REPUBLIC OF MAURITIUS
DEPARTMENT OF CIVIL AVIATION
Sir Seewoosagur Ramgoolam International Airport, Plaine Magnien

MAURITIUS CIVIL AVIATION REQUIREMENTS

MCAR ROA

Rules of the Air

ISSUE 1 | REV 1

08 November 2024

FOREWORD

Regulation 87 of the Civil Aviation Regulations as amended stipulates that the operator and, where appropriate, the commander of any aircraft in or over Mauritius shall comply with the rules of the air and air traffic control as contained in the Fourteenth Schedule or in the Mauritius Civil Aviation Requirements published by the Authority.

The prerequisite to this Requirement is to ensure that every aircraft (irrespective of its nationality mark) flying over or manoeuvring within Mauritius territory shall comply with the rules and regulations relating to the flights and manoeuvre of aircraft there in force. Operators and where appropriate, the commander of any aircraft shall comply with the requirements of this MCAR-ROA.

This MCAR ROA "Rules of the Air"-Issue 1 Rev 0 is issued under the provisions of Regulation 135 of the Civil Aviation Regulations 2007 as amended and replaces the requirements prescribed in Civil Air Navigation Requirements of Mauritius (CANRM), Section 2: Air Navigation, Series A: Air Traffic Management, Part II Rules of the Air, issue 2-rev 0, dated 04 November 2014.

MCAR ROA-Issue 1 Rev 0 was based on the provisions of ICAO Annex 2 "Rules of the Air", 10th edition, amendment 46 dated 8 of November 2018.

This MCAR ROA, Issue 1 Rev 1 is based on the provisions of ICAO Annex 2 "Rules of the Air", 10th edition, amendment 48 dated 28 of November 2024.

This MCAR ROA Issue 1 Rev 1 will be effective as from 28 of November 2024.

I POKHUN
Director of Civil Aviation

ISSUE AND REVISION SYSTEM

THE REVISIONS TO THIS REQUIREMENT WILL BE INDICATED BY A VERTICAL BAR ON THE LEFT SIDE, IN FRONT OF THE LINE, SECTION OR FIGURE THAT HAS BEEN AFFECTED. AN ISSUE WILL BE THE REPLACEMENT OF THE COMPLETE DOCUMENT.

THESE REVISIONS MUST BE RECORDED ON THE RECORD OF REVISIONS TABLE OF THIS DOCUMENT, INDICATING THE RESPECTIVE NUMBER, DATE IT WAS ENTERED AND SIGNED BY THE PERSON ENTERING THE REVISION.

RECORD OF REVISIONS

REV NO.	DATE	INSERTED BY
Issue 1, rev 0	06 September 2023	ANS Inspector
Revision 1	08 November 2024	ANS Inspector

NOTE

The content of this document is arranged as follows:

The main requirements appear first, followed by the related acceptable means of compliance (AMC), even though this MCAR does not have any, and guidance material (GM) paragraph(s).

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

Requirements

Acceptable means of compliance

Guidance Material

TABLE OF CONTENT

GENERAL REQUIREMENTS

ROA.001 General

This Requirement establishes the Standards to be met by an air operator, a pilot-in-command or any aircraft bearing the nationality and registration marks of Mauritius, wherever they may be, to the extent that they do not conflict with the rules published by the State having jurisdiction over the territory overflown.

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SECTION A

TECHNICAL REQUIREMENTS

CHAPTER 1

Applicability of the Rules of the Air

ROA.005 Territorial application of the rules of the air

(a) This Requirement applies to:

(i) the operation of Mauritian civil aircraft operating in Mauritius territory; and

(ii) the operation of a foreign registered civil aircraft flying into or out of, or operating in, Mauritian territory.

(b) In spite of paragraph (a) (i):

(i) Annex 2, Rules of the Air, to the Chicago Convention applies to the operation of a Mauritian civil aircraft over the high seas; and

(ii) the rules of a foreign State relating to the flight and manoeuvre of aircraft apply to the operation of a Mauritian civil aircraft in that State; and

(c) If, and so long as, Mauritius has not notified the International Civil Aviation Organization to the contrary, it shall be deemed, as regards aircraft of its registration, to have agreed as follows:

For purposes of flight over those parts of the high seas where a Contracting State has accepted, pursuant to a regional air navigation agreement, the responsibility of providing air traffic services, the “appropriate ATS authority” referred to in this Requirement is the relevant authority designated by the State responsible for providing those services.

GM ROA.005 Territorial application of the rules of the air

The Council of the International Civil Aviation Organization resolved, in adopting Annex 2 in April 1948 and Amendment 1 to the said Annex in November 1951, that the Annex constitutes Rules relating to the flight and manoeuvre of aircraft within the meaning of Article 12 of the Convention. Over the high seas, therefore, these rules apply without exception.

The phrase “regional air navigation agreement” refers to an agreement approved by the Council of ICAO, normally on the advice of a Regional Air Navigation Meeting.

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ROA.010 Compliance with the rules of the air

The operation of an aircraft either in flight or on the movement area of an aerodrome shall be in compliance with the general rules and, in addition, when in flight, either with:

(a) the visual flight rules; or

(b) the instrument flight rules.

GM ROA.010 Compliance with the rules of the air

Information relevant to the services provided to aircraft operating in accordance with both visual flight rules and instrument flight rules in the seven ATS airspace classes is contained in Appendix 8 of this MCAR.

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 appropriate ATS authority.
(See Appendix 8)

ROA.015 Responsibility for compliance with the rules of the air

(a) Responsibility of 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 the rules of the air, 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.

ROA.020 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.

ROA.025 Problematic use of psychoactive substances

(a) The persons whose functions are critical regarding the safety of aviation and that carry out safety-sensitive functions, shall not undertake those functions while under the influence of any psychoactive substance, by reason of which human performance is impaired.

(b) No person shall carry out functions that are critical regarding the safety of aviation, under the following conditions:

(i) Within eight hours after consuming any alcoholic beverage (social drinking, not heavy drinking).

(ii) Under the influence of alcoholic beverages.

(iii) While under the influence of psychoactive substances that can impair human performance.

(iv) The blood alcohol level should not exceed the lower of the national requirements or 0.2 per thousand at the start of a flight duty period or operational shifts at ATS facilities or at Approved Maintenance Organizations.

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CHAPTER 2

General Rules

(1) Protection of persons and property

ROA.030 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.

ROA.035 Minimum heights

Except when necessary for take-off or landing, or except by permission from the appropriate authority, 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.

GM ROA.035 Minimum heights

See ROA.405 for minimum heights for VFR flights and ROA.435 for minimum levels for IFR flights.

ROA.040 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.

(See Appendix 3)

GM ROA.040 Cruising levels

The system of flight levels is prescribed in the Procedures for Air Navigation Services — Aircraft Operations (Doc 8168).

ROA.045 Special operations

Except under conditions prescribed by the Department of Civil Aviation and as indicated by relevant information, advice and/or clearance from the air traffic services unit, the following air operations shall not be carried out:

(a) Dropping or spraying from an aircraft in flight,

(b) No aircraft or other object shall be towed by an aircraft in any airspace class,

(c) Parachute descents, other than emergency descents,

(d) Acrobatic flights.

ROA.050 Formation flights

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 conditions prescribed by the ATS authority. These conditions shall include the following:

(a) the formation operates as a single aircraft with regard to navigation and position reporting,

(b) 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

(c) a distance not exceeding 1 km (0.5 NM) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each aircraft.

ROA.055 Remotely piloted aircraft

A remotely piloted aircraft 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 4.
(See Appendix 4)

ROA.060 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 5.
(See Appendix 5)

ROA.065 Prohibited areas and restricted areas

Aircraft shall not be flown in a prohibited area, or in a restricted area, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the Department of Civil Aviation or the pertinent Authority over whose territory the areas are established.

(2) Avoidance of collisions

ROA.070 Avoidance of collisions

Nothing in these rules 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.

GM ROA.070 Avoidance of collisions

(a) It is important that vigilance for the purpose of detecting potential collisions be exercised on board an aircraft, regardless of the type of flight or the class of airspace in which the aircraft is operating, and while operating on the movement area of an aerodrome.

(b) Operating procedures for use of ACAS detailing the responsibilities of the pilot-in-command are contained in PANS-OPS (Doc 8168), Volume I, Part III, Section 3, Chapter 3.

(c) Carriage requirements for ACAS equipment are addressed in Annex 6, Part I, Chapter 6 and Part II, Chapter 6.

ROA.075 Proximity

An aircraft shall not be operated in such proximity to other aircraft as to create a collision hazard.

ROA.080 Right-of-way

The aircraft that has the right-of-way shall maintain its heading and speed, but none of these rules shall relieve the pilot-in-command of an aircraft from the responsibility of taking collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment.

ROA.085 Avoidance manoeuvres

An aircraft that is obliged 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.

ROA.090 Aircrafts 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.

ROA.095 Aircrafts 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:

(a) power-driven heavier-than-air aircraft shall give way to airships, gliders, and balloons,

(b) airships shall give way to gliders and balloons,

(c) gliders shall give way to balloons,

(d) power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.

ROA.100 Aircraft 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.

ROA.105 Right of way for aircrafts landing and approaching

(a) 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.

(b) When two or more heavier-than-air aircraft are approaching an aerodrome 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 in front of another which is in the final stages of an approach to land, or to overtake that aircraft. Nevertheless, power-driven heavier-than-air aircraft shall give way to gliders.

ROA.110 Right of way in emergency landing

An aircraft that is aware that another is compelled to land shall give way to that aircraft.

ROA.115 Right of way in taking off

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

ROA.120 Surface movement of aircraft

In case of danger of collision between two aircraft taxiing on the movement area of an aerodrome the following shall apply:

(a) 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,

(b) when two aircraft are on a converging course, the one which has the other on its right shall give way,

(c) 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.

ROA.125 Aircraft taxiing on the manoeuvring area

An aircraft taxiing on the manoeuvring area shall stop and hold at:

(a) all runway-holding positions unless otherwise authorized by the aerodrome control tower.
(b) all lighted stop bars and may proceed further when the lights are switched off.

GM ROA.125 (a) Aircraft taxiing on the manoeuvring area

For runway-holding position markings and related signs, see Annex 14, Volume I, 5.2.10 and 5.4.2.

ROA.130 Lights to be displayed by aircraft

Except as provided by ROA.150, from sunset to sunrise or during any other period which may be prescribed by the Department of Civil Aviation all aircraft in flight shall display:

(a) anti-collision lights intended to attract attention to the aircraft, and

(b) navigation lights intended to indicate the relative path of the aircraft to an observer and other lights shall not be displayed if they are likely to be mistaken for these lights.

GM ROA.130 Lights to be displayed by aircraft

(a) Specifications for navigation lights for aeroplanes are contained in Appendix 6 of this MCAR. (See Appendix 6)

(b) The characteristics of lights intended to meet the requirements of ROA.130 for aeroplanes are specified in Annex 8. Detailed technical specifications for lights for aeroplanes are contained in Volume II, Part A, Chapter 4 of the Airworthiness Manual (Doc 9760) and for helicopters in Part A, Chapter 5 of that document.

(c) In the context of ROA.135 (c) and ROA.145 (a) an aircraft is understood to be operating when it is taxiing or being towed or is stopped temporarily during the course of taxiing or being towed.

(d) For aircraft on the water see ROA.170.

(e) Lights fitted for other purposes, such as landing lights and airframe floodlights, may be used in addition to the anti-collision lights specified in the Airworthiness Manual, Volume II (Doc 9760) to enhance aircraft conspicuity.

ROA.135 Lights to be displayed by aircraft on the manoeuvring area

Except as provided by ROA.150, all aircraft that operate on the manoeuvring area of an aerodrome, from sunset to sunrise or during any other period prescribed by the Department of Civil Aviation shall display:

(a) navigation lights intended to indicate the relative path of the aircraft to an observer and other lights shall not be displayed if they are likely to be mistaken for these lights,

(b) lights intended to indicate the extremities of their structure, unless stationary and otherwise adequately illuminated,

(c) lights intended to attract attention to the aircraft, and

(d) lights which indicate that engines are running.

GM ROA.135 Lights to be displayed by aircraft on the manoeuvring area

If suitably located on the aircraft, the navigation lights referred to in ROA.130 b) may also meet the requirements of ROA.135 b). Red anti-collision lights fitted to meet the requirements of ROA.130 a) may also meet the requirements of ROA.135 c) and ROA.135 d) provided they do not subject observers to harmful dazzle.

ROA.140 Anti-collision lights

Except as provided by ROA.150, all aircraft in flight and fitted with anti-collision lights to meet the requirement of ROA.130 a) shall display such lights also outside the period specified in ROA.130.

ROA.145 Use of aircraft lights on the aerodrome

Except as provided by ROA.150, all aircraft:

(a) operating on the movement area of an aerodrome and fitted with anti-collision lights to meet the requirement of ROA.135 c); or

(b) on the movement area of an aerodrome and fitted with lights to meet the requirement of ROA.135 d); shall display such lights also outside the period specified in ROA.135.

ROA.150 Reducing the intensity of any flashing lights

A pilot shall be permitted to switch off or reduce the intensity of any flashing lights fitted to meet the requirements of ROA.130, ROA.135, ROA.140 and ROA.145 if they do or are likely to:

(a) adversely affect the satisfactory performance of duties; or

(b) subject an outside observer to harmful dazzle.

ROA.155 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) a qualified 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.

ROA.160 Operation on and in the vicinity of an aerodrome

An aircraft operated on or in the vicinity of an aerodrome shall, whether or not within an aerodrome traffic zone:

(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) make all turns to the left, when approaching for a landing and after taking off, unless otherwise instructed,

(d) land and take off into the wind unless safety, the runway configuration, or air traffic considerations determine that a different direction is preferable.

GM ROA.160 Operation on and in the vicinity of an aerodrome

Additional rules may apply in aerodrome traffic zones.

ROA.165 Water operations

When two aircraft or an aircraft and a vessel are approaching one another and there is a risk of collision, the aircraft shall proceed with careful regard to existing circumstances and conditions including the limitations of the respective craft.

(a) **Aircrafts converging.** An aircraft which has another aircraft or a vessel on its right shall give way so as to keep well clear.

(b) **Aircrafts approaching head-on**. An aircraft approaching another aircraft or a vessel head-on, or approximately so, shall alter its heading to the right to keep well clear.

(c) **Overtaking**. The aircraft or vessel which is being overtaken has the right of way, and the one overtaking shall alter its heading to keep well clear.

(d) **Landing and taking off**. Aircraft landing on or taking off from the water shall, in so far as practicable, keep well clear of all vessels and avoid impeding their navigation.

GM ROA.165 Water operations

In addition to the provisions of ROA.165 of this MCAR, rules set forth in the International Regulations for Preventing Collisions at Sea, developed by the International Conference on Revision of the International Regulations for Preventing Collisions at Sea (London, 1972) may be applicable in certain cases.

ROA.170 Lights to be displayed by aircraft on the water

Between sunset and sunrise or such other period between sunset and sunrise as may be prescribed by the appropriate authority, all aircraft on the water shall display lights as required by the International Regulations for Preventing Collisions at Sea (revised 1972) unless it is impractical for them to do so, in which case they shall display lights as closely similar as possible in characteristics and position to those required by the International Regulations.

GM ROA.170 Lights to be displayed by aircraft on the water

(a) Specifications for lights to be shown by aeroplanes on the water are contained in the Appendix 6 of this MCAR.

(b) The International Regulations for Preventing Collisions at Sea specify that the rules concerning lights shall be complied with from sunset to sunrise. Any lesser period between sunset and sunrise established in accordance with ROA.170 cannot, therefore, be applied in areas where the International Regulations for Preventing Collisions at Sea apply, e.g. on the high seas.

(3) Flight plans

ROA.175 Submission of a flight plan

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.
(See Appendix 10)

ROA.180 Flight plan submitted prior to operating

A flight plan shall be submitted prior to operating:

(a) any flight or portion thereof to be provided with air traffic control service,

(b) any IFR flight within advisory airspace,

(c) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATS authority to facilitate the provision of flight information, alerting and search and rescue services,

(d) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATS authority to facilitate coordination with appropriate military units

or with air traffic services units in adjacent States in order to avoid the possible need for interception for the purpose of identification,

(e) any flight across international borders.

GM ROA.180 Flight plan

The term "flight plan" is used to mean variously, full information on all items comprised in the flight plan description, covering the whole route of a flight, or limited information required when the purpose is to obtain a clearance for a minor portion of a flight such as to cross an airway, to take off from, or to land at a controlled aerodrome.

Procedures relating to flight plans and associated services are contained in the PANS-ATM (Doc 4444).

ROA.185 Submission to a flight plan

Unless otherwise prescribed by the appropriate ATS authority, a flight plan shall be submitted:

(a) before departure, to an air traffic services reporting office,

(b) during flight, transmitted to the appropriate air traffic services unit or air-ground control radio station,

ROA.190 Minimum time for submitting a Flight plan

Unless otherwise prescribed by the appropriate ATS authority, a flight plan for a flight to be provided with air traffic control service or air traffic advisory service shall be submitted at least sixty minutes before departure, or, if submitted during flight, at a time which will ensure its receipt by the appropriate air traffic services unit at least ten minutes before the aircraft is estimated to reach:

(a) the intended point of entry into a control area or advisory area, or

(b) the point of crossing an airway or advisory route.

ROA.195 Contents of a Flight plan

A flight plan shall comprise information regarding such of the following items as are considered relevant by the appropriate ATS authority:

(a) Aircraft identification

(b) Flight rules and type of flight

(c) Number and type(s) of aircraft and wake turbulence category

(d) Equipment

(e) Departure aerodrome (see GM ROA.195a))
(f) Estimated off-block time (see GM ROA.195b))

(g) Cruising speed(s)

(h) Cruising level(s)

(i) Route to be followed

(j) Destination aerodrome and total estimated elapsed time

(k) Alternate aerodrome(s)

(l) Fuel endurance

(m) Total number of persons on board

(n) Emergency and survival equipment

(o) Other information.

GM ROA.195 Contents of a Flight plan

(a) For flight plans submitted during flight, the information provided in respect of this item will be an indication of the location from which supplementary information concerning the flight may be obtained, if required.

(b) For flight plans submitted during flight, the information to be provided in respect of this item will be the time over the first point of the route to which the flight plan relates.

(c) The term “aerodrome” when used in the flight plan is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

ROA.200 Completion of a Flight plan

Whatever the purpose for which it is submitted, a flight plan shall contain information, as applicable, on relevant items up to and including “Alternate aerodrome(s)” regarding the whole route or the portion thereof for which the flight plan is submitted; in addition, it shall contain information, as applicable, on all other items when so prescribed by the appropriate ATS authority or when otherwise deemed necessary by the person submitting the flight plan.

