Statutory Instrument No. 24 of 2012

CIVIL AVIATION ACT
(Act No. 11 of 2011)

CIVIL AVIATION (RULES OF THE AIR AND AIR TRAFFIC SERVICES) REGULATIONS, 2012
(*Published on 23rd March, 2012*)

ARRANGEMENT OF REGULATIONS

REGULATION

PART VII – *Visual Flight Rules*

PART VIII – *Instrument Flight Rules*

PART IX – *Offences and Penalties*

IN EXERCISE of the powers conferred on the Minister of Transport and Communications by section 89 of the Civil Aviation Act and on the recommendation of the Civil Aviation Authority, the following Regulations are hereby made —

PART I – *Preliminary*

Citation

1. These Regulations may be cited as the Civil Aviation (Rules of the Air and Air Traffic Services) Regulations, 2012.

Application of rules

2. The provisions of these Regulations, insofar as they are applicable to aircraft, shall apply to —

(*a*) all aircraft within Botswana; and

(*b*) all aircraft registered in Botswana, wherever they may be.

Interpretation

3. In these Regulations, unless the context otherwise requires —

"acrobatic flight" means manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed;

"advisory airspace" means an airspace of defined dimensions, or designated route, within which air traffic advisory service is available;

"aerodrome control tower" means a unit established to provide ATC service to aerodrome traffic;

"aerodrome traffic" means all traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome;

"aerodrome traffic zone" means an airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic;

"aeronautical information publication" means 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" means a mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate;

"aeronautical station" means a land station in the aeronautical mobile service which in certain instances, may be located, for example, on board a ship or on a platform at sea;

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

"airborne collision avoidance system (ACAS)" means an aircraft system based on SSR transponder signals which operates independently of ground based equipment to provide advice to the PIC on potential conflicting aircraft that are equipped with SSR transponders;

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

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

"air traffic advisory service" means a service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans;

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

"air traffic control service" means a service provided for the purpose of —

(*a*) preventing collisions —

(i) between aircraft; and

(ii) on manoeuvring area between aircraft and obstructions; and

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

"air traffic control unit (ATCU)" means an AWY, approach control unit or aerodrome control tower;

"air traffic service (ATS)" means flight information service, alerting service, air traffic advisory service, or ATC service;

"air traffic services (ATS) airspaces" means airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which ATS and rules of operation are specified;

"air traffic services reporting office" means a unit established for the purpose of receiving reports concerning ATS and flight plans submitted before departure;

"air traffic services unit (ATSU)" includes an ATC unit, FIC or ATS reporting office;

"airway (AWY)" means a CTA or portion thereof established in the form of a corridor;

"alerting service" means a service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required;

"alternate aerodrome" means an aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing and includes the following —

(*a*) take-off alternate; an alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure;

(*b*) en-route alternate; an aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en- route;

(*c*) Extended Range Operation by Turbine-engined Aeroplanes en-route alternate; a suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing an engine shutdown or other abnormal or emergency condition while en route in an Extended Range Operation by Turbine-engined Aeroplanes operation; and

(*d*) destination alternate; an alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing;

"altitude" means the vertical distance of a level, a point or an object considered as a point, measured from mean sea level;

"anti-collision light" means a flashing red or flashing white light showing in all directions for the purpose of enabling the aircraft to be more readily detected by the PIC of distant aircraft;

"approach control service" means ATC service for arriving or departing controlled flights;

"approach control unit" means a unit established to provide ATC service to controlled flights arriving at, or departing from, one or more aerodromes;

"apron" means a defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance;

"area control centre (ACC)" means a unit established to provide air traffic control service to controlled flights in CTA under its jurisdiction;

"area control service" means ATC service for controlled flights in CTA;

"air traffic services (ATS) route" means a specified route designed for channeling the flow of traffic as necessary for the provision of ATS;

"automatic dependent surveillance (ADS)" means a surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position-fixing systems, including aircraft identification, four dimensional position and additional data as appropriate;

"ceiling" means the height above the ground or water of the base of the lowest layer of cloud below 6 000 metres covering more than half the sky;

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

"clearance limit" means the point to which an aircraft is granted an ATC clearance;

"control area (CTA)" means a controlled airspace extending upwards from a specified limit above the earth;

"controlled aerodrome" means an aerodrome at which ATC service is provided to aerodrome traffic;

"controlled airspace" means an airspace of defined dimensions within which ATC service is provided in accordance with the airspace classification and covers ATS airspace Classes A, B, C, D and E as described in these regulations;

"controlled flight" means any flight which is subject to an ATC clearance;

"control zone (CTR)" means a controlled airspace extending upwards from the surface of the earth to a specified upper limit;

"cruising level" means a level maintained during a significant portion of a flight;

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

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

"data link communications" means a form of communication intended for the exchange of messages via a data link;

"estimated off-block time (EOBT)" means the estimated time at which the aircraft will commence movement associated with departure;

"estimated time of arrival (ETA)"—

(*a*) for IFR flights, means 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 IAP will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome; and

(*b*) for VFR flights means the time at which it is estimated that the aircraft will arrive over the aerodrome;

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

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

"flight (FLT)" means in the case of —

(*a*) an aeroplane or glider, from the moment it first moves for the purpose of taking off until the moment when it next comes to rest after landing; or

(*b*) an airship or free balloon, from the moment when it first becomes detached from the surface until the moment when it next becomes attached thereto or comes to rest thereon;

"flight information centre (FIC)" means a unit established to provide FIS and alerting service;

"flight information region (FIR)" means an airspace of defined dimensions within which FIS and alerting service are provided;

"flight information service (FIS)" means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights;

"flight level (FL)" means a surface of constant atmospheric pressure which is related to a specific pressure datum, 1013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals;

"flight plan" means specified information provided to ATS units, relative to an intended flight or portion of a flight of an aircraft;

"flight visibility" means the visibility forward from the cockpit of an aircraft in flight;

"glider" means a non-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;

"ground visibility" means the visibility at an aerodrome, as reported by an accredited observer;

"heading (HDG)" means the direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid) to South;

