STATE OF LIBYA
MINISTRY OF TRANSPORT
CIVIL AVIATION AUTHORITY

دولة ليبيا
وزارة المواصلات
مصلحة الطيران المدني

LYCAR Part-ROA

Libyan Civil Aviation Regulation

Part - ROA: Rules Of the Air

Third issue, February 2023

Approved by and published under the authority of the President of LYCAA.

INTENTIONALLY LEFT BLANK

RECORD OF REVISIONS

No.	Date	Description / Highlights
Issue 2	December 2017	Initial issue
Issue 3	February 2023	New issue

INTENTIONALLY LEFT BLANK

FOREWORD

1. The regulation contained herein is adopted under the provision of Article N5 of Libyan Civil Aviation Law N6 of 2005, issued and signed by the President of Libyan Civil Aviation by virtue of powers vested from the Minister of Transport under the resolution N154 issued on 13.05.2015.

2. The regulation contained herein, shall be cited as The Libyan Civil Aviation Regulation, Part Rules of the air (LYCAR Part-ROA), is in conformity with ICAO Annex 2 and ICAO Annex 6. It forms the basis of general operating and flight rules for the State of Libya aviation environment and ensures the safe operation of aircraft.

3. LYCAR Part-ROA issue 3 is an update of LYCAR Part 91 and contains major changes from the previous issue.

4. The information contained herein is subject to constant review in the light of changing regulations and requirements. No subscriber or other reader should act on the basis of any such information without taking appropriate professional advice when/as indicated/required. Although, every effort has been made to ensure accuracy, the Libyan Civil Aviation Authority (LYCAA) shall not be held responsible for loss or damage caused by errors, omissions, misprints or misinterpretation of the content hereof.

5. The use of the male gender implies the female gender and vice versa.

6. Copies of this regulation can be obtained from the ANS Inspectorate Office of the LYCAA or can be downloaded on the official website: www.caa.gov.ly

Dr. Mohamed Shlibek
President of LYCAA
14th of February 2023

Table of Content

Subpart A – General

ROA.005 Definitions

For the purpose of this Regulation the following definitions shall apply:

Accuracy. A degree of conformance between the estimated or measured value and the true value.

ADS-C agreement. A reporting plan which establishes the conditions of ADS- C data reporting (i.e. data required by the air traffic services unit and frequency of ADS- C reports which have to be agreed to prior to using ADS-C in the provision of air traffic services.

Advisory airspace. An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

Advisory route. A designated route along which air traffic advisory service is available.

Aerobatic flight. Maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed, not necessary for normal flight or for instruction for licenses or ratings other than aerobatic rating.

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

Aerodrome control service. Air traffic control service for aerodrome traffic.

Aerodrome control tower. A unit established to provide air traffic control service to aerodrome traffic.

Aerodrome traffic. All traffic on the maneuvering area of an aerodrome and all aircraft flying in the vicinity of an aerodrome. An aircraft operating in the vicinity of an aerodrome includes but is not limited to aircraft entering or leaving an aerodrome traffic circuit.

Aerodrome traffic circuit. The specified path to be flown by aircraft operating in the vicinity of an aerodrome.

Aerodrome traffic zone. airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

Aerial work. An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

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

Aeronautical mobile service. A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies.

Aeronautical station. A land station in the aero- nautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

Airplane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

Airborne collision avoidance system (ACAS). An aircraft system based on secondary surveillance radar (SSR) transponder signals which operates Independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

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

Aircraft address. A unique combination of 24 bits available for assignment to an aircraft for the purpose of air-ground communications, navigation and surveillance.

Aircraft observation. The evaluation of one or more meteorological elements made from an aircraft in flight.

AIRMET information. Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of low-level aircraft operations and which was not already included in the forecast issued for low-level flights in the flight information region concerned or sub-area thereof.

Air-ground communication. Two-way communication between aircraft and stations or locations on the surface of the earth.

Air-ground control radio station. An aeronautical telecommunication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area.

Air-report. A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

Air-taxiing. Movement of a helicopter/VTOL above the surface of an aerodrome normally in ground effect and at a ground speed normally less than 37 km/h (20 kts).

Air traffic. All aircraft in flight or operating on the maneuvering area of an aerodrome.

Air traffic advisory service. A service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans.

Air traffic control clearance. Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Air traffic control instruction. Directives issued by air traffic control for the purpose of requiring a pilot to take a specific action.

Air traffic control service. A service provided for the purpose of:

1) Preventing collisions:

a) Between aircraft; and

b) On the maneuvering area between aircraft and obstructions.

2) Expediting and maintaining an orderly flow of air traffic.

Air traffic control unit. A generic term meaning variously, area control center, approach control unit or aerodrome control tower.

Air traffic service (ATS). A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Air traffic services airspaces. Airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

Air traffic services reporting office. A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

Air traffic services unit. A generic term meaning variously, air traffic control unit, flight information center, aerodrome flight information service unit or air traffic services reporting office.

Airway. A control area or portion thereof established in the form of a corridor.

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

Alternate aerodrome. An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to precede to or to land at the aerodrome of intended landing. Alternate aerodromes include the following:

1) Take-off alternate. an alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

2) En-route alternate. an alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.

3) Destination alternate. an alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Altitude. The vertical distance of a level, a point or an object considered as a point, measured from Sea level (MSL).

Approach control service. Air traffic control service for arriving or departing controlled flights.

Approach control unit. A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

Appropriate ATS authority. The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned.

Appropriate authority:

a) Regarding flight over the high seas. The relevant authority of the State of Registry.

b) Regarding flight other than over the high seas. The relevant authority of the State having sovereignty over the territory being overflown.

Apron. A defined area, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fueling, parking or maintenance.

Area control center (ACC). A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

Area control service. Air traffic control service for controlled flights in control areas.

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

ATS route. A specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.

Authority. Libya Civil Aviation Authority, LYCAA abbreviation may be used instead in some cases.

Automatic dependent surveillance - broadcast (ADS-B). A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

Automatic dependent surveillance - contract (ADS-C). a means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS- C reports would be initiated, and what data would be contained in the reports.

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

1) Data link-automatic terminal information service (D-ATIS). the provision of ATIS via data link.

2) Voice-automatic terminal information service (Voice- ATIS). the provision of ATIS by continuous and repetitive voice broadcasts.

Ceiling. The height above the ground or water of the base of the lowest layer of cloud below 6 000 m (20 000 ft) covering more than half the sky.

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

Clearance limit. The point to which an aircraft is granted an air traffic control clearance.

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

Code (SSR). The number assigned to a particular multiple pulse reply signal transmitted by a transponder in Mode A or Mode C.

Command and control (C2) link. The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

C2 Link. The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

Control area. A controlled airspace extending upwards from a specified limit above the earth.

Controlled aerodrome. An aerodrome at which air traffic control service is provided to aerodrome traffic regardless whether or not a control zone exists.

Controlled airspace. An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Controlled flight. Any flight which is subject to an air traffic control clearance.

Controller-pilot data link communications (CPDLC). A means of communication between controller and pilot, using data link for ATC communications.

Control zone. A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

Cruise climb. An airplane cruising technique resulting in a net increase in altitude as the airplane mass decreases.

Cruising level. A level maintained during a significant portion of a flight.

Current flight plan (CPL). The flight plan, including changes, if any, brought about by subsequent clearances.

Danger area. An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

Data link communications. A form of communication intended for the exchange of messages via a data link.

Detect and avoid. The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

Datum. Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities.

Downstream clearance. A clearance issued to an aircraft by an air traffic control unit that is not the current controlling authority of that aircraft.

Estimated elapsed time. The estimated time required to proceed from one significant point to another.

Estimated off-block time. The estimated time at which the aircraft will commence movement associated with departure.

Estimated time of arrival. For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

Expected approach time. The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding fix to complete its approach for a landing. The actual time of leaving the holding fix will depend upon the approach clearance.

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

Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Flight information center. A unit established to provide flight information service and alerting service.

Flight information region. Airspace of defined dimensions within which flight information service and alerting service are provided.

Flight information service. a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

Flight level (FL). A surface of constant atmospheric pressure which is related to a specific pressure datum, 1013,2 hecto pascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Flight visibility. The visibility forward from the cockpit of an aircraft in flight.

Forecast. A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

Ground visibility. The visibility at an aerodrome, as reported by an accredited observer or by automatic systems.

Heading. The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid).

Height. The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

Helicopter. A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power driven rotors on substantially vertical axes.

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

IFR. The symbol used to designate the instrument flight rules.

IFR flight. A flight conducted in accordance with the instrument flight rules.

IMC. The symbol used to designate instrument meteorological conditions.

Instrument approach operation. An approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operation:

a) a two-dimensional(2D) instrument approach operation, using lateral navigation guidance only; and

b) a three-dimensional(3D) instrument approach operation, using both lateral and vertical navigation guidance.

Note: Lateral and vertical navigation guidance refers to the guidance provided either by:

- a ground-based radio navigation aid; or

- Computer- generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

Instrument approach procedure (IAP). A series of predetermined maneuvers by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument Approach procedures are classified as follows:

a) Non-precision approach (NPA) procedure. an instrument approach procedure designed for 2D instrument approach operations Type A.

b) Approach procedure with vertical guidance (APV). a performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

c) Precision approach (PA) procedure. an instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat 1) designed for 3D instrument approach operations Type A or B.

Instrument meteorological conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

Landing area. That part of a movement area intended for the landing or take- off of aircraft.

Level. A generic term relating to vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

Maneuvering area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Mode (SSR). The conventional identifier related to specific functions of the interrogation signals transmitted by an SSR interrogator. There are four modes specified in ICAO Annex 10. A, C, S and inter mode.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the maneuvering area and the apron(s).

Night. The hours between the end of evening civil twilight and the beginning of morning civil twilight. Civil twilight ends in the evening when the center of the sun's disc is 6 degrees below the horizon and begins in the morning when the center of the sun's disc is 6 degrees below the horizon.

Obstacle. all fixed (whether temporary or permanent) and mobile objects, or parts thereof, that:

a) are located on an area intended for the surface movement of aircraft; or

b) extend above a defined surface intended to protect aircraft in flight; or

c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation;

Operator. A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Operating site. A site selected by the operator or pilot-in-command for landing, take-off and/or hoist operations.

Pilot-in-command (PIC). The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight;

Pressure-altitude. An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere, as defined in Annex 8, Part 1 to the Chicago Convention.

Problematic use of substances. The use of one or more psychoactive substances by aviation personnel in a way that constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or causes or worsens an occupational, social, mental or physical problem or disorder.

Prohibited area. Airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

Psychoactive substances. Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psycho• stimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

Radar. A radio detection device which provides information on range, azimuth and/or elevation of objects.

