of the flight, **without expecting a reply from the aircraft**;
- 2) **monitor** and **plot** the progress of the flight with the means available, and **coordinate transfer of control** with adjacent ATS units **without requiring transmissions or other responses from the aircraft**, unless communication with the aircraft remains normal;
- 3) inform, and continue to keep informed, **appropriate ATS units**, including those in adjacent flight information regions (FIRs), which may be concerned with the progress of the flight;
- 4) notify:
 - i. the **operator** or its designated representative;
 - ii. the appropriate **rescue coordination centre** in accordance with appropriate alerting procedures; and
 - iii. the appropriate **authority** designated by the State; and
- 5) relay appropriate messages, relating to the circumstances associated with the unlawful interference, **between the aircraft and designated authorities.**

UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

AMC1 SIRA.11005 Unlawful interference

b) The following additional procedures should apply if a threat is received indicating that a **bomb or other explosive device** has been placed on board a known aircraft.

The ATS unit receiving the threat information should:

- 1) if in direct communication with the aircraft, **advise the flight crew without delay** of the threat and the circumstances surrounding the threat; or
- 2) if not in direct communication with the aircraft, **advise the flight crew** by the most expeditious means through other ATS units or other channels.



UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

AMC1 SIRA.11005 Unlawful interference

- c) The **ATS unit** in communication with the aircraft should ascertain the **intentions of the flight crew** and report those intentions to other ATS units which may be concerned with the flight.
- d) The aircraft should be handled in the **most expeditious manner** while ensuring, to the extent possible, the safety of other aircraft and that personnel and ground installations are not put at risk.
- e) Aircraft in flight **should be given re-clearance to a requested new destination** without delay. Any request by the flight crew to climb or descend for the purpose of equalising or reducing the differential between the outside air pressure and the cabin air pressure should be **approved as soon as possible**.

UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

AMC1 SIRA.11005 Unlawful interference

- f) An aircraft on the **ground** should be advised to remain as **far away from other aircraft** and **installations** as possible and, if appropriate, to vacate the runway. The aircraft should be instructed to taxi to a designated or **isolated parking area** in accordance with local instructions.
- g) ATS units should not provide any **advice** or **suggestions** concerning action to be taken by the flight crew in relation to an **explosive device**.
- h) An aircraft known or believed to be the subject of unlawful interference or which for other reasons needs **isolation** from normal aerodrome activity should be cleared to the **designated isolated parking position**. Where such an isolated parking position has **not been designated**, or if the designated position is not available, the aircraft should be cleared to a position within the area or areas selected by prior agreement with the aerodrome authority. The taxi clearance should specify the taxi route to be followed to the parking position. This route should be selected with a view to **minimising any security risks to the public, other air craft** and **installations** at the aerodrome.

SIRA

UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

AMC1 SIRA.11005 Unlawful interference



→ 7- Isolated aircraft parking position

Normally unlawfully interfered and bomb threat aircraft must be parked on TWY B9 to minimize any security risks to public, other aircraft and installations at the aerodrome.

When RWY 29R is used for landing, TWY B9 is not usable due to the isolated area and VOR checkpoints.

0111

UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

GM1 to AMC1 SIRA.11005(a)(1) Unlawful interference

Verbal reference to unlawful interference should not be made by the controller unless it is first made by the pilot in a radio communication transmission, since it might attract the attention of the hijacker (or of other aircraft) and have **detrimental** [=harmful] **consequences**.



UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

GM1 SIRA.11005 Unlawful interference

The following procedures are intended as guidance for use by aircraft when unlawful interference occurs and **the aircraft is unable to notify an ATS unit** of this fact.

- a) If the pilot-in-command **cannot proceed to an aerodrome** [according to **SIRA.11005 (a)**], they should attempt to continue flying on the assigned **track** and at the assigned cruising **level** at least until able to **notify an ATS** unit or until within radar or ADS-B coverage.
- b) When an aircraft subjected to an act of unlawful interference **must depart from its assigned track or its assigned cruising level** without being able to make radiotelephony contact with ATS, the pilot-in-command should, whenever possible:

UNLAWFUL INTERFERENCE

SIRA.11005 Unlawful interference

GM1 SIRA.11005 Unlawful interference

- 1) attempt to **broadcast warnings** on the VHF channel in use or the **VHF emergency frequency**, and other appropriate channels, unless considerations aboard the aircraft dictate otherwise. Other equipment such as on-board **transponders** and data links should also be used when it is advantageous to do so and circumstances permit; and
- 2) proceed in accordance with applicable **special procedures for in-flight contingencies**, where such procedures have been established and promulgated in the Regional Supplementary Procedures (Doc 7030); or
- 3) if no applicable regional procedures have been established, proceed at a level which differs from the cruising levels normally used for an IFR flight by:
 - i. **150 m (500 ft) in an area where a vertical separation minimum of 300 m (1 000 ft) is applied; or**
 - ii. **300 m (1 000 ft) in an area where a vertical separation minimum of 600 m (2 000 ft) is applied.**

ENR 1.13 UNLAWFUL INTERFERENCE**1. General**

The following procedures are intended for use by aircraft when unlawful interference occurs and the aircraft is unable to notify an ATS unit of this fact.

2. Procedures

2.1 If the pilot-in-command cannot proceed to an aerodrome, the pilot-in-command should attempt to continue flying on the assigned track and at the assigned cruising level at least until able to notify an ATS unit or within ATS surveillance system coverage.

2.2 When an aircraft subjected to an act of unlawful interference must depart from its assigned track or its assigned cruising level without being able to make radiotelephony contact with ATS, the pilot-in-command should, whenever possible:

- a) attempt to broadcast warnings on the VHF channel in use or the VHF emergency

frequency, and other appropriate channels, unless considerations aboard the aircraft dictate otherwise. Other equipment such as on-board transponders, data links, etc. should also be used when it is advantageous to do so and circumstances permit; and

- b) proceed at a level which differs from the cruising levels normally used for IFR flight in the area by 1 000 FT if above FL 410 or by 500 FT if below FL 410.

3. SSR Transponder operation procedure

3.1 Should an aircraft in flight be subject to unlawful interference, the pilot-in-command shall endeavour to set the transponder to Mode A, Code 7500 to give indication of the situation unless circumstances warrant the use of Code 7700.

123. 'strayed aircraft' means an aircraft which has deviated significantly from its intended track or which reports that it is lost;

137. 'unidentified aircraft' means an aircraft which has been observed or reported to be operating in a given area but whose identity has not been established;



STRAYED OR UNIDENTIFIED AIRCRAFT

SIRA.11010 Strayed or unidentified aircraft

a) As soon as an air traffic services unit becomes aware of a **strayed** aircraft it shall take all necessary steps as outlined in (1) and (3) to assist the aircraft and to safeguard its flight.

1) If the aircraft's position is not known, the air traffic services unit shall:

- i. attempt to establish two-way **communication** with the aircraft, unless such communication already exists;
- ii. use all available means to **determine its position**;
- iii. inform **other** air traffic services units into whose area the aircraft **may have strayed** or **may stray**;
- iv. inform, in accordance with locally agreed procedures, appropriate **military units** and provide them with pertinent flight plan and other data concerning strayed aircraft;
- v. request from the units referred to in (iii) and (iv) and from **other aircraft** in flight every assistance in establishing communication with the aircraft and determining its position.

STRAYED OR UNIDENTIFIED AIRCRAFT

SIRA.11010 Strayed or unidentified aircraft

- a) As soon as an air traffic services unit becomes aware of a **strayed** aircraft it shall take all necessary steps as outlined in (1) and (3) to assist the aircraft and to safeguard its flight.
- 2) The requirements in (1)(iv) and (1)(v) shall apply also to air traffic services units informed in accordance with (1)(iii).
- 3) **When the aircraft's position is established**, the air traffic services unit shall:
- i. **advise the aircraft** of its **position** and the **corrective action** to be taken. This advice shall be immediately provided when the ATS unit is aware that there is a possibility of **interception** or **other hazard** to the safety of the aircraft; and
 - ii. provide, as necessary, **other** air traffic services units and appropriate **military** units with relevant information concerning the strayed aircraft and any advice given to that aircraft.

STRAYED OR UNIDENTIFIED AIRCRAFT

SIRA.11010 Strayed or unidentified aircraft

b) As soon as an air traffic services unit becomes aware of an **unidentified** aircraft in its area, it shall endeavor to **establish the identity** of the aircraft whenever this is necessary for the provision of **air traffic services** or required by the appropriate **military** authorities in accordance with **locally** agreed procedures. To this end, the air traffic services unit shall take such of the following steps as are appropriate in the circumstances:

- 1) attempt to establish two-way **communication** with the aircraft;
- 2) **inquire** of **other** air traffic services units **within the flight information region** about the flight and request their assistance in establishing two-way communication with the aircraft;
- 3) **inquire** of air traffic services units serving the **adjacent flight information regions** about the flight and request their assistance in establishing two-way communication with the aircraft;
- 4) attempt to obtain information from **other aircraft** in the area;
- 5) the air traffic services unit shall, as necessary, inform the appropriate military unit as soon as the identity of the aircraft has been established.

STRAYED OR UNIDENTIFIED AIRCRAFT

SIRA.11010 Strayed or unidentified aircraft

c) In the case of a **strayed** or **unidentified** aircraft, the possibility of the aircraft being subject of **unlawful interference** shall be taken into account.

Should the air traffic services unit consider that a strayed or unidentified aircraft may be the subject of unlawful interference, the **appropriate authority** designated by the State shall immediately be informed, in accordance with locally agreed procedures.



STRAYED OR UNIDENTIFIED AIRCRAFT

SIRA.11010 Strayed or unidentified aircraft

GM1 SIRA.11010 Strayed or unidentified aircraft

GENERAL

- a) An aircraft may be considered, at the same time, as a 'strayed aircraft' by one unit and as an 'unidentified aircraft' by another unit. This possibility should be taken into account when complying with the provisions of SIRA.11010(a)(1)(iii) and SIRA.11010(b)(2) and (b)(3).
- b) **Navigational assistance** by an air traffic services unit is particularly important if the unit becomes aware of an aircraft straying, or about to stray, into an area where there is a risk of **interception** or **other hazard** to its safety.



MINIMUM FUEL AND FUEL EMERGENCY

SIRA. 11012 Minimum Fuel and Fuel Emergency

a) When a pilot reports a state of **minimum fuel**, the controller shall inform the pilot as soon as practicable of any **anticipated delays or that no delays are expected**.

b) When the level of fuel renders declaring a situation of **distress** necessary, the pilot, in accordance with SIRA.14095, shall indicate that by using the radiotelephony distress signal (**MAYDAY**), **preferably spoken three times**, followed by the nature of the distress condition (**FUEL**).



MAYDAY MAYDAY MAYDAY FUEL

CHAPTER 4. FLIGHT OPERATIONS

Annex 6

4.3.7 In-flight fuel management

4.3.7.2.2 The pilot-in-command shall advise ATC of a **minimum fuel** state by declaring **MINIMUM FUEL** when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome may result in *landing with less than the planned final reserve fuel*.

Note 1.— The declaration of **MINIMUM FUEL** is **not an emergency** situation but an indication that an emergency situation is possible should any additional delay occur.

4.3.7.2.3 The pilot-in-command shall declare a situation of fuel emergency by broadcasting **MAYDAY MAYDAY MAYDAY FUEL**, when the **calculated usable fuel** predicted to be available upon landing at the nearest aerodrome where a safe landing can be made **is less than the planned final reserve fuel**.