"heavier-than-air aircraft" means any aircraft deriving its lift in flight chiefly from aerodynamic forces;

"height (Hgt)" means the vertical distance of a level, a point or an object considered as a point, measured from a specified datum;

"helicopter (Hel)" means 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 axis;

"instrument flight rules (IFR) flight" means a flight conducted in accordance with the IFR;

"instrument approach procedure (IAP)" means a series of pre-determined manoeuvres by reference to flight instruments, with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or enroute obstacle clearance criteria apply and is classified as follows —

(*a*) non-precision approach procedure (NPA) – an IAP which utilises lateral guidance but does not utilise vertical guidance;

(*b*) approach procedure with vertical guidance (APV) – an IAP which utilises lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations;

(*c*) precision approach (PA) procedure - an IAP using precision lateral and vertical guidance with minima as determined by the category of operation;

"instrument meteorological conditions (IMC)" means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions;

"landing area" means that part of a movement area intended for the landing or take-off of aircraft;

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

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

"movement area" means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron;

"night" means the time between thirty minutes after sunset and thirty minutes before sunrise, sunrise and sunset being determined at surface level;

"overtaking aircraft" means 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, so that it 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;

"parascending parachute" means a parachute which is towed by cable in such a manner as to cause it to ascend;

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

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

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

"radiotelephony (RTF)" means a form of radio communication primarily intended for the exchange of information in the form of speech;

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

"reporting point (RP)" means a specified geographical location in relation to which the position of an aircraft can be reported;

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

"runway (RWY)" means a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft;

"runway-holding position" means a designated position intended to protect —

(*a*) a runway;

(*b*) an obstacle limitation surface; or

(*c*) an instrument landing system or microwave landing system critical area or sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower;

"safety-sensitive personnel" means 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;

"simulated instrument flight" means a flight during which mechanical or optical devices are used in order to reduce the field of vision or the range of visibility from the cockpit of the aircraft;

"signal area" means an area on an aerodrome used for the display of ground signals;

"special visual flight rules (SVFR)" means a controlled VFR traffic authorized by ATC to operate within the CTR under meteorological conditions below the visual meteorological conditions or at night;

"secondary surveillance radar (SSR)" means a surveillance radar system which uses interrogators and transponders;

"taxiing" means movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing;

"taxiway (TWY)" means a defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including —

(*a*) aircraft stand taxilane - 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; or

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

"total estimated elapsed time"—

(*a*) for IFR flights means 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; and

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

"track (tr)" means 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) to South;

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

"unmanned free balloon" means a non-power-driven, unmanned, lighter-than-air aircraft in free flight;

"visual flight rules (VFR) flight" means a flight conducted in accordance with the VFR;

"visibility (Viz)" for aeronautical purposes means 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; or

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

"visual meteorological conditions (VMC)" means meteorological conditions expressed in terms of visibility distance from cloud, and ceiling, equal to or better than specified minima.

PART II — *General Flight Rules*

Dangerous operation of aircraft

4. (1) Where an aircraft is flown in such a manner as to cause danger to any person or property on land or water, or in contravention of these Regulations, the PIC or other person in charge of the aircraft and the owner of the aircraft commits an offence and shall be liable for a first offence to a fine not exceeding P20 000 or to imprisonment for a term not exceeding three years, or to both, and for a second or subsequent offence to a fine not exceeding P50 000 or to imprisonment for a term not exceeding 10 years, or to both.

(2) In any proceedings against the owner of an aircraft in respect of an offence under this regulation, it shall be a defence to prove that the act constituting the offence was done without the knowledge or consent of the owner.

(3) In this regulation, "owner", in relation to an aircraft and an offence, includes any person by whom the aircraft is hired at the time the offence was committed.

Problematic use of psychoactive substances

5. (1) A person whose competency is critical to the safety of aviation shall not undertake his or her duties while under the influence of any psychoactive substance which impair the performance of his or her duties.

Low flying

6. (1) Subject to the provisions of subregulations (2) and (3) —

(*a*) a person shall not fly an aircraft, other than a helicopter, over any congested area of a city, town or settlement below —

(i) a height that would enable the aircraft to alight clear of the area and without danger to persons or property on the surface, in the event of failure of a power unit; or

(ii) a height of 1500 feet above the highest fixed object and within 600 metres of the aircraft, whichever is the higher;

(*b*) a person shall not fly a helicopter below such height as would enable it to alight without danger to persons or property on the surface, in the event of failure of a power unit;

(*c*) except with the permission, in writing, of the Authority and in accordance with any condition therein specified, a person shall not fly a helicopter over a congested area of a city, town or settlement below a height of 1 500 feet above the highest fixed object or within 600 metres of the helicopter;

(*d*) a person shall not fly an aircraft —

(i) over, or within 3 000 metres of any assembly in the open air of more than one thousand persons assembled for the purpose of witnessing or participating in any organised event, except with the permission in writing of the Authority and in accordance with any conditions therein specified and with the consent in writing of the organizers of the event,

(ii) below a height that would enable it to land clear of the assembly in the event of the failure of a power unit or if such an aircraft is towing a banner the height shall be calculated on the basis that the banner shall not be dropped within 3 000 metres of the assembly, or

(iii) where a person is charged with an offence under these regulations by reason of a contravention of this subregulation, it shall be a good defence to prove that the flight of the aircraft over, or within 3 000 metres of the assembly was made at a reasonable height and for a reason not connected with the assembly or with the event which was the occasion for the assembly; and

(*e*) an aircraft shall not fly less than 500 feet above ground or water.

(2) The provisions of —

(*a*) subregulation (1) (*a*) shall not apply to —

(i) an aircraft while it is landing or taking-off in accordance with normal aviation practice; or

(ii) a glider while it is hill-soaring;

(*b*) subregulation (1) (*d*) and (*e*) shall not apply to an aircraft which is being used for police purposes;

(*c*) subregulation (1) (*e*) shall not apply to an aircraft which is being used for aerial work operations in accordance with the operating provisions of the Civil Aviation (Aerial Work) Regulations; and

(*d*) subregulation (1) (*d*) and (*e*) shall not apply to the flight of an aircraft over or within 3 000 metres of an assembly of persons gathered for the purpose of witnessing an event which consists wholly or principally of an aircraft race contest or an exhibition of flying, if the aircraft is taking part in such a race, contest or exhibition or is engaged in a flight arranged by, or made with the consent in writing of, the organizers of the event, and the races, contest, exhibition or flight is approved by the Authority.