Radio mandatory zone (RMZ). An airspace of defined dimensions wherein the carriage and operation of radio equipment is mandatory.

Radio navigation service. A service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids.

Radiotelephony. A form of radio communication primarily intended for the exchange of information in the form of speech.

Remote pilot. A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

Remote pilot station. The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

Remotely piloted aircraft (RPA). An unmanned aircraft which is piloted from a remote pilot station.

Remotely piloted aircraft system (RPAS). A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

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

Reporting point. A specified geographical location in relation to which the position of an aircraft can be reported.

Restricted area. Airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

RPA observer. A trained and competent person designated by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.

Route segment. A route or portion of route usually flown without an intermediate stop.

Runway. A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway-holding position. A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

Runway visual range (RVR). The range over which the pilot of an aircraft on the center line of a runway can see the runway surface markings or the lights delineating the runway or identifying its center line.

Safety-sensitive personnel. Persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers.

Sailplane. A heavier-than-air aircraft which is supported in flight by the dynamic reaction of the air against its fixed lifting surfaces, the free flight of which does not depend on an engine, including also hang gliders, Para gliders and other comparable craft.

Secondary surveillance radar (SSR). A surveillance radar system which uses transmitters/receivers (interrogators) and transponders.

SIGMET information. Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations.

Signal area. An area on an aerodrome used for the display of ground signals.

Significant point. A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

Special VFR flight. A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

Strayed aircraft. An aircraft which has deviated significantly from its intended track or which reports that it is lost.

Surveillance radar. Radar equipment used to determine the position of an aircraft in range and azimuth.

Taxiing. Movement of an aircraft on the surface of an aerodrome or an operating site under its own power, excluding take-off and landing.

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

a) Aircraft stand taxi lane. a portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

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

c) Rapid exit taxiway. a taxiway connected to a runway at an acute angle and designed to allow landing airplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times;

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

Territory. The land areas and territorial waters adjacent thereto under the sovereignty, protection or mandate of a State.

Threshold. The beginning of that portion of the runway usable for landing.

Total estimated elapsed time. For IFR flights, the estimated time required from take- off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from take- off to arrive over the destination aerodrome.

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

Traffic avoidance advice. An advice provided by an air traffic services unit specifying maneuvers to assist a pilot to avoid a collision.

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

Transfer of control point. A defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next.

Transition altitude. The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

Transition level. The lowest flight level available for use above the transition altitude.

Transponder mandatory zone (TMZ). Airspace of defined dimensions wherein the carriage and operation of pressure-altitude reporting transponders is mandatory.

Unidentified aircraft. An aircraft which has been observed or reported to be operating in a given area but whose identity has not been established.

Unmanned free balloon. A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

VFR. The symbol used to designate the visual flight rules.

VFR flight. A flight conducted in accordance with the visual flight rules.

Visibility. Visibility for aeronautical purposes which is the greater of:

a) The greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background.

b) the greatest distance at which lights in the vicinity of 1000 candelas can be seen and identified against an unlit background.

Visual line-of-sight (VLOS) operation. An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft.

Visual meteorological conditions. Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

VMC. The symbol used to designate visual meteorological conditions.

ROA.010 Scope

(1) The objective of this Regulation is to establish the common rules of the air and operational provisions regarding services and procedures in air navigation that shall be applicable to general air traffic.

(2) Annex 2 to the Convention on International Civil Aviation, as amended, is transposed into this part and made a part hereof.

ROA.015 Exemptions for special operations

At the request of the entities conducting the following activities, the Authority may grant exemptions from the specific requirements of this Regulation to those entities for the following activities of public interest and for the training necessary to carry out the activities safely:

(1) Police and customs missions.

(2) Traffic surveillance and pursuit missions.

(3) Environmental control missions conducted by, or on behalf of public authorities.

(4) Search and rescue; medical flights.

(5) Evacuations.

(6) Firefighting.

(7) Exemptions required to ensure the security of flights by heads of State, Ministers and comparable State functionaries.

ROA.020 Flight over the high seas

(1) For flight over the high seas, the rules specified in Annex 2 to the Chicago Convention shall apply without exception.

(2) For those parts of the high seas where Libya has accepted, pursuant to an ICAO regional air navigation agreement, the responsibility of providing air traffic services, Libya shall designate the ATS provider for providing those services.

ROA.025 Applicability

This Regulation shall apply to airspace users and aircraft:

(1) operating into, within or out of the State of Libya.

(2) Bearing the Libyan nationality and registration marks, and operating in any airspace to the extent that they do not conflict with the rules published by the State having jurisdiction over the territory overflown.

(3) This Part shall also apply to the Air Navigation Service Providers and the relevant ground personnel engaged in aircraft operations.

ROA.030 Compliance with the rules of the air

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

(1) The visual flight rules; or

(2) The instrument flight rules.

ROA.035 Responsibility for compliance with the rules of the air

(1) Responsibility of the pilot-in-command:

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

(2) 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.040 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.045 Problematic use of psychoactive substances

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

Subpart B - General Flight Rules

ROA.050 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.055 Minimum heights

Except when necessary for take-off or landing, or except by permission from the LYCAA, aircraft shall not be flown over the congested areas of cities, towns or settlements or over an open-air assembly of persons, unless at such a height as will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property on the surface. The minimum heights for VFR flights shall be those specified in Subpart C and minimum levels for IFR flights shall be those specified in Subpart D.

ROA.060 Cruising levels

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

(1) Flight levels, for flights at or above the lowest usable flight level or, where applicable, above the transition altitude; and

(2) Altitudes, for flights below the lowest usable flight level or, where applicable, at or below the transition altitude.

ROA.065 Dropping or spraying

Dropping or spraying from an aircraft in flight shall only be conducted in accordance with:

(1) A pilot of an aircraft shall not allow any object to be dropped from that aircraft in flight unless the pilot has taken every possible precaution to ensure that such action does not constitute any danger to persons or property on the surface; and

(2) As indicated by any relevant information, advice and/or clearance from the appropriate air traffic services unit.

ROA.070 Towing

(1) No person may operate a civil aircraft towing a glider or unpowered ultra-light vehicle unless:

(a) The pilot of the towing aircraft holds appropriate qualification;

(b) The towing aircraft is equipped with a tow hitch of a kind and installed in a manner, approved by the LYCAA;

(c) The towline used has breaking strength not less than 80 percent of the maximum certificated operating mass of the glider or unpowered ultra-light vehicle and not more than twice this operating mass. However, the towline used may have a breaking strength more than twice the maximum certificated operating mass of the glider or unpowered ultra-light vehicle if:

i. A safety link is installed at the point of attachment of the towline to the glider or unpowered ultra-light vehicle with a breaking strength not less than 80 percent of the maximum certificated operating mass of the glider and not greater than twice this operating mass; or

ii. A safety link is installed at the point of attachment of the towline to the towing aircraft with a breaking strength greater, but not more than 25 per cent greater, than that of the safety link at the towed glider or unpowered ultra-light vehicle end of the towline and not greater than twice the maximum certificated operating mass of the glider or unpowered ultra-light vehicle.

(d) Before conducting any towing operation within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an aerodrome, or before making each towing flight within such controlled airspace if required by ATC, the PIC notifies the control tower; and

(e) The pilots of the towing aircraft and the glider or unpowered ultra-light vehicle have agreed upon a general course of action, including take-off and release signals, airspeeds and emergency procedures for each pilot.

(2) No pilot of a civil aircraft may intentionally release a towline, after release of a glider or unpowered ultra-light vehicle, in a manner that endangers the life or property of another.

(3) No pilot of a civil aircraft may tow anything with that aircraft other than as prescribed under paragraphs (a) and (b), except in accordance with the terms of a certificate of waiver issued by the LYCAA.

ROA.075 Parachutes and parachuting

(1) No pilot of an aircraft may allow a parachute that is available for emergency use to be carried in that aircraft unless it is an approved type and has been packed:

(a) Within the preceding 180 days, if its canopy, shrouds, and harness are composed exclusively of nylon, rayon, or other similar synthetic fiber or materials that are substantially resistant to damage from mold, mildew, or other fungi and other rotting agents propagated in a moist environment; or

(b) Within the preceding 60 days, if any part of the parachute is composed of silk, pongee, or other natural fiber or materials not specified in paragraph (1)(a) of this section.

(2) Except in an emergency, no pilot may allow, and no person may conduct, a parachute operation from an aircraft within the State of Libya unless it complies with these Regulations and clearance from the appropriate ATS unit.

(3) Unless each occupant of the aircraft is wearing an approved parachute, no pilot of a civil aircraft carrying any person (other than a crew member) may execute any intentional maneuver that exceeds:

(a) A bank of 60°relative to the horizon; or

(b) A nose up or nose down attitude of 30°relative to the horizon.

(4) Paragraph (3) does not apply to:

(c) Flight tests for pilot certification or rating; or

(d) Spins and other flight maneuvers required by the regulations for any certificate or rating when given by a certificated flight instructor.

(5) For the purposes of this paragraph, approved parachute means:

(a) A parachute manufactured under a Type Certificate or an FAA TSO (C–23 series); or

(b) Personnel carrying military parachute identified by a military designation or specification number acceptable to LYCAA.

ROA.080 Aerobatic flight

A person shall not operate an aircraft in aerobatic flight:

(1) Over any congested area of a city, town, or settlement.

(2) Over an-open air assembly of persons.

(3) Within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an aerodrome.

(4) Within 10 NM of the center line of any airway.

(5) Below an altitude of 1500 feet (460 m) above the surface.

(6) When flight visibility is less than 5 km.

ROA.085 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 LYCAA. These conditions shall include the following:

(1) One of the pilots-in-command shall be designated as the flight leader;

(2) The formation operates as a single aircraft with regard to navigation and position reporting;

(3) 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 maneuvering to attain their own separation within the formation and during join-up and breakaway; and

(4) For State aircraft a maximum lateral, longitudinal and vertical distance between each aircraft and the flight leader in accordance with the Chicago Convention. For other than State aircraft a distance not exceeding 1km (0,5 nm) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each aircraft.

ROA.090 Unmanned free balloons

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

ROA.095 Remotely piloted aircraft

A person shall operate a remotely piloted aircraft in such a manner as to minimize hazards to Persons, property or other aircraft, and in accordance with the conditions specified in LYCAA regulations.

ROA.100 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 State over whose territory the areas are established.

ROA.105 Avoidance of collisions

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

ROA.110 Proximity

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

ROA.115 Right-of-way

(1) The aircraft that has the right-of-way shall maintain its heading and speed.

(2) An aircraft that is aware that the maneuverability of another aircraft is impaired shall give way to that aircraft.

(3) An aircraft that is obliged by the following rules to keep out of the way of another shall avoid passing over, under or in front of the other, unless it passes well clear and takes into account the effect of aircraft wake turbulence.