MINIMUM FUEL AND FUEL EMERGENCY

SIRA. 11012 Minimum Fuel and Fuel Emergency

GM1 SIRA.11012 Minimum fuel and fuel emergency

The declaration of **MINIMUM FUEL** informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing, and any **change to the existing clearance** may result in landing with less than planned final reserve fuel. **This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.**

94a. 'minimum fuel' means a term used to describe a situation in which an aircraft's fuel supply has reached a state where the flight is committed to land at a specific aerodrome and no additional delay can be accepted;

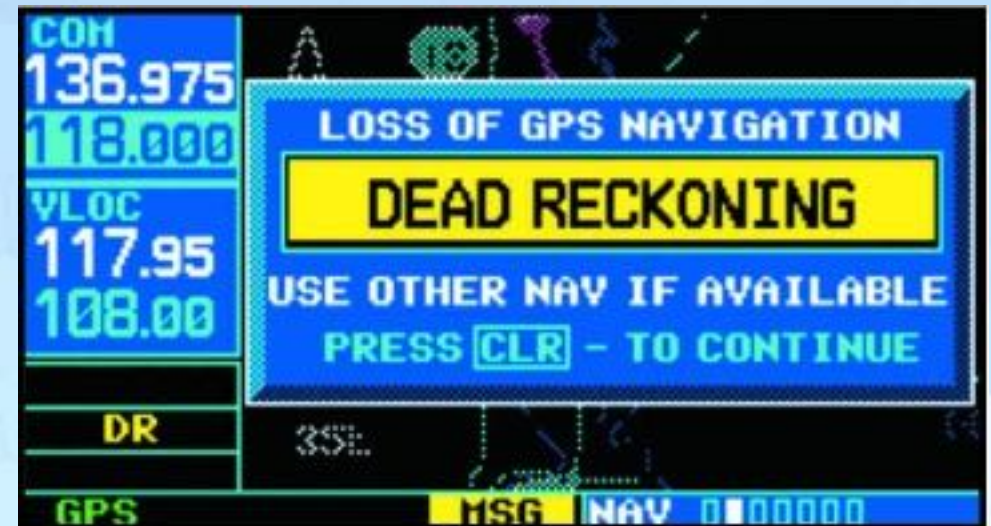


DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

a) Whenever, as a result of failure or degradation of navigation, communications, altimetry, flight control or other systems, **aircraft performance is degraded below the level required** for the airspace in which it is operating, **the flight crew shall advise the ATC unit concerned without delay.**

Where the failure or degradation affects the separation minimum currently being employed, the controller shall take action to establish **another appropriate type of separation or separation minimum.**



DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

b) Degradation or failure of the RNAV system

When an aircraft cannot meet the specifications as required by the RNAV route or procedure, as a result of a failure or degradation of the RNAV system, a **revised clearance shall be requested by the pilot.**



Annex 2

CHAPTER 3. GENERAL RULES

3.6 Air traffic control service

3.6.5 Communications

3.6.5.2 **Communication failure** . If a communication failure precludes compliance with 3.6.5.1, the aircraft shall comply with the voice communication failure procedures of Annex 10, Volume II, and with such of the following procedures as are appropriate. The aircraft shall attempt to establish communications with the appropriate air traffic control unit using all other available means. In addition, the aircraft, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by **visual signals**.



Annex 2**CHAPTER 3. GENERAL RULES****3.6 Air traffic control service****3.6.5 Communications**

3.6.5.2.1 If in visual meteorological conditions, the aircraft shall:

- a) continue to fly in visual meteorological conditions; land at the nearest suitable aerodrome; and report its arrival by the most expeditious means to the appropriate air traffic services unit;
- b) if considered advisable, complete an IFR flight in accordance with 3.6.5.2.2.



Annex 2

CHAPTER 3. GENERAL RULES

3.6 Air traffic control service

3.6.5 Communications

3.6.5.2.2 If in instrument meteorological conditions or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with 3.6.5.2.1 a), the aircraft shall:

a) unless otherwise prescribed on the basis of regional air navigation agreement, in airspace where radar is not used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of **20 minutes** following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan;



The rest in the next slide

Annex 2

CHAPTER 3. GENERAL RULES

3.6 Air traffic control service

3.6.5 Communications

3.6.5.2.2 If in instrument meteorological conditions or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with 3.6.5.2.1 a), the aircraft shall:

b) in airspace where radar is used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of **7 minutes** following:

- 1) the time the last assigned level or minimum flight altitude is reached; or
- 2) the time the transponder is set to Code 7600; or
- 3) the aircraft's failure to report its position over a compulsory reporting point;

whichever is **later**, and thereafter adjust level and speed in accordance with the **filed flight plan**;



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Annex 2

CHAPTER 3. GENERAL RULES

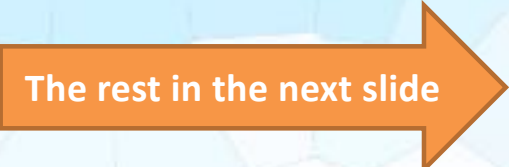
3.6 Air traffic control service

3.6.5 Communications

3.6.5.2.2 If in **instrument meteorological conditions** or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with 3.6.5.2.1 a), the aircraft shall:

- c) when being **radar vectored** or having been directed by ATC to proceed **offset** using area navigation (RNAV) without a specified limit, rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude;
- d) proceed according to the **current flight plan route** to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure compliance with e) below, hold over this aid or fix until commencement of descent;

Area navigation (RNAV). A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

The rest in the next slide

Annex 2

CHAPTER 3. GENERAL RULES

3.6 Air traffic control service

3.6.5 Communications

- 3.6.5.2.2 If in **instrument meteorological conditions** or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with 3.6.5.2.1 a), the aircraft shall:
- e) commence descent from the navigation aid or fix specified in d) at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to, the estimated time of arrival resulting from the current flight plan;
 - f) complete a normal instrument approach procedure as specified for the designated navigation aid or fix; and
 - g) land, if possible, ***within 30 minutes*** after the estimated time of arrival specified in e) or the last acknowledged expected approach time, whichever is ***later***.

71. 'estimated time of arrival (ETA)' means for **IFR flights**, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced **(=IAF)**, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome.

For **VFR flights**, the time at which it is estimated that the aircraft will arrive **over** the aerodrome;

72. 'expected approach time (EAT)' means the time at which **ATC expects** that an arriving aircraft, **following a delay**, will **leave the holding fix** to complete its **approach for a landing**.

The actual time of leaving the holding fix will depend upon the approach clearance;

4444

6.5.7 Expected approach time

6.5.7.1 An expected approach time shall be determined for an arriving aircraft that will be subjected to a delay of **10 minutes or more**.

A revised expected approach time shall be transmitted to the aircraft without delay whenever it differs from that previously transmitted by **5 minutes or more**.

12.3.3.4 EXPECTED APPROACH TIME

- a) NO DELAY EXPECTED;
- b) EXPECTED APPROACH TIME (*time*);
- c) REVISED EXPECTED APPROACH TIME (*time*);
- d) DELAY NOT DETERMINED (*reasons*).

6.5.8 Onward clearance time

129. 'total estimated elapsed time' means:

(a) for IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced (=IAF), or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome;

(b) for VFR flights, the estimated time required from take-off to arrive over the destination aerodrome;

The image shows a flight plan form with the following fields and labels:

- 13 DEPARTURE AERODROME / Aéroport de départ
- 15 CRUISING SPEED / Vitesse croisière
- LEVEL / Niveau
- ROUTE / Route
- 16 DESTINATION AERODROME / Aéroport de destination
- 18 OTHER INFORMATION / Renseignements divers
- TYPE OF AIRCRAFT / Type d'aéronef
- WAKE TURBULENCE CAT. / Cat. de turbulence de sillage
- 19 EQUIPMENT / Équipement
- TIME / Heure
- TOTAL EET / Durée totale estimée** (circled in red)
- HR MIN
- ALTN AERODROME / Aéroport de dégagement
- 2ND ALTN AERODROME / 2^e aéroport de dégagement

89a. 'instrument approach operation' means an approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

- (a) a **two-dimensional (2D)** instrument approach operation, using lateral navigation guidance only;
and
- (b) a **three-dimensional (3D)** instrument approach operation, using both lateral and vertical navigation guidance;

90. 'instrument approach procedure (IAP)' means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as follows:

- 2D** (a) **non-precision approach (NPA) procedure.** An instrument approach procedure designed for 2D instrument approach operations Type A;
- 3D** (b) **approach procedure with vertical guidance (APV).** A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A;
- 3D** (c) **precision approach (PA) procedure.** An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or B;

SIRA

Type	CAT	Visibility	RVR	2D	3D
				MDH	DH
A		+1000 m		+250ft	+250ft
B	I	+800 m	+550m		+200ft
	II		+300m		+100ft
	IIIA		+175m		-100ft
	IIIB		+50m		-50ft
	IIIC				

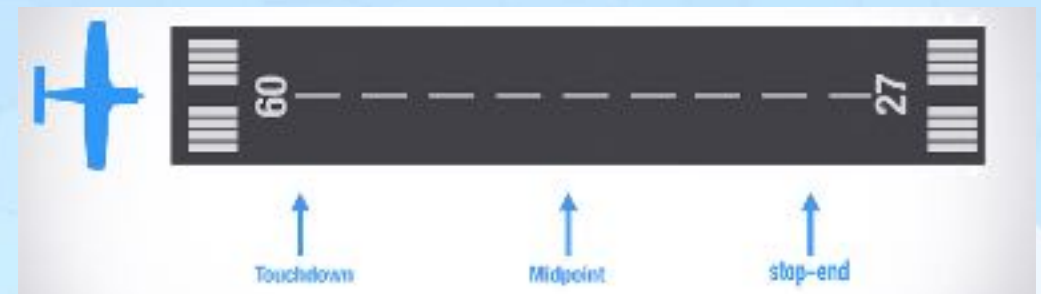
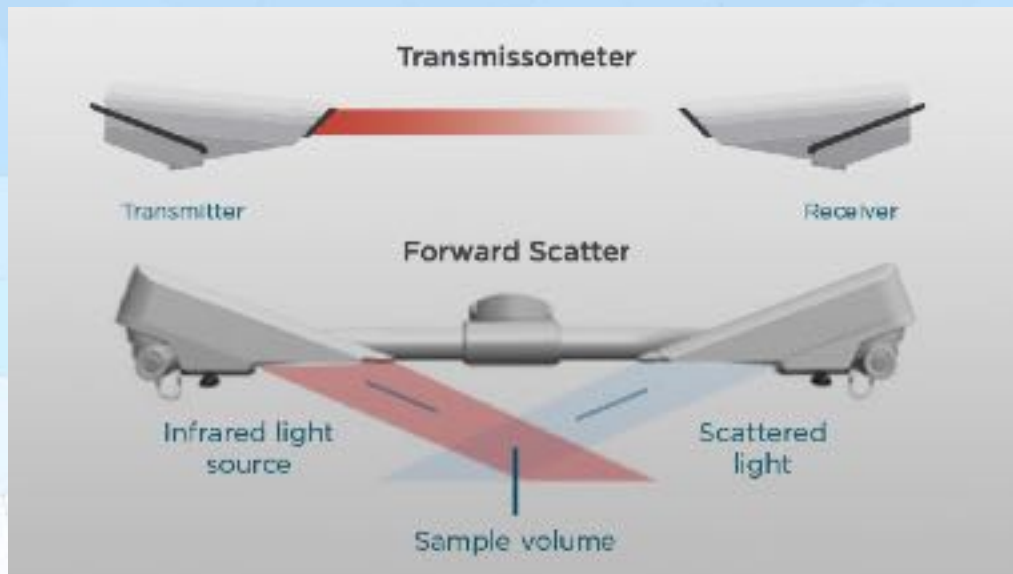
Converted meteorological visibility (CMV)

Conversion of reported VIS to RVR/CMV

Light elements in operation	RVR/CMV = reported VIS x	
	Day	Night
HI approach and runway lights	1.5	2.0
Any type of light installation other than above	1.0	1.5
No lights	1.0	not applicable

If the reported RVR is not available, a CMV may be substituted for the RVR, **except**:
(1) to satisfy the **take-off** minima; or
(2) for the purpose of continuation of an approach in **LVOs**.

115. 'runway visual range (RVR)' means the range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line;



DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

DEGRADATION OR FAILURE OF THE RNAV SYSTEM

If an aircraft cannot meet the requirements due to a **failure or degradation of the RNAV** system that is detected before departure from an aerodrome where it is not practicable to affect a repair, the aircraft concerned should be permitted to **proceed to the nearest suitable aerodrome where the repair can be made.**

When granting clearance to such aircraft, ATC should take into consideration the existing or anticipated traffic situation and may have to **modify** the **time of departure**, **flight level** or **route** of the intended flight.

Subsequent adjustments may become necessary during the course of the flight.

DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

DEGRADATION OR FAILURE OF THE RNAV SYSTEM

With respect to the degradation/failure in flight of an RNAV system, while the aircraft is operating on an ATS route requiring the use of **RNAV 5**:

- 1) aircraft should be routed via VOR/DME-defined ATS routes; or
- 2) if no such routes are available, aircraft should be routed via conventional navigation aids, i.e. VOR/DME; or

When the above procedures are not feasible, the ATC unit should, where practicable, provide the aircraft with **radar vectors** until the aircraft is capable of resuming its own navigation.