(3) Nothing in this regulation shall prohibit any aircraft from —

(*a*) taking off or landing;

(*b*) flying for the purpose of checking navigational aids or procedures in accordance with normal aviation practice at a licensed or certificated aerodrome in Botswana or at any aerodrome in any other state;

(*c*) flying in such a manner as may be necessary for the purpose of saving life; or

(*d*) practising approaches to landing, such practising is confined to the airspace customarily used by aircraft when landing or taking off in accordance with normal aviation practice at the aerodrome concerned.

(4) The provisions of this regulation shall not apply to any captive balloon or kite.

Formation flights

7. A person shall not fly an aircraft in a formation flight except by pre-arrangement among the PIC of the aircraft taking part in the flight and, for a formation flight in controlled airspace, in accordance with the conditions prescribed by the appropriate ATS authority, which conditions shall include —

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

(*b*) separation between aircraft in the flight shall be the responsibility of the flight leader and the PIC of the other aircraft in the flight and shall include periods of transition when aircraft are manoeuvring to attain their own separation within the formation flight and during join-up and break-away; and

(*c*) a distance not exceeding 1 000 metres laterally and longitudinally and 100 feet vertically from the flight leader shall be maintained by each aircraft.

Unmanned free balloons

8. (1) A person who operates an unmanned free balloon shall operate the balloon in such a manner as to minimize hazards to persons, property or other aircraft and in accordance with the conditions specified in this regulation.

(2) Unmanned free balloons shall be classified as —

(*a*) light, if it is an unmanned free balloon which carries a pay load of one or more packages with a combined mass of less than four kilograms, unless qualifying as a heavy balloon under this paragraph;

(*b*) medium, if it is an unmanned free balloon which carries a pay load of two or more packages with a combined mass of four kilogram or more but less than six kilograms; or

(*c*) heavy, if it is an unmanned free balloon which carries a pay load which —

(i) has a combined mass of six kilograms or more;

(ii) includes a package of three kilograms or more;

(iii) includes a package of two kilograms or more with an area density of more than 13 kilograms per square centimeter; or

(iv) uses a rope or other device for suspension of the pay load that requires an impact force of 230 newtons or more to separate the suspended pay load from the balloon, and the "area density" referred to in sub-paragraph (iii) shall be determined by dividing the total mass in grams of the pay load package by area, in square centimetres, of its smallest surface.

(3) An unmanned free balloon shall —

(*a*) not be operated without the permission of the Authority;

(*b*) not be operated across the territory of another State without the appropriate authorization from that other State unless it is a light balloon used exclusively for meteorological purposes which is operated in a manner prescribed by the Authority; and

(*c*) be operated in accordance with conditions specified by the Authority while being flown over Botswana territory.

(4) A medium or heavy unmanned free balloon shall not be released in a manner that may cause it to fly lower than 1000 feet over the congested area of cities, towns, or settlements or an open air assembly of persons not associated with the operation.

(5) A heavy unmanned free balloon shall not be operated —

(*a*) over the high seas without prior co-ordination with the appropriate ATS unit;

(*b*) without authorization from the appropriate ATS unit at or through any level below 60 000 feet pressure altitude at which —

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

(ii) the horizontal visibility is less than eight kilometres;

(*c*) unless —

(i) it is equipped with at least two pay load flight termination devices or systems, whether automatic or operating independently of each other,

(ii) at least two method systems, devices or combination thereof that function independently of each other are employed for terminating the flight of the balloon services in the case of polyethylene zero-pressure balloons, or

(iii) the balloon envelope is equipped with either a radar reflective device or radar reflective material that will present an echo to surface radar operating in the 200MHz to 2700MHz frequency range or the balloon is equipped with other devices which shall permit continuous tracking by the operator beyond the range of ground-based radar;

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

(*e*) below 60 000 feet pressure-altitude between sunset and sunrise or such other period between sunset and sunrise, corrected to the altitude of operation, as may be prescribed by the appropriate ATS authority unless the balloon and its attachments and pay load, whether or not they become separated during the operation, are lighted; or

(*f*) below 60 000 feet pressure-altitude between sunset and sunrise where it is equipped with a suspension device, other than a highly conspicuous coloured open parachute, more than 15 metres long, unless the suspension device is coloured in alternate bands of highly conspicuous colours or has coloured pennants attached.

(6) An operator of a heavy unmanned free balloon shall activate the appropriate termination devices required under subregulation (5) (*c*) —

(*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.

(7) An operator of a medium or heavy unmanned free balloon shall notify the air traffic service unit, not less than seven days before the date of the intended flight of a medium or heavy unmanned balloon, of the intention to fly the medium or heavy unmanned free balloon.

(8) The notification referred to in subregulation (7) shall include the following information —

(*a*) balloon classification and identification;

(*b*) balloon flight identification or project code name;

(*c*) SSR services code or non-directional radio beacon frequency as applicable;

(*d*) the operator's name and telephone number;

(*e*) launch site; and estimated time of launch or time of commencement and completion of multiple launches, if multiple launches;

(*f*) expected direction of ascent; and cruising level (pressure altitude);

(*g*) the estimated elapsed time to pass 60 000 feet together with the estimated location;

(*h*) the estimated date and time of termination of the flight and the planned location of the impact or recovery area;

(*i*) 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 the impact cannot be forecast with accuracy, the term "long duration" shall be used;

(*j*) where the operation consists of continuous launchings, the time to be included is the estimated time at which the first and last launchings in the series will reach the appropriate level (such as, 122136UTC-130330UTC);

(*k*) if there is to be more than one location of impact or recovery, each location is to be listed together with the appropriate estimated time of impact, and, where there is to be a series of continuous impacts, the time to be included is the estimated time of the first and last series (such as, 070330UTC-072300UTC);

(l) any changes in the pre-launch information notified in accordance with subregulation (7) shall be forwarded to the air traffic service unit concerned not less than six hours before the estimated time of launch or in the case of solar or cosmic disturbances investigations involving a critical time element, not less than 30 minutes before the estimated time of the commencement of the operation.