(a) 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.

(b) Converging. When two aircraft are converging at approximately the same level, the aircraft that has the other on its right shall give way, except as follows:

i. power-driven heavier-than-air aircraft shall give way to airships, sailplanes gliders and balloons.

ii. Airships shall give way to sailplanes, gliders and balloons.

iii. Sailplanes, gliders shall give way to balloons.

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

(c) 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.

(d) Landing. An aircraft in flight, or operating on the ground or water, shall give way to aircraft landing or in the final stages of an approach to land.

i. When two or more heavier-than-air aircraft are approaching an aerodrome or an operating site for the purpose of landing, aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in front of another which is in the final stages of an approach to land, or to overtake that aircraft. Nevertheless, power-driven heavier-than-air aircraft shall give way to gliders.

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

(e) Taking off. An aircraft taxiing on the maneuvering area of an aerodrome shall give way to aircraft taking off or about to take off.

(4) Surface movement of aircraft, persons and vehicles:

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

i. When two aircraft are approaching head on or approximately so, each shall stop or where practicable alter its course to the right so as to keep well clear.

ii. when two aircraft are on a converging course, the one which has the other on its right shall give way.

iii. an aircraft which is being overtaken by another aircraft shall have the right- of-way and the overtaking aircraft shall keep well clear of the other aircraft.

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

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

(d) Movement of persons and vehicles at aerodromes:

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

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

iii. Subject to the provisions in (3), vehicles on the maneuvering area shall be required to comply with the following rules:

- Vehicles and vehicles towing aircraft shall give way to aircraft which are landing, taking off, taxiing or being towed.

- Vehicles shall give way to other vehicles towing aircraft.

- Vehicles shall give way to other vehicles in accordance with air traffic services unit instructions.

- Notwithstanding the provisions of the three above points, vehicles and vehicles towing aircraft shall comply with instructions issued by the aerodrome control tower.

ROA.120 Lights to be displayed by aircraft

(1) Except as provided by (5), at night, all aircraft in flight shall display:

(a) Anti-collision lights intended to attract attention to the aircraft;

(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; and

(c) In the case of balloons, position lights.

(2) Except as provided by (5), at night:

(a) All aircraft moving on the movement area of an aerodrome shall display navigation lights intended to indicate the relative path of the aircraft to an observer and other lights shall not be displayed if they are likely to be mistaken for these lights.

(b) Unless stationary and otherwise adequately illuminated, all aircraft on the movement area of an aerodrome shall display lights intended to indicate the extremities of their structure, as far as practicable.

(c) All aircraft taxiing or being towed on the movement area of an aerodrome shall display lights intended to attract attention to the aircraft; and

(d) All aircraft on the movement area of an aerodrome whose engines are running shall display lights which indicate that fact.

(3) Except as provided by (5), all aircraft in flight and fitted with anti-collision lights to meet the requirement of (1)(a) shall display such lights also during day.

(4) Except as provided by (5), all aircraft:

(a) Taxiing or being towed on the movement area of an aerodrome and fitted with anti-collision lights, to meet the requirement of (2)(c); or

(b) On the movement area of an aerodrome and fitted with lights to meet the requirement of (2)(d); shall display such lights also during day.

(5) A pilot shall be permitted to switch off or reduce the intensity of any flashing lights fitted to meet the requirements of (1), (2), (3) and (4) 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.125 Simulated instrument flights

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

(1) fully functioning dual controls are installed in the aircraft; and

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

ROA.130 Operation on and in the vicinity of an aerodrome

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

(1) Observe other aerodrome traffic for the purpose of avoiding collision.

(2) Conform with or avoid the pattern of traffic formed by other aircraft in operation.

(3) Except for balloons, make all turns to the left, when approaching for a landing and after taking off, unless otherwise indicated, or instructed by ATC.

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

(5) An aircraft shall not be operating to, from, through or on an aerodrome having an operational control tower unless two- way communications are maintained between that person and the control tower.

(6) A pilot-in-command shall, when departing from an aerodrome, establish communications with the control tower prior to taxi.

(7) A person shall not, at any aerodrome with an operating control tower, operate an aircraft on a runway or taxiway or take-off or land an aircraft, unless an appropriate clearance has been received from the air traffic control unit.

ROA.135 Water operations

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

(b) 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.

(2) Lights to be displayed by aircraft on the water. At night or during any other period prescribed by the LYCAA, all aircraft on the water shall display lights as required by the Convention on the International Regulations for Preventing Collisions at Sea, 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.

ROA.140 Signals

(1) 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.

(2) 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.

(3) A signalman/marshaller shall be responsible for providing standard marshalling signals to aircraft in a clear and precise manner using the signals shown in Appendix 1.

(4) Only persons trained, qualified and approved by the appropriate authority as required by the LYCAA legislation shall carry out the functions of a signalman/marshaller.

(5) The signalman/marshaller shall wear a distinctive fluorescent identification vest to allow the flight crew to identify that he or she is the person responsible for the marshalling operation.

(6) Daylight-fluorescent wands, table-tennis bats or gloves shall be used for all signaling by all participating ground staff during daylight hours. Illuminated wands shall be used at night or in low visibility.

ROA.145 Time

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.

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

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

(3) Time in air traffic services:

(a) Aerodrome control towers shall, prior to an aircraft taxiing for take-off, provide the pilot with the correct time, unless arrangements have been made for the pilot to obtain it from other sources.

(b) Air traffic services units shall, in addition, provide aircraft with the correct time on request. Time checks shall be given at least to the nearest minute.

ROA.150 Submission of a flight plan

(1) A person shall not commence a flight if he or she has not filed a flight plan except as authorized by the Authority.

(2) 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.

(3) 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 areas, or along routes designated by the ATS authority, to facilitate the provision of flight information, alerting and search and rescue services.

(d) Any flight within or into areas or along routes designated by the 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, unless otherwise prescribed by the States concerned.

(4) A flight plan shall be submitted, before departure, to an air traffic services reporting office or, during flight, transmitted to the appropriate air traffic services unit or air-ground control radio station, unless arrangements have been made for submission of repetitive flight plans.

(5) A flight plan for any flight planned to operate across international borders or 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.155 Contents of a flight plan

(1) A flight plan shall comprise information regarding such of the following items as are considered relevant by the 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 or operating site.

(f) Estimated off-block time.

(g) Cruising speed(s).

(h) Cruising level(s).

(i) Route to be followed.

(j) Destination aerodrome or operating site and total estimated elapsed time.

(k) Alternate aerodrome(s) or operating site(s).

(l) Fuel endurance.

(m) Total number of persons on board.

(n) Emergency and survival equipment.

(o) Other information.

ROA.160 Completion of a flight plan

(1) A flight plan shall contain information, as applicable, on relevant items up to and including Alternate aerodrome(s) or operating site(s)' regarding the whole route or the portion thereof for which the flight plan is submitted.

(2) It shall, in addition, contain information, as applicable, on all other items when so prescribed by the ATS or when otherwise deemed necessary by the person submitting the flight plan.

ROA.165 Changes to a flight plan

(1) Subject to the provisions of ATS.035 (2) 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.

ROA.170 Closing a flight plan

(1) An arrival report shall be made in person, by radiotelephony, via data link or by other means as prescribed by the ATS authority 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.

(a) Submission of an arrival report is not required after landing on an aerodrome.

(b) Where air traffic services are provided on condition, that radio communication or visual signals indicate that the landing has been observed.

(2) 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.

(3) When no air traffic services unit exists at the arrival aerodrome or operating site, 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.

(4) When communication facilities at the arrival aerodrome or operating site 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.

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

(a) Aircraft identification.

(b) Departure aerodrome or operating site.

(c) Destination aerodrome or operating site (only in the case of a diversionary landing).

(d) Arrival aerodrome or operating site.

(e) Time of arrival.

Subpart C - Visual Flight Rules

ROA.175 VMC visibility and distance from cloud minima

VMC visibility and distance from cloud minima are contained in Table 1 below.

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 3050 m (10 000 ft) AMSL and above 900 m (3000 ft) AMSL, or above 300 m (1000 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 (3000 ft) AMSL, or 300 m (1 000 ft) above terrain, whichever isthe 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 3050 m (10 000 ft) AMSL, FL 100 shall 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 maneuvered 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.

ROA.180 Visual Flight Rules

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

(2) When so prescribed by the ATS authority, VFR flights at night may be permitted by an ATS unit under Special VFR in the following conditions:

(a) A flight plan shall be submitted.

(b) Flights shall establish and maintain two-way radio communication on the appropriate ATS communication channel.

(c) The VMC visibility and distance from cloud minima as specified in Table 1 shall apply.

(3) Unless authorized by the appropriate ATS authority, VFR, flights shall not be operated:

(d) Above FL 195.

(e) At transonic and supersonic speeds.

(4) Authorization for VFR flights to operate above FL 290 shall not be granted where a vertical separation minimum of 300 m (1 000 ft) is applied above FL 290.

(5) Except where otherwise indicated in air traffic control clearances or specified by the ATS authority, VFR flights in level cruising flight when operated above 900 m (3 000 ft) from the ground or water, or a higher datum as specified by the ATS authority, shall be conducted at a cruising level appropriate to the track as specified in the table of cruising levels in Appendix 3.

(6) VFR flights shall comply with the provisions of Subpart F (ATS):

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

(b) When forming part of aerodrome traffic at controlled aerodromes.

(c) When operated as special VFR flights.

ROA.185 Visual Flight Rules within control zone

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

(1) the ceiling is less than 450m (1 500 ft); or

(2) The ground visibility is less than 5 km.

ROA.190 Minimum safe Visual Flight Rules altitude

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

(1) Over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300 m (1 000 ft) above the highest obstacle within a radius of 600 m from the aircraft.

(2) Elsewhere than as specified in (1), at a height less than 150 m (500 ft) above the ground or water.

ROA.195 Visual Flight Rules flight within designated areas

A VFR flight operating within or into areas or along routes designated by the ATS authority, in accordance with ROA.150 (3)(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.200 Changing from Visual Flight Rules to Instrument Flight Rules

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

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

(2) as required by ROA.150 (2), submit a flight plan to the appropriate air traffic services unit as soon as practicable and obtain a clearance prior to proceeding IFR when in controlled airspace.

Subpart D - Instrument Flight Rules (IFR)

ROA.205 Rules applicable to all IFR flights

(1) Aircraft equipment

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

(2) Minimum levels

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

(a) Over high terrain or in mountainous areas, at a level which is at least 600 m (2 000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.

(b) Elsewhere than as specified in (a), at a level which is at least 300 m (1 000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.

(3) Change from IFR flight to VFR flight

(a) An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall notify the appropriate Air Traffic Services Unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.

(b) 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.