ROA.205 Changes to a Flight plan

Subject to the provisions of ROA.300, all changes to a flight plan submitted for an IFR flight, or a VFR flight operated as a controlled flight, shall be reported as soon as practicable to the appropriate air traffic services unit. For other VFR flights, significant changes to a flight plan shall be reported as soon as practicable to the appropriate air traffic services unit.

GM ROA.205 Changes to a Flight plan

Information submitted prior to departure regarding fuel endurance or total number of persons carried on board, if incorrect at time of departure, constitutes a significant change to the flight plan and as such must be reported.

ROA.205 Closing a Flight plan

Unless otherwise prescribed by the ATS authority, a report of arrival shall be made in person, by radiotelephony or via data link at the earliest possible moment after landing, to the appropriate air traffic services unit at the arrival aerodrome, by any flight for which a flight plan has been submitted covering the entire flight or the remaining portion of a flight to the destination aerodrome.

ROA.210 Closing a Flight plan of a portion of a flight

When a flight plan has been submitted only in respect of a portion of a flight, other than the remaining portion of a flight to destination, it shall, when required, be closed by an appropriate report to the relevant air traffic services unit.

ROA.215 Closing a Flight plan when there is no ATS unit

When no air traffic services unit exists at the arrival aerodrome, the arrival report, when required, shall be made as soon as practicable after landing and by the quickest means available to the nearest air traffic services unit.

ROA.220 Closing a Flight plan when communication facilities are inadequate

When communication facilities at the arrival aerodrome are known to be inadequate and alternate arrangements for the handling of arrival reports on the ground are not available, the following action shall be taken. Immediately prior to landing the aircraft shall, if practicable, transmit to the appropriate air traffic services unit, a message comparable to an arrival report, where such a report is required. Normally, this transmission shall be made to the aeronautical station serving the air traffic services unit in charge of the flight information region in which the aircraft is operated.

ROA.225 Information of an arrival report

Arrival reports made by aircraft shall contain the following elements of information:

(a) aircraft identification,

(b) departure aerodrome,

(c) destination aerodrome (only in the case of a diversionary landing),

(d) arrival aerodrome,

(e) time of arrival.

GM ROA.225 Information of an arrival report

Whenever an arrival report is required, failure to comply with these provisions may cause serious disruption in the air traffic services and incur great expense in carrying out unnecessary search and rescue operations.

(4) Signals

ROA.230 Distress and urgency signals

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.
(See Appendix 1)

ROA.235 Meaning of the signals

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.

ROA.240 Marshalling signals

A signalman shall be responsible for providing standard marshalling signals to aircraft in a clear and precise manner using the signals shown in Appendix 1, and no o person shall guide an aircraft unless trained, qualified, and approved by the Department of Civil Aviation to carry out the functions of a signalman.

ROA.245 Signalman wear

The signalman 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. All participating ground staff during daylight hours shall use daylight-fluorescent wands, table-tennis bats or gloves shall be used for all signaling and illuminated wands at night or in low visibility.

(5) Time

ROA.250 Coordinated Universal Time (UTC)

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.

ROA.255 Time check

A time check shall be obtained prior to operating a controlled flight and at such other times during the flight as may be necessary.

GM ROA.255 Time check

Such time check is normally obtained from an air traffic services unit unless other arrangements have been made by the operator or by the ATS authority.

ROA.260 Time used in CPDLC communications

Wherever time is utilized in the application of data link communications, it shall be accurate to within 1 second of UTC.

(6) Air traffic control service

ROA.265 Air traffic control clearances

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.

GM ROA.265 Air traffic control clearances

(a) A flight plan may cover only part of a flight, as necessary, to describe that portion of the flight or those manoeuvres which are subject to air traffic control.

(b) A clearance may cover only part of a current flight plan, as indicated in a clearance limit or by reference to specific manoeuvres such as taxiing, landing, or taking off.

(c) If an air traffic control clearance is not satisfactory to a pilot-in-command of an aircraft, the pilot-in-command may request and, if practicable, will be issued an amended clearance.

ROA.270 Priority clearance request

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.

ROA.275 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.

GM ROA.275 Potential reclearance in flight

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

ROA.280 Taxi clearance on the manoeuvring area

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.

ROA.285 Adherence to current flight plan

Except as provided for in ROA.315, an aircraft shall adhere to the current flight plan or the applicable portion of a current flight plan for a controlled flight within the tolerances defined in paragraphs ROA.290 to ROA.310 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.

ROA.290 Controlled flights operations

Unless otherwise authorized by the ATS authority, or directed by the appropriate air traffic control unit, controlled flights shall, in so far as practicable:

(a) when on an established ATS route, operate along the defined centre line of that route; or

(b) when on any other route, operate directly between the navigation facilities and/or points defining that route.

ROA.295 Aircraft operating along defined routes

Subject to the overriding requirement in ROA.290, 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. Any deviation from the requirements in ROA.290 shall be notified to the appropriate air traffic services unit.

ROA.300 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 10 kt 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.

ROA.305 Provision of ADS-C services

When ADS-C services are provided and ADS-C is activated, the air traffic services unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.

ROA.310 Flight plan change request

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

(a) Change of cruising level: aircraft identification; requested new cruising level and cruising Mach number/true airspeed at this level; revised time estimates (when applicable) at subsequent reporting points or flight information region boundaries.

(b) Change of Mach number/true airspeed: aircraft identification; requested Mach number/true airspeed.

(c) 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.

ROA.315 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:

(a) 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

(b) 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

(c) if operated within a control zone, request authorization to operate as a special VFR flight; or

(d) request clearance to operate in accordance with the instrument flight rules.

ROA.320 Position reports

Unless exempted by the appropriate ATS authority 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 appropriate ATS authority or specified by the appropriate air traffic services unit.

ROA.325 Data link Position reports

Controlled flights providing position information to the appropriate air traffic services unit via data link communications shall only provide voice position reports when requested.

GM ROA.325 Data link Position reports

The conditions and circumstances in which ADS-B or SSR Mode C transmission of pressure-altitude satisfies the requirement for level information in position reports are indicated in the PANS-ATM (Doc 4444).

ROA.330 Termination of control

A controlled flight shall, except when landing at a controlled aerodrome, advise the appropriate ATC unit as soon as it ceases to be subject to air traffic control service.

ROA.335 Communications

An aircraft operated as a controlled flight shall maintain continuous air-ground voice communication watch on the appropriate communication channel of, and establish two-way communication as necessary with, the appropriate air traffic control unit, except as may be prescribed by the appropriate ATS authority in respect of aircraft forming part of aerodrome traffic at a controlled aerodrome.

GM ROA.335 Communications

(a) SELCAL or similar automatic signalling devices satisfy the requirement to maintain an air-ground voice communication watch.

(b) The requirement for an aircraft to maintain an air-ground voice communication watch remains in effect after CPDLC has been established.

ROA.340 Communication failure

If a communication failure precludes compliance with ROA.335, the aircraft shall comply with the voice communication failure procedures in Appendix 9 of this MCAR, 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.
(See Appendix 9)

ROA.345 Aerodrome communication failure

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.
(See appendix 1).

ROA.350 Communication failure in VMC

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 ROA.355.

ROA.355 Communication failure in IMC

If in instrument meteorological conditions or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with ROA.350 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,

(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:

(i) the time the last assigned level or minimum flight altitude is reached, or

(ii) the time the transponder is set to Code 7600, or

(iii) 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,

(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,

(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.

GM ROA.355 Communication failure in IMC

The provision of air traffic control service to other flights operating in the airspace concerned will be based on the premise that an aircraft experiencing communication failure will comply with the rules in ROA.355.

(7) Unlawful interference

ROA.360 Unlawful interference

An aircraft which is being subjected to unlawful interference shall endeavour to notify the appropriate ATS unit of this fact, 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 minimize conflict with other aircraft.

GM ROA.360 Unlawful interference

(a) Responsibility of ATS units in situations of unlawful interference is contained in Annex 11.

(b) Guidance material for use when unlawful interference occurs, and the aircraft is unable to notify an ATS unit of this fact is contained in ENR 1.13 of the AIP.

(c) Action to be taken by SSR-, ADS-B- and ADS-C-equipped aircraft which are being subjected to unlawful interference is contained in Annex 11, the PANS-ATM (Doc 4444) and the PANS-OPS (Doc 8168).

(d) Action to be taken by CPDLC-equipped aircraft which are being subjected to unlawful interference is contained in Annex 11, the PANS-ATM (Doc 4444), and guidance material on the subject is contained in the Manual of Air Traffic Services Data Link Applications (Doc 9694).

ROA.365 Actioning of the pilot in command in an unlawful interference

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 appropriate authority unless considerations aboard the aircraft dictate otherwise.

GM ROA.365 Actioning of the pilot in command in an unlawful interference

(a) Requirements for Mauritian authorities with respect to aircraft on the ground that are subject to unlawful interference are contained in the Civil Aviation Security Regulations and Annex 17, Chapter 5, 5.2.4.

(b) See ROA.20 regarding the authority of the pilot-in-command of an aircraft.

(8) Interception

ROA.370 Interception

Interception of civil aircraft shall be governed by appropriate regulations and administrative directives issued by Contracting States in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft.
(See Appendix 1, section 2)
(See Appendix 2, section 1)

GM ROA.370 Interception

(a) The word “interception” in this context does not include intercept and escort service provided, on request, to an aircraft in distress, in accordance with Volumes II and III of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual (Doc 9731).

(b) Recognizing that it is essential for the safety of flight that any visual signals employed in the event of an interception which should be undertaken only as a last resort be correctly employed and understood by civil and military aircraft throughout the world. The visual signals in Appendix 1 to this MCAR, shall be strictly adhered to by the State’s aircraft.

ROA.375 The pilot-in-command of an intercepted civil aircraft

The pilot-in-command of a civil aircraft, when intercepted, shall comply with the Standards in Appendix 2, Sections 2 and 3, interpreting and responding to visual signals as specified in Appendix 1, Section 2.

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CHAPTER 3

Visual Flight Rules (VFR)

ROA.380 Visibility and distance from clouds for VFR flights

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 Appendix 7.
(See Appendix 7)

ROA.385 Visibility and ceiling minimums for VFR flights

Except when a 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 traffic pattern:

(a) when the ceiling is less than 1 500 ft, or

(b) when the ground visibility is less than 5 km.

ROA.390 VFR flights between sunset and sunrise

VFR flights between sunset and sunrise, or such other period between sunset and sunrise as may be prescribed by the ATS authority, shall be operated in accordance with the conditions prescribed by such authority.

ROA.395 VFR flights restrictions

Unless authorized by the Authority, VFR flights shall not be operated:

(a) above FL 200,

(b) at transonic and supersonic speeds,

(c) beyond 20 NM from shoreline, and

(d) across international boundaries.

ROA.400 VFR flights to operate above FL 290

Authorization for VFR flights to operate above FL 290 shall not be granted, due to the implementation of a Reduced Vertical Separation Minimum (RVSM) of 1 000ft applied above FL 290 in Mauritius.

ROA.405 Safety minimum VFR heights

Except when necessary for take-off or landing, or except by permission from the appropriate authority, a VFR flight shall not be flown:

(a) over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 1 000 ft above the highest obstacle within a radius of 600 m from the aircraft,

(b) elsewhere than as specified in ROA.405 a), at a height less than 500 ft above the ground or water.

ROA.410 VFR cruising levels

Except where otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority, VFR flights in level cruising flight when operated above 3 000 ft from the ground or water, or a higher datum as specified by the ATS authority, shall be conducted at a cruising altitude or level appropriate to the track as specified in the tables of cruising levels in Appendix 3.

ROA.415 VFR flights clearances provisions

VFR flights shall comply with the provisions of ROA.265:

(a) when operated within Classes B, C and D airspace,

(b) when forming part of aerodrome traffic at controlled aerodromes, or

(c) when operated as special VFR flights.

ROA.420 VFR flights communications

A VFR flight operating within or into areas, or along routes, designated by the ATS authority in accordance with ROA.180 c) or d) shall maintain continuous air-ground voice communication watch on the appropriate communication channel of, and report its position as necessary to, the air traffic services unit providing flight information service.

ROA.425 Changing from VFR to IFR

An aircraft operated in accordance with the visual flight rules which wishes to change to compliance with the instrument flight rules shall:

(a) if a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan, or

(b) when so required by ROA.180, submit a flight plan to the appropriate air traffic services unit and obtain a clearance prior to proceeding IFR when in controlled airspace.

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CHAPTER 4

Instrument Flight Rules (IFR)

(1) Rules applicable to all IFR flights

ROA.430 Aircraft equipment

Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown.

ROA.435 Minimum levels

An IFR flight shall be flown at a level which is not below the minimum flight altitude established by the State, except when necessary for take-off or landing, or except when specifically authorized by the appropriate authority, where no such minimum flight altitude has been established:

(a) over high terrain or in mountainous areas, at a level which is at least 2 000 ft above the highest obstacle located within 8 km of the estimated position of the aircraft,

(b) elsewhere than as specified in a), at a level which is at least 1 000 ft above the highest obstacle located within 8 km of the estimated position of the aircraft.

GM ROA.435 Minimum levels

The estimated position of the aircraft will take account of the navigational accuracy which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.

ROA.440 Change from IFR flight to VFR flight

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, if a flight plan was submitted, 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.

ROA.445 Cancelling IFR in VMC

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.

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(2) Rules applicable to IFR flights within controlled airspace

ROA.450 Applicable provisions to IFR flights in controlled airspace

IFR flights shall comply with the provisions of ROA.265 when operated in controlled airspace.

ROA.455 Cruising levels within controlled airspace

An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level, or, if authorized to employ cruise climb techniques, between two levels or above a level, selected from:

(a) the tables of cruising levels in Appendix 3, or

(b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 for flight above FL 410,

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 ATS authority in Aeronautical Information Publications.

(3) Rules applicable to IFR flights outside controlled airspace

ROA.460 Cruising levels outside controlled airspace

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:

(a) the tables of cruising levels in Appendix 3, except when otherwise specified by the appropriate ATS authority for flight at or below 3 000 ft above mean sea level, or

(b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 for flight above FL 410.

GM ROA.460 Cruising levels outside controlled airspace

This provision does not preclude the use of cruise climb techniques by aircraft in supersonic flight.

ROA.465 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 ROA.180 c) or d) shall maintain an air-ground voice communication watch on the appropriate communication channel and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

ROA.470 Position reports outside controlled airspace

An IFR flight operating outside controlled airspace and required by the ATS authority to:

(a) submit a flight plan,

(b) maintain an air-ground voice communication watch on the appropriate communication channel and establish two-way communication, as necessary, with the air traffic services unit providing flight information service, shall report position as specified in ROA.320 for controlled flights.

GM ROA.470 Position reports outside controlled airspace

Aircraft electing to use the air traffic advisory service whilst operating IFR within specified advisory airspace are expected to comply with the provisions of ROA.180, except that the flight plan and changes thereto are not subjected to clearances and that two-way communication will be maintained with the unit providing the air traffic advisory service.

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APPENDIX 1

SIGNALS

(See MCAR ROA.230)

(1) DISTRESS AND URGENCY SIGNALS

GM 1: None of the provisions in this section shall prevent the use, by an aircraft in distress, of any means at its disposal to attract attention, make known its position and obtain help.

GM 2: For full details of telecommunication transmission procedures for the distress and urgency signals, see Annex 10, Volume II, Chapter 5.

GM 3: For details of the search and rescue visual signals, see Annex 12.

(a) Distress signals

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

(i) a signal made by radiotelegraphy or by any other signalling method consisting of the group SOS (. . . ——— . . . in the Morse Code),

(ii) a radiotelephony distress signal consisting of the spoken word MAYDAY,

(iii) a distress message sent via data link which transmits the intent of the word MAYDAY,

(iv) rockets or shells throwing red lights, fired one at a time at short intervals,

(v) a parachute flare showing a red light.

GM 4: Article 41 of the ITU Radio Regulations (Nos. 3268, 3270 and 3271 refer) provides information on the alarm signals for actuating radiotelegraph and radiotelephone auto-alarm systems:

3268 The radiotelegraph alarm signal consists of a series of twelve dashes sent in one minute, the duration of each dash being four seconds and the duration of the interval between consecutive dashes one second. It may be transmitted by hand but its transmission by means of an automatic instrument is recommended.

3270 The radiotelephone alarm signal consists of two substantially sinusoidal audio frequency tones transmitted alternately. One tone shall have a frequency of 2 200 Hz and the other a frequency of 1 300 Hz, the duration of each tone being 250 milliseconds.

3271 The radiotelephone alarm signal, when generated by automatic means, shall be sent continuously for a period of at least thirty seconds but not exceeding one minute; when generated by other means, the signal shall be sent as continuously as practicable over a period of approximately one minute.

(b) Urgency signals

(i) 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:

(1) the repeated switching on and off of the landing lights,

(2) the repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

(ii) 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:

(1) a signal made by radiotelegraphy or by any other signalling method consisting of the group XXX,

(2) a radiotelephony urgency signal consisting of the spoken words PAN, PAN,

(3) an urgency message sent via data link which transmits the intent of the words PAN, PAN.

(2) SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

(See ROA.370)

(a) Signals initiated by intercepting aircraft and responses by intercepted aircraft

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1	DAY or NIGHT — Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left (or to the right in the case of a helicopter) on the desired heading. GM 1- Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1. GM 2- If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of racetrack patterns and to rock the aircraft each time it passes the intercepted aircraft.	You have been intercepted, Follow me.	DAY or NIGHT — Rocking aircraft, flashing navigational lights at irregular intervals and following.	Understood, will comply

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
2	DAY or NIGHT — 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	DAY or NIGHT — Rocking the aircraft	Understood, will comply
3	DAY or NIGHT — Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT — Lowering landing gear, (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply

(b) Signals initiated by intercepted aircraft and responses by intercepting aircraft

Series	INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responds	Meaning
4	DAY or NIGHT — Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 1 000 ft but not exceeding 2 000 ft (in the case of a helicopter, at a height exceeding 170 ft but not exceeding 330 ft) above the aerodrome level and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate	DAY or NIGHT — If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft.	Understood, follow me
			If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, you may proceed
5	DAY or NIGHT — Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply	DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood
6	DAY or NIGHT — Irregular flashing of all available lights.	In distress	DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood

(3) VISUAL SIGNALS USED TO WARN AN UNAUTHORIZED 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 will indicate to an unauthorized 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.