(9) Immediately after a medium or heavy unmanned free balloon is launched, an operator shall give the appropriate air traffic service unit the following information —

(*a*) balloon flight identification;

(*b*) launch site;

(*c*) actual time of launch;

(*d*) estimated time at which 60 000 feet pressure-altitude shall be passed, or the estimated time at which the cruising level shall be reached if at or below 60 000 feet and the estimated location; and

(*e*) any changes to the information previously given under subregulation (8).

(10) An operator shall notify the appropriate air traffic service unit immediately the operator knows that the intended flight of a medium or heavy unmanned free balloon previously notified in accordance with paragraph (8) has been cancelled.

(11) An operator of a heavy unmanned free balloon operating at or below 60 000 feet pressure-altitude shall monitor the flight path and flight progress of the balloon and forward reports of the balloon's position as requested by the air traffic service unit and unless the air traffic service unit require reports of the balloon's position at more frequent intervals the operator shall record the position —

(*a*) in the case of the flight path, every two hours; or

(*b*) in the case of the flight progress, every 24 hours;

and if the position cannot be recorded the operator shall immediately notify the appropriate air traffic service unit, which notification shall include the last recorded position and thereafter shall notify the appropriate air traffic service unit when the tracking of the balloon is re-established.

(12) An operator shall, one hour before the beginning of the planned descent of a medium or heavy unmanned free balloon, forward to the appropriate air traffic service unit the following information regarding the balloon —

(*a*) its current geographical position;

(*b*) the current level (pressure-altitude);

(*c*) the forecast time of penetrating of 60 000 feet pressure-altitude, if applicable; and

(*d*) the forecast time and location of ground impact.

(13) An operator of a medium or heavy unmanned free balloon shall notify the appropriate air traffic service unit when the operation of a medium or heavy unmanned free balloon has ended.

Acrobatic manoeuvres

9. A person shall not carry out any acrobatic manoeuvres —

(*a*) over any city, town or settlement;

(*b*) over an open air assembly of persons;

(*c*) below an altitude of 1500 feet above the surface;

(*d*) when the flight visibility is less than five kilometres;

(*e*) in manoeuvres exceeding a bank of sixty degrees or pitch of thirty degrees from level flight attitude unless all occupants of the aircraft are wearing parachutes packed by a qualified parachute rigger in the past twelve months;

(*f*) within controlled airspace except with the consent of the appropriate ATC; or

(*g*) except under conditions prescribed by the Authority and as indicated by relevant information, advice or clearance from the appropriate air traffic service unit.

Right-hand traffic rule

10. A person flying an aircraft and in sight of the ground and following a road, railway, river, cordon fence or any other line of landmark, shall keep the road, river, cordon fence or other line of landmark on his or her left.

Prohibited areas and restricted areas

11. (1) A person shall not operate an aircraft in a prohibited area or a restricted area, the particulars of which prohibited area have been duly published, except in accordance with the conditions of the restrictions or by permission of the Authority.

(2) Any person who contravenes the provisions of subregulation (1) commits an offence and is liable to a fine not exceeding P50 000 or a term of imprisonment not exceeding 10 years, or to both.

Flights over game parks, game reserves and national parks

12. Subject to regulation 11, a person shall not operate an aircraft, except for the purpose of take-off or landing, below 1000 feet, above ground level when operating the aircraft over game parks, game reserves and national parks.

Cruising levels

13. (1) The cruising levels at which a flight or a portion of a flight is to be conducted shall be in terms of flight levels at or above the lowest usable flight level or altitudes if below the transition altitude.

(2) Subject to subregulation (5), in order to comply with IFR, an aircraft when in level flight at or above 3000 feet over land or water within controlled airspace shall be flown at a level appropriate to its magnetic track as specified in regulation 81.

(3) Subject to subregulation (5), in order to comply with IFR, an aircraft when in level flight at or above 3000 feet over land or water outside controlled airspace shall be flown at a level appropriate to its magnetic track, in accordance with Table 1 in Schedule I.

(4) A VFR flights in level cruising flight when operated at or above 3000 feet from the ground or water shall be conducted at a flight level appropriate to its magnetic track in accordance with Table 1 in Schedule I, except where otherwise indicated in ATC clearances or specified by the Authority.

(5) The level of flight shall be measured by an altimeter set according to the system notified, or in the case of flight over a state other than Botswana, otherwise published by the competent authority, in relation to the area over which the aircraft is flying.

Altimeter settings

14. A person operating an aircraft registered in Botswana shall set the aircraft altimeter to maintain the cruising altitude for flight level reference in accordance with the procedure notified by —

(*a*) the Aeronautical Information Publication; or

(*b*) the State where the aircraft may be.

Dropping, spraying, towing and parachute descents

15. A person shall not —

(*a*) drop any article, substance or spray any substance from the aircraft in flight;

(*b*) tow an aircraft or other object; or

(*c*) make a parachute descent other than an emergency descent,

except in accordance with conditions prescribed by the Authority and as indicated by relevant information, advice and clearance from the appropriate air traffic service unit.

Proximity to other aircraft

16. A person shall not operate an aircraft in such proximity to other aircraft as to create a collision hazard.

Right-of-way rules in air operations

17. (1) A PIC of an aircraft who has the right-of-way shall maintain the aircraft's heading and speed.

(2) Notwithstanding subregulation (1), a PIC shall not be relieved from the responsibility of taking such action, including collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment, as will best avert a collision.

(3) A PIC operating an aircraft shall maintain vigilance so as to see and avoid other aircraft, and where this regulation gives another aircraft the right-of-way, the PIC shall give way to that aircraft and shall not pass over, under, or ahead of it unless well clear and taking into account the effect of aircraft wake turbulence.