ROA.210 Rules applicable to IFR flights within controlled airspace

(1) IFR flights shall comply with the provisions of Subpart F when operated in controlled airspace.

(2) An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level, or, if authorized by ATS unit to employ cruise climb techniques, between two levels or above a level, selected from the table of cruising levels in Appendix 3, except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in Air Traffic Control clearances or specified by the ATS authority in Aeronautical Information Publications (AIP).

ROA.215 Rules applicable to IFR flights outside controlled airspace

(1) Cruising levels

An IFR flight operating in level cruising flight outside of controlled airspace shall be flown at a cruising level appropriate to its track as specified in the table of cruising levels in Appendix 3, except when otherwise specified by the appropriate ATS authority for flight at or below 900 m (3 000 ft) above Mean Sea Level.

(2) Communications

An IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the ATS authority in accordance with ROA.150 (3) (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.

(3) Position reports

An IFR flight operating outside controlled airspace and required by the ATS authority to submit a flight plan and 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.265 for controlled flights.

Subpart E - Classification of airspaces

ROA.220 Airspace classification

Air traffic services airspaces classification in the State of Libya shall be as specified in Appendix 4 to these Regulations and as shown in the Aeronautical information Publication AIP and in accordance with the LYCAR Part-ATS.

ROA.225 Requirements for communications and SSR transponder

(1) Radio Mandatory Zone (RMZ)

(a) VFR flights operating in parts of Classes C, E, F or G airspace and IFR flights operating in parts of Classes F or G airspace designated as a Radio Mandatory Zone (RMZ) by the ATS authority shall maintain continuous air-ground voice communication watch and establish two-way communication, as necessary, on the appropriate communication channel, unless in compliance with alternative provisions prescribed for that particular airspace by the Authority.

(b) Before entering a Radio Mandatory Zone, an initial call containing the designation of the station being called, call sign, type of aircraft, position, level, the intentions of the flight and other information as prescribed by the ATS authority, shall be made by pilots on the appropriate communication channel.

(2) Transponder Mandatory Zone (TMZ)

All flights operating in airspace designated by the ATS authority as a Transponder Mandatory Zone (TMZ) shall carry and operate SSR transponders capable of operating on Modes A and C or on Mode S, unless in compliance with alternative provisions prescribed for that particular airspace by the Authority.

(3) Airspaces designated as Radio Mandatory Zone and/or Transponder Mandatory Zone shall be duly promulgated in the Aeronautical Information Publications (AIP).

Subpart F - Air Traffic Services (ATS)

ROA.230 General - objectives of the Air Traffic Services

The objectives of the Air Traffic Services shall be to:

(1) Prevent collisions between aircraft.

(2) Prevent collisions between aircraft on the maneuvering area and obstructions on that area.

(3) Expedite and maintain an orderly flow of air traffic.

(4) Provide advice and information useful for the safe and efficient conduct of flights.

(5) Notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

ROA.235 coordination between the aircraft operator and air traffic services

(1) Air Traffic Services Units, in carrying out their objectives, shall have due regard for the requirements of the aircraft operator's consequent on their obligations as specified in the relevant LYCAA Regulations on Air Operations, and if so required by the aircraft operators, shall make available to them or their designated representatives such information as may be available to enable them or their designated representatives to carry out their responsibilities.

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

ROA.240 Application

Air Traffic Control Service shall be provided to:

(1) All IFR flights in airspace Classes A, B, C, D and E.

(2) All VFR flights in airspace Classes B, C and D.

(3) All special VFR flights.

(4) All aerodrome traffic at controlled aerodromes.

ROA.245 Operation of Air Traffic Control service

(1) In order to provide Air Traffic Control Service, an Air Traffic Control Unit shall:

(a) Be provided with information on the intended movement of each aircraft, or variations there from, and with current information on the actual progress of each aircraft.

(b) Determine from the information received, the relative positions of known aircraft to each other.

(c) Issue clearances and information for the purpose of preventing collision between aircraft under its control and of expediting and maintaining an orderly flow of traffic.

(d) Coordinate clearances as necessary with other units:

i. Whenever an aircraft might otherwise conflict with traffic operated under the control of such other units.

ii. Before transferring control of an aircraft to such other units.

(2) Clearances issued by Air Traffic Control Units shall provide separation between:

(a) All flights in airspace Classes A and B.

(b) IFR flights in airspace Classes C, D and E.

(c) IFR flights and VFR flights in airspace Class C.

(d) IFR flights and special VFR flights.

(e) Special VFR flights unless otherwise prescribed by the ATS authority; except that, when requested by the pilot of an aircraft and agreed by the pilot of the other aircraft and if so prescribed by the ATS authority for the cases listed under (2) (b) above in lasses' D and E, a flight may be cleared subject to maintaining own separation in respect of a specific portion of the flight conducted in Visual Meteorological Conditions.

(3) Except for cases when a reduction in separation minima in the vicinity of aerodromes can be applied, separation by an Air Traffic Control Unit shall be obtained by at least one of the following:

(a) Vertical Separation, obtained by assigning different levels selected from the table of cruising levels in Appendix 3, or a modified table of cursing levels specified in accordance with Appendix 3 to these Regulations for flight above FL 410, except that the correlation of levels to track as prescribed therein shall not apply whenever otherwise indicated in appropriate Aeronautical Information Publications or air traffic control clearances. The Vertical Separation Minimum

shall be a nominal 300 m (1 000 ft) up to and including FL 410 and a nominal 600 m (2 000 ft) above this level.

(b) Horizontal Separation, obtained by providing:

i. longitudinal separation, by maintaining an interval between aircraft operating along the same, converging or reciprocal tracks, expressed in time or distance; or

ii. Lateral separation, by maintaining aircraft on different routes or in different geographical areas.

ROA.250 Separation minima

(1) The selection of Separation Minima for application within a given portion of airspace shall be made by the Authority responsible for the provision of Air Traffic Services and approved by the LYCAA.

(2) For traffic that will pass from one into the other of neighboring airspaces and for routes that are closer to the common boundary of the neighboring airspaces than the Separation Minima applicable in the circumstances, the selection of Separation Minima shall be made in consultation between the ANSPs responsible for the provision of Air Traffic Services in neighboring airspace.

(3) Details of the selected Separation Minima and of their areas of application shall be notified:

(a) To the Air Traffic Services Units concerned; and

(b) To pilots and aircraft operators through Aeronautical Information Publications, where separation is based on the use by aircraft of specified navigation aids or specified navigation techniques.

ROA.255 Air Traffic Control clearances

(1) Air Traffic Control clearances shall be based solely on the requirements for providing Air Traffic Control Service.

(2) Operation subject to clearance:

(a) 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.

(b) The pilot-in-command of an aircraft shall inform ATC if an Air Traffic Control clearance is not satisfactory. In such cases, ATC will issue an amended clearance, if practicable.

(c) 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.

(d) Potential re-clearance in flight. If prior to departure it is anticipated that depending on fuel endurance and subject to re-clearance in flight, a decision may be taken 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.

(e) An aircraft operated on a controlled aerodrome shall not taxi on the maneuvering area without clearance from the aerodrome control tower and shall comply with any instructions given by that unit.

(3) Clearances for transonic flight:

The Air Traffic Control clearance relating to the transonic acceleration phase of a supersonic flight shall extend at least to the end of that phase.

(4) Contents of clearances:

An Air Traffic Control clearance shall indicate:

(a) Aircraft identification as shown in the flight plan.

(b) Clearance limit.

(c) Route of flight.

(d) level(s) of flight for the entire route or part thereof and changes of levels if required.

(e) Any necessary instructions or information on other matters such as approach or departure maneuvers, communications and the time of expiry of the clearance.

(5) Read-back of clearances and safety-related information:

(a) The flight crew shall read back to the Air Traffic Controller safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items shall always be read back:

i. ATC route clearances;

ii. clearances and instructions to enter, land on, take off from, hold short of, cross, taxi and backtrack on any runway;

iii. runway-in-use, altimeter settings, SSR codes, newly assigned communication channels, level instructions, heading and speed instructions; and

iv. Transition levels, whether issued by the controller or contained in ATIS broadcasts.

(b) Other clearances or instructions, including conditional clearances and taxi instructions, shall be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.

(c) The controller shall listen to the read-back to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and shall take immediate action to correct any discrepancies revealed by the read-back.

(d) Voice read-back of CPDLC messages shall not be required, unless otherwise specified by the ATS authority.

(e) Vehicle driver operating or intending to operate on the maneuvering area shall read back to the air traffic controller safety-related parts of instructions which are transmitted by voice, e.g. instructions to enter, hold short of, cross and operate on any operational runway or taxiway.

(f) The controller shall listen to the read-back to ascertain that the instruction has been correctly acknowledged by the vehicle driver and shall take immediate action to correct any discrepancies revealed by the read-back.

(6) Coordination of clearances:

An Air Traffic Control clearance shall be coordinated between air traffic control units to cover the entire route of an aircraft or a specified portion thereof as follows:

(a) An aircraft shall be cleared for the entire route to the aerodrome of first intended landing:

i. when it has been possible, prior to departure, to coordinate the clearance between all the units under whose control the aircraft will come; or

ii. When there is reasonable assurance that prior coordination will be effected between those units under whose control the aircraft will subsequently come.

(b) When coordination as in (a) has not been achieved or is not anticipated, the aircraft shall be cleared only to that point where coordination is reasonably assured; prior to reaching such point, or at such point, the aircraft shall receive further clearance, holding instructions being issued as appropriate.

(c) When prescribed by the ATS unit, aircraft shall contact a downstream Air Traffic Control unit, for the purpose of receiving a downstream clearance prior to the transfer of control point.

i. Aircraft shall maintain the necessary two-way communication with the current air traffic control unit whilst obtaining a downstream clearance.

ii. A clearance issued as a downstream clearance shall be clearly identifiable as such to the pilot.

iii. Unless coordinated, downstream clearances shall not affect the aircraft's original flight profile in any airspace, other than that of the Air Traffic Control unit responsible for the delivery of the downstream clearance.

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

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

ROA.260 Adherence to current flight plan

(1) Except as provided for in (4), an aircraft shall adhere to the current flight plan or the applicable portion of a current flight plan submitted for a controlled flight, unless a request for a change has been made and clearance obtained from the appropriate Air Traffic Control unit, or unless an emergency situation arises which necessitates immediate action by the aircraft, in which event as soon as circumstances permit, after such emergency authority is exercised, the appropriate Air Traffic Services unit shall be notified of the action taken and that this action has been taken under emergency authority.

(a) Unless otherwise authorized by the appropriate ATS authority, or directed by the appropriate Air Traffic Control unit, controlled flights shall, in so far as practicable:

i. When on an established ATS route, operate along the defined center line of that route; or

ii. When on any other route, operate directly between the navigation facilities and/or points defining that route.