(4) SIGNALS FOR AERODROME TRAFFIC

(See ROA.345)

(a) Light and pyrotechnic signals

(i) Instructions

LIGHT		From Aerodrome Control to:	
		Aircraft in Flight (See Figure 1)	**Aircraft on the ground** (See Figure 2)
Directed towards aircraft concerned (See Figure 1&2)	**STEADY GREEN**	Cleared to land	Cleared for take off
	STEADY RED	Give way to other aircraft and continue circling	Stop
	GREEN FLASHES	Return for landing (clearances to land and to taxi will be given in due course)	Cleared to taxi (or you may move on the manoeuvring area
	RED FLASHES	Do not land; aerodrome unsafe	Taxi or move clear of the landing area
	WHITE FLASHES	Land at this aerodrome and proceed to the apron (clearances to land and to taxi will be given in due course)	Return to starting point on the aerodrome or vacate manoeuvring area in accordance with local instructions.
	RED PYROTECHNICS	Do not land; wait for permission	

(1) Aircraft in Flight

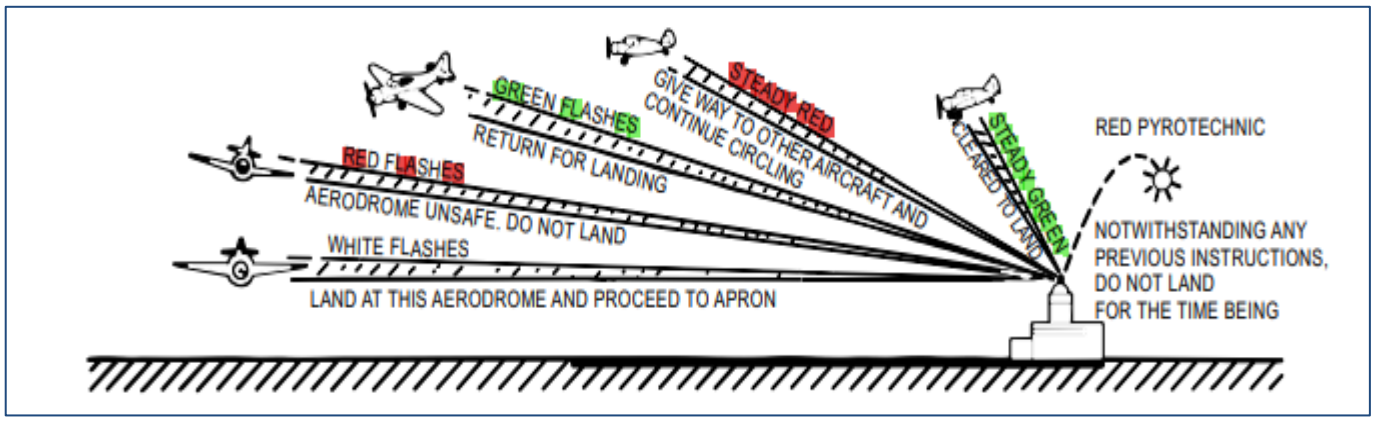


Figure 1

(2) Aircraft on the ground

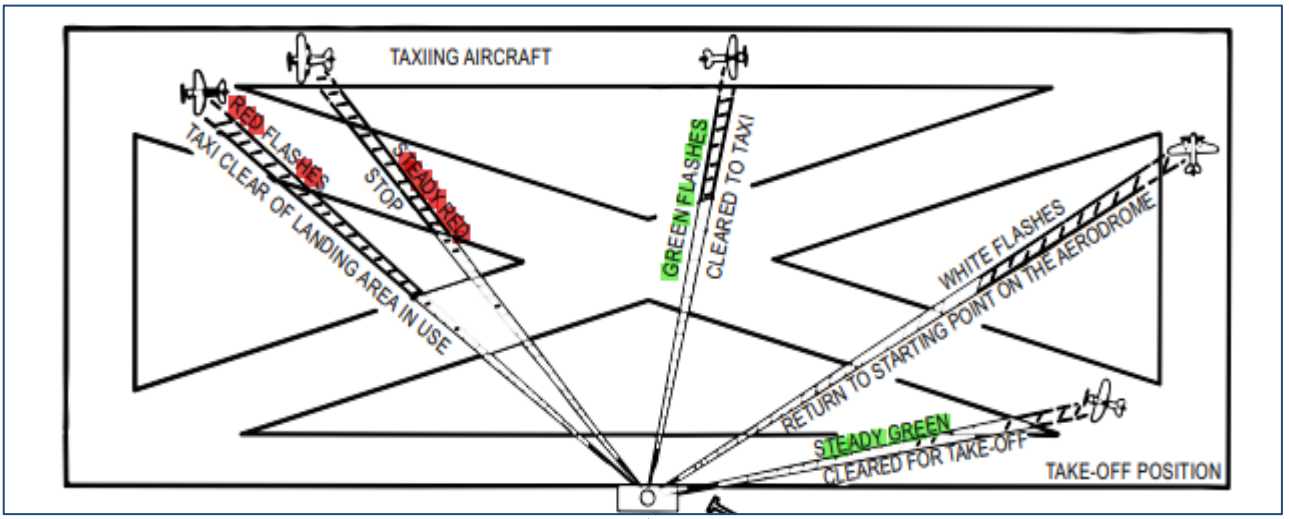


Figure 2

(ii) Acknowledgement by an aircraft

(1) When in flight:

(a) during the hours of daylight:

i) by rocking the aircraft's wings

GM 5 - This signal should not be expected on the base and final legs of the approach.

(b) during the hours of darkness:

i) 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.

(2) When on the ground:

(a) during the hours of daylight:

i) by moving the aircraft's ailerons or rudder

(b) during the hours of darkness:

i) 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.

See table 1 (bellow) for an easier understanding of acknowledgement by an aircraft of the signals for aerodrome traffic.

Acknowledgement by an aircraft		
Time of day	When in flight	When on the ground
Hours of Daylight	by rocking the aircraft's wings*	by moving the aircraft's ailerons or rudder
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.	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.

Table 1

(b) Visual ground signals

(i) Prohibition of landing

A horizontal red square panel with yellow diagonals (Figure 3) when displayed in a signal area indicates that landings are prohibited, and that the prohibition is liable to be prolonged.

Figure 3

(ii) Need for special precautions while approaching or landing

A horizontal red square panel with one yellow diagonal (Figure 4) 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.

Figure 4

(iii) Use of runways and taxiways

(1) A horizontal white dumb-bell (Figure 5) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

Figure 5

(2) The same horizontal white dumb-bell as in (iii) above, but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 6) 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

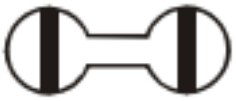


Figure 6

(iv) Closed runways or taxiways

Crosses of a single contrasting colour, yellow or white (Figure 7), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

Figure 7

(v) Directions for landing or take-off

(1) A horizontal white or orange landing T (Figure 8) 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.

GM 6 — When used at night, the landing T is either illuminated or outlined in white lights.

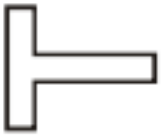


Figure 8

(2) A set of two digits (Figure 9) 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.

Figure 9

(vi) 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 10) indicates that turns are to be made to the right before landing and after take-off.

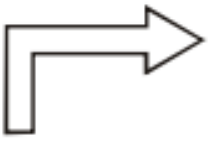


Figure 10

(vii) Air traffic services reporting office

The letter C displayed vertically in black against a yellow background (Figure 11) indicates the location of the air traffic services reporting office.

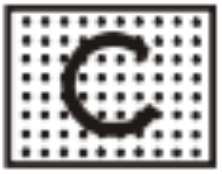


Figure 11

(viii) Glider flights in operation

A double white cross displayed horizontally (Figure 12) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

Figure 12

(5) MARSHALLING SIGNALS

(a) From a signalman to an aircraft

GM 1.— These signals are designed for use by the signalman, with hands illuminated as necessary to facilitate observation by the pilot, and facing the aircraft in a position:

(1) for fixed-wing aircraft, on left side of aircraft, where best seen by the pilot, and

(2) for helicopters, where the signalman can best be seen by the pilot.

GM 2.— The meaning of the relevant signals remains the same if bats, illuminated wands or torchlights are held.

GM 3.— The aircraft engines are numbered, for the signalman facing the aircraft, from right to left (i.e. No. 1 engine being the port outer engine).

GM 4.— Signals marked with an asterisk (*) are designed for use to hovering helicopters.

GM 5.— References to wands may also be read to refer to daylight-fluorescent table-tennis bats or gloves (daytime only).

GM 6. — References to the signalman may also be read to refer to marshaller.

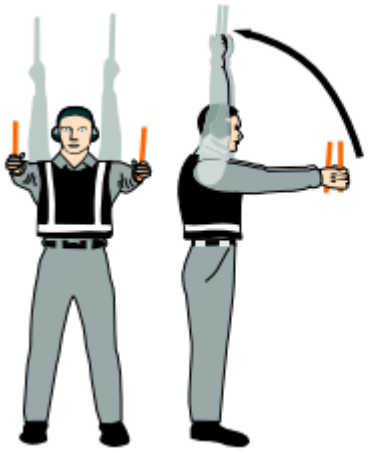
(i) Prior to using the following signals, the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft, in complying with Chapter 2, (4) of this MCAR, might otherwise strike.

GM 7 - The design of many aircraft is such that the path of the wing tips, engines and other extremities cannot always be monitored visually from the flight deck while the aircraft is being manoeuvred on the ground.

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.



2. Identify gate

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

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.

4. Straight ahead

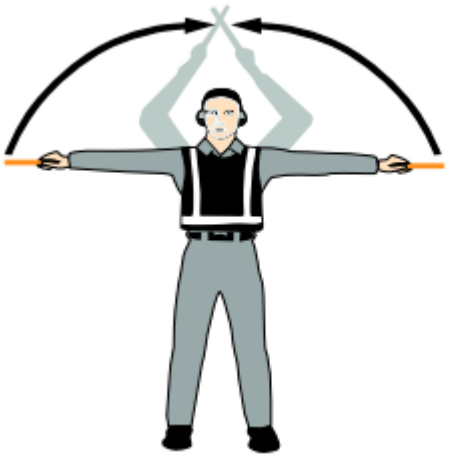
Bend extended arms at elbows and move wands up and down from chest height to head.

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.

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.

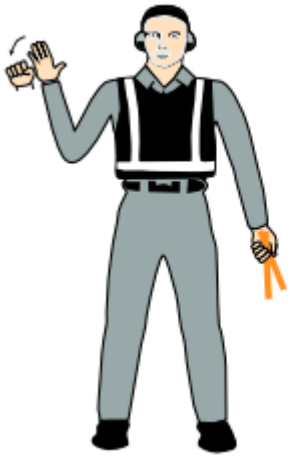


6 a). Normal stop

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

6 b). Emergency stop

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



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.

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.

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.

8 b). Chocks removed

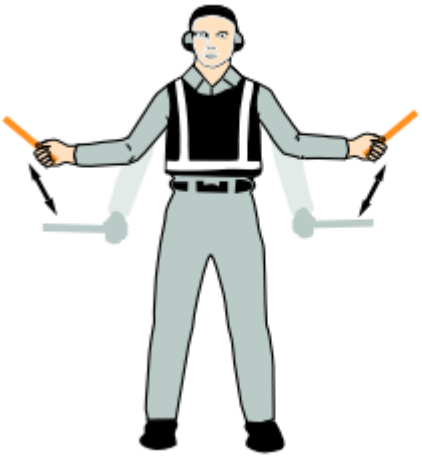
With arms and wands fully extended above head, move wands outward in a "jabbing" motion. **Do not** remove chocks until authorized by flight crew.

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.

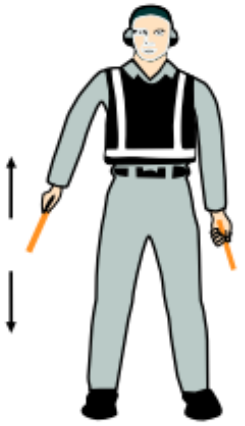
10. Cut engines

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.



11. Slow down

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



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.

13. Move back

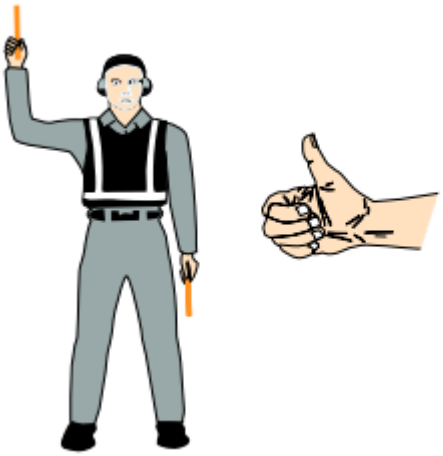
With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6 a) or 6 b).

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.

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.



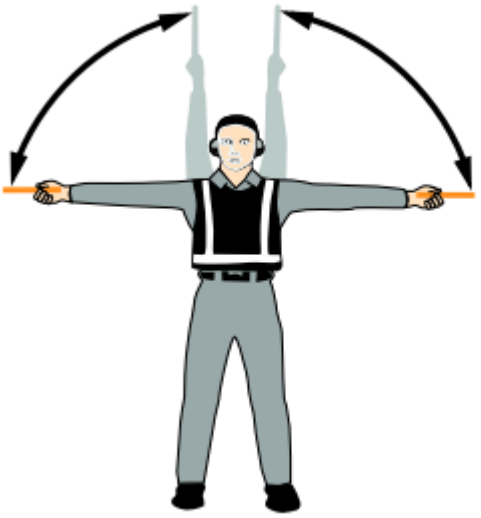
15. Affirmative/all clear

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.

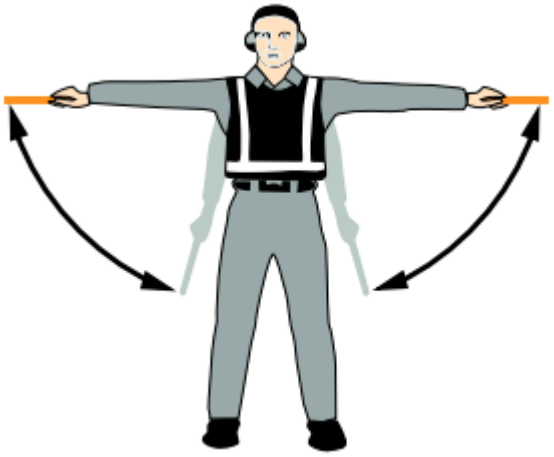
***16. Hover**

Fully extend arms and wands at a 90-degree angle to sides.



***17. Move upwards**

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upwards. Speed of movement indicates rate of ascent.

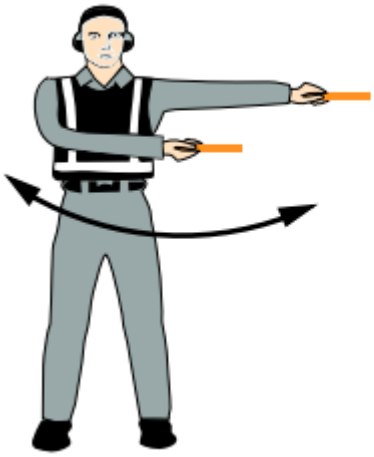


***18. Move downwards**

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downwards. Speed of movement indicates rate of descent.

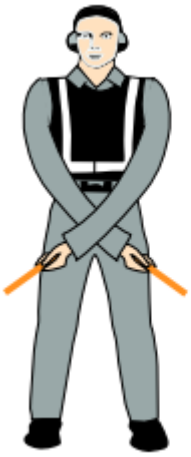
***19 a). Move horizontally left (from pilot's point of view)**

Extend arm horizontally at a 90-degree angle to right side of body. Move other arm in same direction in a sweeping motion.



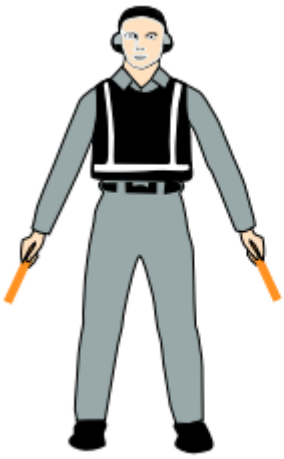
***19 b). Move horizontally right (from pilot's point of view)**

Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.



***20. Land**

Cross arms with wands downwards and in front of body.

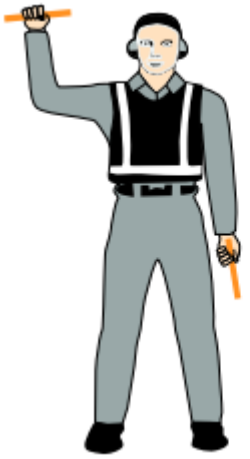


21. Hold position/stand by

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

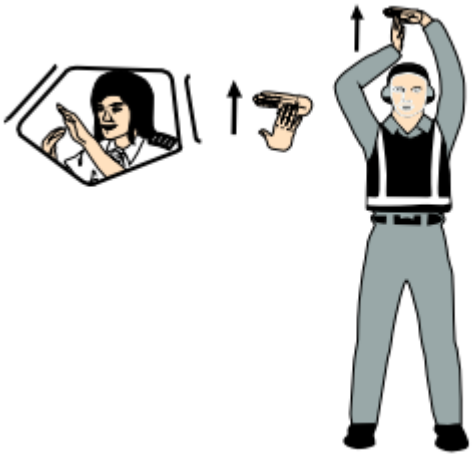
22. Dispatch aircraft

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.



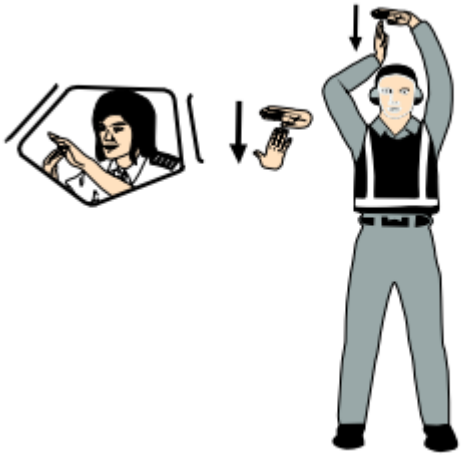
23. Do not touch controls (technical/servicing communication signal)

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



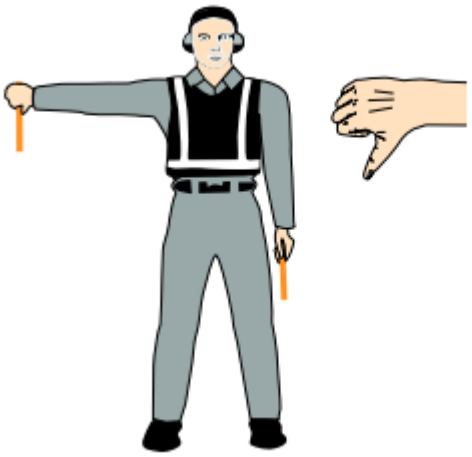
24. Connect ground power (technical/servicing communication signal)

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.