(4) An aircraft in distress has the right-of-way over all other air traffic.

(5) Where two aircraft are converging at approximately the same level, the aircraft that has the other aircraft on its right shall give way, except as follows —

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

(*b*) airships shall give way to gliders and balloons;

(*c*) gliders shall give way to balloons; or

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

(6) An aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft, except for aircraft in distress.

(7) Where two aircraft are approaching head-on or nearly so, and there is danger of collision, each PIC shall alter course to the right.

(8) 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.

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

(10) When an ATC unit has communicated to any aircraft an order of priority for landing, the aircraft shall approach to land in that order; and when the PIC of an aircraft is aware that another aircraft is making an emergency landing, the PIC shall give way to that aircraft, notwithstanding that the PIC may have received permission to land, and shall not attempt to land until the PIC receives further permission to do so.

(11) A power-driven heavier-than-air aircraft shall give way to gliders.

(12) A PIC who causes a collision while taxing under the regulations commits an offence and is liable to a fine not exceeding P15 000 or a term of imprisonment not exceeding nine months, or to both.

Right of way rules in ground operations

18. (1) This regulation shall apply to aircraft and vehicles on the movement area of a land aerodrome.

(2) Notwithstanding any ATC clearances, it shall remain the duty of the PIC of an aircraft to take all possible measures to ensure that the aircraft does not collide with any other aircraft or with any vehicle.

(3) Emergency vehicles proceeding to the assistance of aircraft in distress shall be accorded priority over all other surface movement traffic.

(4) In normal ground operations –

(*a*) aircraft and vehicles shall give way to aircraft which are taking off or landing;

(*b*) vehicles towing aircraft shall give way to aircraft which are landing, taking off or taxing;

(*c*) vehicles which are not towing aircraft shall give way to aircraft; and

(*d*) vehicles shall give way to other vehicles towing aircraft.

(5) Subject to the provisions of subregulation (4) and of regulation 24 (4), in case of a possible danger of collision between two aircraft —

(*a*) when two aircraft are approaching head-on or approximately so, each aircraft shall stop or where practicable alter its course to the right so as to keep well clear;

(*b*) when the two aircraft are on converging course, the one which has the other on its right shall give way to the other and shall avoid crossing ahead of the other unless passing well clear of it;

(*c*) an aircraft which is being overtaken shall have the right-of-way, and the overtaking aircraft shall keep out of the way of the other aircraft by altering its course to the left until that other aircraft has been passed and is clear, notwithstanding any change in the relative position of the two aircraft;

(*d*) an aircraft taxiing on the manoeuvring area of an aerodrome shall give way to aeroplanes taking off or about to take off.

(6) Subject to the provisions of subregulation (4) (*b*) a vehicle shall —

(*a*) overtake another vehicle so that the other vehicle is on the left of the overtaking vehicle; and

(*b*) keep to the left when passing another vehicle which is approaching head-on or approximately so.

Right-of-way rules in water operations

19. (1) A person operating an aircraft on water shall, in so far as possible —

(*a*) keep clear of all vessels in the vicinity;

(*b*) avoid impeding the navigation of all vessels in the vicinity; and

(*c*) give way to any vessel or other aircraft that is given the right-of-way by this regulation.

(2) Where aircraft, or an aircraft and a vessel, are on crossing courses, the aircraft or vessel to the other's right has the right-of-way.

(3) Where aircraft, or an aircraft and a vessel, are approaching head-on, or nearly so, each shall alter its course to the right to keep well clear.

(4) An aircraft that is being overtaken has the right-of-way, and the aircraft overtaking shall alter course to the right to keep well clear of the aircraft being overtaken.

(5) When aircraft, or, an aircraft and a vessel, approach in a manner that involves a risk of collision, each aircraft or vessel shall proceed with careful regard to existing circumstances, including the limitations of the respective craft.

Coordinated Universal Time

20. (1) A PIC flying an aircraft shall use Coordinated Universal Time (UTC) which shall be expressed in hours, minutes and seconds of the twenty four hour day beginning at midnight.

(2) A PIC shall obtain a time check prior to operating a controlled flight and at such other times during the flight as may be necessary, the time check shall be obtained from an ATS unit unless other arrangements have been made by the operator or by the Authority.

(3) Wherever time is utilised in the application of data link communications, it shall be accurate to within one second of Coordinated Universal Time (UTC).

Part III – *Lights and other signals to be shown or made by Aircraft or aerodrome*

Interpretation for purposes of Schedule II

21. For the purposes of Schedule II the following terms shall have the following meanings —

(*a*) "angles of coverage" means and are formed as follows —

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

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

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

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

(*b*) "horizontal plane" means the plane containing the longitudinal axis and perpendicular to the plane of symmetry of the aeroplane;

(*c*) "longitudinal axis of the aeroplane" means a selected axis parallel to the direction of the flight at a normal cruising speed, and passing through the centre of gravity of the aeroplane;

(*d*) "making way" is when an aeroplane on the surface of the water is "making way" when it is under way and has a velocity relative to the water;

(*e*) "under command" is when an aeroplane on the surface of the water is "under command" when it is able to execute manoeuvres as required by the Convention on the International Regulations for Prevention of Collisions at Sea, 1972 for the purpose of avoiding other vessels;

(*f*) "under way" is when an aeroplane on the surface of the water is not aground or moored to the ground or to any fixed object on the land or in the water;

(*g*) "vertical planes" means planes perpendicular to the horizontal plane; and

(*h*) "visible" means visible on a dark night with a clear atmosphere.

Display of lights and signals for aerodrome traffic

22. (1) An aerodrome control tower shall use the lights and pyrotechnic signals shown in Table 2 and illustrated in Figure 10 in Schedule III.

(2) A PIC shall acknowledge aerodrome control tower signals as follows —

(*a*) when in flight —

(i) during the hours of daylight, by rocking the aircraft's wings, except that this signal shall not be expected on the base and final legs of the approach, and

(ii) during the hours of darkness, by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights; and

(*b*) when on the ground —

(i) during the hours of daylight by, moving the aircraft's ailerons or rudder, and

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

(3) An aerodrome authority shall use the visual ground signals as shown in Figures 11 to 20 during the situations indicated therein in Schedule III.