(b) Subject to the overriding requirement in (a), 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.

(c) Deviation from the requirements in (a) shall be notified to the appropriate Air Traffic Services unit.

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

(a) Deviation from track: if the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain track as soon as practicable.

(b) Deviation from ATC assigned Mach number/indicated airspeed: the appropriate Air Traffic Services unit shall be so 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 19 km/h (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 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.

(3) Changes Requests. Requests for flight plan changes shall include information as indicated hereunder:

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

(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.

(4) 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.265 Position reports

(1) Unless exempted by the appropriate ATS authority or by the appropriate Air Traffic Services unit under conditions specified by LYCAA, 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.

(2) Controlled flights providing position information to the appropriate Air Traffic Services unit via data link communications shall only provide voice position reports when requested.

ROA.270 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.275 Communications

(1) All aircraft 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.

(2) Communication failure: air-to-ground

(a) Where a pilot-in-command has been unable to establish contact with an aeronautical ground station in order to comply with ROA.180, the pilot-in-command shall attempt to establish communications with the appropriate air traffic control unit using all other available means.

(b) The pilot-in-command shall, where an aircraft forms part of the aerodrome traffic at a controlled aerodrome, keep a watch for such instructions as may be issued by visual signals.

(c) The pilot-in-command shall select Mode A, Code 7600, where an aircraft is equipped with secondary surveillance radar transponder.

(d) Where a pilot-in-command is unable to establish communication in accordance with (a) and is in visual meteorological conditions, he or she shall:

i. Continue to fly in visual meteorological conditions, land at the nearest suitable aerodrome and report his or her arrival by the most expeditious means to the appropriate air traffic control unit; or

ii. if considered advisable, complete an instrument flight rules flight in accordance with (e).

(e) If a pilot-in-command is unable to establish communication in accordance with (a) and is in instrument meteorological conditions or when the pilot-in-command of an instrument flight rules flight considers it inadvisable to complete the flight in accordance with (d)(i), the pilot-in-command shall:

i. 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 failure by the pilot-in-command to report the aircraft position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan.

ii. 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:

- the time the last assigned level or minimum flight altitude is reached; or
- the time the transponder is set to Code 7600; or
- failure by the pilot-in-command to report the position of the aircraft over Compulsory reporting point; whichever is later and thereafter adjust level and Speed in accordance with the filed flight plan.

(f) When being radar vectored or having been directed by air traffic control to proceed offset using area navigation without a specified limit, region the current flight plan route no later than the next significant point, taking into Consideration the applicable minimum flight altitude.

(g) Proceed according to the current flight plan route to the appropriate designate navigation aid or fix serving the destination aerodrome and, when required to

Ensure compliance with paragraph (h), hold over this aid or fix until Commencement of descent.

(h) Commence descent from the navigation aid or fix specified in paragraph (g) 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.

(i) Complete a normal instrument approach procedure as specified for the designated navigation aid or fix.

(j) Land, if possible, within 30 minutes after the estimated time of arrival specified in Paragraph (h) or the last acknowledged expected approach time, whichever Is later.

(3) Communication failure: ground-to-air

(a) Where an aeronautical station has been unable to establish contact with a Pilot-in command after calls on the frequencies on which the pilot-in-command is believed to be listening, the station shall:

i. Request other aeronautical stations to render assistance by calling the pilot-in Command and relaying traffic information, if necessary.

ii. Request pilot-in-command of other aircraft on the route to attempt to establish Communication with the aircraft and rely traffic information, if necessary.

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

i. on request of the air traffic services unit concerned: and

ii. when an expected communication from a pilot-in- command has not been Received within a time period such the occurrence of a communication Failure is suspected.

(c) The aeronautical station shall transmit messages addressed to the pilot In-command, other than messages containing air traffic control clearances by blind transmission on the frequency on which the pilot-in-command is Believed to be listening, where the attempts specified in(a) fail.

ROA.280 Flight Information Service

(1) Flight Information Service shall be provided by the appropriate Air Traffic Services units to all aircraft which are likely to be affected by the information and which are:

(a) Provided with Air Traffic Control Service; or

(b) Otherwise known to the relevant Air Traffic Services units.

(2) The reception of Flight Information Service does not relieve the pilot-in-command of an aircraft of any responsibilities and the pilot-in-command shall make the final decision regarding any suggested alteration of flight plan.

(3) Where Air Traffic Services units provide both Flight Information Service and Air Traffic Control Service, the provision of Air Traffic Control Service shall have precedence over the provision of Flight Information Service whenever the provision of Air Traffic Control Service so requires.

ROA.285 Scope of Flight Information Service

(1) Flight Information Service shall include the provision of pertinent:

(a) SIGMET and AIRMET information.

(b) Information concerning pre-eruption volcanic activity, volcanic eruptions and volcanic ash clouds.

(c) Information concerning the release into the atmosphere of radioactive materials or toxic chemicals.

(d) Information on changes in the availability of radio navigation services.

(e) Information on changes in condition of aerodromes and associated facilities, including information on the state of the aerodrome movement areas when they are affected by snow, ice or significant depth of water.

(f) Information on unmanned free balloons; and of any other information likely to affect safety.

(2) Flight Information Service provided to flights shall include, in addition to that outlined in (1), the provision of information concerning:

(a) Weather conditions reported or forecast at departure, destination and alternate aerodromes.

(b) Collision hazards, to aircraft operating in airspace Classes C, D, E, F and G.

(c) for flight over water areas, in so far as practicable and when requested by a pilot, any available information such as radio call sign, position, true track, speed, etc., of surface vessels in the area.

(3) Flight Information Service provided to VFR flights shall include, in addition to that outlined in (a), the provision of available information concerning traffic and weather conditions along the route of flight that are likely to make operation under the Visual Flight Rules impracticable.

ROA.290 Automatic Terminal Information Service (ATIS)

(1) Use of the ATIS messages in directed request/reply transmissions:

(a) When requested by the pilot, the applicable ATIS message(s) shall be transmitted by the appropriate air traffic services unit.

(b) Whenever Voice-ATIS and/or D-ATIS is provided:

i. aircraft shall acknowledge receipt of the information upon establishing communication with the ATS unit providing approach control service, the aerodrome control tower or Aerodrome Flight Information Service (AFIS), as appropriate; and

ii. The appropriate Air Traffic Services unit shall, when replying to an aircraft acknowledging receipt of an ATIS message or, in the case of arriving aircraft, at such other time as may be prescribed by the LYCAA, provide the aircraft with the current altimeter setting.

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

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

(2) ATIS for arriving and departing aircraft:

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

(a) Name of aerodrome.

(b) Arrival and/or departure indicator.

(c) Contract type, if communication is via D-ATIS.

(d) Designator.

(e) Time of observation, if appropriate.

(f) Type of approach (es) to be expected.

(g) The runway(s) in use; status of arresting system constituting a potential hazard, if any.

(h) Significant runway surface conditions and, if appropriate, braking action.

(i) Holding delay, if appropriate.

(j) Transition level, if applicable.

(k) Other essential operational information;

(l) surface wind direction and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by aircraft operators, the indication of the runway and the section of the runway to which the information refers;

(m) Visibility and, when applicable, RVR.

(n) Present weather.

(o) Cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available.

(p) Air temperature.

(q) Dew point temperature.

(r) Altimeter setting(s).

(s) any available information on significant meteorological phenomena in the approach and climb-out areas including wind shear, and information on recent weather of operational significance.

(t) Trend forecast, when available; and

(u) Specific ATIS instructions.

(3) ATIS for arriving aircraft:

ATIS messages containing arrival information only shall contain the following elements of information in the order listed:

(a) Name of aerodrome.

(b) Arrival indicator.

(c) Contract type, if communication is via D-ATIS.

(d) Designator.

(e) Time of observation, if appropriate.

(f) Type of approach (es) to be expected.

(g) Main landing runway(s); status of arresting system constituting a potential hazard, if any.

(h) Significant runway surface conditions and, if appropriate, braking action.

(i) Holding delay, if appropriate.

(j) Transition level, if applicable.

(k) Other essential operational information.

(l) surface wind direction and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by aircraft operators, the indication of the runway and the section of the runway to which the information refers.

(m) Visibility and, when applicable, RVR.

(n) Present weather.

(o) Cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available.

(p) Air temperature.

(q) Dew point temperature.

(r) Altimeter setting(s).

(s) Any available information on significant meteorological phenomena in the approach area including wind shear, and information on recent weather of operational significance.

(t) Trend forecast, when available; and

(u) Specific ATIS instructions.

(4) ATIS for departing aircraft:

ATIS messages containing departure information only shall contain the following elements of information in the order listed:

(a) Name of aerodrome.

(b) Departure indicator.

(c) Contract type, if communication is via D-ATIS.

(d) Designator.

(e) Time of observation, if appropriate.

(f) Runway to be used for take-off; status of arresting system constituting a potential hazard, if any.

(g) Significant surface conditions of runway(s) to be used for take-off and, if appropriate, braking action.

(h) Departure delay, if appropriate.

(i) Transition level, if applicable.

(j) Other essential operational information.

(k) surface wind direction and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by aircraft operators, the indication of the runway and the section of the runway to which the information refers.

(l) Visibility and, when applicable, RVR.

(m) Present weather.

(n) Cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available.

(o) Air temperature.

(p) Dew point temperature.

(q) Altimeter setting(s).

(r) Any available information on significant meteorological phenomena in the climb-out area including wind shear.

(s) Trend forecast, when available; and

(t) Specific ATIS instructions.

ROA.295 Alerting Service

Alerting Service shall be provided by the Air Traffic Services units:

(1) for all aircraft provided with Air Traffic Control service;

(2) in so far as practicable, to all other aircraft having filed a flight plan or otherwise known to the Air Traffic Services; and

(3) to any aircraft known or believed to be the subject of unlawful interference.

ROA.300 Information to aircraft operating in the vicinity of an aircraft in a state of emergency

(1) When it has been established by an Air Traffic Services unit that an aircraft is in a state of emergency, other aircraft known to be in the vicinity of the aircraft involved shall, except as provided in (2), be informed of the nature of the emergency as soon as practicable.

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

Subpart G - Interference, Emergency, Contingencies and Interception

ROA.305 Unlawful interference

(1) An aircraft which is being subjected to unlawful interference shall endavour to set the transponder to Code 7500 and notify the appropriate ATS unit of, any significant circumstances associated therewith and any deviation from the current flight plan necessitated by the circumstances, in order to enable the ATS unit to give priority to the aircraft and to minimize conflict with other aircraft.

(2) 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 LYCAA unless considerations aboard the aircraft dictate otherwise.

ROA.310 Service to aircraft in the event of an emergency

(1) In the case of an aircraft known or believed to be in a state of emergency, including being subjected to unlawful interference, Air Traffic Services units shall give the aircraft maximum consideration, assistance and priority over other aircraft as may be necessitated by the circumstances.