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.



26. Negative (technical/servicing communication signal)

Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with "thumbs down"; left hand remains at side by knee.

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

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

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.

(b) From the pilot of an aircraft to a signalman

GM 1- These signals are designed for use by a pilot in the cockpit with hands plainly visible to the signalman and illuminated as necessary to facilitate observation by the signalman.

GM 2- The aircraft engines are numbered in relation to the signalman facing the aircraft, from right to left (i.e. No. 1 engine being the port outer engine).

(i) Brakes

GM - The moment the fist is clenched or the fingers are extended indicates, respectively, the moment of brake engagement or release.

(1) Brakes engaged: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.

(2) Brakes released: raise arm, with fist clenched, horizontally in front of face, then extend fingers.

(ii) Chocks

(1) Insert chocks: arms extended, palms outwards, move hands inwards to cross in front of face.

(2) Remove chocks: hands crossed in front of face, palms outwards, move arms outwards.

(iii) Ready to start engine(s)

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

(c) Technical/servicing communication signals

(i) Manual signals shall only be used when verbal communication is not possible with respect to technical/servicing communication signals.

(ii) Signalmen shall ensure that an acknowledgement is received from the flight crew with respect to technical/servicing communication signals.

GM— The technical/servicing communication signals are included in Appendix 1 to standardize the use of hand signals used to communicate to flight crews during the aircraft movement process that relate to servicing or handling functions.

(6) STANDARD EMERGENCY HAND SIGNALS

The following hand signals are established as the minimum required for emergency communication between the aircraft rescue and firefighting (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 flight crew.

GM— In order to communicate more effectively with the cabin crew, emergency hand signals may be given by ARFF firefighters from other positions.

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.

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.

3. Emergency contained

No outside evidence of dangerous conditions or "all-clear."

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.

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.

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APPENDIX 2.

INTERCEPTION OF CIVIL AIRCRAFT

(See MCAR ROA.370)

(1) Principles to be observed by States

(a) To achieve the uniformity in regulations which is necessary for the safety of navigation of civil aircraft due regard shall be had by Contracting States to the following principles when developing regulations and administrative directives:

(i) interception of civil aircraft will be undertaken only as a last resort,

(ii) if undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome,

(iii) practice interception of civil aircraft will not be undertaken,

(iv) navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established, and

(v) in the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

GM 1— In the unanimous adoption by the 25th Session (Extraordinary) of the ICAO Assembly on 10 May 1984 of Article 3 bis to the Convention on International Civil Aviation, Mauritius by ratifying Article 3 bis have recognized that “every State must refrain from resorting to the use of weapons against civil aircraft in flight”.

(b) As interceptions of civil aircraft are, in all cases, potentially hazardous, in this Appendix a standard method recommended by ICAO is urged to be implemented through appropriate regulatory and administrative action. The uniform application by all concerned is considered essential in the interest of safety of civil aircraft and their occupants. This method has been established for the manoeuvring of aircraft intercepting a civil aircraft, method that has been designed to avoid any hazard for the intercepted aircraft.

(c) Provisions shall be made for the use of secondary surveillance radar or ADS-B, when available in Mauritius, to identify civil aircraft in areas where they may be subject to interception.

(d) To eliminate or reduce the need for interception of civil aircraft, it is important that:

(i) all possible efforts be made by intercept control units to secure identification of any aircraft which may be a civil aircraft, and to issue any necessary instructions or advice to such aircraft, through the appropriate air traffic services units. To this end, it is essential that means of rapid and reliable communications between intercept control units and air traffic services units be established and that agreements be formulated concerning exchanges of information between such units on the movements of civil

aircraft, in accordance with the provisions of Annex 11,

(ii) areas prohibited to all civil flights and areas in which civil flight is not permitted without special authorization by the State, will be clearly promulgated in Aeronautical Information Publications (AIP) in accordance with the provisions of Annex 15, together with the risk, if any, of interception in the event of penetration of such areas. When delineating such areas in close proximity to promulgated ATS routes, or other frequently used tracks, States should take into account the availability and overall systems accuracy of the navigation systems to be used by civil aircraft and their ability to remain clear of the delineated areas,

(iii) the establishment of additional navigation aids be considered where necessary to ensure that civil aircraft are able safely to circumnavigate prohibited or, as required, restricted areas.

(e) To eliminate or reduce the hazards inherent in interceptions undertaken as a last resort, all possible efforts should be made to ensure coordinated actions by the pilots and ground units concerned. To this end, it is essential that Contracting States take steps to ensure that:

(i) all pilots of civil aircraft be made fully aware of the actions to be taken by them and the visual signals to be used, as specified in Chapter 2 (8) and Appendix 2 of this MCAR,

(ii) operators or pilots-in-command of civil aircraft implement the provisions in Annex 6, Parts I, II and III, regarding the capability of aircraft to communicate on 121.5 MHz and the availability of interception procedures and visual signals on board aircraft,

(iii) all air traffic services personnel be made fully aware of the actions to be taken by them in accordance with the provisions of Annex 11, Chapter 2, and the PANS-ATM (Doc 4444),

(iv) all pilots-in-command of intercepting aircraft be made aware of the general performance limitations of civil aircraft and of the possibility that intercepted civil aircraft may be in a state of emergency due to technical difficulties or unlawful interference,

(v) clear and unambiguous instructions be issued to intercept control units and to pilots-in-command of potential intercepting aircraft, covering interception manoeuvres, guidance of intercepted aircraft, action by intercepted aircraft, air-to-air visual signals, radiocommunication with intercepted aircraft, and the need to refrain from resorting to the use of weapons.

(vi) intercept control units and intercepting aircraft be provided with radiotelephony equipment compatible with the technical specifications of Annex 10, Volume I, so as to enable them to communicate with intercepted aircraft on the emergency frequency 121.5 MHz,

(vii) secondary surveillance radar and/or ADS-B facilities be made available to the extent possible to permit intercept control units to identify civil aircraft in areas where they might otherwise be intercepted. Such facilities should permit recognition of aircraft identity and immediate recognition of any emergency or urgency conditions.

(2) Interception manoeuvres

(a) A standard method is being established in this Appendix for the manoeuvring of aircraft intercepting a civil aircraft in order to avoid any hazard for the intercepted aircraft. This method takes due account of the performance limitations of civil aircraft, the need to avoid flying in such proximity to the intercepted aircraft that a collision hazard may be created and the need to avoid crossing the aircraft's flight path or to perform any other manoeuvre in such a manner that the wake turbulence may be hazardous, particularly if the intercepted aircraft is a light aircraft.

(b) An aircraft equipped with an airborne collision avoidance system (ACAS), which is being intercepted, may perceive the interceptor as a collision threat and thus initiate an avoidance manoeuvre in response to an ACAS resolution advisory. 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 resolution advisories in respect of the interceptor, while the ACAS traffic advisory information will remain available.

(c) Manoeuvres for visual identification

The following method is recommended for the manoeuvring of intercepting aircraft for the purpose of visually identifying a civil aircraft:

(i) 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. Any other participating aircraft should stay well clear of the intercepted aircraft, preferably above and behind. After speed and position have been established, the aircraft should, if necessary, proceed with Phase II of the procedure.

(ii) 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. The element leader, or the single intercepting aircraft, should use caution to avoid startling the flight crew or the passengers of the intercepted aircraft, keeping constantly in mind the fact that manoeuvres considered normal to an intercepting aircraft may be considered hazardous to passengers and crews of civil aircraft. Any other participating aircraft should continue to stay well clear of the intercepted aircraft. Upon completion of identification, the intercepting aircraft should withdraw from the vicinity of the intercepted aircraft as outlined in Phase III.

(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.

(d) Manoeuvres for navigational guidance

(i) If, following the identification manoeuvres in Phase I and Phase II above, it is considered necessary to intervene in the navigation of the intercepted aircraft, 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, to enable the pilot-in-command of the latter aircraft to see the visual signals given.

(ii) It is indispensable that the pilot-in-command of the intercepting aircraft be satisfied that the pilot-in-command of the intercepted aircraft is aware of the interception and acknowledges the signals given. If repeated attempts to attract the attention of the pilot-in-command of the intercepted aircraft by use of the Series 1 signal in Appendix 1, Section 2, 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.

(iii) It is recognized that meteorological conditions or terrain may occasionally make it necessary for the element leader, or the single intercepting aircraft, to take up a position on the right (starboard) side, slightly above and ahead of the intercepted aircraft. In such case, the pilot-in-command of the intercepting aircraft must take particular care that the intercepting aircraft is clearly visible at all times to the pilot-in-command of the intercepted aircraft.

(3) Guidance of an intercepted aircraft

(a) Navigational guidance and related information should be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established.

(b) When navigational guidance is given to an intercepted aircraft, care must be taken that the aircraft is not led into conditions where the visibility may be reduced below that required to maintain flight in visual meteorological conditions and that the manoeuvres demanded of the intercepted aircraft do not add to already existing hazards in the event that the operating efficiency of the aircraft is impaired.

(c) In the exceptional case where an intercepted civil aircraft is required to land in the territory overflown, care must also be taken that:

(i) the designated aerodrome is suitable for the safe landing of the aircraft type concerned, especially if the aerodrome is not normally used for civil air transport operations,

(ii) the surrounding terrain is suitable for circling, approach and missed approach manoeuvres,

(iii) the intercepted aircraft has sufficient fuel remaining to reach the aerodrome,

(iv) 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

(v) whenever possible, the designated aerodrome is one that is described in detail in the relevant Aeronautical Information Publication.

(d) When requiring a civil aircraft to land at an unfamiliar aerodrome, it is essential that sufficient time be allowed it to prepare for a landing, bearing in mind that only the pilot-in-command of the civil aircraft can judge the safety of the landing operation in relation to runway length and aircraft mass at the time.

(e) It is particularly important that all information necessary to facilitate a safe approach and landing be given to the intercepted aircraft by radiotelephony.

(4) Action by intercepted aircraft

(a) An aircraft which is intercepted by another aircraft shall immediately:

(i) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Appendix 1,

(ii) notify, if possible, the appropriate air traffic services unit,

(iii) attempt to establish radiocommunication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 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,

(iv) if equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit,

(v) if equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate air traffic services unit.

(b) 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.

(c) 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.

(5) Air-to-air visual signals

The visual signals to be used by intercepting and intercepted aircraft are those set forth in is this Appendix. It is essential that intercepting and intercepted aircraft adhere strictly to those signals and interpret correctly the signals given by the other aircraft, and that the intercepting aircraft pay particular attention to any signals given by the intercepted aircraft to indicate that it is in a state of distress or urgency.

(6) Radiocommunication between the intercept control unit or the intercepting aircraft and the intercepted aircraft

(a) When an interception is being made, the intercept control unit and the intercepting aircraft should:

(i) first attempt to establish two-way communication with the intercepted aircraft in a common language on the emergency frequency 121.5 MHz, using the call signs "INTERCEPT CONTROL", "INTERCEPTOR (call sign)" and "INTERCEPTED AIRCRAFT" respectively; and

(ii) failing this, attempt to establish two-way communication with the intercepted aircraft on such other frequency or frequencies as may have been prescribed by the appropriate ATS authority, or to establish contact through the appropriate ATS unit(s).

(b) If radio contact is established during interception but communication in a common language is not possible, attempts must be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table 2 and transmitting each phrase twice.

(7) Refraining from the use of weapons

The use of tracer bullets to attract attention is hazardous, and it is expected that measures will be taken to avoid their use so that the lives of persons on board and the safety of aircraft will not be endangered.

(8) Coordination between intercept control units and air traffic services units

It is essential that close coordination be maintained between an intercept control unit and the appropriate air traffic services unit during all phases of an interception of an aircraft which is, or might be, a civil aircraft, in order that the air traffic services unit is kept fully informed of the developments and of the action required of the intercepted aircraft.

Phrases for use by INTERCEPTING aircraft			*Phrases for use by INTERCEPTED aircraft*		
Phrase	*Pronunciation*[1]	*Meaning*	*Phrase*	*Pronunciation*[1]	*Meaning*
CALL SIGN	KOL SA-IN	What is your call sign?	CALL SIGN (call sign)[2]	KOL SA-IN (call sign)	My call sign is (call sign)
FOLLOW	FOL-LO	Follow me	WILCO Will comply	VILL-KO	Understood
DESCEND	DEE-SEND	Descend for landing	CAN NOT	KANN NOTT	Unable to comply
YOU LAND	YOU LAAND	Land at this aerodrome	REPEAT	REE-PEET	Repeat your instruction
PROCEED	PRO-SEED	You may proceed	AM LOST	AM LOSST	Position unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK[3]	HI-JACK	I have been hijacked
			LAND (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE-SEND	I require descent

Table 2

(a) In the second column, syllables to be emphasized are underlined.

(b) The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.

(c) Circumstances may not always permit, nor make desirable, the use of the phrase “HIJACK”.

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APPENDIX 3

TABLES OF CRUISING LEVELS

(See MCAR ROA.040)

The cruising levels to be observed when so required by this Annex are as follows:

(1) RVSM — FEET

(a) in areas where feet are used for altitude and where, in accordance with regional air navigation agreements, a vertical separation minimum of 1 000 ft is applied between FL 290 and FL 410 inclusive: *

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.			

*Except when, on the basis of regional air navigation agreements, a modified table of cruising levels based on a nominal vertical separation minimum of 1 000 ft (300 m) is prescribed for use, under specified conditions, by aircraft operating above FL 410 within designated portions of the airspace.

** Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

*** Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

GM 1 - Guidance material relating to vertical separation is contained in the Manual on Implementation of a 1 000 ft Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574).

(2) Non-RVSM — FEET

(b) in other areas where feet are the primary unit of measurement for altitude:

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	3500	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.

* Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

** Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

GM 2 - Guidance material relating to vertical separation is contained in the Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574).

APPENDIX 4

REMOTELY PILOTED AIRCRAFT SYSTEMS

(See MCAR ROA.055)

GM 1 — The circular Unmanned Aircraft Systems (UAS) (Cir 328) contains explanatory information related to remotely piloted aircraft systems.

(1) General operating rules

(a) A remotely piloted aircraft system (RPAS) engaged in international air navigation shall not be operated without appropriate authorization from the State from which the take-off of the remotely piloted aircraft (RPA) is made.

(b) An RPA shall not be operated across the territory of another State without special authorization issued by each State in which the flight is to operate. This authorization may be in the form of agreements between the States involved.

(c) An RPA shall not be operated over the high seas without prior coordination with the appropriate ATS authority.

(d) The authorization and coordination referred to in (b) and (c) shall be obtained prior to take-off if there is reasonable expectation, when planning the operation, that the aircraft may enter the airspace concerned.

(e) An RPAS shall be operated in accordance with conditions specified by the State of Registry, the State of the Operator, if different, and the State(s) in which the flight is to operate.

(f) Flight plans shall be submitted in accordance with Chapter 2 of this Requirement or as otherwise mandated by the State(s) in which the flight is to operate.

(g) RPAS shall meet the performance and equipment carriage requirements for the specific airspace in which the flight is to operate.

(2) Certificates and licensing

GM 2 — Assembly Resolution A37-15 Appendix G resolves that pending the coming into force of international Standards respecting particular categories, classes or types of aircraft, certificates issued or rendered valid, under national regulations, by the Contracting State in which the aircraft is registered shall be recognized by other Contracting States for the purposes of flight over their territories, including landings and take-offs.

GM 3 — Notwithstanding Assembly Resolution A41-10, Article 8 of the Chicago Convention assures each Contracting State of the absolute sovereignty over the authorization for RPA operations over its territory.

(a) An RPAS shall be approved, taking into account the interdependencies of the components, in accordance with national regulations and in a manner that is consistent with the provisions of related Annexes. In addition:

(i) an RPA shall have a certificate of airworthiness issued in accordance with national regulations and in a manner that is consistent with the provisions of Annex 8, and

(ii) the associated RPAS components specified in the type design shall be certificated and maintained in accordance with national regulations and in a manner that is consistent with the provisions of related Annexes.

(b) Until 25 November 2026, an operator shall have an RPAS operator certificate issued in accordance with national regulations and in a manner that is consistent with the provisions of Annex 6.

(c) As of 26 November 2026, in order to operate an RPAS certificated in accordance with Annex 8, an operator shall have an RPAS operator certificate issued in accordance with the provisions of Annex 6, Part IV.

(d) Remote pilots shall be licensed, or have their licences rendered valid, in accordance with national regulations and in a manner that is consistent with the provisions of Annex 1.

(3) Request for authorization

(a) The request for authorization referred to in (1)(b) above shall be made to the appropriate authorities of the State(s) in which the RPA will operate not less than seven days before the date of the intended flight unless otherwise specified by the State.

(b) Unless otherwise specified by the State(s), the request for authorization shall include the following:

(i) name and contact information of the operator,

(ii) RPA characteristics (type of aircraft, maximum certificated take-off mass, number of engines, wingspan),

(iii) copy of certificate of registration,

(iv) aircraft identification to be used in radiotelephony, if applicable,

(v) copy of the certificate of airworthiness,

(vi) copy of the RPAS operator certificate,

(vii) copy of the remote pilot(s) licence,

(viii) copy of the aircraft radio station licence, if applicable,

(ix) description of the intended operation (to include type of operation or purpose), flight rules, visual line-of-sight (VLOS) operation if applicable, date of intended flight(s), point of departure, destination, cruising speed(s), cruising level(s), route to be followed, duration/frequency of flight,

(x) take-off and landing requirements,

(xi) RPA performance characteristics, including:

(1) operating speeds,

(2) typical and maximum climb rates,

(3) typical and maximum descent rates,

(4) typical and maximum turn rates,

(5) other relevant performance data (e.g. limitations regarding wind, icing, precipitation), and

(6) maximum aircraft endurance

(xii) communications, navigation and surveillance capabilities:

(1) aeronautical safety communications frequencies and equipment, including:

(a) ATC communications, including any alternate means of communication,

(b) command and control links (C2) including performance parameters and designated operational coverage area,

(c) communications between remote pilot and RPA observer, if applicable

(2) navigation equipment, and

(3) surveillance equipment (e.g. SSR transponder, ADS-B out)

(xiii) detect and avoid capabilities,

(xiv) emergency procedures, including:

(1) communications failure with ATC,

(2) C2 failure, and

(3) remote pilot/RPA observer communications failure, if applicable,

(xv) number and location of remote pilot stations as well as handover procedures between remote pilot stations, if applicable,

(xvi) document attesting noise certification that is consistent with the provisions of Annex 16, Volume 1, if applicable,

(xvii) confirmation of compliance with national security standards in a manner that is consistent with the provisions of Annex 17, to include security measures relevant to the RPAS operation, as appropriate,

(xviii) payload information/description, and

(xix) proof of adequate insurance/liability coverage.