Failure of lights by night

23. In the event of the failure of any light which is required by these regulations to be displayed at night, if the light cannot be immediately repaired or replaced, the PIC —

(*a*) shall not depart from the aerodrome; and

(*b*) if in flight, shall land as soon as, in the PIC's opinion, he can safely do so, unless authorised by the appropriate ATC unit to continue the flight.

Conditions for lights to be displayed by an aircraft

24. (1) A PIC, when operating an aircraft during the period from sunset to sunrise or any other period which may be prescribed by the Authority, shall display —

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

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

(2) From sunset to sunrise or during any other period prescribed by the Authority —

(*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;

(*c*) all aircraft operating 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) All aircraft in flight and fitted with anti-collision lights to meet the requirements of subregulation (1) (*a*) shall display such lights also outside the period specified in subregulation (1).

(4) All aircraft —

(*a*) operating on the movement area of an aerodrome and fitted with anti-collision lights to meet the requirement of subregulation (2) (*c*); or

(*b*) on the movement area of an aerodrome and fitted with lights to meet the requirement of subregulation (2) (*d*),

shall display such lights also outside the period specified in subregulation (2).

(5) Without prejudice to subregulations (1) to (4), a PIC shall be permitted to switch off or reduce the intensity of any flashing lights fitted to meet the requirements of subregulations (1), (2), (3) and (4) if they do or are likely to —

(*a*) adversely affect the satisfactory operation of an aircraft; or

(*b*) subject another aircraft or ATC tower to harmful dazzle.

Balloons, kites, airships, gliders and parascending parachutes

25. (1) A person shall not —

(*a*) fly a captive balloon or kite at a height of more than 200 feet above the ground level or within 60 metres of any vessel, vehicle or structure;

(*b*) fly a captive balloon within three nautical miles of an aerodrome;

(*c*) fly a balloon exceeding six feet in any linear dimension at any stage of its flight, including any basket or other equipment attached to the balloon, in controlled airspace; or

(*d*) fly a kite within three nautical miles of an aerodrome; moor an airship; fly a free balloon at night; or launch a glider or parascending parachute by winch and cable or by ground tow to a height of more than 200 feet above ground level;

without the permission in writing of the Authority, and in accordance with any conditions that may be attached to the permission granted.

(2) A captive balloon when in flight shall not be left unattended unless it is fitted with a device which ensures automatic deflation if it breaks.

Captive balloons and kites by day

26. A person flying a captive balloon or kite by day at a height exceeding 200 feet above the surface shall ensure that the captive balloon or kite displays lights as follows —

(*a*) a group of two steady lights consisting of a white light placed 12 feet above a red light, both being of at least five candelas and showing in all directions, the white light being placed not less than 15 feet or more than 30 feet below the basket, or, if there is no basket, below the lowest part of the balloon or kite;

(*b*) on the mooring cable, at intervals of not more than 1000 feet measured from the group of lights referred to in paragraph (*a*), groups of two lights of the colour and power and in the relative positions specified in that paragraph, and, if the lowest group of lights is obscured by cloud, an additional group below the cloud base; and

(*c*) on the surface, a group of three flashing lights arranged in a horizontal plane at the apexes of a triangle, approximately equilateral, each side of which measured at least 80 feet, one side of the triangle shall be approximately at right angles to the horizontal projection of the cable and shall be delimited by two red lights, the third light shall be a green light placed in such a way that the triangle encloses the object on the surface to which the balloon or kite is moored.

Captive balloons and kites by night

27. (1) A captive balloon while flying at night at a height exceeding 200 feet above the surface shall have attached to its mooring cable at intervals of not more than 600 feet measured from the basket, or, if there is no basket, from the lowest part of the balloon, tubular streamers not less than sixteen inches in diameter and six feet in length, and marked with alternate bands of red and white twenty inches wide.

(2) A kite flown in the circumstances referred to in subregulation (1) shall have attached to its mooring cable either —

(*a*) tubular streamers as specified in subregulation (1); or

(*b*) at intervals of not more than 300 feet measured from the lowest part of the kite, not less than thirty streamers of thirty two inches long and one foot wide at their widest part and marked with alternate bands of red and white four inches wide.

Airships by day and night

28. (1) Except as provided in subregulation (2), an airship while flying at night shall display the following steady lights —

(*a*) a white light of at least five candelas showing through angles of 110 degrees from dead ahead to each side in the horizontal plane;

(*b*) a green light of at least five candelas showing to the starboard side through an angle of 110 degrees from dead ahead in the horizontal plane;

(*c*) a red light of at least five candelas showing to the port side through an angle of 110 degrees from dead ahead in the horizontal plane; and

(*d*) a white light of at least five candelas showing through angles of 70 degrees from dead ahead astern to each side in the horizontal plane.

(2) A person flying an airship at night shall ensure that the airship displays, if it is not under command, or has its engines voluntarily stopped, or is being towed, the following steady lights —

(*a*) the white lights referred to in subregulations (1) (*a*) and (1) (*d*);

(*b*) two red lights, each of at least five candelas and showing in all directions suspended below the control car so that one is at least 12 feet above the other and at least twenty five feet below the control car; and

(*c*) if an airship is making way but not otherwise, the green and red lights referred to in subregulation (1) (b) and (1) (*c*).

(3) An airship while picking up its moorings, notwithstanding that it is not under command, shall display only the lights specified in subregulation (1).

(4) An airship, while moored within Botswana by night, shall display the following lights —

(*a*) when moored to a mooring mast, at or near the rear, a white light of at least five candelas showing in all directions; and

(*b*) a white light of at least five candelas showing through angles of 70 degrees from dead astern to each side in the horizontal plane.

(5) An airship while flying by day, if it is not under command, or has its engines voluntarily stopped, or is being towed, shall display two black balls suspended below the control car so that one is at least 12 feet above the other and at least 25 feet below the control car.