DEGRADED AIRCRAFT PERFORMANCE

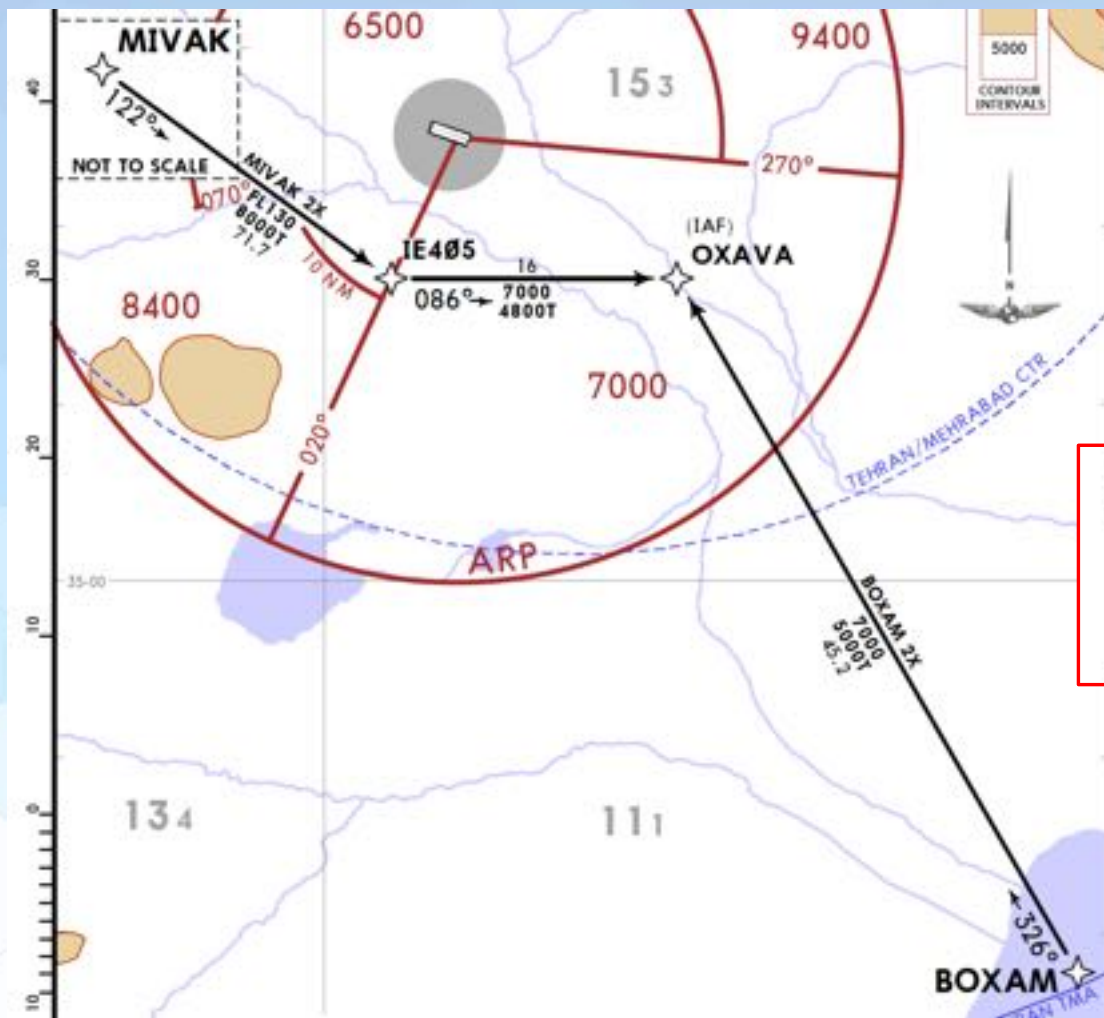
SIRA.11013 Degraded aircraft performance

DEGRADATION OR FAILURE OF THE RNAV SYSTEM

With respect to the degradation/failure in flight of an RNAV system, while the aircraft is operating on an **arrival or departure procedure requiring the use of RNAV**:

- 1) the aircraft should be provided with **radar vectors** until the aircraft is capable of resuming its own navigation; or
- 2) the aircraft should be routed by conventional navigation aids, i.e. VOR/DME.

SIRA



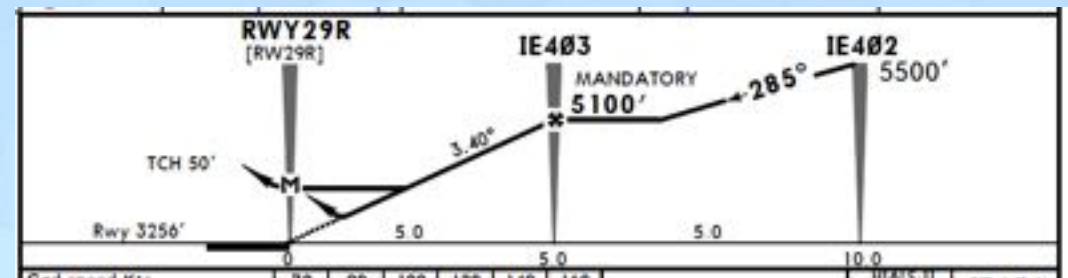
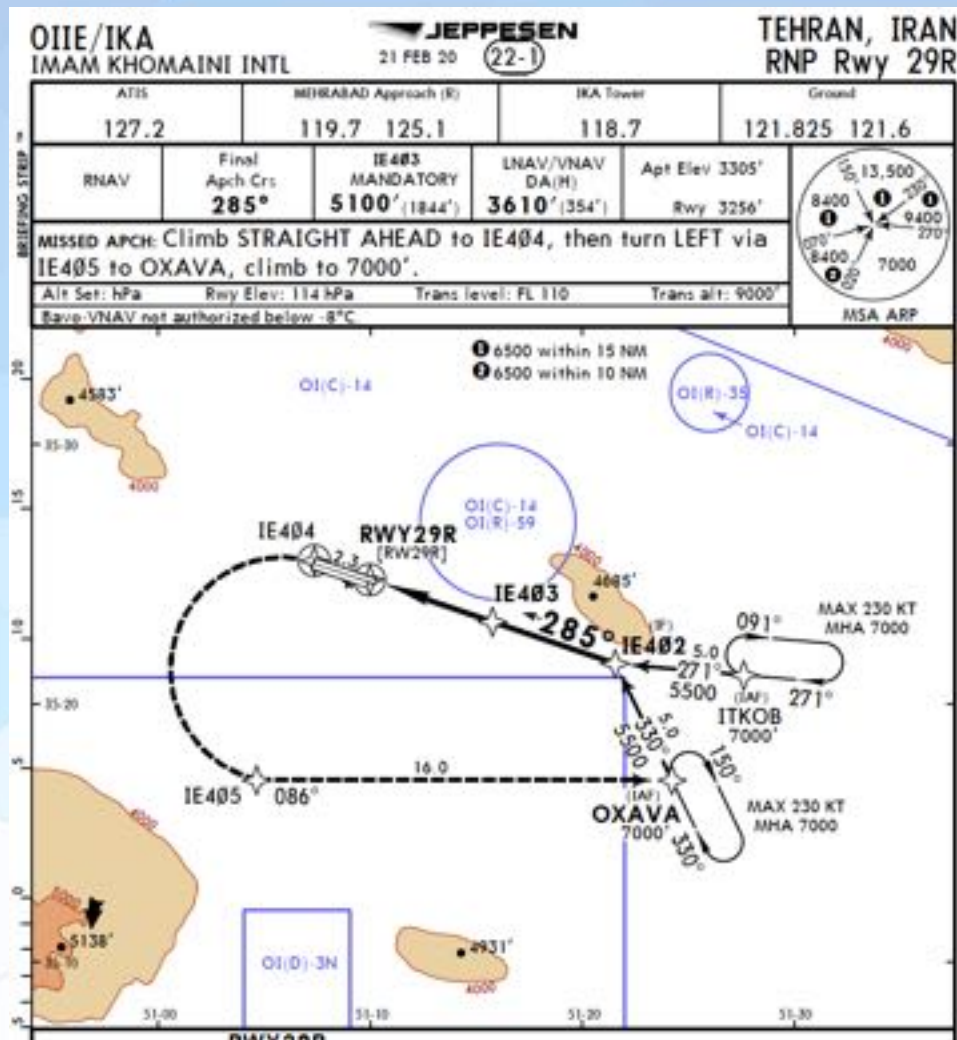
OIIE/IKA
IMAM KHOMAINI INTL

JEPPESSEN
1 OCT 21 **20-2E** Eff 7 Oct

TEHRAN, IRAN
RNAV STAR

ATIS 127.2	Apt Elev 3305	Alt Set: hPa Trans level: FL110 1. RNAV 1. 2. DME/DME required. 3. Actual descent clearance will be as directed by ATC. 4. Compliance with RNP 1 will be radar monitored. Advise if unable to comply. ATC will issue an alternative clearance.
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SIRA



APPENDIX 1. NAVIGATION SPECIFICATIONS and ATS ROUTES

Annex 11

2. Composition of designator

2.2.1 Selection of the letter shall be made from those listed hereunder:

- a) **A, B, G, R** for routes which form part of the **regional** networks of ATS routes and are **not area navigation** routes;
- b) **L, M, N, P** for **area navigation** routes which form part of the **regional** networks of ATS routes;
- c) **H, J, V, W** for routes which do **not** form part of the **regional** networks of ATS routes and are **not area navigation** routes;
- d) **Q, T, Y, Z** for **area navigation** routes which do **not** form part of the **regional** networks of ATS routes.

	Non-REGIONAL	REGIONAL
Non-RNAV	HJWV	BARG
RNAV	QTYZ	LMPN

SIRA

Route designator Name of significant points Coordinates	MAG TR DIST	Upper limits Lower limits MNM FLT ALT Airspace classification	Lateral limits (NM)	Direction of cruising levels		Remarks Controlling unit FREQ
				Odd	Even	
1	2	3	4	5		6
→ L223 RNAV1						
▲ DASIS 385435N 0441230E	146° 327°		10			Ankara FIR Tehran FIR Tehran Radar FREQ: 132.500 MHZ
◻ UROMIYEH DVOR/DME (UMH) 374114.0N 0450503.7E	84.3 NM 138° 319°			↑	↓	Unidirectional westbound from UHM to DASIS

→ A414 RNAV 5 above FL285						
▲ DEHNAMAK VOR/DME(DHN) 351515.0N 0524312.0E	011° 191°		20	↓		Tehran Radar FREQ: 120.700 MHZ MOCA 13200 FT (DHN-LABET)

SIRA

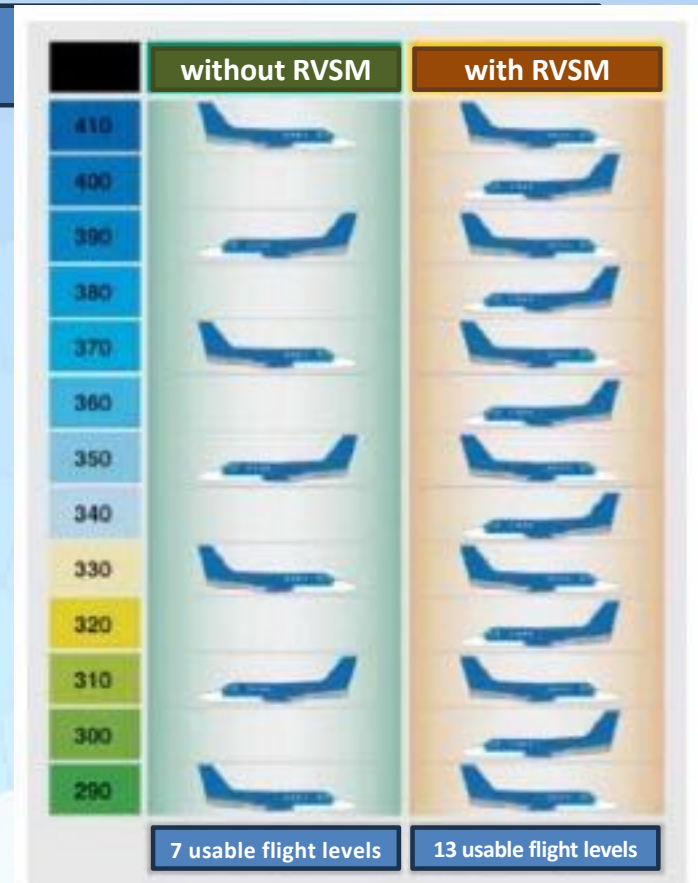
Route designator Name of significant points Coordinates	MAG TR DIST	Upper limits Lower limits MNM FLT ALT Airspace classification	Lateral limits (NM)	Direction of cruising levels		Remarks Controlling unit <i>FREQ</i>
				Odd	Even	
1	2	3	4	5		6
P574 RNAV5						
▲ ULDUS 380000N 0510100E	160° 340°	UNL FL100	20	↓		Baku FIR Tehran FIR Tehran Radar FREQ: 132.500 MHZ MOCA 6700 FT (ULDUS-NSH)
▲ ULEXI 374344N 0510631E	16.8 NM 160° 340°		10			
▲ NOSHAHR DVOR/DME (NSH) 363946.1N 0512751.4E	66.2 NM 184° 004°	Class A, D				MOCA 16100 FT (NSH-NAGMO)
△ DANEB 362001N 0512408E	20.0 NM 184° 004°	UNL FL170 Class A, D				→ AWY P574 between NSH DVOR/DME - TRN DVOR/DME defined as tactical route (conditional route) which maybe used on pilot request and controller approval, based on traffic situation. This AWY shall not be used in filed flight plan.
△ NAGMO	18.0 NM					

DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

c) Loss of vertical navigation performance required for RVSM airspace

1) The **pilot shall inform ATC** as soon as possible of any circumstance s where the vertical navigation performance requirements for RVSM airspace cannot be maintained. In such cases, the pilot shall obtain a **revised ATC clearance** prior to initiating any deviation from the cleared route and/or flight level, whenever possible. When a revised ATC clearance cannot be obtained prior to such a deviation, the pilot shall obtain a revised clearance as soon as possible thereafter.