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

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

ROA.315 In-flight contingencies

Strayed or unidentified aircraft:

(1) As soon as an Air Traffic Services unit becomes aware of a strayed aircraft it shall take all necessary steps as outlined in (a) and (c) to assist the aircraft and to safeguard its flight.

(a) If the aircraft's position is not known, the Air Traffic Services unit shall:

i. Attempt to establish two-way communication with the aircraft, unless such communication already exists.

ii. Use all available means to determine its position.

iii. Inform other Air Traffic Services units into whose area the aircraft may have strayed or may stray, taking into account all the factors which may have affected the navigation of the aircraft in the circumstances.

iv. Inform, in accordance with locally agreed procedures, appropriate military units and provide them with pertinent flight plan and other data concerning strayed aircraft.

v. Request from the units referred to in (iii) and (iv) and from other aircraft in flight every assistance in establishing communication with the aircraft and determining its position.

(b) The requirements in (iv) and (v) shall apply also to Air Traffic Services units informed in accordance with (iii).

(c) When the aircraft's position is established, the Air Traffic Services unit shall:

i. Advise the aircraft of its position and corrective action to be taken. This advice shall be immediately provided when ATS is aware that there is a possibility of interception or other hazard to the safety of the aircraft; and

ii. Provide, as necessary, other air traffic services units and appropriate military units with relevant information concerning the strayed aircraft and any advice given to that aircraft.

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

(a) Attempt to establish two-way communication with the aircraft.

(b) Inquire of other air traffic services units within the flight information region about the flight and request their assistance in establishing two-way communication with the aircraft.

(c) Inquire of Air Traffic Services units serving the adjacent Flight Information Regions about the flight and request their assistance in establishing two-way communication with the aircraft.

(d) Attempt to obtain information from other aircraft in the area.

(e) The Air Traffic Services unit shall, as necessary, inform the appropriate military unit as soon as the identity of the aircraft has been established.

(3) In the case of a strayed or unidentified aircraft, the possibility of the aircraft being subject of unlawful interference shall be taken into account. Should the Air Traffic

Services unit consider that a strayed or unidentified aircraft may be the subject of unlawful interference, the Authority shall immediately be informed.

ROA.320 Interception

(1) The pilot-in-command of a civil aircraft, when intercepted, shall:

(a) Immediately follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Tables 1 and 2.

(b) Notify, if possible, the appropriate Air Traffic Services unit.

(c) Attempt to establish radio-communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121,5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz.

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

(e) 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.

Table 1: 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.	You have been intercepted. Follow me.	DAY or NIGHT- Rocking aircraft, flashing navigational lights at irregular intervals and following.	Understood, will comply.
	Note 1:			

	Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1.			
	Note 2: *If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft each time it passes the intercepted aircraft.*			
2.	DAY or NIGHT — An abrupt breakaway maneuver 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.

Signals initiated by intercepted aircraft and responses by intercepting aircraft

Series	INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING	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 300 m (1000 ft) but not exceeding 600 m (2 000 ft) (in the case of a helicopter, at a height exceeding 50 m (170 ft) but not exceeding 100 m (330ft)) 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. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. 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.

(2) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

(3) 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.

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

Table 2

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	VILL-KO	Understood
DESCEND	DEE-SEND	Descend for landing	Will comply		
			CAN NOT	KANN NOTT	Unable to comply
YOU LAND	YOU LAAND	Land at this aerodrome	REPEAT	REE-PEET	Repeat your instruction
			AM LOST	AM LOSST	Position unknown
PROCEED	PRO-SEED	You may proceed			
			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

(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'.

(5) As soon as an air traffic services unit learns that an aircraft is being intercepted in its area of responsibility, it shall take such of the following steps as are appropriate in the circumstances:

(a) Attempt to establish two-way communication with the intercepted aircraft via any means available, including the emergency radio frequency 121,5 MHz, unless such communication already exists.

(b) Inform the pilot of the intercepted aircraft of the interception.

(c) Establish contact with the intercept control unit maintaining two-way communication with the intercepting aircraft and provide it with available information concerning the aircraft.

(d) Relay messages between the intercepting aircraft or the intercept control unit and the intercepted aircraft, as necessary.

(e) In close coordination with the intercept control unit take all necessary steps to ensure the safety of the intercepted aircraft.

(f) Inform air traffic services units serving adjacent flight information regions if it appears that the aircraft has strayed from such adjacent flight information regions.

(6) As soon as an air traffic services unit learns that an aircraft is being intercepted outside its area of responsibility, it shall take such of the following steps as are appropriate in the circumstances:

(a) Inform the air traffic services unit serving the airspace in which the interception is taking place, providing this unit with available information that will assist in identifying the aircraft and requesting it to take action in accordance with (6).

(b) Relay messages between the intercepted aircraft and the appropriate air traffic services unit, the intercept control unit or the intercepting aircraft.

Subpart H - Services related to Meteorology - Aircraft observations and reports by voice communications

ROA.325 Types of aircraft observations

The following aircraft observations shall be made during any phase of the flight:

(1) Special aircraft observations; and

(2) Other non-routine aircraft observations.

ROA.330 - Special aircraft observations

Special observations shall be made and reported by all aircraft whenever the following conditions are encountered or observed:

(1) Moderate or severe turbulence; or

(2) Moderate or severe icing; or

(3) Severe mountain wave; or

(4) Thunderstorms, without hail, that are obscured, embedded, widespread or in squall lines; or

(5) Thunderstorms, with hail, that are obscured, embedded, widespread or in squall lines; or

(6) Heavy dust storm or heavy sandstorm; or

(7) Volcanic ash cloud; or

(8) Pre-eruption volcanic activity or a volcanic eruption.

ROA.335 Other non-routine aircraft observations

When other meteorological conditions not listed under ROA.330 e.g. wind shear, are encountered and which, in the opinion of the pilot-in-command, may affect the safety or markedly affect the efficiency of other aircraft operations, the pilot-in-command shall advise the appropriate Air Traffic Services unit as soon as practicable.

ROA.340 Reporting of aircraft observations by voice communication

(1) Aircraft observations shall be reported during flight at the time the observation is made or as soon thereafter as is practicable.

(2) Aircraft observations shall be reported as air-reports and shall comply with the technical specifications in Appendix 5.

ROA.345 Exchange of air-reports

(1) ATS units shall transmit, as soon as practicable, special and non-routine air-reports to:

(a) other aircraft concerned.

(b) the associated meteorological watch office (MWO); and

(c) other ATS units concerned.

(2) Transmissions to aircraft shall be repeated at a frequency and continued for a period of time which shall be determined by the ATS unit concerned.

Appendix 1 - Signals

1. Distress and urgency signals

1.1 General

1.1.1 Notwithstanding the provisions in 1.2 and 1.3, an aircraft in distress shall use any means at its disposal to attract attention, make known its position and obtain help.

1.1.2 The telecommunication transmission procedures for the distress and urgency signals shall be in accordance with Volume II of Annex 10 to the Chicago Convention.

1.2 Distress signals

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

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

b) a radiotelephony distress signal consisting of the spoken word MAYDAY.

c) a distress message sent via data link which transmits the intent of the word MAYDAY.

d) rockets or shells throwing red lights, fired one at a time at short intervals.

e) a parachute flare showing a red light.

f) setting of the transponder to Mode A Code 7700.

1.3 Urgency signals

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

a) the repeated switching on and off of the landing lights; or

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

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

a) a signal made by radiotelegraphy or by any other signaling method consisting of the group XXX (—..——..— —..— in the Morse Code).

b) a radiotelephony urgency signal consisting of the spoken words PAN, PAN.

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

2. Visual signals used to warn an unauthorized aircraft flying in or about to enter a restricted, prohibited or danger area

When visual signals are used to warn 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 shall 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.

3. Signals for aerodrome traffic

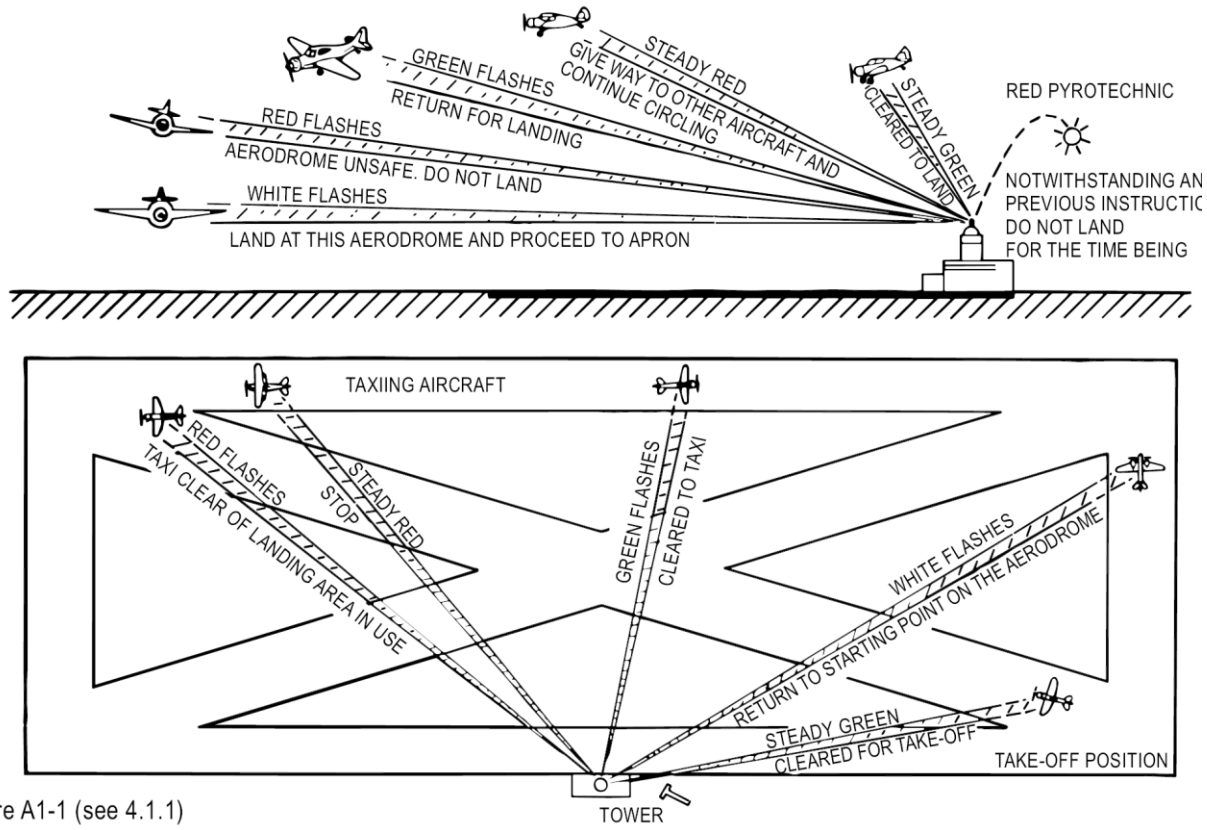
3.1 Light and pyrotechnic signals

3.1.1 Instructions

Table 1

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

(*) Clearances to land and to taxi will be given in due course.