(6) For the purpose of this regulation —

(*a*) an airship shall be deemed not to be under command when it is Simulated instrument flight conditions unable to execute a manoeuvre which it may be required to execute by or under these Regulations; and

(*b*) an airship shall be deemed to be making way when it is not moored and is in motion relative to the air.

Anti collision light

29. (1) When operating by day, an aircraft fitted with an anti-collision light shall display such light in flight.

(2) An aircraft shall display, when stationary on the apron by day or night with engines running, a red anti-collision light when fitted.

(3) When operating by night all aircraft shall display anti-collision lights, intended to attract attention to the aircraft.

(4) When operating an anti-collision light, the light shall be a flashing or rotating red light which shall show in all directions within 30 degrees above and 30 degrees below the horizontal plane of the aircraft.

(5) In the event of a failure of anti-collision light when flying by day, an aircraft may continue to fly provided that the lights are repaired at the earliest practicable opportunity.

Simulated instrument flight conditions

30. (1) A person shall not operate an aircraft in simulated instrument flight conditions unless —

(*a*) that aircraft has fully functioning dual controls;

(*b*) a qualified pilot occupies a control seat to act as safety pilot for the person who is flying under simulated instrument conditions; and

(*c*) the safety pilot has 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 the vision of the safety pilot.

(2) A person shall not engage in simulated instrument flight conditions during commercial air transport operations.

(3) For purposes of this Regulation the phrase "simulated instrument flight" means a flight during which mechanical or optical devices are used in order to reduce the field of vision or the range of visibility from the cockpit of the aircraft.

Practice instrument approaches

31. An aircraft shall not carry out instrument approach practices when flying in visual meteorological conditions unless —

(*a*) the appropriate ATC unit has previously been informed that the flight is to be made for the purpose of instrument approach practice; and

(*b*) if the flight is not being carried out in simulated instrument flight conditions, an observer approved by the Authority is carried in such a position in the aircraft that the observer has an adequate field of vision and can readily communicate with the PIC flying the aircraft.

Aerodromes not having air traffic control units

32. (1) A person shall not fly within a zone which the PIC knows or ought reasonably to know to be the aerodrome traffic zone of an aerodrome which does not have an ATC unit, except for the purpose of taking off, landing or observing the signals in the signals area with a view to landing, and an aircraft flying within such a zone for the purpose of observing the signals shall remain clear of cloud and at least 500 feet above the level of the aerodrome.

(2) A PIC flying in the zone referred to in subregulation (1) or moving on such an aerodrome shall —

(*a*) conform to the pattern of traffic formed by other aircraft, or keep clear of the airspace in which the pattern is formed;

(*b*) make all turns to the left unless ground signals indicate otherwise or obstacles on the ground require otherwise; and

(*c*) take off and land in the direction indicated by the ground signals or, if no such signals are displayed, into the wind, unless good aviation practice demands otherwise.

(3) A person shall not land an aircraft on a runway at an aerodrome unless the runway is clear of other aircraft.

(4) Where takeoffs and landings are not confined to a runway —

(*a*) an aircraft when landing shall leave clear on its left any aircraft which has already landed or is already landing or is about to take off, and if such aircraft is obliged to turn, it shall turn to the left after the PIC of the aircraft has satisfied himself that such action will not interfere with other traffic movements; and

(*b*) an aircraft about to take off shall take up position and manoeuvre in such a way as to leave clear on its left any aircraft which is already taking off or is about to take off.

(5) An aircraft after landing shall move clear of the landing area in use as soon as it is possible to do so.

Aerodromes having air traffic control units

33. (1) A PIC shall not fly the aircraft within a zone which the PIC knows or ought reasonably to know to be the aerodrome having an ATC unit except for the purpose of taking off, landing or observing the signals area with a view to landing, unless the PIC has the permission of the appropriate ATC unit.

(2) A PIC flying in the aerodrome traffic zone of an aerodrome having an ATC unit or moving on the manoeuvring area of such an aerodrome shall —

(*a*) maintain a continuous listening watch on the appropriate radio frequency notified for ATC communications at the aerodrome, or if this is not possible, cause a watch to be kept for such instructions as may be issued by visual means;

(*b*) not taxi, take off or land except with the permission of the ATC unit; and

(*c*) comply with the provisions of regulation 19 as if the aerodrome did not have an ATC unit, unless the PIC has the permission of the ATC unit at the aerodrome, or has been instructed by that unit, to do otherwise.

Operations on or in the vicinity of an aerodrome

34. (1) A person shall not operate an aircraft to, from, through, or on an aerodrome having an operational control tower unless two-way communication is maintained between that person and the control tower.

(2) When arriving at an aerodrome, a PIC shall establish communications required by subregulation (1), prior to entering the vicinity of a controlled aerodrome, when operating from the surface up to and including 2500 feet.

(3) When departing from an aerodrome, a PIC shall establish communications with the control tower prior to taxi.

(4) A person shall not, at any aerodrome with an operating control tower, operate an aircraft on a runway or taxiway or takeoff or land an aircraft, unless an appropriate clearance has been received from the ATC unit.

(5) A person who takeoffs against an instruction or clearance under subregulation (4) commits an offence and is liable to a fine not exceeding P50 000 or a term of imprisonment not exceeding 10 years, or to both.

(6) A clearance to "taxi to" —

(*a*) the takeoff runway —

(i) is not a clearance to cross or taxi on to that runway, and

(ii) authorises the PIC to cross other runways during the taxi to the assigned runway; and

(*b*) from any other point on the aerodrome is a clearance to cross all runways that intersect the taxi route to the assigned point.

(7) If two-way communication is lost, a PIC may continue a VFR flight operation and land if —

(*a*) the weather conditions are at or above basic VFR minimums; and;

(*b*) clearance to land is received by light signals.

(8) During IFR operations, the two-way communications failure procedures prescribed in regulation 60 shall apply.

Access to and movement in the manoeuvring area

35. (1) A person shall not enter the manoeuvring area of an aerodrome or drive a vehicle on the manoeuvring area of an aerodrome without the permission of the aerodrome control tower in the case of a controlled aerodrome, or in the case of an uncontrolled aerodrome, the person in charge of the aerodrome, and in accordance with any conditions subject to which that permission may have been granted.