(c) When certificates or other documents identified in (3)(b) above are issued in a language other than English, an English translation shall be included.

(d) 3.4 After authorization has been obtained from the appropriate State(s), air traffic services notification and coordination shall be completed in accordance with the requirements of the State(s).

GM 5 — A request for authorization does not satisfy the requirement to file a flight plan with the air traffic services units.

(e) Changes to the authorization shall be submitted for consideration to the appropriate State(s). If the changes are approved, all affected authorities shall be notified by the operator.

(f) In the event of a flight cancellation, the operator or remote pilot shall notify all appropriate authorities as soon as possible.

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APPENDIX 5

UNMANNED FREE BALLOONS

(See MCAR ROA.060)

(1) Classification of unmanned free balloons

Unmanned free balloons shall be classified as:

(a) **light**: an unmanned free balloon which carries a payload of one or more packages with a combined mass of less than 4 kg, unless qualifying as a heavy balloon in accordance with c) ii), iii) or iv) below; or

(b) **medium**: an unmanned free balloon which carries a payload of two or more packages with a combined mass of 4 kg or more, but less than 6 kg, unless qualifying as a heavy balloon in accordance with c) ii), iii) or iv) below; or

(c) **heavy**: an unmanned free balloon which carries a payload which:

(i) has a combined mass of 6 kg or more; or

(ii) includes a package of 3 kg or more; or

(iii) includes a package of 2 kg or more with an area density of more than 13 g per square centimetre; or

(iv) uses a rope or other device for suspension of the payload that requires an impact force of 230 N or more to separate the suspended payload from the balloon.

GM 1 — The area density referred to in c) iii) is determined by dividing the total mass in grams of the payload package by the area in square centimetres of its smallest surface.

GM 2.— See Figure 13.

(2) General operating rules

(a) An unmanned free balloon shall not be operated without appropriate authorization from the State from which the launch is made.

(b) An unmanned free balloon, other than a light balloon used exclusively for meteorological purposes and operated in the manner prescribed by the appropriate authority, shall not be operated across the territory of another State without appropriate authorization from the other State concerned.

(c) The authorization referred to in (2)(b) shall be obtained prior to the launching of the balloon if there is reasonable expectation, when planning the operation, that the balloon may drift into airspace over the territory of another State. Such authorization may be obtained for a series of balloon flights or for a particular type of recurring flight, e.g. atmospheric research balloon flights.

(d) An unmanned free balloon shall be operated in accordance with conditions specified by the State of Registry and the State(s) expected to be overflown.

Classification of unmanned free balloons

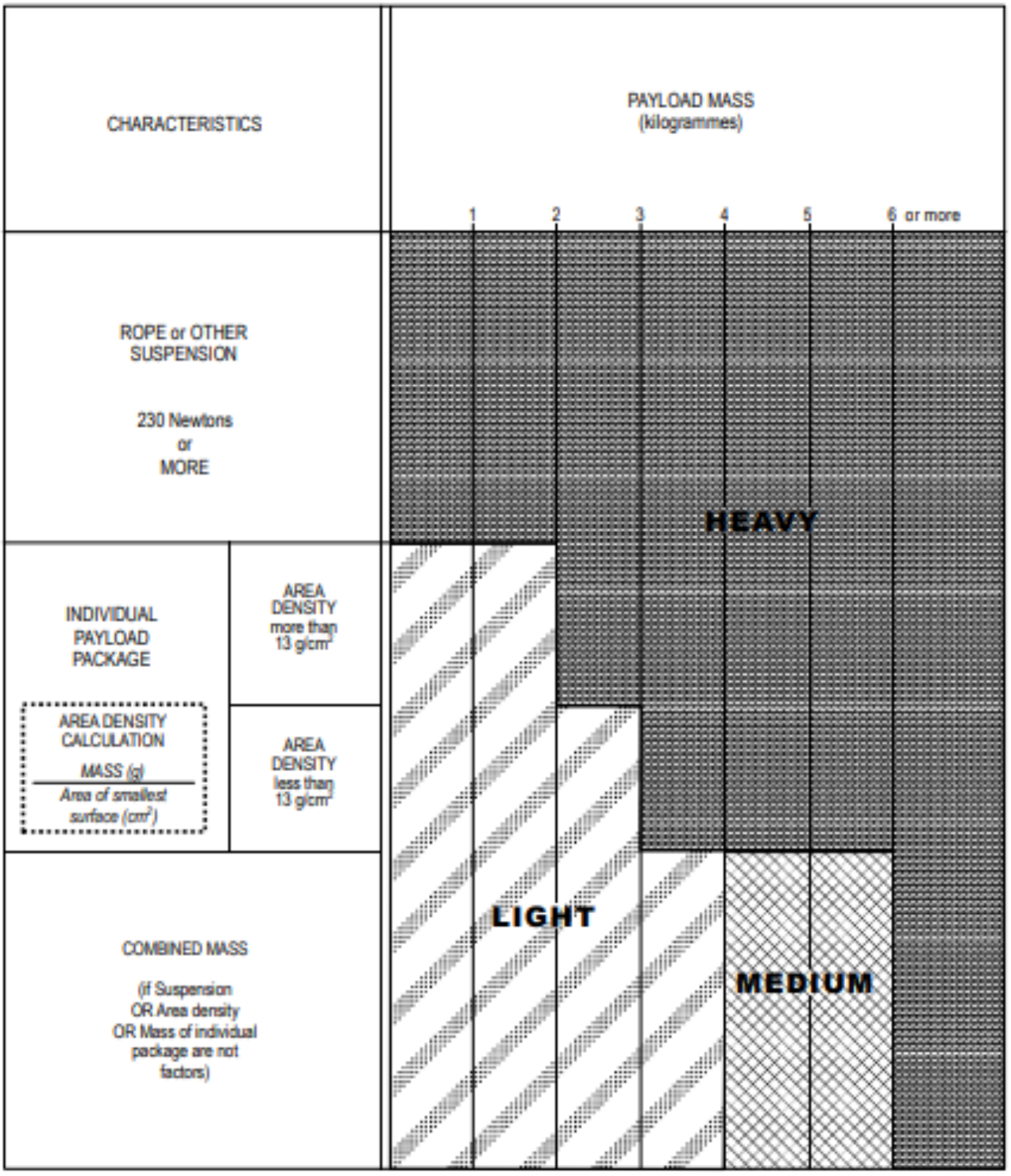

Figure 13

(e) An unmanned free balloon shall not be operated in such a manner that impact of the balloon, or any part thereof, including its payload, with the surface of the earth, creates a hazard to persons or property not associated with the operation.

(f) A heavy unmanned free balloon shall not be operated over the high seas without prior coordination with the appropriate ATS authority.

(3) Operating limitations and equipment requirements

(a) A heavy unmanned free balloon shall not be operated without authorization from the appropriate ATS authority at or through any level below 60 000 ft pressure-altitude at which:

(i) there are clouds or obscuring phenomena of more than four oktas coverage; or

(ii) the horizontal visibility is less than 8 km.

(b) A heavy or medium unmanned free balloon shall not be released in a manner that will cause it to fly lower than 1 000 ft over the congested areas of cities, towns or settlements or an open-air assembly of persons not associated with the operation.

(c) A heavy unmanned free balloon shall not be operated unless:

(i) it is equipped with at least two payload flight-termination devices or systems, whether automatic or operated by telecommand, that operate independently of each other;

(ii) for polyethylene zero-pressure balloons, at least two methods, systems, devices, or combinations thereof, that function independently of each other are employed for terminating the flight of the balloon envelope;

GM 3 — Super pressure balloons do not require these devices as they quickly rise after payload discharge and burst without the need for a device or system designed to puncture the balloon envelope. In this context a super pressure balloon is a simple non-extensible envelope capable of withstanding a differential of pressure, higher inside than out. It is inflated so that the smaller night-time pressure of the gas still fully extends the envelope. Such a super pressure balloon will keep essentially constant level until too much gas diffuses out of it.

(iii) the balloon envelope is equipped with either a radar reflective device(s) or radar reflective material that will present an echo to surface radar operating in the 200 MHz to 2 700 MHz frequency range, and/or the balloon is equipped with such other devices as will permit continuous tracking by the operator beyond the range of ground-based radar.

(d) A heavy unmanned free balloon shall not be operated under the following conditions:

(i) in an area where ground-based SSR equipment is in use, unless it is equipped with a secondary surveillance radar transponder, with pressure-altitude reporting capability, which is continuously operating on an assigned code, or which can be turned on when necessary by the tracking station; or

(ii) in an area where ground-based ADS-B equipment is in use, unless it is equipped with an ADS-B transmitter, with pressure-altitude reporting capability, which is continuously operating, or which can be turned on when necessary by the tracking station.

(e) An unmanned free balloon that is equipped with a trailing antenna that requires a force of more than 230 N to break it at any point shall not be operated unless the antenna has coloured pennants or streamers that are attached at not more than 15 m intervals.

(f) A heavy unmanned free balloon shall not be operated below 60 000 ft pressure-altitude between sunset and sunrise or such other period between sunset and sunrise (corrected to the altitude of operation) as may be prescribed by the appropriate ATS authority, unless the balloon and its attachments and payload, whether or not they become separated during the operation, are lighted.

(g) A heavy unmanned free balloon that is equipped with a suspension device (other than a highly conspicuously coloured open parachute) more than 15 m long shall not be operated between sunrise and sunset below 60 000 ft pressure-altitude unless the suspension device is coloured in alternate bands of high conspicuity colours or has coloured pennants attached.

(4) Termination

The operator of a heavy unmanned free balloon shall activate the appropriate termination devices required by (3)(c)(i) and (ii) above:

(a) when it becomes known that weather conditions are less than those prescribed for the operation,

(b) if a malfunction or any other reason makes further operation hazardous to air traffic or to persons or property on the surface; or

(c) prior to unauthorized entry into the airspace over another State's territory.

(5) Flight notification

(a) Pre-flight notification

(i) Early notification of the intended flight of an unmanned free balloon in the medium or heavy category shall be made to the appropriate air traffic services unit not less than seven days before the date of the intended flight.

(ii) Notification of the intended flight shall include such of the following information as may be required by the appropriate air traffic services unit:

(1) balloon flight identification or project code name;

(2) balloon classification and description;

(3) SSR code, aircraft address or NDB frequency, as applicable;

(4) operator's name and telephone number;

(5) launch site;

(6) estimated time of launch (or time of commencement and completion of multiple launches);

(7) number of balloons to be launched and the scheduled interval between launches (if multiple launches);

(8) expected direction of ascent;

(9) cruising level(s) (pressure-altitude);

(10) the estimated elapsed time to pass 60 000 ft pressure-altitude or to reach cruising level if at or below 60 000 ft, together with the estimated location;

GM 4 — If the operation consists of continuous launchings, the time to be included is the estimated time at which the first and the last in the series will reach the appropriate level (e.g. 122136Z–130330Z).

(11) the estimated date and time of termination of the flight and the planned location of the impact/recovery area. In the case of balloons carrying out flights of long duration, as a result of which the date and time of termination of the flight and the location of impact cannot be forecast with accuracy, the term “long duration” shall be used.

GM 5 — If there is to be more than one location of impact/recovery, each location is to be listed together with the appropriate estimated time of impact. If there is to be a series of continuous impacts, the time to be included is the estimated time of the first and the last in the series (e.g. 070330Z–072300Z).

(iii) Any changes in the pre-launch information notified in accordance with (5)(a)(ii) above shall be forwarded to the air traffic services unit concerned not less than 6 hours before the estimated time of launch, or in the case of solar or cosmic disturbance investigations involving a critical time element, not less than 30 minutes before the estimated time of the commencement of the operation.

(b) Notification of launch

Immediately after a medium or heavy unmanned free balloon is launched the operator shall notify the appropriate air traffic services unit of the following:

(i) balloon flight identification,

(ii) launch site,

(iii) actual time of launch,

(iv) estimated time at which 60 000 ft pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 60 000 ft, and the estimated location, and

(v) any changes to the information previously notified in accordance with (5)(a)(vii) and viii).

(c) Notification of cancellation

The operator shall notify the appropriate air traffic services unit immediately when it is known that the intended flight of a medium or heavy unmanned free balloon, previously notified in accordance with (5)(a), has been cancelled.

(6) Position recording and reports

(a) The operator of a heavy unmanned free balloon operating at or below 60 000 ft pressure-altitude shall monitor the flight path of the balloon and forward reports of the balloon's position as requested by air traffic services. Unless air traffic services require reports of the balloon's position at more frequent intervals, the operator shall record the position every 2 hours.

(b) The operator of a heavy unmanned free balloon operating above 60 000 ft pressure-altitude shall monitor the flight progress of the balloon and forward reports of the balloon's position as requested by air traffic services. Unless air traffic services require reports of the balloon's position at more frequent intervals, the operator shall record the position every 24 hours.

(c) If a position cannot be recorded in accordance with (6)(a) and (6)(b), the operator shall immediately notify the appropriate air traffic services unit. This notification shall include the last recorded position. The appropriate air traffic services unit shall be notified immediately when tracking of the balloon is re-established.

(d) One hour before the beginning of planned descent of a heavy unmanned free balloon, the operator shall forward to the appropriate ATS unit the following information regarding the balloon:

(i) the current geographical position,

(ii) the current level (pressure-altitude),

(iii) the forecast time of penetration of 60 000 ft pressure-altitude, if applicable,

(iv) the forecast time and location of ground impact.

(e) The operator of a heavy or medium unmanned free balloon shall notify the appropriate air traffic services unit when the operation is ended.

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APPENDIX 6

LIGHTS TO BE DISPLAYED BY AEROPLANES

(See MCAR ROA.130)

(1) Terminology

When the following terms are used in this Appendix, they have the following meanings:

Angles of coverage.

(a) Angle of coverage A is formed by two intersecting vertical planes making angles of 70 degrees to the right and 70 degrees to the left respectively, looking aft along the longitudinal axis to a vertical plane passing through the longitudinal axis.

(b) Angle of coverage F is formed by two intersecting vertical planes making angles of 110 degrees to the right and 110 degrees to the left respectively, looking forward along the longitudinal axis to a vertical plane passing through the longitudinal axis.

(c) Angle of coverage L is formed by two intersecting vertical planes, one parallel to the longitudinal axis of the aeroplane, and the other 110 degrees to the left of the first, when looking forward along the longitudinal axis.

(d) Angle of coverage R is formed by two intersecting vertical planes, one parallel to the longitudinal axis of the aeroplane, and the other 110 degrees to the right of the first, when looking forward along the longitudinal axis.

Horizontal plane. The plane containing the longitudinal axis and perpendicular to the plane of symmetry of the aeroplane.

Longitudinal axis of the aeroplane. A selected axis parallel to the direction of flight at a normal cruising speed and passing through the centre of gravity of the aeroplane.

Making way. An aeroplane on the surface of the water is “making way” when it is under way and has a velocity relative to the water.

Under command. An aeroplane on the surface of the water is “under command” when it is able to execute manoeuvres as required by the International Regulations for Preventing Collisions at Sea for the purpose of avoiding other vessels.

Under way. An aeroplane on the surface of the water is “under way” when it is not aground or moored to the ground or to any fixed object on the land or in the water.

Vertical planes. Planes perpendicular to the horizontal plane.

Visible. Visible on a dark night with a clear atmosphere.

(2) Navigation lights to be displayed in the air

GM 1 — The lights specified herein are intended to meet the requirements of MCAR ROA for navigation lights.

As illustrated in Figure 14, the following unobstructed navigation lights shall be displayed:

(a) a red light projected above and below the horizontal plane through angle of coverage L,

(b) a green light projected above and below the horizontal plane through angle of coverage R,

(c) a white light projected above and below the horizontal plane rearward through angle of coverage A.

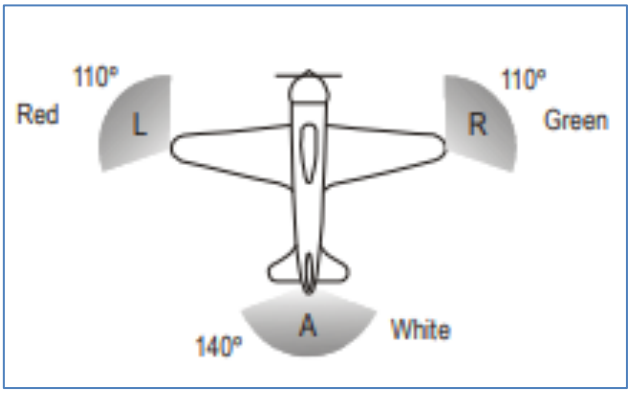

Figure 14

(3) Lights to be displayed on the water

(a) General

GM 2 — The lights specified herein are intended to meet the requirements of MCAR ROA for lights to be displayed by aeroplanes on the water.

The International Regulations for Preventing Collisions at Sea require different lights to be displayed in each of the following circumstances:

(i) when under way,

(ii) when towing another vessel or aeroplane,

(iii) when being towed,

(iv) when not under command and not making way,

(v) when making way but not under command,

(vi) when at anchor,

(vii) when aground.

The lights required by aeroplanes in each case are described below.

(b) When under way

As illustrated in Figure 15, the following appearing as steady unobstructed lights:

(i) a red light projected above and below the horizontal through angle of coverage L;

(ii) a green light projected above and below the horizontal through angle of coverage R,

(iii) a white light projected above and below the horizontal through angle of coverage A, and

(iv) a white light projected through angle of coverage F.

The lights described in (3)(b)(i)(ii) and (iii) should be visible at a distance of at least 3.7 km (2 NM). The light described in (3)(b)(iv) should be visible at a distance of 9.3 km (5 NM) when fitted to an aeroplane of 20 m or more in length or visible at a distance of 5.6 km (3 NM) when fitted to an aeroplane of less than 20 m in length.

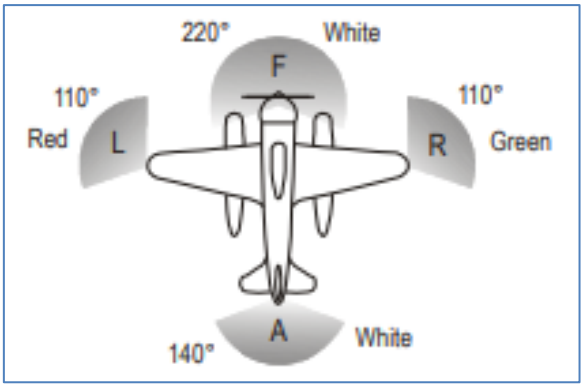

Figure 15

(c) When towing another vessel or aeroplane

As illustrated in Figure 16, the following appearing as steady, unobstructed lights:

(i) the lights described in (b),

(ii) a second light having the same characteristics as the light described in (b)(iv) and mounted in a vertical line at least 2 m above or below it, and

(iii) a yellow light having otherwise the same characteristics as the light described in (b)(iii) and mounted in a vertical line at least 2 m above it.