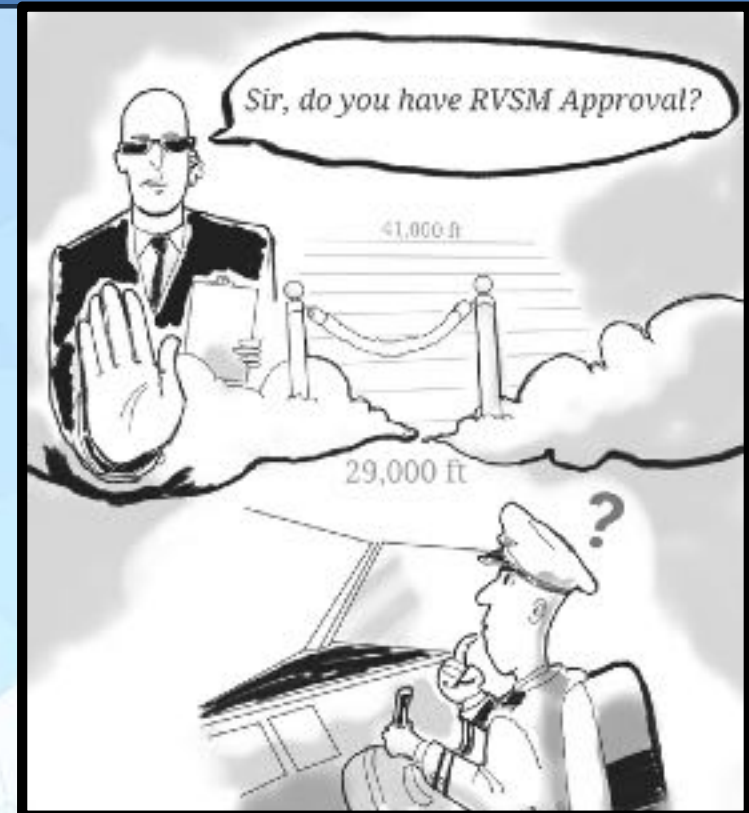
DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

c) Loss of vertical navigation performance required for RVSM airspace

2) During operations **in**, or **vertical transit** through, RVSM airspace with aircraft **not approved for RVSM operations**, pilots shall **report non-approved** status as follows:

- i. at initial call on any channel within RVSM airspace;
- ii. in all requests for level changes; and
- iii. in all read-backs of level clearances.



DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

CLIMB TO FL310,
NEGATIVE RVSM

REQUEST FL310,
NEGATIVE RVSM

c) Loss of vertical navigation performance
required for **RVSM** airspace

3) Air traffic controllers shall explicitly
acknowledge receipt of messages from aircraft
reporting RVSM non-approved status.



DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

c) Loss of vertical navigation performance required for RVSM airspace

4) Degradation of aircraft equipment — pilot-reported:

- i. When informed by the pilot of an RVSM-approved aircraft operating in RVSM airspace that the aircraft's equipment **no longer meets the RVSM requirements**, ATC shall consider the aircraft as **non-RVSM-approved**.
- ii. ATC shall take action immediately to **provide a minimum vertical separation of 600 m (2 000 ft)** or an appropriate **horizontal separation** from all other aircraft concerned that are operating in RVSM airspace. An aircraft rendered non-RVSM- approved shall normally be **cleared out of RVSM airspace** by ATC when it is possible to do so.
- iii. Pilots shall inform ATC, as soon as practicable, of any **restoration** of the proper functioning of equipment required to meet the RVSM requirements.
- iv. The first ACC to become aware of a change in an aircraft's RVSM status shall coordinate with **adjacent ACCs**, as appropriate.

DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

... to ascertain RVSM approval status of an aircraft ... to report RVSM approved status ... to report RVSM non-approved status followed by supplementary information <i>Note.— See 12.2.4 and 12.2.5 for procedures relating to operations in RVSM airspace by aircraft with non-approved status.</i> ... to deny ATC clearance into RVSM airspace ... to report when severe turbulence affects the capability of an aircraft to maintain height-keeping requirements for RVSM	a) CONFIRM RVSM APPROVED; *b) AFFIRM RVSM; *c) NEGATIVE RVSM [(supplementary information, e.g. State aircraft)]; d) UNABLE ISSUE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN [or DESCEND TO, or CLIMB TO] (level); *e) UNABLE RVSM DUE TURBULENCE;	... to report that the equipment of an aircraft has degraded below minimum aviation system performance standards ...to request an aircraft to provide information as soon as RVSM-approved status has been regained or the pilot is ready to resume RVSM operations ... to request confirmation that an aircraft has regained RVSM-approved status or a pilot is ready to resume RVSM operations ... to report ability to resume RVSM operations after an equipment or weather-related contingency	*f) UNABLE RVSM DUE EQUIPMENT; g) REPORT WHEN ABLE TO RESUME RVSM; h) CONFIRM ABLE TO RESUME RVSM; *i) READY TO RESUME RVSM.
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DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

c) Loss of vertical navigation performance required for RVSM airspace

5) Severe turbulence — not forecast:

- i. When an aircraft operating in RVSM airspace encounters **severe turbulence** due to weather or wake vortex that the pilot believes will impact the aircraft's capability to maintain its cleared flight level, the **pilot shall inform ATC**. ATC shall establish either an appropriate **horizontal separation** or an **increased minimum vertical separation**.
- ii. ATC shall, to the extent possible, **accommodate pilot requests** for flight level and/or route changes and shall **pass on traffic information**, as required.
- iii. ATC shall solicit **reports from other aircraft** to determine whether **RVSM should be suspended entirely or within a specific flight level band and/or area**.
- iv. The ACC suspending RVSM shall **coordinate with adjacent ACCs** such suspension(s) and any required adjustments to sector capacities, as appropriate, to ensure an orderly progression of the transfer of traffic.

DEGRADED AIRCRAFT PERFORMANCE

SIRA.11013 Degraded aircraft performance

c) Loss of vertical navigation performance required for RVSM airspace

6) Severe turbulence — forecast:

- i. When a meteorological **forecast** is predicting **severe turbulence** within RVSM airspace ATC shall **determine whether RVSM should be suspended** and, if so, for **how long** and for **which specific flight level(s) and/or area**.
- ii. In cases where RVSM will be suspended, the ACC suspending RVSM shall **coordinate** with **adjacent ACCs** with regard to the flight levels appropriate for the transfer of traffic, unless a contingency flight level allocation scheme has been determined by letter of agreement . The ACC suspending RVSM shall also **coordinate** applicable sector **capacities** with adjacent ACCs, as appropriate.

INTERCEPTION

SIRA.11015 Interception

a) Except for intercept and escort service provided on request to an aircraft, interception of civil aircraft shall be in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which ICAO Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft.



INTERCEPTION

SIRA.11015 Interception

- b) The **pilot-in-command** of a civil aircraft, when intercepted, shall:
- 1) immediately **follow the instructions given by the intercepting aircraft**, interpreting and **responding to visual signals** in accordance with the specifications in Tables S11-1 and S11-2;
 - 2) **notify**, if possible, the appropriate **air traffic services unit**;
 - 3) attempt to establish **radio-communication** with the **intercepting aircraft** or with the appropriate intercept control unit, by making a general call on the **emergency frequency 121,5 MHz**, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency **243 MHz**;
 - 4) if equipped with SSR transponder, select Mode A, Code **7700**, unless otherwise instructed by the appropriate air traffic services unit;

Appendix 1

2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

2.1 Signals initiated by intercepting aircraft and responses by intercepted aircraft

INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1— Rocking aircraft and flashing navigational lights at irregular intervals from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft and, after acknowledgement, a slow level turn, normally to the left.	You have been intercepted. Follow me.	Rocking aircraft, flashing navigational lights at irregular intervals and following.	Understood, will comply.

Appendix 1

2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

2.1 Signals initiated by intercepting aircraft and responses by intercepted aircraft

INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
2— An abrupt breakaway manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	Rocking the aircraft.	Understood, will comply.

Appendix 1

2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

2.1 Signals initiated by intercepting aircraft and responses by intercepted aircraft

INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
3— Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use.	Land at this aerodrome.	Lowering landing gear, showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use, landing is considered safe, proceeding to land.	Understood, will comply.

Appendix 1

2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

2.2 Signals initiated by intercepted aircraft and responses by intercepting aircraft

INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responds	Meaning
4— Raising landing gear and flashing landing lights while passing over runway in use at a height exceeding 1000ft but not exceeding 2000ft above the aerodrome level, and continuing to circle runway in use.	Aerodrome you have designated is inadequate.	To take intercepted aircraft to an alternate aerodrome, use the Series 1 signals for intercepting aircraft. To release the intercepted aircraft, use the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.

Appendix 1

2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

2.2 Signals initiated by intercepted aircraft and responses by intercepting aircraft

INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responds	Meaning
5— Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	In distress.	Use Series 2 signals prescribed for intercepting aircraft.	Understood,
6— Irregular flashing of all available lights.			

INTERCEPTION

SIRA.11015 Interception

- c) If any instructions received by radio from any sources **conflict** with those given by the intercepting aircraft by **visual signals**, the intercepted aircraft shall request immediate clarification while continuing to **comply with the visual instructions given by the intercepting aircraft**.
- d) If any instructions received by radio from any sources **conflict** with those given by the intercepting aircraft by **radio**, the intercepted aircraft shall request immediate clarification while continuing to **comply with the radio instructions given by the intercepting aircraft**.
- e) If **radio contact is established** during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table S11-3 and transmitting each phrase twice:

INTERCEPTION

SIRA.11015 Interception

<i>Phrases for use by INTERCEPTING aircraft</i>			<i>Phrases for use by INTERCEPTED aircraft</i>		
<i>Phrase</i>	<i>Pronunciation¹</i>	<i>Meaning</i>	<i>Phrase</i>	<i>Pronunciation¹</i>	<i>Meaning</i>
CALL SIGN	<u>KOL</u> SA-IN	What is your call sign?	CALL SIGN	<u>KOL</u> SA-IN	My call sign is (call sign)
FOLLOW	<u>FOL</u> -LO	Follow me	(call sign) ²	(call sign)	
DESCEND	DEE- <u>SEND</u>	Descend for landing	WILCO	<u>VILL</u> -KO	Understood
YOU LAND	<u>YOU</u> LAAND	Land at this aerodrome	Will comply		
PROCEED	PRO- <u>SEED</u>	You may proceed	CAN NOT	<u>KANN</u> NOTT	Unable to comply
			REPEAT	REE- <u>PEET</u>	Repeat your instruction
			AM LOST	<u>AM</u> LOSST	Position unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK ³	<u>HI</u> -JACK	I have been hijacked
			LAND	LAAND	I request to land at
			(place name)	(place name)	(place name)
			DESCEND	DEE- <u>SEND</u>	I require descent

INTERCEPTION

SIRA.11015 Interception

f) As soon as an **air traffic services unit** learns that an aircraft is being intercepted in its area of responsibility, it shall take such of the following steps as are appropriate in the circumstances:

- 1) attempt to establish two-way communication with the intercepted aircraft via any means available, including the emergency radio frequency 121,5 MHz, unless such communication already exists,
- 2) inform the pilot of the intercepted aircraft of the interception;
- 3) establish contact with the intercept control unit maintaining two-way communication with the intercepting aircraft and provide it with available information concerning the aircraft;
- 4) relay messages between the intercepting aircraft or the intercept control unit and the intercepted aircraft, as necessary;
- 5) in close coordination with the intercept control unit take all necessary steps to ensure the safety of the intercepted aircraft;
- 6) inform air traffic services units serving adjacent flight information regions if it appears that the aircraft has strayed from such adjacent flight information regions.