ıre A1-1 (see 4.1.1)

Figure A1-1

3.1.2 Acknowledgement by an aircraft

a) When in flight:

1) During the hours of daylight: by rocking the aircraft's wings, except for the base and final legs of the approach.

2) During the hours of darkness: by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

b) When on the ground:

1) During the hours of daylight: by moving the aircraft's ailerons or rudder.

2) During the hours of darkness: by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

3.2 Visual ground signals

3.2.1 Prohibition of landing: A horizontal red square panel with yellow diagonals (Figure A1-2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.

Figure A1-2

3.2.2 Need for special precautions while approaching or landing: A horizontal red square panel with one yellow diagonal (Figure A1-3) when displayed in a signal area indicates that owing to the bad state of the maneuvering area, or for any other reason, special precautions must be observed in approaching to land or in landing.

Figure A1-3

3.2.3 Use of runways and taxiways

a) A horizontal white dumb-bell (Figure A1-4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

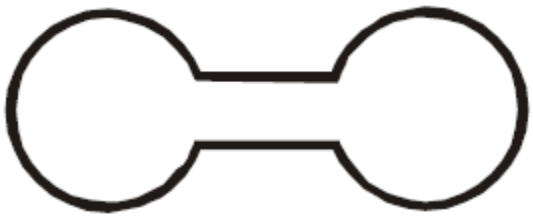


Figure A1-4

b) The same horizontal white dumb-bell as in 3.2.3. but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure A1-5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other maneuvers need not be confined to runways and taxiways.

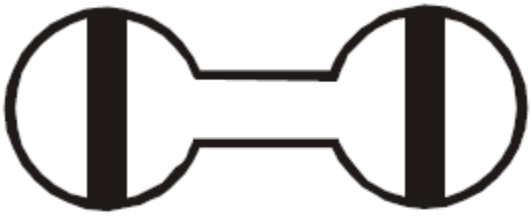


Figure A1-5

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

Figure A1-6

3.2.5 Directions for landing or take-off

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

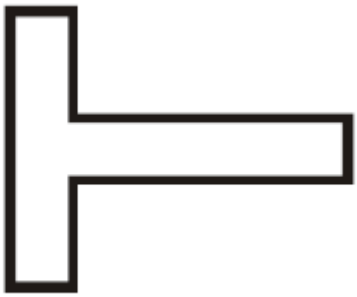


Figure A1-7

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

Figure A1-8

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

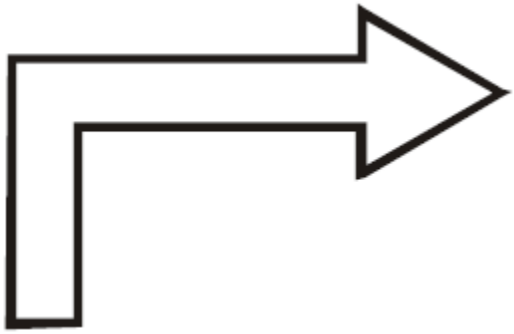


Figure A1-9

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

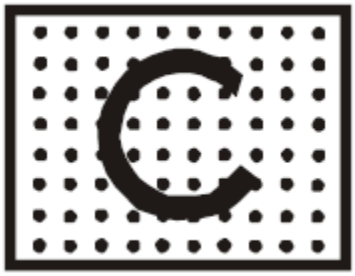


Figure A1-10

3.2.8 Sailplane flights in operation: A double white cross displayed horizontally (Figure A1-11) in the signal area indicates that the aerodrome is being used by sailplanes and that sailplane flights are being performed.

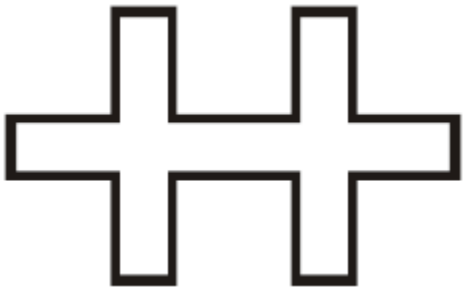


Figure A1-11

4. Marshalling signals

4.1 From a signalman/marshaller to an aircraft

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

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

b) for helicopters, where the signalman/marshaller can best be seen by the pilot.

4.1.2 The meaning of the relevant signals remains the same if bats, illuminated wands or Torchlights are held.

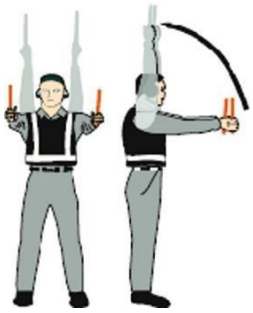
4.1.3 The aircraft engines are numbered, for the signalman/marshaller facing the aircraft from right to left (i.e., No. 1engine being port outer engine).

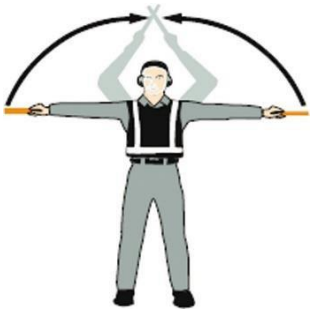
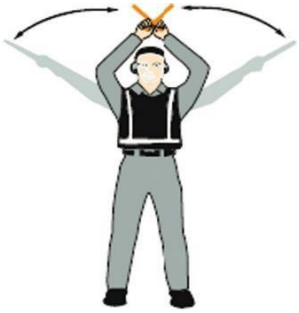
4.1.4 Signal marked with an asterisk (*) are designed for use to hovering helicopters.

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

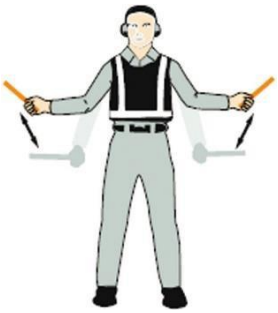
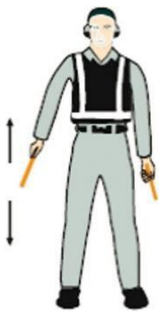
4.1.6 References to the signalman may also be read to refer to marshaller.

4.1.7 Prior to using the following signals the signalman/marshaller shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft might otherwise strike.

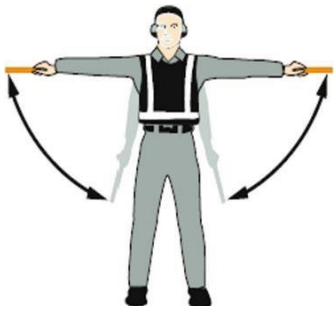
	1. Wing walker/guide (*) Raise right hand above head level with wand pointing up; move left-hand wand pointing down toward body. (*) This signal provides an indication by a person positioned at the aircraft wing tip, to the pilot/marshaller/push-back operator, that the aircraft movement on/off a parking position would be unobstructed.
	2. Identify gate Raise fully extended arms straight above head with wands pointing up.
	3.Proceed to next signalman/marshaller 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/marshaller 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.

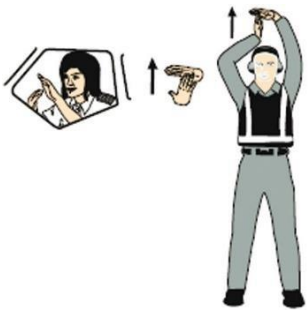
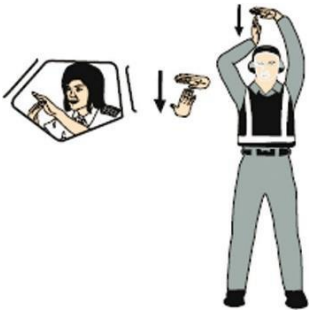
	7.a Set brakes Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. Do not move until receipt of 'thumbs up' acknowledge• from flight crew.
	7.b Release brakes Raise hand just above shoulder height with hand closed in a fist. Ensuring eye 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 authorised 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. (*) 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. (*) For use to hovering helicopters.
	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. (*) For use to hovering helicopters.
	18. Move downwards (*) Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands down• wards. Speed of movement indicates rate of descent. (*) For use to hovering helicopters.
	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. (*) For use to hovering helicopters.

	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. (*) For use to hovering helicopters.
	20. Land (*) Cross arms with wands downwards and in front of body. (*) For use to hovering helicopters.
	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 maneuver.
	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. (*) This signal is intended mainly for aircraft with the set of integral stairs at the front.

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

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

a) Brakes

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.

b) 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.

c) Ready to start engine(s) Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

4.3 Technical/servicing communication signals

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

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

4.4 Standard emergency hand signals

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

	1. **Recommend evacuation** Evacuation recommended based on aircraft rescue and fire-fighting 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. **Recommend 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. 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.

Appendix 2 - Unmanned free balloons

1. Classification of unmanned free balloons

Unmanned free balloons shall be classified as (see Figure A2-1):

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)(2), (3) or (4) 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)(2), (3) or (4) below; or

c) Heavy: an unmanned free balloon which carries a payload which:

1) Has a combined mass of 6 kg or more; or

2) Includes a package of 3 kg or more; or

3) Includes a package of 2 kg or more with an area density of more than 13 g per square centimeter, determined by dividing the total mass in grams of the payload package by the area in square centimeters of its smallest surface; or

4) 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.

2. General operating rules

2.1 An unmanned free balloon shall not be operated without authorization from the State from which the launch is made.

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

2.3 The authorization referred to in 2.2 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 flight.

2.4 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.

2.5 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.