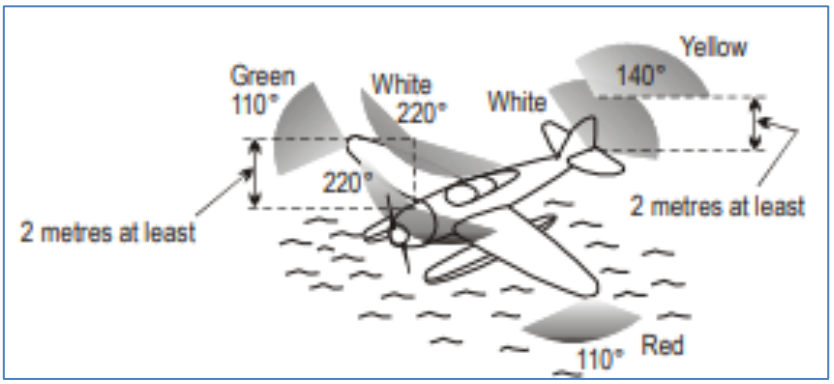

Figure 16

(d) When being towed

The lights described in (b)(i), (ii) and (iii) appearing as steady, unobstructed lights.

(e) When not under command and not making way

As illustrated in Figure 17, two steady red lights placed where they can best be seen, one vertically over the other and not less than 1 m apart, and of such a character as to be visible all around the horizon at a distance of at least 3.7 km (2 NM).

(f) When making way but not under command

As illustrated in Figure 18, the lights described in (d) plus the lights described in (b)(i), (ii) and (iii).

GM 3 — The display of lights prescribed in (e) and (f) is to be taken by other aircraft as signals that the aeroplane showing them is not under command and cannot therefore get out of the way. They are not signals of aeroplanes in distress and requiring assistance.

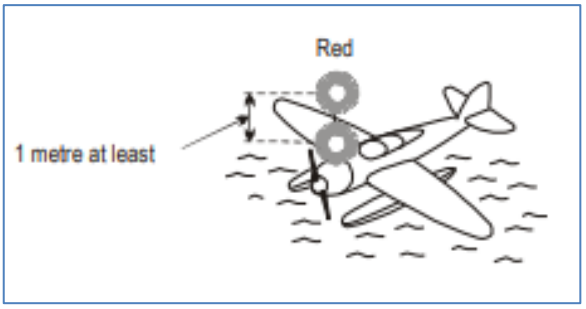

Figure 17

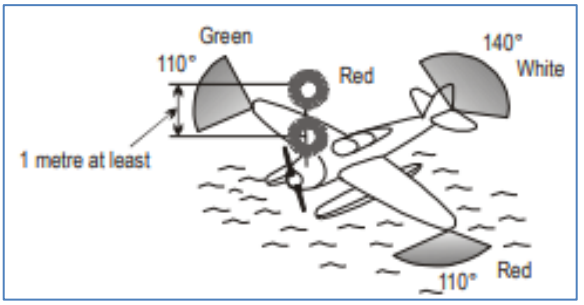

Figure 18

(g) When at anchor

(i) If less than 50 m in length, where it can best be seen, a steady white light (Figure 19), visible all around the horizon at a distance of at least 3.7 km (2 NM).

(ii) If 50 m or more in length, where they can best be seen, a steady white forward light and a steady white rear light (Figure 20) both visible all around the horizon at a distance of at least 5.6 km (3 NM).

(iii) If 50 m or more in span a steady white light on each side (Figures 21 and 22) to indicate the maximum span and visible, so far as practicable, all around the horizon at a distance of at least 1.9 km (1 NM).

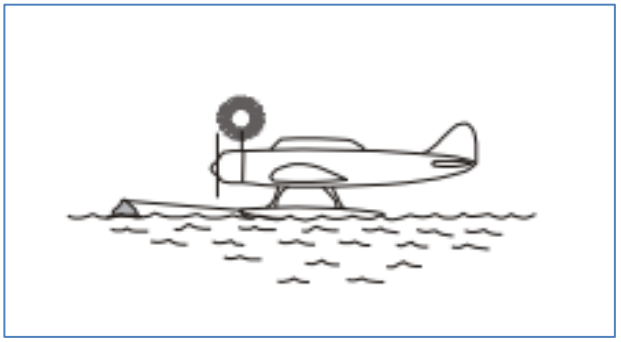

Figure 19

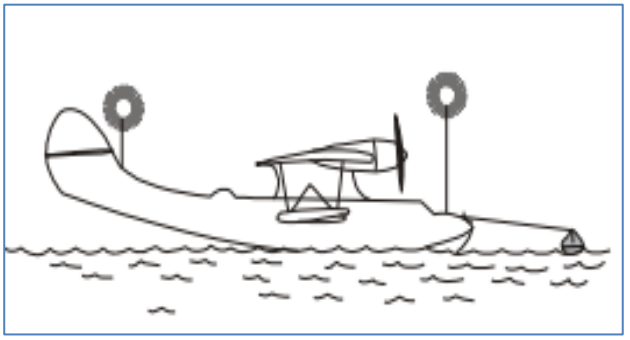

Figure 20

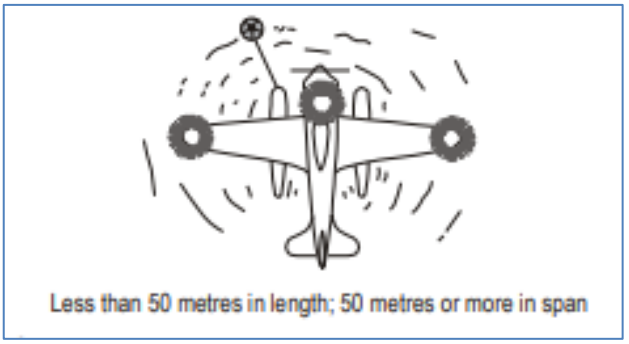

Figure 21

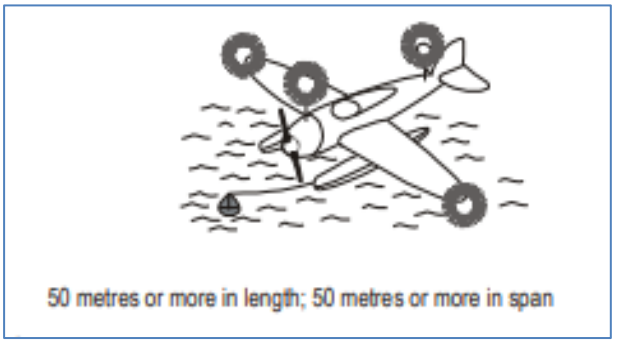

Figure 22

(h) When aground

The lights prescribed in (g) and in addition two steady red lights in vertical line, at least 1 m apart so placed as to be visible all around the horizon.

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APPENDIX 7

VMC VISIBILITY AND DISTANCE FROM CLOUD MINIMA

(See MCAR ROA.380)

Altitude band	Airspace class	Flight visibility	Distance from cloud
At and above 3 050 m (10 000 ft) AMSL	A*** B C D E F G	8 km	1 500 m horizontally 300 m (1 000 ft) vertically
Below 3 050 m (10 000 ft) AMSL and above 900 m (3 000 ft) AMSL, or above 300 m (1 000 ft) above terrain, whichever is the higher	A***B C D E F G	5 km	1 500 m horizontally 300 m (1 000 ft) vertically
At and below 900 m (3 000 ft) AMSL, or 300 m (1 000 ft) above terrain, whichever is the higher	A***B C D E	5 km	1 500 m horizontally 300 m (1 000 ft) vertically
	F G	5 km**	Clear of cloud and with the surface in sight

When the height of the transition altitude is lower than 10 000 ft AMSL, FL 100 should be used in lieu of 10 000 ft.

** When so prescribed by the appropriate ATS authority:

(1) flight visibilities reduced to not less than 1 500 m may be permitted for flights operating:

(a) at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision, or

(b) 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.

(2) HELICOPTERS may be permitted to operate in less than 1 500 m flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

*** The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.

APPENDIX 8

ATS AIRSPACE CLASSES

(See MCAR ROA.010)

SERVICES PROVIDED AND FLIGHT REQUIREMENTS

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	Continuous two-way	Yes
B	IFR	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
	VFR	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Continuous two-way	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	Continuous two-way	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	Continuous two-way	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	Continuous two-way	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	Continuous two-way	Yes
	VFR	Nil	Traffic information as far as practical	250 kt IAS below 3 050 m (10 000 ft) AMSL	No	No
F	IFR	IFR from IFR as far as practical	Air traffic advisory service; flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	No	No
G	IFR	Nil	Flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	No	No

When the height of the transition altitude is lower than 10 000 ft AMSL, FL 100 should be used in lieu of 10 000 ft.

APPENDIX 9

COMMUNICATION FAILURE

(See MCAR ROA.340)

(1) AIR-GROUND

(a) When an aircraft station fails to establish contact with the appropriate aeronautical station on the designated channel, it shall attempt to establish contact on the previous channel used and, if not successful, on another channel appropriate to the route. If these attempts fail, the aircraft station shall attempt to establish communication with the appropriate aeronautical station, other aeronautical stations or other aircraft using all available means and advise the aeronautical station that contact on the assigned channel could not be established. In addition, an aircraft operating within a network shall monitor the appropriate VHF channel for calls from nearby aircraft.

(b) If the attempts specified under (a) fail, the aircraft station shall transmit its message twice on the designated channel(s), preceded by the phrase “TRANSMITTING BLIND” and, if necessary, include the addressee(s) for which the message is intended.

(i) In network operation, a message which is transmitted blind should be transmitted twice on both primary and secondary channels. Before changing channel, the aircraft station should announce the channel to which it is changing.

(c) Receiver failure

(i) When an aircraft station is unable to establish communication due to receiver failure, it shall transmit reports at the scheduled times, or positions, on the channel in use, preceded by the phrase “TRANSMITTING BLIND DUE TO RECEIVER FAILURE”. The aircraft station shall transmit the intended message, following this by a complete repetition. During this procedure, the aircraft shall also advise the time of its next intended transmission.

(ii) An aircraft which is provided with air traffic control or advisory service shall, in addition to complying with (c)(i), transmit information regarding the intention of the pilot-in-command with respect to the continuation of the flight of the aircraft.

(iii) When an aircraft is unable to establish communication due to airborne equipment failure it shall, when so equipped, select the appropriate SSR code to indicate radio failure.

(2) GROUND-TO-AIR

(a) When an aeronautical station has been unable to establish contact with an aircraft station after calls on the frequencies on which the aircraft is believed to be listening, it shall:

(i) request other aeronautical stations to render assistance by calling the aircraft and relaying traffic, if necessary,

(ii) request aircraft on the route to attempt to establish communication with the aircraft and relay traffic, if necessary.

(b) The provisions of (a) above shall also be applied:

(i) on request of the air traffic services unit concerned,

(ii) when an expected communication from an aircraft has not been received within a time period such that the occurrence of a communication failure is suspected.

GM 1 — A specific time period may be prescribed by the appropriate ATS Authority.

(c) If the attempts specified in (a) fail, the aeronautical station shall transmit messages addressed to the aircraft, other than messages containing air traffic control clearances, by blind transmission on the frequency(ies) on which the aircraft is believed to be listening.

(d) Blind transmission of air traffic control clearances shall not be made to aircraft, except at the specific request of the originator.

(3) Notification of communications failure

The air-ground control radio station shall notify the appropriate air traffic services unit and the aircraft operating agency, as soon as possible, of any failure in air-ground communication.

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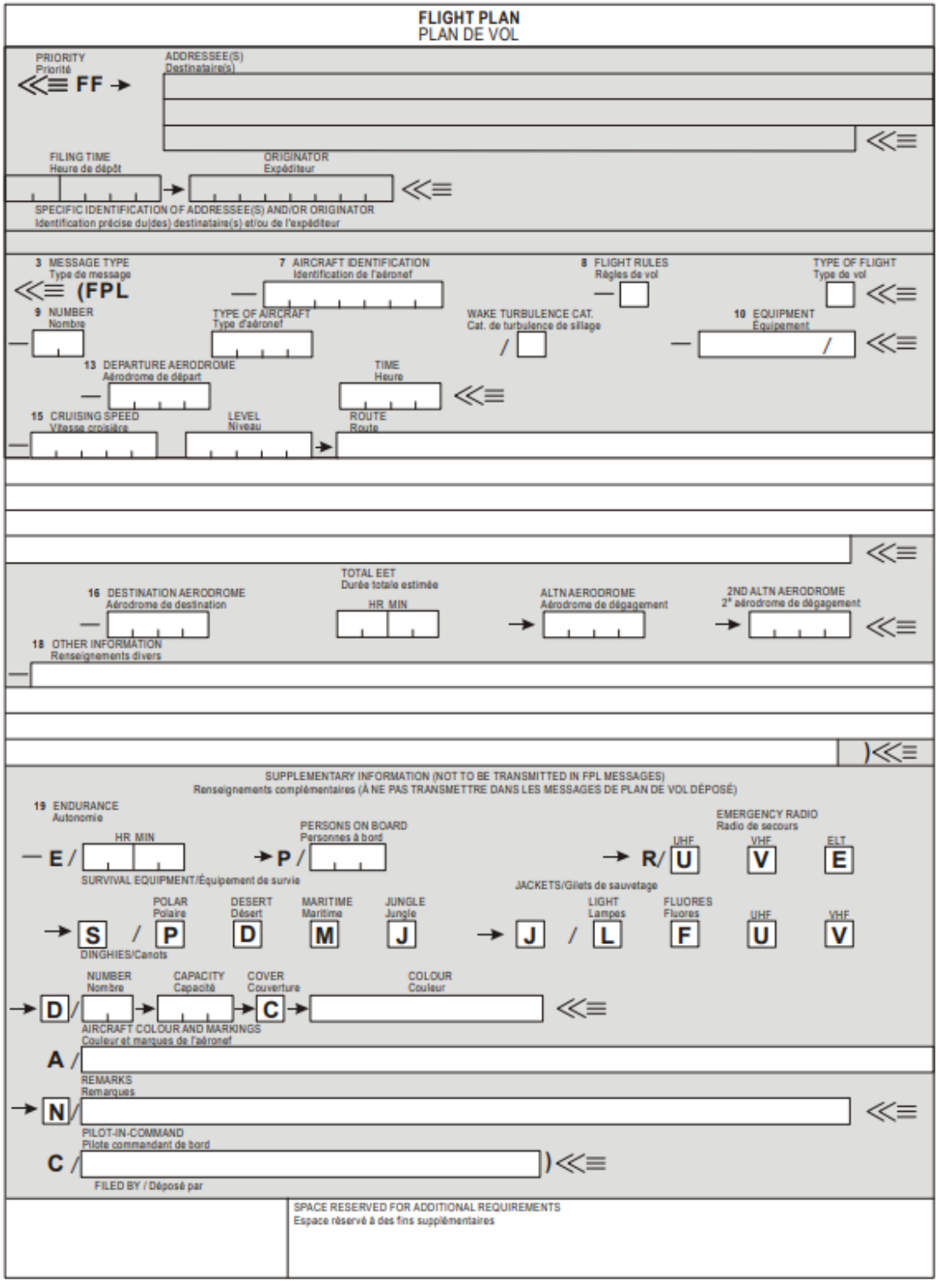
APPENDIX 10

FLIGHT PLAN

(See MCAR ROA.175)

(1) Flight plan form



(2) Instructions for the completion of the flight plan form

(a) General

(i) Adhere closely to the prescribed formats and manner of specifying data.

(ii) Commence inserting data in the first space provided. Where excess space is available, leave unused spaces blank.

(iii) Insert all clock times in 4 figures UTC.

(iv) Insert all estimated elapsed times in 4 figures (hours and minutes).

(v) Shaded area preceding Item 3 — to be completed by ATS and COM services, unless the responsibility for originating flight plan messages has been delegated.

GM 1 — The term “aerodrome” where used in the flight plan is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

(b) Instructions for insertion of ATS data

(i) Complete Items 7 to 18 as indicated hereunder.

(ii) Complete also Item 19 as indicated hereunder, when so required by the appropriate ATS authority or when otherwise deemed necessary.

GM 2 — Item numbers on the form are not consecutive, as they correspond to Field Type numbers in ATS messages.

GM 3 — Air traffic services data systems may impose communications or processing constraints on information in filed flight plans. Possible constraints may, for example, be limits with regard to item length, number of elements in the route item or total flight plan length. Significant constraints are documented in the relevant Aeronautical Information Publication.

ITEM 7: AIRCRAFT IDENTIFICATION (MAXIMUM 7 CHARACTERS)

INSERT one of the following aircraft identifications, not exceeding 7 alphanumeric characters and without hyphens or symbols:

(i) the ICAO designator for the aircraft operating agency followed by the flight identification (e.g. KLM511, NGA213, JTR25) when in radiotelephony the call sign to be used by the aircraft will consist of the ICAO telephony designator for the operating agency followed by the flight identification (e.g. KLM511, NIGERIA 213, JESTER 25), or

(ii) the nationality or common mark and registration mark of the aircraft (e.g. EIAKO, 4XBCD, N2567GA), when:

(1) in radiotelephony the call sign to be used by the aircraft will consist of this identification alone (e.g. CGAJS), or preceded by the ICAO telephony designator for the aircraft operating agency (e.g. BLIZZARD CGAJS),

(2) the aircraft is not equipped with radio.

GM 4 — Standards for nationality, common and registration marks to be used are contained in Annex 7, section 3.

GM 5 — Provisions for the use of radiotelephony call signs are contained in Annex 10, Volume II, Chapter 5. ICAO designators and telephony designators for aircraft operating agencies are contained in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

ITEM 8: FLIGHT RULES AND TYPE OF FLIGHT (ONE OR TWO CHARACTERS)

Flight rules

INSERT one of the following letters to denote the category of flight rules with which the pilot intends to comply:

I if it is intended that the entire flight will be operated under the IFR

V if it is intended that the entire flight will be operated under the VFR

Y if the flight initially will be operated under the IFR, followed by one or more subsequent changes of flight rules, or

Z if the flight initially will be operated under the VFR, followed by one or more subsequent changes of flight rules.

Specify in Item 15 the point or points at which a change of flight rules is planned.

Type of flight

INSERT one of the following letters to denote the type of flight when so required by the appropriate ATS authority:

S if scheduled air service

N if non-scheduled air transport operation

G if general aviation

M if military

X if other than any of the defined categories above.

Specify status of a flight following the indicator STS in Item 18, or when necessary to denote other reasons for specific handling by ATS, indicate the reason following the indicator RMK in Item 18.