INTERCEPTION

SIRA.11015 Interception

g) As soon as an **air traffic services unit** learns that an aircraft is being intercepted outside its area of responsibility, it shall take such of the following steps as are appropriate in the circumstances:

- 1) inform the air traffic services unit serving the airspace in which the interception is taking place, providing this unit with available information that will assist in identifying the aircraft and requesting it to take action in accordance with (f);
- 2) relay messages between the intercepted aircraft and the appropriate air traffic services unit, the intercept control unit or the intercepting aircraft.



INTERCEPTION

SIRA.11015 Interception

GM2 SIRA.11015 Interception

1) General

1.1. Interception of civil aircraft should be avoided and should be undertaken only as a **last resort**. If undertaken, the interception should be limited to:

- determining the **identity** of the aircraft,
- return the aircraft to its planned **track**,
- direct it **beyond** the **boundaries** of national airspace,
- guide it away from a **prohibited, restricted, danger, caution, or TRA** or
- instruct it to affect a **landing** at a designated aerodrome.

Temporary reserved airspace

Practice interception of civil aircraft is not to be undertaken unless prior agreement has been reached to conduct such activity with the pilot and operator of the civil aircraft concerned.

INTERCEPTION

SIRA.11015 Interception

GM2 SIRA.11015 Interception

2) Interception manoeuvres

2.2. An aircraft equipped with an ACAS, which is being intercepted, may perceive the interceptor as a **collision threat** and thus initiate an avoidance manoeuvre in response to an **ACAS RA**.

Such a manoeuvre might be misinterpreted by the interceptor as an indication of **unfriendly intentions**.

It is important therefore that pilots of intercepting aircraft equipped with a secondary surveillance radar (SSR) transponder **suppress** the transmission of pressure-altitude information (in Mode C replies or in the AC field of Mode

S replies) **within a range of at least 37 km (20 NM)** of the aircraft being intercepted.

This prevents the ACAS in the intercepted aircraft from using RAs in respect of the interceptor, while the ACAS traffic advisory information will remain available.

INTERCEPTION

SIRA.11015 Interception

GM2 SIRA.11015 Interception

2) Interception manoeuvres

2.3. Manoeuvres for visual identification

Phase I

The intercepting aircraft should approach the intercepted aircraft from **astern**. The element leader, or the single intercepting aircraft, should normally take up a position **on the left (port) side, slightly above and ahead** of the intercepted aircraft, within the field of view of the pilot of the intercepted aircraft, and initially **not closer to the aircraft than 300 m**.



INTERCEPTION

SIRA.11015 Interception

GM2 SIRA.11015 Interception

2) Interception manoeuvres

2.3. Manoeuvres for visual identification

Phase II

The element leader, or the single intercepting aircraft, should begin closing in gently on the intercepted aircraft, at the same level, until no closer than absolutely necessary to obtain the information needed.

Upon completion of identification, the intercepting aircraft should withdraw from the vicinity of the intercepted aircraft as outlined in Phase III.

Phase III

The element leader, or the single intercepting aircraft, should break gently away from the intercepted aircraft in a shallow dive. Any other participating aircraft should stay well clear of the intercepted aircraft and rejoin their leader.

INTERCEPTION

SIRA.11015 Interception

GM2 SIRA.11015 Interception

2) Interception manoeuvres

2.4. Manoeuvres for navigational guidance

If repeated attempts to attract the attention of the pilot-in-command of the intercepted aircraft are unsuccessful, other methods of signalling may be used for this purpose, including as a last resort the visual effect of the **reheat/afterburner**, provided that no hazard is created for the intercepted aircraft.



INTERCEPTION

SIRA.11015 Interception

GM2 SIRA.11015 Interception

3) Guidance of an intercepted aircraft

3.3 In the exceptional case where an intercepted civil aircraft is required to land in the territory overflown, care must also be taken that:

- a) the designated aerodrome is **suitable** for the safe landing of the aircraft type concerned;
- b) the surrounding **terrain** is suitable for circling, approach and missed approach manoeuvres;
- c) the intercepted aircraft has sufficient **fuel** remaining to reach the aerodrome;
- d) if the intercepted aircraft is a civil transport aircraft, the designated aerodrome has a **runway with a length equivalent to at least 2 500 m** at mean sea level and a bearing **strength** sufficient to support the aircraft; and
- e) whenever possible, the designated aerodrome is one that is described in detail in the relevant **Aeronautical Information Publication**.

ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT**1. Interception procedures**

1.1 The following procedures and visual signals apply over the territory and territorial waters of Islamic Republic of Iran in the event of interception of an aircraft. An aircraft which is intercepted by another aircraft shall immediately:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in SIRA.11015;
- b) notify, if possible, the appropriate air traffic services unit;
- c) attempt to establish radiocommunication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.500 MHz, giving the identity of the intercepted aircraft and

the nature of the flight, and if no contact has been established and if practicable, repeat this call on the emergency frequency 243.000 MHz;

- d) if equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

1.2 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

1. The word "interception" in this context does not include intercept and escort service provided, on request, to an aircraft in distress, in accordance with the *Search and Rescue Manual (Doc 7333)*.

PART: RULES OF THE AIR

SECTION 13

SSR TRANSPONDER

SSR TRANSPONDER

SIRA.13001 Operation of an SSR transponder

a) All aircraft flying within Tehran FIR are required to be **equipped** with SSR transponder having a combined Mode A/3, 4096 Codes capability and a Mode C automated altitude reporting capability.

b) The **use** of SSR transponder is mandatory for all aircraft flying within **controlled airspace**, unless otherwise approved by prior coordination or instructed by ATS unit.

Pilots shall not operate the IDENT feature unless requested by ATS.



INTERCEPTION

SIRA.13001 Operation of an SSR transponder

GM1 SIRA.13001 Operation of an SSR transponder

Pilots of aircraft engaged in formation join-ups are expected to continue operating the transponder until established in **formation**. Once established in formation, **all except the lead aircraft** should be instructed to 'squawk standby'.

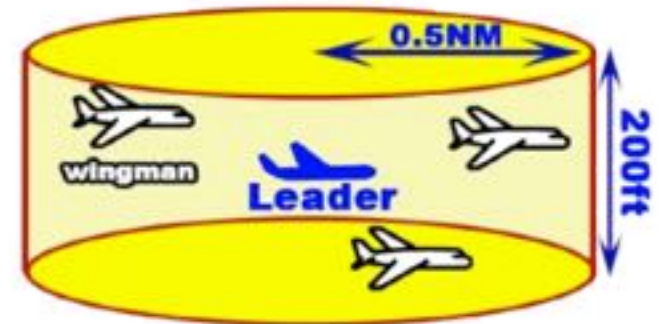


Annex 2

3.1.8 Formation flights

These conditions shall include the following:

- the formation operates as a **single aircraft** with regard to navigation and position reporting;
- separation** between aircraft in the flight shall be the responsibility of the **flight leader** and **the pilots-in-command of the other aircraft** in the flight and shall include periods of transition when aircraft are manoeuvring to attain their own separation within the formation and during join-up and breakaway; and
- a distance not exceeding **0.5 NM** laterally and **100 ft** vertically from the flight leader shall be maintained by each aircraft.



SSR TRANSPONDER

SIRA.13005 SSR transponder Mode A code setting

a) SPECIFIC FAMILY CODES ARE RESERVED FOR SPECIAL PURPOSES AS FOLLOWS:

- 1) Code **0000**: transponder malfunction;
- 2) Code **2000**: for use by flight crew in the absence of any Air Traffic Control (ATC) instructions or operating in the non-mandatory area, unless the conditions for the use of codes **7000**, 7500, 7600 and 7700 apply.
- 3) Code **1200**: VFR flights in the absence of code assignment instructions or when the aircraft is operating in an area in which the code setting is not mandatory, unless the conditions for the use of codes **7500**, **7600** and **7700** apply;
- 4) Code **7500**: unlawful interference;
- 5) Code **7600**: radio communications failure;
- 6) Code **7700**: emergencies and interception;
- 7) Code **7776** and Code **7777**: SSR ground transponder monitoring; and
- 8) Code **7601-7612**: humanitarian purposes.

SSR TRANSPONDER

SIRA.13005 SSR transponder Mode A code setting

GM1 SIRA.13005(a) SSR transponder Mode A code setting

If a pilot has selected Mode A Code **7500** and has been requested to confirm this code by ATC, the pilot should, according to circumstances, either confirm this or not reply at all. **If the pilot does not reply, ATC should take this as confirmation that the use of Code 7500 is not an inadvertent false code selection.**



SSR TRANSPONDER

SIRA.13005 SSR transponder Mode A code setting

b) When it is observed that the **code shown on the situation display is different** from what has been assigned to the aircraft:

- 1) the pilot shall be requested to **confirm the code selected** and, if the situation warrants, to **reselect the correct code**; and
- 2) if the discrepancy between assigned and displayed codes still persists, the pilot may be requested to **stop the operation of the aircraft's transponder**.

The next control position and any other affected unit using SSR and/or multilateration (MLAT) in the provision of ATS shall be informed accordingly.

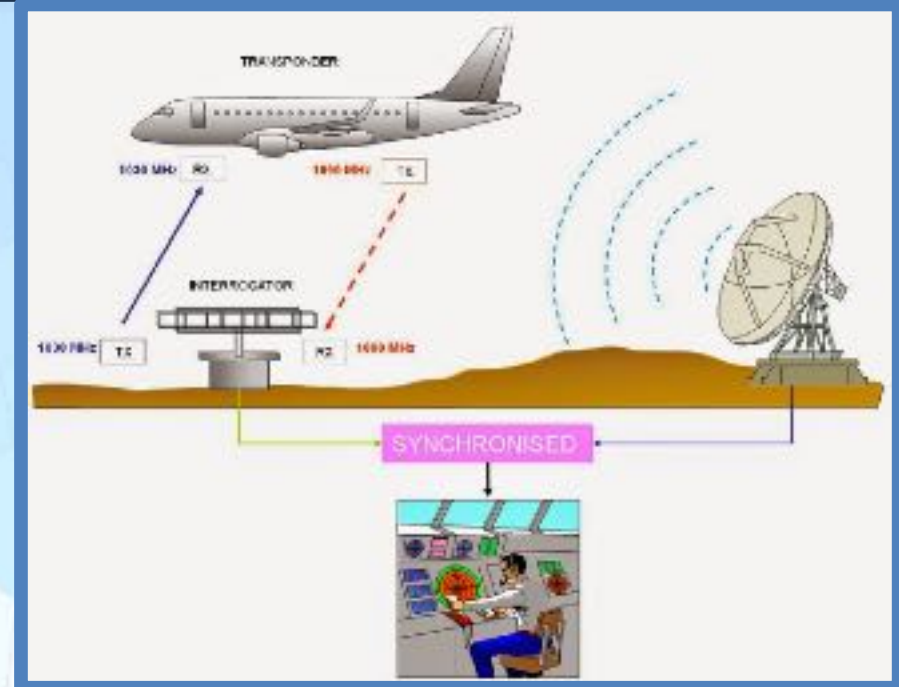
SSR TRANSPONDER

SIRA.13005 SSR transponder Mode A code setting

AMC1 SIRA.13005(b) SSR transponder Mode A code setting

When requested by ATC to **confirm the code selected**, the pilot should:

- verify the Mode A code setting on the transponder;
- reselect the assigned code if necessary; and
- confirm to ATC the setting displayed on the controls of the transponder.



SSR TRANSPONDER

SIRA.13010 Pressure-altitude-derived information

- a) When the aircraft carries serviceable Mode C equipment, the pilot **shall continuously operate this mode** unless otherwise dictated by ATC.
- b) Verification of the pressure -altitude- derived level information displayed to the controller shall be affected **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.