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

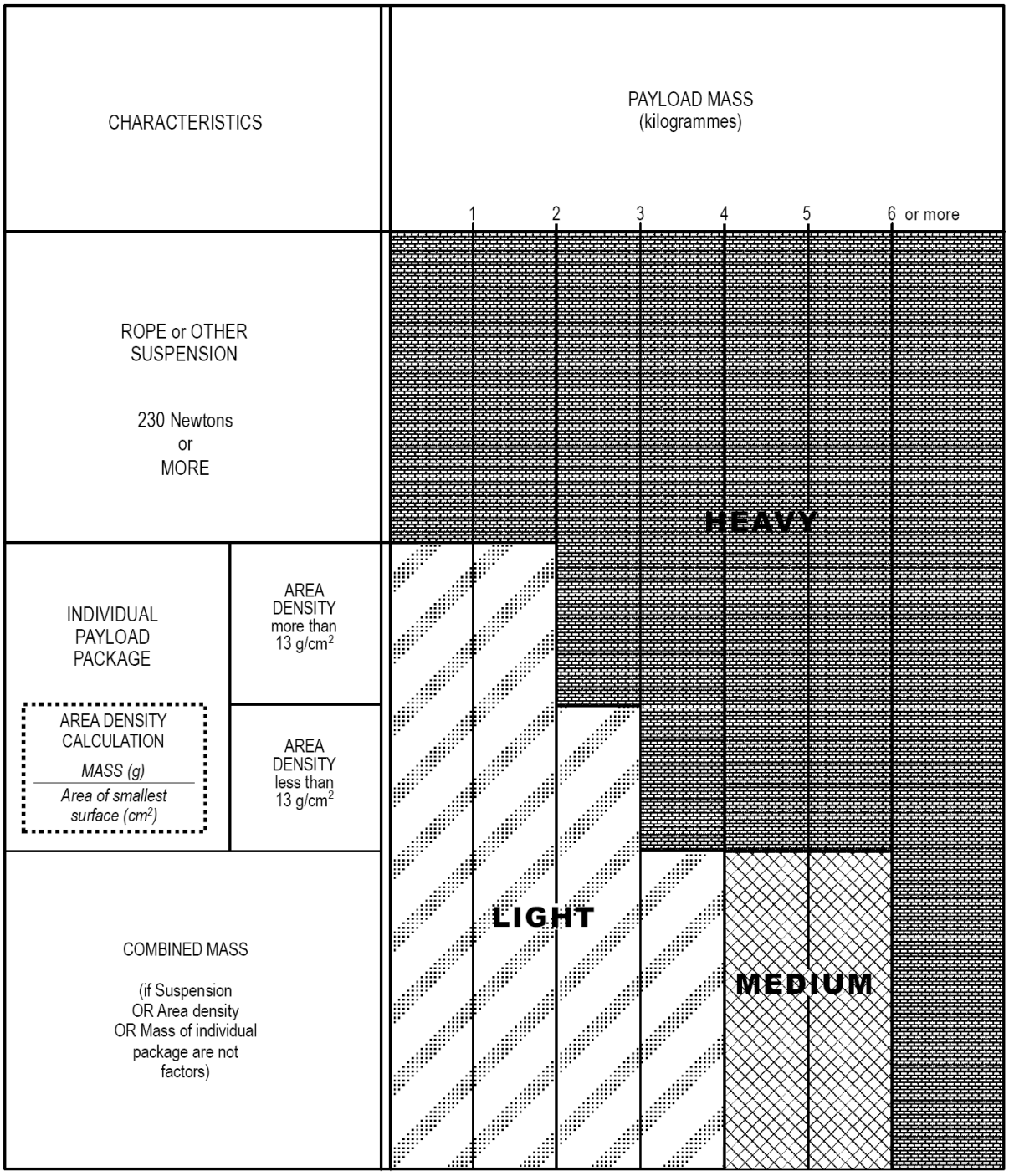


Figure A2-1: Classification of unmanned free balloons

3. Operating limitations and equipment requirements

3.1 A heavy unmanned free balloon shall not be operated without authorization from the ANSP(s) at or through any level below 18 000 m (60 000 ft) pressure-altitude at which:

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

b) the horizontal visibility is less than 8 km.

3.2 A heavy or medium unmanned free balloon shall not be released in a manner that will cause it to fly lower than 300 m (1 000 ft) over the congested areas of cities, towns or settlements or an open-air assembly of persons not associated with the operation.

3.3 A heavy unmanned free balloon shall not be operated unless:

a) It is equipped with at least two payload flight-termination devices or systems, whether automatic or operated by telecom and, that operate independently of each other.

b) 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.

c) 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.

3.4 A heavy unmanned free balloon shall not be operated under the following conditions:

a) 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

b) 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.

c) 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 colored pennants or streamers that are attached at not more than 15 m intervals.

3.6 A heavy unmanned free balloon shall not be operated below 18 000 m (60 000 ft) pressure- altitude at night or during any other period 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.

3.7 A heavy unmanned free balloon that is equipped with a suspension device (other than a highly conspicuously colored open parachute) more than 15 m long shall not be operated during night below 18 000 m (60 000 ft) pressure-altitude unless the suspension device is colored in alternate bands of high conspicuity colors or has colored pennants attached.

4. Termination

The operator of a heavy unmanned free balloon shall activate the appropriate devices required by 3.3 (a) and (b):

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

5.1 Pre-flight notification

5.1.1 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.

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

a) Balloon flight identification or project code name.

b) Balloon classification and description.

c) SSR code, aircraft address or NDB frequency as applicable.

d) Operator's name and telephone number.

e) Launch site.

f) Estimated time of launch (or time of commencement and completion of multiple launches).

g) Number of balloons to be launched and the scheduled interval between launches (if multiple launches).

h) Expected direction of ascent.

i) Cruising level(s) (pressure-altitude).

j) The estimated elapsed time to pass 18 000 m (60 000 ft) pressure-altitude or to reach cruising level if at or below 18 000 m (60 000 ft), together with the estimated location. If the operation consists of continuous launchings, the time to be included shall be the estimated time at which the first and the last in the series will reach the appropriate level (e.g. 122136Z–130330Z).

k) 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. If there is to be more than one location of impact/recovery, each location shall 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 shall be the estimated time of the first and the last in the series (e.g. 070330Z–072300Z).

5.1.3 Any changes in the pre-launch information notified in accordance with paragraph 5.1 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.

5.2 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:

a) Balloon flight identification.

b) Launch site.

c) Actual time of launch.

d) Estimated time at which 18 000 m (60 000 ft) pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 18 000 m (60 000 ft), and the estimated location; and

e) any changes to the information previously notified in accordance with 5.1.2(g) and (h).

5.3 Notification of cancellation

The operator shall notify the appropriate air traffic services unit immediately it is known that the intended flight of a medium or heavy unmanned free balloon, previously notified in accordance with paragraph 5.1, has been cancelled.

6. Position recording and reports

6.1 The operator of a heavy unmanned free balloon operating at or below 18 000 m (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.

6.2 The operator of a heavy unmanned free balloon operating above 18 000 m (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.

6.3 If a position cannot be recorded in accordance with 6.1 and 6.2, 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.

6.4 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:

a) the current geographical position.

b) the current level (pressure-altitude).

c) the forecast time of penetration of 18 000 m (60 000 ft) pressure-altitude, if applicable.

d) the forecast time and location of ground impact.

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

Appendix 3 - Table of cruising levels

The cruising levels to be observed are as follows:

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	Meters	FL	Feet	Meters	FL	Feet	Meters	FL	Feet	Meter
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
27	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.			

(*) 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 competent 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.

Appendix 4 - ATS airspace classes services provided and flight requirements

Class	Type of flight	Separation provided	Service provided	Speed limitation (*)	Radio communication capability requirement	Continuous two-way air-ground voice communication required	Subject to an ATC clearance
A	IFR only	All aircraft	Air traffic control service	Not applicable	Yes	Yes	Yes
B	IFR	All aircraft	Air traffic control service	Not applicable	Yes	Yes	Yes
	VFR	All aircraft	Air traffic control service	Not applicable	Yes	Yes	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Yes	Yes	Yes
	VFR	VFR from IFR	(1) Air traffic control service for separation from IFR; (2) VFR/VFR traffic information (and traffic avoidance advice on request)	250 kts IAS below 3050 m (10 000 ft) AMSL	Yes	Yes	Yes
D	IFR	IFR from IFR	Air traffic control service, traffic information about VFR flights (and traffic avoidance advice on request)	250 kts IAS below 3050 m (10 000 ft) AMSL	Yes	Yes	Yes
	VFR	Nil	IFR/VFR and VFR/VFR traffic information (and traffic avoidance advice on request)	250 kts IAS below 3050 m (10 000 ft) AMSL	Yes	Yes	Yes

E	IFR	IFR from IFR	Air traffic control service and, as far as practical, traffic information about VFR flights	250 kts IAS below 3050 m (10 000 ft) AMSL	Yes	Yes	Yes
	VFR	Nil	Traffic information as far as practical	250 kts IAS below 3050 m (10 000 ft) AMSL	No (**)	No (**)	No
F	IFR	IFR from IFR as far as practical	Air traffic advisory service; flight information service if requested	250 kts IAS below 3050 m (10 000 ft) AMSL	Yes (***)	No (***)	No
	VFR	Nil	Flight information service if requested	250 kts IAS below 3050 m (10 000 ft) AMSL	No (**)	No (**)	No
G	IFR	Nil	Flight information service if requested	250 kts IAS below 3050 m (10 000 ft) AMSL	Yes (**)	No (**)	No
	VFR	Nil	Flight information service if requested	250 kts IAS below 3050 m (10 000 ft) AMSL	No (**)	No (**)	No

(*) When the level of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 should be used in lieu of 10 000 ft. The authority may also exempt aircraft types, which for technical or safety reasons, cannot maintain this speed.

(**) Pilots shall maintain continuous air-ground voice communication watch and establish two-way communication, as necessary, on the appropriate communication channel in RMZ.

(***) Air-ground voice communications mandatory for flights participating in the advisory service. Pilots shall maintain continuous air-ground voice communication watch and establish two-way communication, as necessary, on the appropriate communication channel in RMZ.

Appendix 5 - Requirements regarding services in air navigation

Technical specifications related to aircraft observations and reports by voice communications.

1. Contents of air-reports

Special air-reports:

The elements contained in special air-reports shall be: Message type designator (Position information), Aircraft identification Position or latitude and longitude, Time Level or range of levels, (Meteorological information) Condition prompting the issuance of a special air-report, to be selected from the list presented in ROA.330.

2. Specific provisions related to reporting wind shear and volcanic ash

2.1 Reporting of wind shear

2.1.1 When reporting aircraft observations of wind shear encountered during the climb- out and approach phases of flight, the aircraft type shall be included.

2..1.2 Where wind shear conditions in the climb-out or approach phases of flight were reported or forecast but not encountered, the pilot-in-command shall advise the appropriate air traffic services unit as soon as practicable unless the pilot-in- command is aware that the appropriate air traffic services unit has already been so advised by a preceding aircraft.

2.2 Post-flight reporting of volcanic activity

2.2.1 On arrival of a flight at an aerodrome, the completed report of volcanic activity shall be delivered by the aircraft operator or a flight crew member, without delay, to the aerodrome meteorological office, or if such office is not easily accessible to arriving flight crew members, the completed form shall be dealt with in accordance with local arrangements made by the meteorological authority and the aircraft operator.

2.2.2 The completed report of volcanic activity received by a meteorological office shall be transmitted without delay to the meteorological watch office responsible for the provision of meteorological watch for the flight information region in which the volcanic activity was observed.