ITEM 9: NUMBER AND TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY

Number of aircraft (1 or 2 characters)

INSERT the number of aircraft, if more than one.

Type of aircraft (2 to 4 characters)

INSERT the appropriate designator as specified in Doc 8643, Aircraft Type Designators, or if no such designator has been assigned, or in case of formation flights comprising more than one type, INSERT ZZZZ, and SPECIFY in Item 18, the (numbers and) type(s) of aircraft preceded by TYP/

Wake turbulence category
(1 character)

INSERT an oblique stroke followed by one of the following letters to indicate the wake turbulence category of the aircraft:

J — SUPER, to indicate an aircraft type specified as such in Doc 8643, Aircraft Type Designators,

H — HEAVY, to indicate an aircraft type with a maximum certificated take-off mass of 136 000 kg or more, with the exception of aircraft types listed in Doc 8643 in the SUPER (J) category,

M — MEDIUM, to indicate an aircraft type with a maximum certificated take-off mass of less than 136 000 kg but more than 7 000 kg,

L — LIGHT, to indicate an aircraft type with a maximum certificated take-off mass of 7 000 kg or less.

ITEM 10: EQUIPMENT AND CAPABILITIES

Capabilities comprise the following elements:

(i) presence of relevant serviceable equipment on board the aircraft,

(ii) equipment and capabilities commensurate with flight crew qualifications, and

(iii) where applicable, authorization from the appropriate authority.

Radiocommunication, navigation and approach aid equipment and capabilities

INSERT one letter as follows:

N if no COM/NAV/approach aid equipment for the route to be flown is carried, or the equipment is unserviceable, or

S if standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable, and/or (See GM 6)

INSERT one or more of the following letters to indicate the serviceable COM/NAV/approach aid equipment and capabilities available:

Letter	Aid equipment and capabilities available	Letter	Aid equipment and capabilities available
A	GBAS landing system	**K**	MLS
B	LPV (APV with SBAS)	**L**	ILS
C	LORAN C	**M1**	ATC SATVOICE (INMARSAT)
D	DME	**M2**	ATC SATVOICE (MTSAT)
E1	FMC WPR ACARS	**M3**	ATC SATVOICE (Iridium)
E2	D-FIS ACARS	**O**	VOR
E3	PDC ACARS	**P1**	CPDLC RCP 400 (See GM 12)
F	ADF	**P2**	CPDLC RCP 240 (See GM12)
G	GNSS. If any portion of the flight is planned to be conducted under IFR, it refers to GNSS receivers that comply with the requirements of Annex 10, Volume I (See GM 7)	**P3**	SATVOICE RCP 400 (See GM 12)
H	HF RTF	**P4-P9**	Reserved for RCP
I	Inertial Navigation	**R**	PBN approved (See GM 9)
J1	CPDLC ATN VDL Mode 2 (See GM 8)	**T**	TACAN
J2	CPDLC FANS 1/A HFDL	**U**	UHF RTF
J3	CPDLC FANS 1/A VDL Mode A	**V**	VHF RTF
J4	CPDLC FANS 1/A VDL Mode 2	**W**	RVSM approved
J5	CPDLC FANS 1/A SATCOM (INMARSAT)	**X**	MNPS approved
J6	CPDLC FANS 1/A SATCOM (MTSAT)	**Y**	VHF with 8.33 kHz channel spacing capability
J7	CPDLC FANS 1/A SATCOM (Iridium)	**Z**	Other equipment carried or other capabilities (See GM 10)

Any alphanumeric characters not indicated above are reserved.

GM 6 — If the letter S is used, standard equipment is considered to be VHF RTF, VOR and ILS, unless another combination is prescribed by the appropriate ATS authority.

GM 7 — If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ and separated by a space.

GM 8 — See RTCA/EUROCAE Interoperability Requirements Standard for ATN Baseline 1 (ATN B1 INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.

GM 9 — If the letter R is used, the performance-based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance-based navigation to a specific route segment, route or area is contained in the Performance-based Navigation (PBN) Manual (Doc 9613).

GM 10 — If the letter Z is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/, NAV/ and/or DAT, as appropriate.

GM 11 — Information on navigation capability is provided to ATC for clearance and routing purposes.

GM 12 — Guidance material on the application of performance-based communication, which prescribes RCP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

Surveillance equipment and capabilities

INSERT **N** if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable, or

INSERT one or more of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board:

SSR Modes A and C:

A Transponder — Mode A (4 digits — 4 096 codes)

C Transponder — Mode A (4 digits — 4 096 codes) and Mode C

SSR Mode S:

E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability

H Transponder — Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability

I Transponder — Mode S, including aircraft identification, but no pressure-altitude capability

L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability

P Transponder — Mode S, including pressure-altitude, but no aircraft identification capability

S Transponder — Mode S, including both pressure altitude and aircraft identification capability

X Transponder — Mode S with neither aircraft identification nor pressure-altitude capability

GM 13 — Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.

ADS-B:

B1 ADS-B with dedicated 1 090 MHz ADS-B “out” capability

B2 ADS-B with dedicated 1 090 MHz ADS-B “out” and “in” capability

U1 ADS-B “out” capability using UAT

U2 ADS-B “out” and “in” capability using UAT

V1 ADS-B “out” capability using VDL Mode 4

V2 ADS-B “out” and “in” capability using VDL Mode 4

ADS-C:

D1 ADS-C with FANS 1/A capabilities

G1 ADS-C with ATN capabilities

Alphanumeric characters not indicated above are reserved.

Example: ADE3RV/HB2U2V2G1

GM 14 — The RSP specification(s), if applicable, will be listed in Item 18 following the indicator SUR/. Guidance material on the application of performance-based surveillance, which prescribes RSP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

GM 15 — Additional surveillance equipment or capabilities will be listed in Item 18 following the indicator SUR/, as required by the appropriate ATS authority.

ITEM 13: DEPARTURE AERODROME AND TIME (8 CHARACTERS)

INSERT the ICAO four-letter location indicator of the departure aerodrome as specified in Doc 7910, Location Indicators,

OR, if no location indicator has been assigned,

INSERT ZZZZ and SPECIFY, in Item 18, the name and location of the aerodrome preceded by DEP/ ,

OR, the first point of the route or the marker radio beacon preceded by DEP/…, if the aircraft has not taken off from the aerodrome,

OR, if the flight plan is received from an aircraft in flight,

INSERT AFIL, and SPECIFY, in Item 18, the ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, preceded by DEP/ .

THEN, WITHOUT A SPACE

INSERT for a flight plan submitted before departure, the estimated off-block time (EOBT),

OR, for a flight plan received from an aircraft in flight, the actual or estimated time over the first point of the route to which the flight plan applies.

ITEM 15: ROUTE

INSERT the first cruising speed as in (a) and the first cruising level as in (b), without a space between them.

THEN, following the arrow, INSERT the route description as in (c).

(a) Cruising speed (maximum 5 characters)

INSERT the True airspeed for the first or the whole cruising portion of the flight, in terms of:

Kilometres per hour, expressed as K followed by 4 figures (e.g. K0830), or

Knots, expressed as N followed by 4 figures (e.g. N0485), or

True Mach number, when so prescribed by the appropriate ATS authority, to the nearest hundredth of unit Mach, expressed as M followed by 3 figures (e.g. M082).

(b) Cruising level (maximum 5 characters)

INSERT the planned cruising level for the first or the whole portion of the route to be flown, in terms of:

Flight level, expressed as F followed by 3 figures (e.g. F085; F330), or

* Standard metric level in tens of metres, expressed as S followed by 4 figures (e.g. S1130), or

Altitude in hundreds of feet, expressed as A followed by 3 figures (e.g. A045; A100), or

Altitude in tens of metres, expressed as M followed by 4 figures (e.g. M0840), or

for uncontrolled VFR flights, the letters VFR.

(c) Route (including changes of speed, level and/or flight rules)

Flights along designated ATS routes:

INSERT, if the departure aerodrome is located on or connected to the ATS route, the designator of the first ATS route,

OR, if the departure aerodrome is not on or connected to the ATS route, the letters DCT followed by the point of joining the first ATS route, followed by the designator of the ATS route.

THEN

INSERT each point at which either a change of speed and/or level is planned to commence, or a change of ATS route, and/or a change of flight rules is planned,

GM 16 — When a transition is planned between a lower and upper ATS route and the routes are oriented in the same direction, the point of transition need not be inserted.

Followed in each case

by the designator of the next ATS route segment, even if the same as the previous one,

OR by DCT, if the flight to the next point will be outside a designated route, unless both points are defined by geographical coordinates.

Flights outside designated ATS routes

INSERT points normally not more than 30 minutes flying time 200 NM apart, including each point at which a change of speed or level, a change of track, or a change of flight rules is planned.

OR, when required by appropriate ATS authority(ies),

DEFINE the track of flights operating predominantly in an east-west direction between 70°N and 70°S by reference to significant points formed by the intersections of half or whole degrees of latitude with meridians spaced at intervals of 10 degrees of longitude. For flights operating in areas outside those latitudes the tracks shall be defined by significant points formed by the intersection of parallels of latitude with meridians normally spaced at 20 degrees of longitude. The distance between significant points shall, as far as possible, not exceed one hour's flight time. Additional significant points shall be established as deemed necessary.

For flights operating predominantly in a north-south direction, define tracks by reference to significant points formed by the intersection of whole degrees of longitude with specified parallels of latitude which are spaced at 5 degrees.

INSERT DCT between successive points unless both points are defined by geographical coordinates or by bearing and distance.

USE ONLY the conventions in (1) to (5) below and SEPARATE each sub-item by a space.

(1) **ATS route (2 to 7 characters)**

The coded designator assigned to the route or route segment including, where appropriate, the coded designator assigned to the standard departure or arrival route (e.g. BCN1, BI, R14, UB10, KODAP2A).

GM 17 — Provisions for the application of route designators are contained in Annex 11, Appendix 1.

(2) **Significant point (2 to 11 characters)**

The coded designator (2 to 5 characters) assigned to the point (e.g. LN, MAY, HADDY), or, if no coded designator has been assigned, one of the following ways:

(i) Degrees only (7 characters):

2 figures describing latitude in degrees, followed by "N" (North) or "S" (South), followed by 3 figures describing longitude in degrees, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 46N078W.

(ii) Degrees and minutes (11 characters):

4 figures describing latitude in degrees and tens and units of minutes followed by "N" (North) or "S" (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W.

(iii) Bearing and distance from a reference point:

The identification of the reference point, followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros — e.g. a point 180° magnetic at a distance of 40 nautical miles from VOR "DUB" should be expressed as DUB180040.

(3) **Change of speed or level (maximum 21 characters)**

The point at which a change of speed (5% TAS or 0.01 Mach or more) or a change of level is planned to commence, expressed exactly as in (2) above, followed by an oblique stroke and both the cruising speed and the cruising level, expressed exactly as in (a) and (b) above, without a space between them, even when only one of these quantities will be changed.

Examples: LN/N0284A045
MAY/N0305FI80
HADDY/N0420F330
4602N07805W/N0500F350
46N078W/M082F330
DUB180040/N0350M0840

(4) **Change of flight rules (maximum 3 characters)**

The point at which the change of flight rules is planned, expressed exactly as in (2) or (3) above as appropriate, followed by a space and one of the following:

VFR if from IFR to VFR
IFR if from VFR to IFR

Examples: LN VFR
LN/N0284A050 IFR

(5) **Cruise climb (maximum 28 characters)**

The letter C followed by an oblique stroke; THEN the point at which cruise climb is planned to start, expressed exactly as in (2) above, followed by an oblique stroke; THEN the speed to be maintained during cruise climb, expressed exactly as in (a) above, followed by the two levels defining the layer to be occupied during cruise climb, each level expressed exactly as in (b) above, or the level above which cruise climb is planned followed by the letters PLUS, without a space between them.

Examples: C/48N050W/M082F290F350
C/48N050W/M082F290PLUS
C/52N050W/M220F580F620.

ITEM 16: DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME, DESTINATION ALTERNATE AERODROME(S)

Destination aerodrome and total estimated elapsed time (8 characters)

INSERT the ICAO four-letter location indicator of the destination aerodrome as specified in Doc 7910, Location Indicators,

OR, if no location indicator has been assigned,

INSERT ZZZZ and SPECIFY in Item 18 the name and location of the aerodrome, preceded by DEST/ .

THEN WITHOUT A SPACE

INSERT the total estimated elapsed time.

GM 18 — For a flight plan received from an aircraft in flight, the total estimated elapsed time is the estimated time from the first point of the route to which the flight plan applies to the termination point of the flight plan.

Destination alternate aerodrome(s))

INSERT the ICAO four-letter location indicator(s) of not more than two destination alternate aerodromes, as specified in Doc 7910, Location Indicators, separated by a space,

OR, if no location indicator has been assigned to the destination alternate aerodrome(s),

INSERT ZZZZ and SPECIFY in Item 18 the name and location of the destination alternate aerodrome(s), preceded by ALTN/ .

ITEM 18: OTHER INFORMATION

GM 19 — Use of indicators not included under this item may result in data being rejected, processed incorrectly or lost.

Hyphens or oblique strokes should only be used as prescribed below.

INSERT 0 (zero) if no other information,

OR, any other necessary information in the sequence shown hereunder, in the form of the appropriate indicator selected from those defined hereunder followed by an oblique stroke and the information to be recorded:

STS/ Reason for special handling by ATS, e.g. a search and rescue mission, as follows:

ALTRV: for a flight operated in accordance with an altitude reservation,

ATFMX: for a flight approved for exemption from ATFM measures by the appropriate ATS authority,

FFR: fire-fighting,

FLTCK: flight check for calibration of navaids,

HAZMAT: for a flight carrying hazardous material,

HEAD: a flight with Head of State status,

HOSP: for a medical flight declared by medical authorities,

HUM: for a flight operating on a humanitarian mission,

MARSA: for a flight for which a military entity assumes responsibility for separation of military aircraft,

MEDEVAC: for a life critical medical emergency evacuation,

NONRVSM: for a non-RVSM capable flight intending to operate in RVSM airspace,

SAR: for a flight engaged in a search and rescue mission, and

STATE: for a flight engaged in military, customs or police services.

Other reasons for special handling by ATS shall be denoted under the designator RMK/.

PBN/ Indication of RNAV and/or RNP capabilities. Include as many of the descriptors below, as apply to the flight, up to a maximum of 8 entries, i.e. a total of not more than 16 characters.

PBN: RNAV and/or RNP capabilities

	RNAV SPECIFICATIONS
A1	RNAV 10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS
C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
	RNP SPECIFICATIONS
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BARO-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

Combinations of alphanumeric characters not indicated above are reserved.

NAV/ Significant data related to navigation equipment, other than specified in PBN/, as required by the appropriate ATS authority. Indicate GNSS augmentation under this indicator, with a space between two or more methods of augmentation, e.g. NAV/GBAS SBAS.

COM/ Indicate communication equipment and capabilities not specified in Item 10 a).

DAT/ Indicate data communication equipment and capabilities not specified in 10 a).

SUR/ Indicate surveillance equipment and capabilities not specified in Item 10 b). Indicate as many RSP specification(s) as apply to the flight, using designator(s) with no space.

Multiple RSP specifications are separated by a space. Example: RSP180 RSP400.

DEP/ Name and location of departure aerodrome, if ZZZZ is inserted in Item 13, or the ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location as follows: With 4 figures describing latitude in degrees and tens and units of minutes followed by “N” (North) or “S” (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W (11 characters).

OR, Bearing and distance from the nearest significant point, as follows:

The identification of the significant point followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros, e.g. a point of 180° magnetic at a distance of 40 nautical miles from VOR “DUB” should be expressed as DUB180040.

OR, The first point of the route (name or LAT/LONG) or the marker radio beacon, if the aircraft has not taken off from an aerodrome.

DEST/ Name and location of destination aerodrome, if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described under DEP/ above.

DOF/ The date of flight departure in a six-figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day).

REG/ The nationality or common mark and registration mark of the aircraft, if different from the aircraft identification in Item 7.

EET/ Significant points or FIR boundary designators and accumulated estimated elapsed times from take-off to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.

Examples: EET/CAP0745 XYZ0830
EET/EINN0204

SEL/ SELCAL Code, for aircraft so equipped.

TYP/ Type(s) of aircraft, preceded if necessary without a space by number(s) of aircraft and separated by one space, if ZZZZ is inserted in Item 9.

Example: TYP/2F15 5F5 3B2

CODE/ Aircraft address (expressed in the form of an alphanumerical code of six hexadecimal characters) when required by the appropriate ATS authority. Example: “F00001” is the lowest aircraft address contained in the specific block administered by ICAO.

DLE/ Enroute delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four-figure time in hours and minutes (hhmm).

Example: DLE/MDG0030

OPR/ ICAO designator or name of the aircraft operating agency, if different from the aircraft identification in item 7.

ORGN/ The originator’s 8 letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority.

GM 20 — In some areas, flight plan reception centres may insert the ORGN/ identifier and originator’s AFTN address automatically.

PER/ Aircraft performance data, indicated by a single letter as specified in the Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168), Volume I — Flight Procedures, if so prescribed by the appropriate ATS authority.

ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RALT/ ICAO four letter indicator(s) for en-route alternate(s), as specified in Doc 7910, Location Indicators, or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

TALT/ ICAO four letter indicator(s) for take-off alternate, as specified in Doc 7910, Location Indicators, or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RIF/ The route details to the revised destination aerodrome, followed by the ICAO four-letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.

Examples: RIF/DTA HEC KLAX
RIF/ESP G94 CLA YPPH

RMK/ Any other plain-language remarks when required by the appropriate ATS authority or deemed necessary.

ITEM 19: SUPPLEMENTARY INFORMATION

Endurance

After E/ INSERT a 4-figure group giving the fuel endurance in hours and minutes.

Persons on board

After P/ INSERT the total number of persons (passengers and crew) on board, when required by the appropriate ATS authority. INSERT TBN (to be notified) if the total number of persons is not known at the time of filing.

Emergency and survival equipment

R/(RADIO) CROSS OUT U if UHF on frequency 243.0 MHz is not available. CROSS OUT V if VHF on frequency 121.5 MHz is not available. CROSS OUT E if emergency locator transmitter (ELT) is not available.

S/(SURVIVAL EQUIPMENT) CROSS OUT all indicators if survival equipment is not carried.CROSS OUT P if polar survival equipment is not carried. CROSS OUT D if desert survival equipment is not carried. CROSS OUT M if maritime survival equipment is not carried. CROSS OUT J if jungle survival equipment is not carried.

J/(JACKETS) CROSS OUT all indicators if life jackets are not carried. CROSS OUT L if life jackets are not equipped with lights. CROSS OUT F if life jackets are not equipped with fluorescein. CROSS OUT U or V or both as in R/ above to indicate radio capability of jackets, if any.