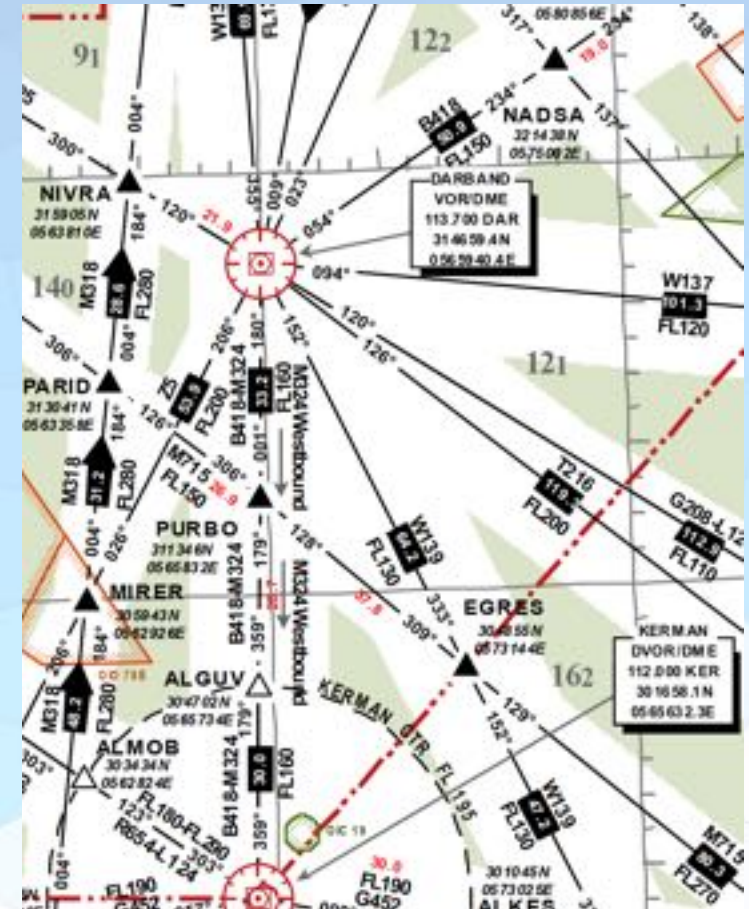
APPENDIX 1. PRINCIPLES GOVERNING THE
IDENTIFICATION OF
NAVIGATION SPECIFICATIONS AND
THE IDENTIFICATION OF **ATS ROUTES**
OTHER THAN STANDARD DEPARTURE AND ARRIVAL ROUTES

Annex 11

1. Designators for ATS routes and navigation specifications

1.1 The purpose of a system of route designators and navigation specification(s) applicable to specified ATS route segment(s), route(s) or area is to allow both pilots and ATS, taking into account automation requirements:

- a) to make **unambiguous reference** to any ATS route without the need to resort to the use of geographical coordinates or other means in order to describe it;
- b) to relate an ATS route to a specific **vertical structure** of the airspace, as applicable;
- c) to indicate a required level of **navigation performance accuracy**, when operating along an ATS route or within a specified area; and
- d) to indicate that a route is used primarily or exclusively by **certain types of aircraft**.



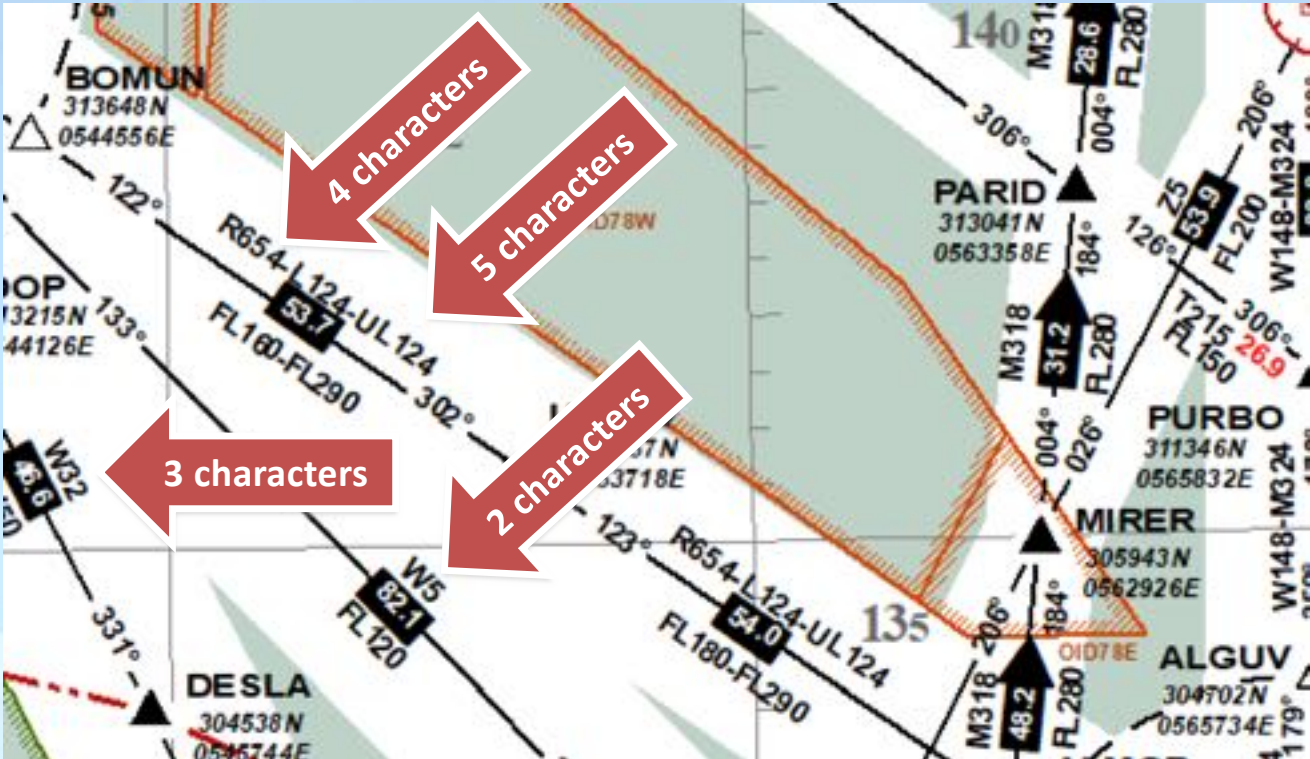
Annex 11

2. Composition of designator

2.1.1 The number of characters required to compose the designator ***shall not exceed six characters.***

2.1.2 The number of characters required to compose the designator should, whenever possible, be kept to a *maximum of five characters*.

2.2 The **basic designator** shall consist of *one letter of the alphabet* followed by *a number from 1 to 999*.



Annex 11**2. Composition of designator**

2.2.1 Selection of the letter shall be made from those listed hereunder:

- a) **A, B, G, R** for routes which form part of the **regional** networks of ATS routes and are **not area navigation** routes;
- b) **L, M, N, P** for **area navigation** routes which form part of the **regional** networks of ATS routes;
- c) **H, J, V, W** for routes which do **not** form part of the **regional** networks of ATS routes and are **not area navigation** routes;
- d) **Q, T, Y, Z** for **area navigation** routes which do **not** form part of the **regional** networks of ATS routes.

	Non-REGIONAL	REGIONAL
Non-RNAV	HJWV	BARG
RNAV	QTYZ	LMPN

Annex 11**2. Composition of designator**

2.3 Where applicable, one supplementary letter shall be added as a **prefix** to the basic designator in accordance with the following:

- a) **K** to indicate a low-level route established for use primarily by **helicopters**;
- b) **U** to indicate that the route or portion thereof is established in the **upper** airspace;
- c) **S** to indicate a route established exclusively for use by supersonic aircraft during acceleration, deceleration and while in **supersonic** flight.

Annex 11**2. Composition of designator**

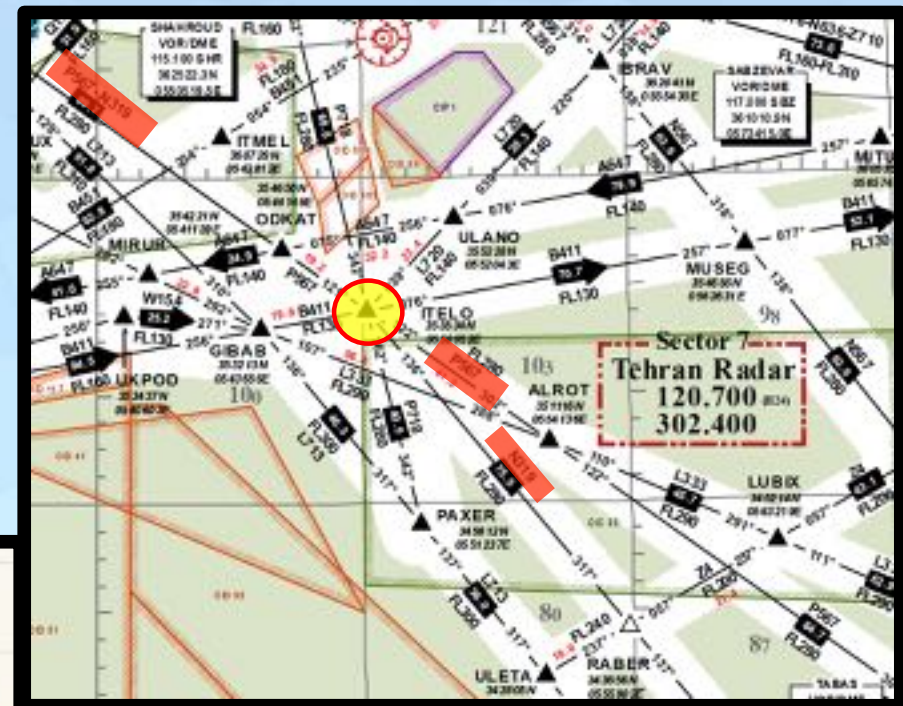
2.4 When prescribed by the appropriate ATS authority or on the basis of regional air navigation agreements, a supplementary letter may **be added after the basic designator** of the ATS route in question in order to indicate the type of service provided in accordance with the following:

- a) the letter **F** to indicate that on the route or portion thereof **advisory** service only is provided;
- b) the letter **G** to indicate that on the route or portion thereof flight **information** service only is provided.

Annex 11**2. Composition of designator**

3.1.1 The same basic designator shall be assigned to a **main trunk route** throughout its entire length, irrespective of terminal control areas, States or regions traversed.

3.1.2 Where two or more trunk routes have a **common segment**, the segment in question shall be assigned each of the designators of the routes concerned, except where this would present difficulties in the provision of air traffic service, in which case, by common agreement, one designator only shall be assigned.



3.1.3 *A **basic designator** assigned to one route shall not be assigned to any other route.*

Annex 11**4. Use of designators in communications**

4.1 In printed communications, the designator shall be expressed at all times by **not less than two** and **not more than six** characters.

4.2 In voice communications, the basic letter of a designator shall be spoken in accordance with the ICAO **spelling alphabet**.

4.3 Where the prefixes K, U or S specified in 2.3 are used, they shall, in voice communications, be spoken as follows:

K — KOPTER

U — UPPER

S — SUPERSONIC

The word “kopter” shall be pronounced as in the word “helicopter” and the words “upper” and “supersonic” as in the English language.

4.4 Where the letters “**F**” or “**G**” specified in 2.4 are used, the flight crew **should not be required to use** them in voice communications.

APPENDIX 2. PRINCIPLES GOVERNING THE ESTABLISHMENT AND IDENTIFICATION OF **SIGNIFICANT POINTS**

Annex 11

APPENDIX 2. SIGNIFICANT POINTS

1. Establishment of significant points

1.1 Significant points should, whenever possible, be established with reference to

ground-based or *space-based radio navigation aids*, preferably VHF or higher frequency aids.

1.2 Where such ground-based or space-based radio navigation aids do not exist, significant points shall be established at locations which can be determined by *self-contained airborne navigation aids*, or, where navigation by visual reference to the ground is to be effected, by *visual observation*.

Specific points may be designated as “**transfer of control**” points by agreement between adjacent air traffic control units or control positions concerned.