D/(DINGHIES) (NUMBER) CROSS OUT indicators D and C if no dinghies are carried, or INSERT number of dinghies carried; and

(CAPACITY) INSERT total capacity, in persons, of all dinghies carried; and

(COVER) CROSS OUT indicator C if dinghies are not covered; and

(COLOUR) INSERT colour of dinghies if carried.

A/(AIRCRAFT COLOUR AND MARKINGS) INSERT colour of aircraft and significant markings.

N/(REMARKS) CROSS OUT indicator N if no remarks or INDICATE any other survival equipment carried and any other remarks regarding survival equipment.

C/(PILOT) INSERT name of pilot-in-command.

(c) Filed by

INSERT the name of the unit, agency or person filing the flight plan.

(d) Acceptance of the flight plan

Indicate acceptance of the flight plan in the manner prescribed by the appropriate ATS authority.

(e) Instructions for insertion of COM data

Items to be completed

COMPLETE the top two shaded lines of the form, and COMPLETE the third shaded line only when necessary, in accordance with the provisions in PANS-ATM (Doc. 4444), Chapter 11, 11.2.1.2, unless ATS prescribes otherwise.

(3) Instructions for the transmission of a filed flight plan (FPL) message

Correction of obvious errors

Unless otherwise prescribed, CORRECT obvious format errors and/or omissions (i.e. oblique strokes) to ensure adherence as specified in Section 2.

Items to be transmitted

TRANSMIT items as indicated hereunder, unless otherwise prescribed:

(a) the items in the shaded lines, above Item 3,

(b) commencing with <<≡ (FPL of Item 3:

all symbols and data in the unshaded boxes down to the) <<≡at the end of Item 18,

additional alignment functions as necessary to prevent the inclusion of more than 69 characters in any line of Items 15 or 18. The alignment function is to be inserted only in lieu of a space so as not to break up a group of data,

letter shifts and figure shifts (not preprinted on the form) as necessary,

(c) the AFTN Ending, as described below:

End-of-Text Signal

(i) one LETTER SHIFT

(ii) two CARRIAGE RETURNS, one LINE FEED

Page-feed Sequence

Seven LINE FEEDS

End-of-Message Signal

Four of the letter N.

(4) Instructions for the transmission of a supplementary flight plan (SPL) message

Items to be transmitted

Transmit items as indicated hereunder, unless otherwise prescribed:

(a) AFTN Priority Indicator, Addressee Indicators <<≡, Filing Time, Originator Indicator <<≡and, if necessary, specific identification of addressees and/or originator,

(b) commencing with <<≡ (SPL:

all symbols and data in the unshaded areas of boxes 7, 13, 16 and 18, except that the ‘)’ at the end of box 18 is not to be transmitted, and then the symbols in the unshaded area of box 19 down to and including the)<<≡ of box 19,

additional alignment functions as necessary to prevent the inclusion of more than 69 characters in any line of Items 18 and 19. The alignment function is to be inserted only in lieu of a space so as not to break up a group of data,

letter shifts and figure shifts (not preprinted on the form) as necessary;

(c) the AFTN Ending, as described below:

End-of-Text Signal

(i) one LETTER SHIFT

(ii) two CARRIAGE RETURNS, one LINE FEED

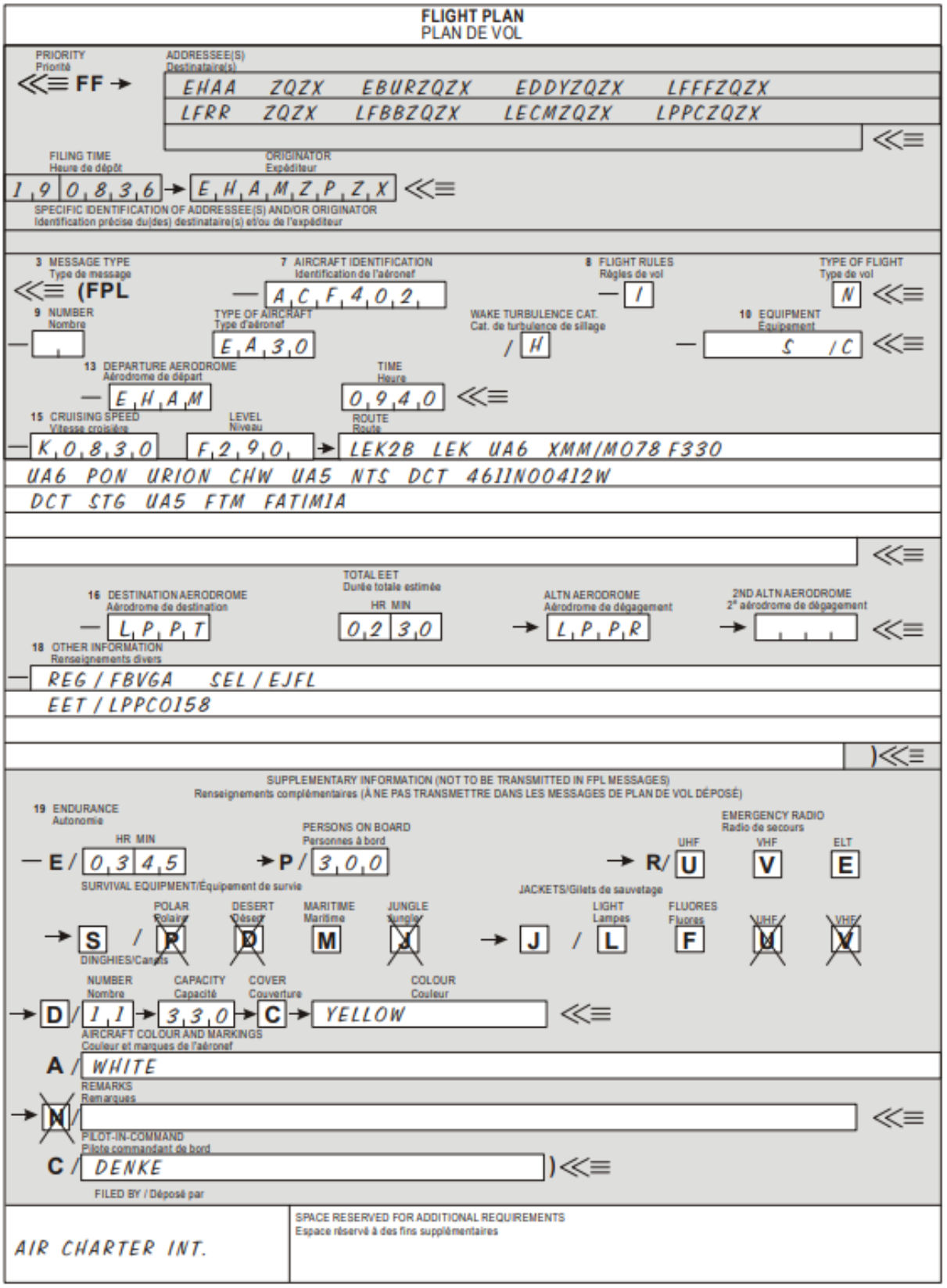
Page-feed Sequence

Seven LINE FEEDS

End-of-Message Signal

Four of the letter N.

(5) Example of a completed flight plan form



FLIGHT PLAN
PLAN DE VOL

PRIORITY / Priorité: FF
ADDRESSEE(S) / Destinataire(s): EHAA ZQZX EBURZQZX EDDYZQZX LFFFZQZX
LFRR ZQZX LFBBZQZX LECMZQZX LPPCZQZX
FILING TIME / Heure de dépôt: 1908
ORIGINATOR / Expéditeur: EHAMZPZX
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR / Identification précise du(des) destinataire(s) et/ou de l'expéditeur:
3 MESSAGE TYPE / Type de message: (FPL
7 AIRCRAFT IDENTIFICATION / Identification de l'aéronef: ACF402
8 FLIGHT RULES / Règles de vol: I
TYPE OF FLIGHT / Type de vol: N
9 NUMBER / Nombre:
TYPE OF AIRCRAFT / Type d'aéronef: EA30
WAKE TURBULENCE CAT. / Cat. de turbulence de sillage: /H
10 EQUIPMENT / Équipement: S /C
13 DEPARTURE AERODROME / Aérodrome de départ: EHAM
TIME / Heure: 0940
15 CRUISING SPEED / Vitesse croisière: K0830
LEVEL / Niveau: F290
ROUTE / Route: LEK2B LEK UA6 XMM/M078 F330
UA6 PON URION CHW UA5 NTS DCT 4611N00412W
DCT STG UA5 FTM FATIMIA
16 DESTINATION AERODROME / Aérodrome de destination: LPPT
TOTAL EET / Durée totale estimée HR MIN: 0230
ALTN AERODROME / Aérodrome de dégagement: LPPR
2ND ALTN AERODROME / 2e aérodrome de dégagement:
18 OTHER INFORMATION / Renseignements divers:
REG/FBVGA SEL/EJFL
EET/LPPC0158

SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES)
Renseignements complémentaires (À NE PAS TRANSMETTRE DANS LES MESSAGES DE PLAN DE VOL DÉPOSÉ)
19 ENDURANCE / Autonomie HR MIN: E/0345
PERSONS ON BOARD / Personnes à bord: P/300
EMERGENCY RADIO / Radio de secours: R/U (UHF) V (VHF) E (ELT)
SURVIVAL EQUIPMENT / Équipement de survie: S/ (POLAR / Polaire) (DESERT / Désert) M (MARITIME / Maritime) (JUNGLE / Jungle)
DINGHIES / Canots:
JACKETS / Gilets de sauvetage: J/L (LIGHT / Lampes) F (FLUORES / Fluores) (UHF) (VHF)
D/ NUMBER / Nombre: 11 CAPACITY / Capacité: 330 COVER / Couverture: C COLOUR / Couleur: YELLOW
AIRCRAFT COLOUR AND MARKINGS / Couleur et marques de l'aéronef: A/WHITE
REMARKS / Remarques: N/
PILOT-IN-COMMAND / Pilote commandant de bord: C/DENKE
FILED BY / Déposé par: AIR CHARTER INT.
SPACE RESERVED FOR ADDITIONAL REQUIREMENTS / Espace réservé à des fins supplémentaires

(6) ICAO model repetitive flight plan (RPL) listing form

A OPERATOR	B ADDRESSEE(S)	C DEPARTURE AERODROME(S)	D DATE _____ yymmdd	E SERIAL NO. __ - __	F PAGE OF __ / __
			G SUPPLEMENTARY DATA (Item 19) AT:		

H	I	J	K							L	M	N	O			P		Q
+ −	VALID FROM	VALID UNTIL	DAYS OF OPERATION							AIRCRAFT IDENTIFI-CATION (Item 7)	TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY (Item 9)	DEPARTURE AERODROME AND TIME (Item 13)	ROUTE (Item 15)			DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME (Item 16)		REMARKS
	yymmdd	yymmdd	1	2	3	4	5	6	7				CRUISING SPEED	LEVEL	ROUTE			

(7) Instructions for the completion of the repetitive flight plan (RPL) listing form

(a) General

List only flight plans that will operate in accordance with IFR. (Flight rules I in FPL format).

It is assumed that all aircraft are operating as scheduled flights (Type of flight S in FPL format), otherwise notify in Q (Remarks).

It is assumed that all aircraft operating on RPLs are equipped with 4 096-code transponders with Modes A and C. Otherwise, notify in Q (Remarks).

List flight plans in alphabetical order of the location indicator of the departure aerodrome.

List flight plans for each departure aerodrome in chronological order of estimated off-block times.

Adhere closely to the data conventions as indicated for the Flight Plan Form (Doc. 4444, Appendix 3, 1.6) unless otherwise specifically indicated in (d) bellow.

Insert all clock times in 4 figures UTC.

Insert all estimated elapsed times in 4 figures (hours and minutes).

Insert data on a separate line for each segment of operations with one or more stops, i.e. from any departure aerodrome to the next destination aerodrome even though call sign or flight number is the same for multiple segments.

Clearly identify additions and deletions in accordance with Item H at (d). Subsequent listings shall list the corrected and added data, and deleted flight plans shall be omitted.

Number pages by indicating number of page and total number of pages in submission.

Utilize more than one line for any RPL where the space provided for items O and Q on one line is not sufficient.

(b) A flight shall be cancelled as follows:

(i) indicate a minus sign in Item H followed by all other items of the cancelled flight,

(ii) insert a subsequent entry denoted by a plus sign in Item H and the date of the last flight in Item J, with all other items of the cancelled flight unchanged.

(c) Modification to a flight shall be made as follows:

(i) carry out the cancellation as indicated in (b), and

(ii) insert a third entry giving the new flight plan(s) with the appropriate items modified as necessary, including the new validity dates in Items I and J.

GM 21 — All entries related to the same flight will be inserted in succession in the order specified above.

(d) Instructions for insertion of RPL data

Complete Items A to Q as indicated hereunder.

ITEM A: OPERATOR

INSERT name of operator.

ITEM B: ADDRESSEE(S)

INSERT name of agency(ies) designated by States to administer RPLs for FIRs or areas of responsibility concerned with the route of flight.

ITEM C: DEPARTURE AERODROME(S)

INSERT location indicator(s) of departure aerodrome(s).

ITEM D: DATE

INSERT on each page of submission the date (year, month, day) in a 6-figure group that the listing was submitted.

ITEM E: SERIAL NO.

INSERT serial number of submission (2 numerics) indicating last two digits of year, a dash, and the sequential no. of the submission for the year indicated (start with numeral 1 each new year).

ITEM F: PAGE OF

INSERT page number and total number of pages submitted.

ITEM G: SUPPLEMENTARY DATA AT

INSERT name and appropriate contact details of entity where information normally provided under Item 19 of the FPL is kept readily available and can be supplied without delay.

ITEM H: ENTRY TYPE

INSERT a minus sign (–) for each flight plan that is to be deleted from the listing.

INSERT a plus sign (+) for each initial listing and, in the case of subsequent submissions, for each flight plan not listed in the previous submission.

GM 22 — No information is required under this item for any flight plan which is unchanged from the previous submission.

ITEM I: VALID FROM

INSERT first date (year, month, day) upon which the flight is scheduled to operate.

ITEM J: VALID UNTIL

INSERT last date (year, month, day) upon which the flight is scheduled to operate as listed, or

UFN if the duration is unknown.

ITEM K: DAYS OF OPERATION

INSERT number corresponding to the day of the week in the appropriate column; Monday = 1 through Sunday = 7.

INSERT 0 for each day of non-operation in the appropriate column.

ITEM L: AIRCRAFT IDENTIFICATION

(Item 7 of the ICAO flight plan)

INSERT aircraft identification to be used for the flight.

ITEM M: TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY

(Item 9 of the ICAO flight plan)

INSERT appropriate ICAO designator as specified in Doc 8643 — Aircraft Type Designators.

INSERT J, H, M or L indicator as appropriate:

J — SUPER to indicate an aircraft type specified as such in Doc 8643, Aircraft Type Designators,

H — HEAVY to indicate an aircraft type with a maximum certificated take-off mass of 136 000 kg or more, with the exception of aircraft types listed in Doc 8643 in the SUPER (J) category,

M — MEDIUM to indicate an aircraft type with a maximum certificated take-off mass of less than 136 000 kg but more than 7 000 kg,

L — LIGHT to indicate an aircraft type with a maximum certificated take-off mass of 7 000 kg or less.

ITEM N: DEPARTURE AERODROME AND TIME

(Item 13 of the ICAO flight plan)

INSERT location indicator of the departure aerodrome.

INSERT the off-block time, i.e. the estimated time that the aircraft will commence movement associated with departure.

ITEM O: ROUTE

(Item 15 of the ICAO flight plan)

(a) Cruising speed

INSERT the true airspeed for the first or whole cruising portion of the flight in accordance with Item 15 (a) of the ICAO flight plan.

(b) Cruising level

INSERT the planned cruising level for the first or whole portion of the route in accordance with Item 15 (b) of the ICAO flight plan.

(c) Route

INSERT the entire route in accordance with Item 15 (c) of the ICAO flight plan.

ITEM P: DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME

(Item 16 of the ICAO flight plan)

INSERT location indicator of the destination aerodrome.

INSERT the total estimated elapsed time.

ITEM Q: REMARKS

INSERT items of information as required by the appropriate ATS authority, items normally notified in Item 18 of the ICAO flight plan and any other information pertinent to the flight of concern to ATS.

(8) Example of a completed repetitive flight plan (RPL) listing form

A OPERATOR	B ADDRESSEE(S)	C DEPARTURE AERODROME(S)	D	E	F
BRITISH AIRWAYS	UK STORED FLIGHT PLAN OFFICE EGTXZBZX Chef de la Subdivision informatique 9 rue de Champagne 91205 Athismons France	EGLL	DATE 800305 ------- yymmdd	SERIAL NO. 80 - 12 -- --	PAGE OF 3 / 3 --/--
			G SUPPLEMENTARY DATA (Item 19) AT: BAW Briefing Office		

H	I	J	K							L	M		N		O			P		Q
	VALID FROM	VALID UNTIL	DAYS OF OPERATION							AIRCRAFT IDENTIFI-CATION (Item 7)	TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY (Item 9)		DEPARTURE AERODROME AND TIME (Item 13)		ROUTE (Item 15) CRUISING SPEED	LEVEL	ROUTE	DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME (Item 16)		REMARKS
+ –	yymmdd	yymmdd	1	2	3	4	5	6	7											
+	800401	811031	1	2	3	4	5	6	7	BAW004	HS21	M	EGLL	0700	N0440	F210	A1E UA1E DPE UA16 MAN	LFPG	0045	
+	800401	800731	1	2	3	4	5	6	7	BAW032	HS21	M	EGLL	1800	N0440	F210	A1E UA1E DPE UA16 MAN	LFPG	0045	
+	800801	811031	1	0	3	0	5	0	7	BAW032	HS21	M	EGLL	1800	N0440	F210	A1E UA1E DPE UA16 MAN	LFPG	0045	
+	800601	800930	0	0	0	0	0	0	7	BAW082	HS21	M	EGLL	1805	N0450	F270	A1S UA1S RBT UA3 MTL			
																	UA3W STP DCT GL	LFMN	0130	
–	800103	800930	0	0	0	0	0	6	7	BAW092	B737	M	EGLL	1810	N0430	F190	A1E UA1E DPE UA16 MAN	LFPG	0400	CHARTERED ACFT
+	800103	800315	0	0	0	0	0	6	7	BAW092	B737	M	EGLL	1810	N0430	F190	A1E UA1E DPE UA16 MAN	LFPG	0400	CHARTERED ACFT

INTENTIONALLY LEFT BLANK