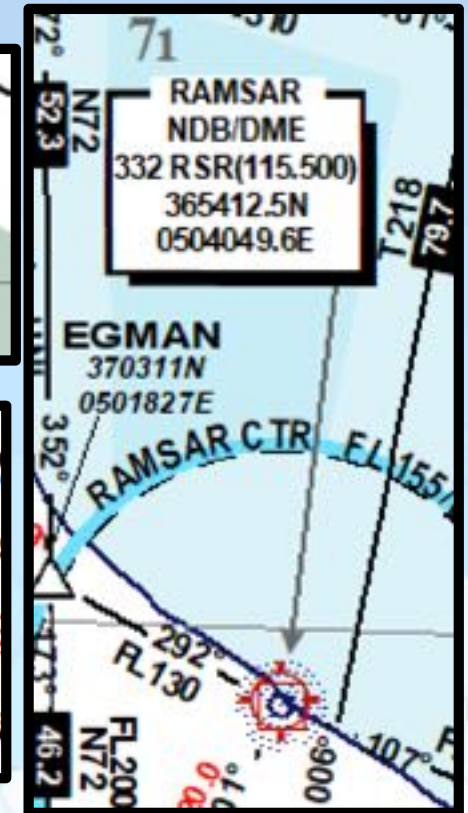
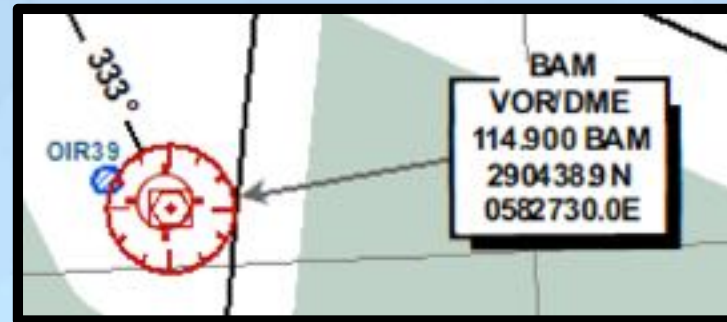


Annex 11

APPENDIX 2. SIGNIFICANT POINTS

2.1 Plain language name for significant points marked by the site of a radio navigation aid

2.1.1 Whenever practicable, significant points shall be named with reference to an identifiable and preferably ***prominent geographical location***.



Annex 11**APPENDIX 2. SIGNIFICANT POINTS****2.1 Plain language name for significant points marked by the site of a radio navigation aid**

2.1.2 In selecting a name for the significant point, care shall be taken to ensure that the following conditions are met:

a) the name shall not create **difficulties in pronunciation** for pilots or ATS personnel when speaking in the language used in ATS communications. Where the name of a geographical location in the national language selected for designating a significant point gives rise to difficulties in pronunciation, an **abbreviated or contracted version** of this name, which retains as much of its geographical significance as possible, shall be selected;

Example: FUERSTENFELDBRUCK = FURSTY

b) the name shall be easily recognizable in voice communications and shall be free of ambiguity with those of other significant points **in the same general area**. In addition, the name shall not create confusion with respect to **other communications exchanged** between air traffic services and pilots;

c) the name should, if possible, consist of **at least six letters** and form **two syllables** and preferably **not more than three**;

d) the selected name shall be the same for both the significant point and the radio navigation aid marking it.

Annex 11

APPENDIX 2. SIGNIFICANT POINTS

2.2 Composition of coded designators for significant points marked by the site of a radio navigation aid

2.2.1 The coded designator shall be the same as the radio identification of the radio navigation aid. It shall be so composed, if possible, as to facilitate association with the name of the point in plain language.

2.2.2 Coded designators ***shall not be duplicated within 1 100 km (600 NM)*** of the location of the radio navigation aid concerned, except as noted hereunder.

Note.— When ***two radio navigation aids*** operating in different bands of the frequency spectrum are situated at ***the same location***, their radio identifications are normally the same.



Annex 11

APPENDIX 2. SIGNIFICANT POINTS

3. Designators for significant points

NOT marked by the site of a radio navigation aid

3.1 Where a significant point is required at a position not marked by the site of a radio navigation aid, and is used for ATC purposes, it shall be designated by a unique **five-letter** pronounceable “**name-code**”. This name-code designator then serves as the name as well as the coded designator of the significant point.

3.4 The unique five-letter pronounceable name-code designator assigned to a significant point **shall not be assigned to any other significant point**. When there is a need to **relocate** a significant point, a **new name-code** designator shall be chosen. In cases when a State wishes to keep the allocation of specific name-codes for reuse at a different location, such name-codes shall not be used until after a period of **at least six months**.



Annex 11**APPENDIX 2. SIGNIFICANT POINTS****4. Use of designators in communications**

4.1 Normally the name selected in accordance with 2 or 3 shall be used to refer to the significant point in voice communications. If the plain language name for a significant point marked by the site of a **radio navigation aid** selected in accordance with 2.1 is not used, it shall be replaced by the coded designator which, in voice communications, shall be spoken in accordance with the **ICAO spelling alphabet**.

4.2 In printed and coded communications, only the coded designator or the selected name-code shall be used to refer to a significant point.

APPENDIX 2. SIGNIFICANT POINTS

5. Significant points used for reporting purposes

5.3 Reporting points shall be established either as “**compulsory**” or as “**on-request**”.

REPORTING POINT	COMPULSORY	▲
	ON REQUEST	△
ATS / MET REPORTING POINT	COMPULSORY	▲
	ON REQUEST	▲



APPENDIX 3. PRINCIPLES GOVERNING THE
IDENTIFICATION OF
STANDARD DEPARTURE AND ARRIVAL ROUTES
AND ASSOCIATED PROCEDURES

Definitions

Standard instrument arrival (STAR). A designated instrument flight rule (IFR) arrival route linking a significant point, normally on an **ATS route**, with a point from which a published instrument approach procedure can be commenced.

Standard instrument departure (SID). A designated instrument flight rule (IFR) departure route linking the **aerodrome** or a specified **runway** of the aerodrome with a specified significant point, normally on a designated **ATS route**, at which the en-route phase of a flight commences.

Annex 11**1. Designators for standard departure and arrival routes and associated procedures**

1.2 Each route shall be identified by a **plain language designator** and a corresponding **coded designator**.

1.3 The designators shall, in voice communications, be easily recognizable as relating to a standard departure or arrival route and shall not create any difficulties in pronunciation for pilots and ATS personnel.

AD 2 OIII STAR 1-5
WEF 27 FEB 20
TEHRAN/MEHRABAD
RWY 11L/R, 29L/R
MUXOR 1N/2P/1V/2Z

AD 2 OIII SID 1-1
WEF 20 JUL 17
TEHRAN/MEHRABAD
RWY 11L/R, 29L/R
NAGMO 1A/1B

Annex 11

2. Composition of designators

2.1 Plain language designator

2.1.1 The plain language designator of a standard departure or arrival route shall consist of:

- a) a **basic indicator**; followed by
- b) a **validity indicator**; followed by
- c) a **route indicator**, where required; followed by

- d) the word “**departure**” or “**arrival**”; followed by
- e) the word “**visual**”, if the route has been established for use by aircraft operating in accordance with the visual flight rules (VFR).

AIP
ISLAMIC REPUBLIC OF IRAN

AD 2 OIMM STAR 1-8
WEF 13 OCT 16

STANDARD ARRIVAL CHART-
INSTRUMENT (STAR)-ICAO

TRANSITION ALTITUDE
8000 FT

APP	127.300
RADAR	127.300
TWR	118.100
GND	121.700, 121.900
ATIS	126.400

MASHHAD/SHAHID HASHEMI NEJAD
RWY 13L/R, 31R/L
RIBUX 1N/1P/1Q

Annex 11

2. Composition of designators

2.1 Plain language designator

2.1.2 The **basic indicator** shall be the name or name-code of the **significant point** where a standard departure route terminates or a standard arrival route begins.

2.1.3 The **validity indicator** shall be a number from **1 to 9**.

2.1.4 The **route indicator** shall be one **letter** of the alphabet. The letters “**I**” and “**O**” shall not be used.

basic indicator

RAMIL

route indicator

1

N

validity indicator

Arrival

RAMIL



Annex 11**2. Composition of designators****2.2 Coded designator**

The coded designator of a standard departure or arrival route, instrument or visual, shall consist of:

- a) the **coded designator** or **name-code** of the significant point described in 2.1.1 a); followed by
- b) the **validity indicator** in 2.1.1 b); followed by
- c) the **route indicator** in 2.1.1 c), where required.

Note.— Limitations in the display equipment on board aircraft may require shortening of the basic indicator, if that indicator is a five-letter name-code, e.g. KODAP. The manner in which such an indicator is shortened is left to the discretion of operators.

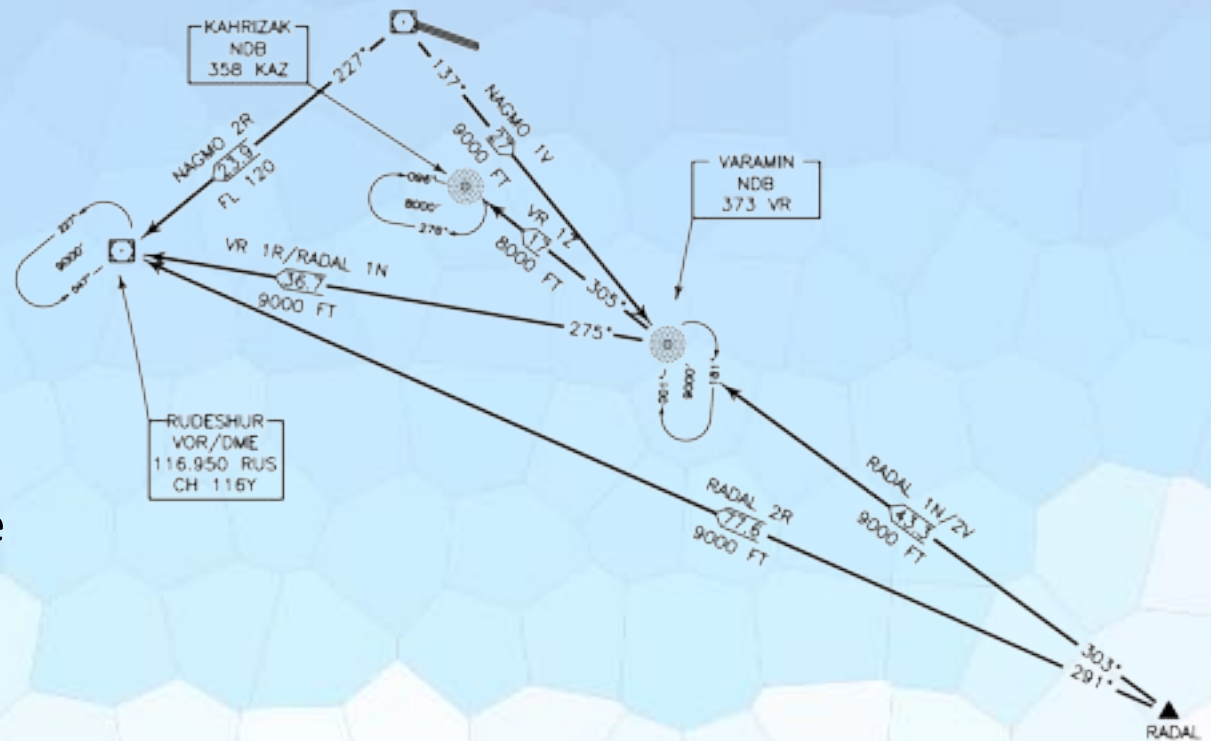
Annex 11

4. Assignment of validity indicators

4.1 A validity indicator shall be assigned to each route to identify the route which is currently in effect.

4.2 The first validity indicator to be assigned shall be the number “1”.

4.3 Whenever a route is amended, a new validity indicator, consisting of the next higher number, shall be assigned. The number “9” shall be followed by the number “1”.



Annex 11**APPENDIX 3. STANDARD DEPARTURE AND ARRIVAL ROUTES****5. Examples of plain language and coded designators**

5.1 Example 1: Standard departure route — instrument:

a) Plain language designator: BRECON ONE DEPARTURE

b) Coded designator: BCN 1

Annex 11

5.1.1 Meaning : The designator identifies a **standard instrument departure** route which terminates at the significant point **BRECON** (*basic indicator*). BRECON is a radio navigation facility with the identification BCN (basic indicator of the coded designator).

The **validity indicator ONE** (1 in the coded designator) signifies either that the original version of the route is still in effect or that a change has been made from the previous version NINE (9) to the now effective version ONE (1) (see 4.3).

The **absence of a route indicator** (see 2.1.4 and 3.2) signifies that only one route, in this case a departure route, has been established with reference to BRECON.

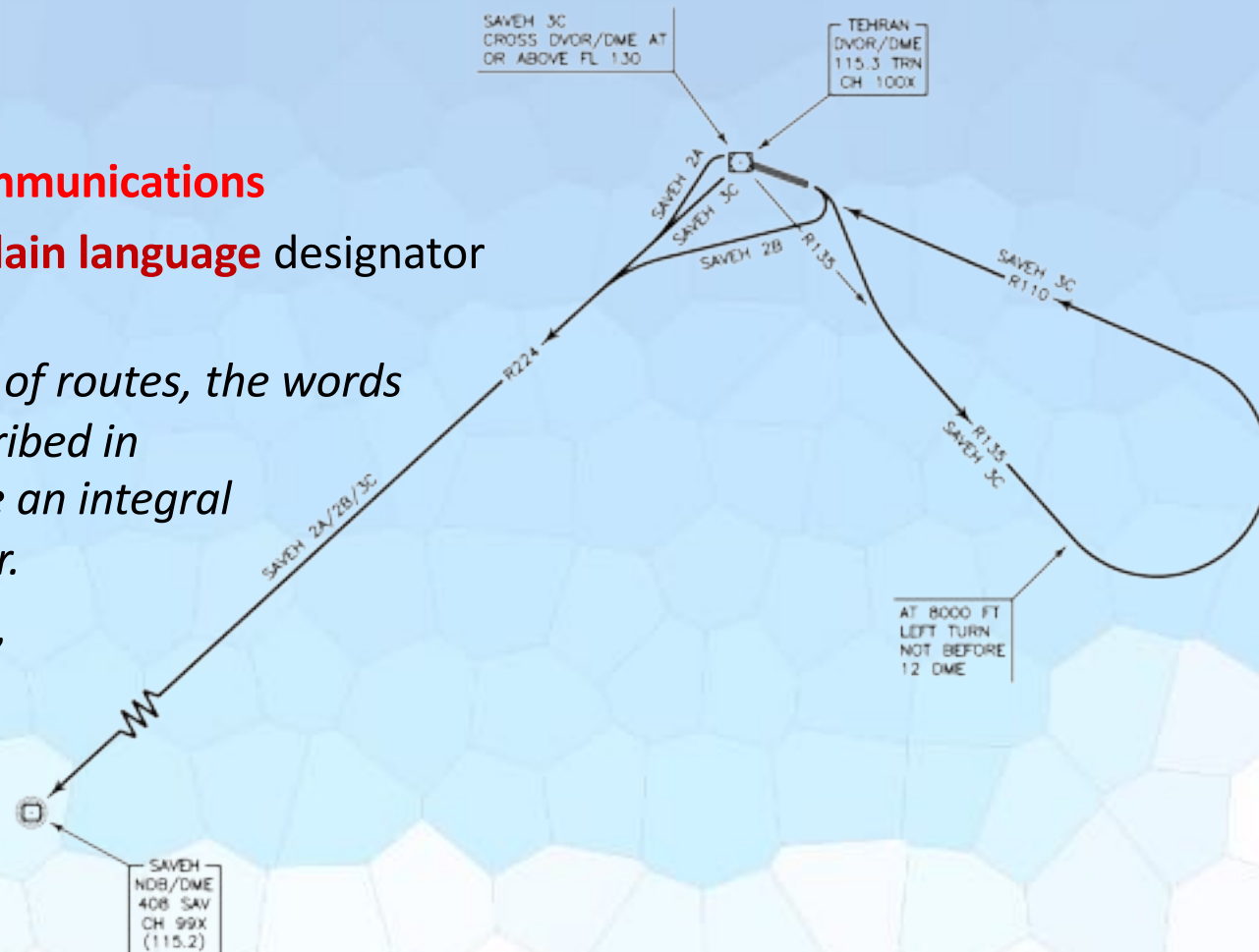
Annex 11

7. Use of designators in communications

7.1 In **voice** communications, **only the plain language** designator shall be used.

Note.— For the purpose of identification of routes, the words “**departure**”, “**arrival**” and “**visual**” described in 2.1.1 d) and 2.1.1 e) are considered to be an integral element of the plain language designator.

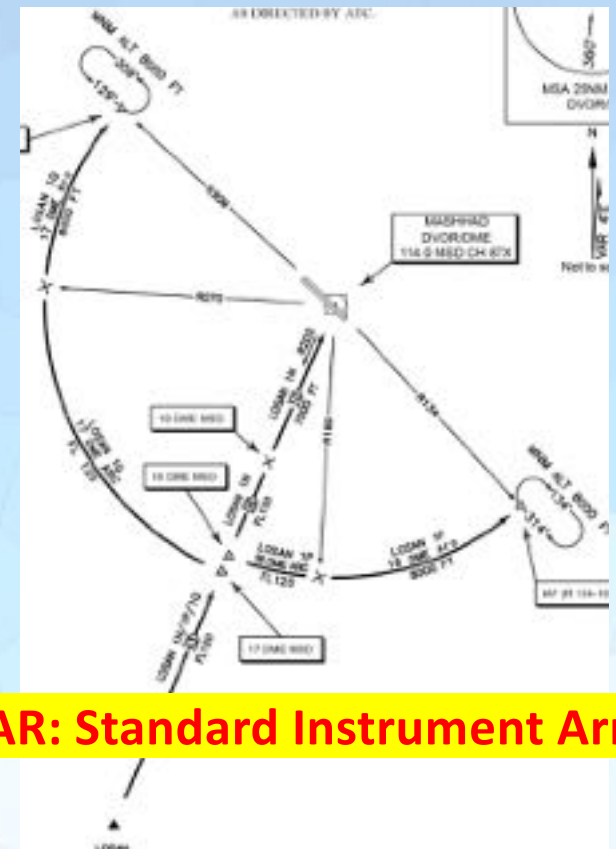
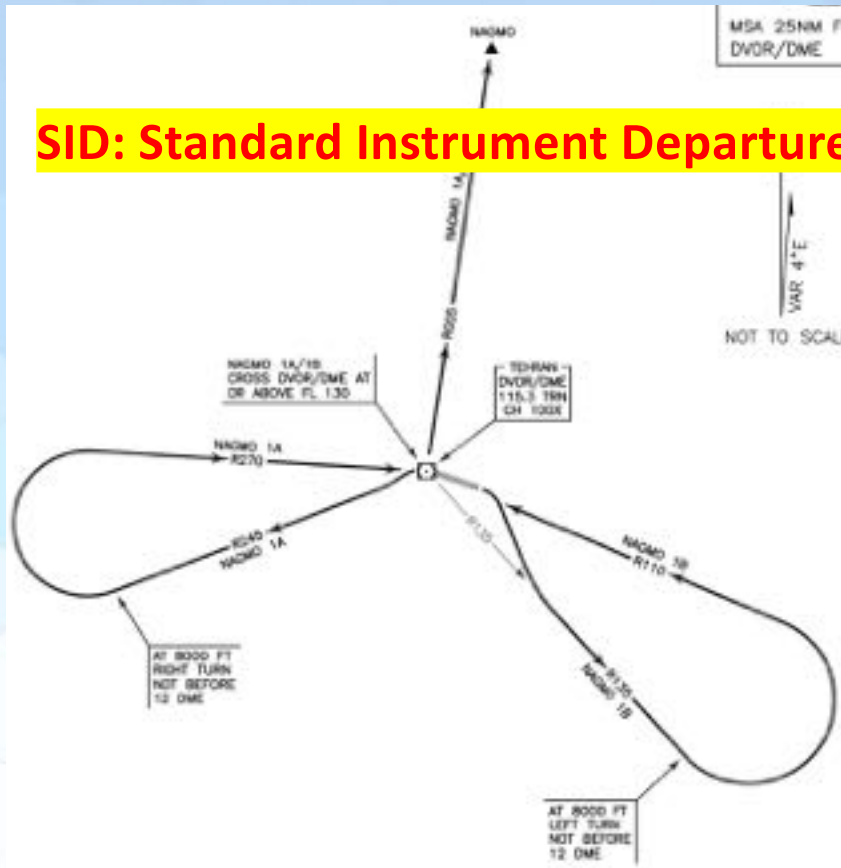
7.2 In **printed** or coded communications, only the **coded** designator shall be used.



Annex 11

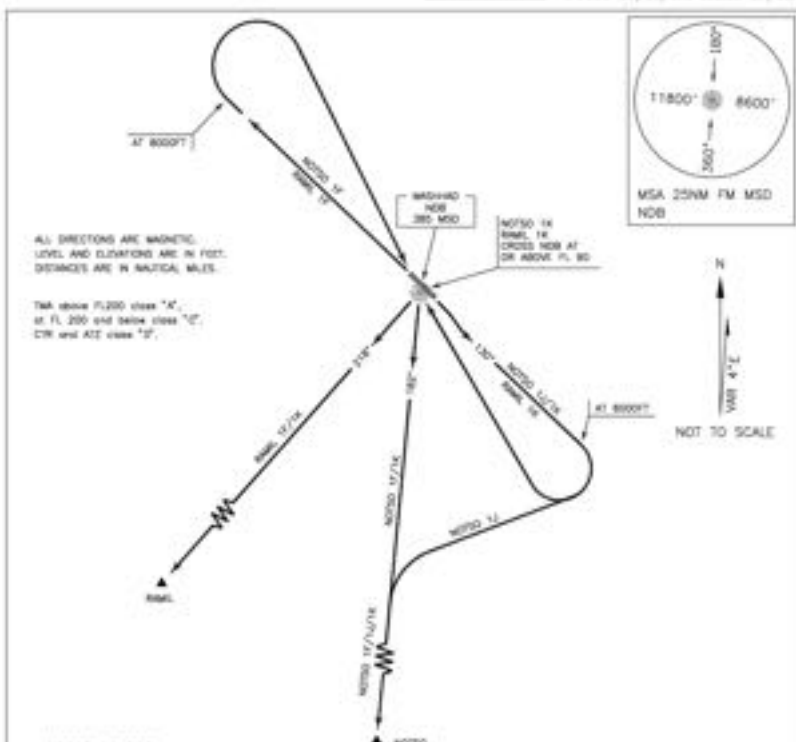
8.2 Whenever possible, a graphic portrayal of the routes/procedures shall also be displayed.

SID: Standard Instrument Departure



STAR: Standard Instrument Arrival

MASIHAD/
SHAHED HASHEMI NEJAD
RWY 13L/R, 31R/L
NOTSO 17/11/18, RAWEL 17/18



NOTED 1P (SEP)

EDF RNY 31R/L - After take off climb on RNY HDG to 8000 FT. then turn right to cross overhead
MSD NOB, then intercept BRG 182° MAG to 10750 and climb to cleared level.

NOTED 11 DEC.

DEP WNY 13L/R - After take off climb on BRG 130° MAG to 6000 FT, then turn right to intercept
BRG 182° MAG to 9000 and climb to cleared level.
MNR rate of climb 300 FT/MIN up to 6000 FT.

NOTED IN DEEP.

DEF ENY 131/E - After take off climb on 300 130° MAG to 8000 FT, then turn right to cross overhead MOO NDB at or above 7, 80, then intercept BNC 182° EAC to NOTRO and climb to cleared level.

FAMIL IF DEP:

DEP NWT 218/L - After take off climb on NWT NDC to 8000 FT, then turn right to cross overhead WDC NDC, then intercept NDC 218* MAC to RANGL and climb to cleared level.

RAMCL 1X DEP)

DEP HWY 154/R - After take off climb on BRG 130° MAG to 6000 FT, then turn right to cross overhead MSD 503 at or above FL 90, then intercept BRG 216° MAG to RAMEL and climb to cleared level.

© HASHEMI NEJAD
RMY 13L/R, 31R/L
NOTSO 1N/1P/1R
RAMEL 1N/1R



NOTES IN USE:

FM NOTSO proceed to MSD DYOR/DNE, Mag. TR 003, Dist 60 NM, MNM FL 140, after 18 DNE MNM FL 110, after 10 DNE MNM ALT 7000 FT.

NOTING IF ANY:

FM 20750 proceed to (AP (ZDL 134-18 (WIS), MAG TR 017, DIST 60.9 NM, MNM FL 130, after crossing ZDL 170 WNW ALT 8000 FT.

NOTED IN AREA

FM NOTSO proceed to IAP (XCL 134-18 DNE), MAC TR 000, at 18 DNE turn right for 18 DNE are to IAP, MYM FL 140, after commencing are at 18 DNE MYM ALT 8000 FT.

TABLE 1 IN ADD:

FM NAMEL proceed to WSD DAVE/DAME. MAG TR COM. DEST 80 NM. WNW FL 130. after 16 DME WNW FL 100. after 10 DME WNW ALT 8000 FT.

PAGE 118 A208

FM RAKE, proceed to JAF (EOL 134-16 DMO), MAC TR 035, at 16 DME turn right for 18 DME and to JAF, MNM FL 130, after commencing arc at 18 DME MNM FL 110, after crossing EOL 185 MNM ALT 8000 FT.



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