(2) A person shall not move, or move a vehicle on the manoeuvring area of an aerodrome having an ATC unit without the permission of that unit and in accordance with any conditions subject to which that permission may have been granted.

(3) Any permission granted for the purpose of this regulation may be granted either in respect of persons or vehicles generally or in respect of any particular person or vehicle or any class of persons or vehicles.

PART IV – *Signals to be displayed by aircraft*

Universal aviation signals

36. (1) Where a signal is given or displayed, or whenever any marking specified in regulations 22, 41 and 42 is displayed by any person in an aircraft, or at an aerodrome, or at any other place which is being used by aircraft for landing or take-off, the signal shall, when given or displayed, have the meaning assigned to it, and no other signals likely to be confused with them shall be used.

(2) Upon observing or receiving any of the signals specified in subregulation (1), a PIC shall take the action that may be required by the interpretation of the signal specified in these Regulations.

(3) A signalman shall be responsible for providing standard marshalling signals to an aircraft in a clear and precise manner using the signals shown in these Regulations.

(4) A person shall not guide an aircraft unless that person is trained and qualified to carry out the functions of a signalman.

(5) A signalman shall wear a distinctive fluorescent identification vest to allow the flight crew to identify that the signalman is the person responsible for the marshalling operation.

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

Misuse of signals and Markings

37. (1) A signal or marking to which a meaning is given by these Regulations, or which is required by these Regulations to be used in circumstances or for a purpose therein specified, and which is given or displayed —

(*a*) by any person in an aircraft;

(*b*) at an aerodrome; or

(*c*) at any other place which is being used by aircraft for landing or take-off, shall not be used except with that meaning, or for that purpose.

(2) A person in an aircraft or on an aerodrome or at any place at which an aircraft is taking off or landing shall not make any signal which may be confused with a signal specified in these Regulations.

Distress signals

38. (1) The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested —

(*a*) a signal made by radiotelegraphy or by any other signalling method consisting of the group SOS (• • • — — — • • • in the Morse Code);

(*b*) a RTF distress signal consisting of the spoken words MAYDAY, MAYDAY, MAYDAY;

(*c*) a distress message sent via data link which transmits the intent of the words MAYDAY, MAYDAY, MAYDAY;

(*d*) pyrotechnic signals, fired one at a time at short intervals; or

(*e*) a parachute flare showing a red light.

(2) No provision in these Regulations shall prevent the use by an aircraft in distress of any means at its disposal to attract attention and make known its position.

Urgency signals

39. (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.

(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 vehicle, train, ship, vessel or aircraft, or of some person on board or within sight —

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

(*b*) a signal sent by RTF consisting of the spoken words PAN, PAN, PAN; or

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

Aircraft interception and interception signals

40. (1) When an aircraft is intercepted a PIC of that aircraft shall comply with the command of the intercepting aircraft, by interpreting and responding to visual signals as shown in Table 3 in Schedule IV.

(2) The intercepting aircraft shall interpret visual signals from an intercepted aircraft as shown in Table 5 in Schedule IV.

Visual signals to warn an unauthorised aircraft entering notified airspace

41. A PIC shall take such remedial action as may be necessary, when by day or night, a series of projectiles is discharged from the ground at intervals of ten seconds, each showing, on bursting, red and green lights or stars indicating to an unauthorised aircraft that it is flying in or about to enter a restricted, prohibited or danger area.

Marshalling signals – signalman to a pilot

42. (1) The marshalling signals shown in Figures 22 to 56 in Schedule V shall be used from a signalman to a PIC of an aircraft.

(2) The signals are designed for use by the signalman, with hands illuminated as necessary to facilitate observation by the PIC, and facing the aircraft in a position —

(*a*) for fixed-wing aircraft, the signalman shall be positioned forward of the left-wing tip within view of the PIC; and

(*b*) for helicopters, where the signalman can best be seen by the PIC.

(3) The meaning of the relevant signals shall remain the same if a marshalling bat, illuminated wand or a torchlight is held.

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

(5) Prior to using the signals, as shown in Figures 21 to 55 in Schedule V the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects.

Marshalling signals- pilot to a signalman

43. A PIC shall use the signals shown in Table 5 in Schedule VI when communicating with a signalman on the ground.

Pre-flight action

44. (1) A PIC shall, before commencing a flight, be familiar with all available information appropriate to the intended operation.

(2) Pre-flight action by a PIC, for a flight away from the vicinity of the place of departure, and for every flight under the IFR, shall include —

(*a*) a careful study of available weather reports and forecasts to determine the fuel requirements; and

(*b*) an alternative course of action if the flight cannot be completed as planned.

(3) A PIC who is unable to communicate by radio with an ATC unit at the aerodrome of destination shall not begin a flight to an aerodrome within a CTR if the information which it is reasonably practicable for the PIC to obtain indicates that he will arrive at that aerodrome when the ground visibility is less than eight kilometres or the cloud ceiling is less than five kilometres, unless the PIC has obtained from an ATC unit at that aerodrome permission to enter the aerodrome traffic zone.

Flight plan

45. A person shall not commence a flight, if he has not submitted a flight plan, except as authorised by the Authority.

Submission of a flight plan

46. (1) Information relating to an intended flight or portion of a flight, to be provided to ATS units, shall be in the form of a flight plan.

(2) A PIC shall, prior to operating one of the following, submit a flight plan for —

(*a*) any flight, or portion thereof, to be provided with ATC service;

(*b*) any IFR flight within advisory airspace;

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

(*d*) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATS authority to facilitate co-ordination with appropriate military units or with ATC units in adjacent states in order to avoid the possible need for interception for the purpose of identification;

(*e*) any flight across international borders; and

(*f*) any flight departing from a manned aerodrome.

(3) A PIC shall submit a flight plan before departure to the appropriate ATS reporting office or during flight, transmit to the appropriate ATS unit unless arrangements have been made for submission of a RPL.

(4) Unless otherwise prescribed by the Authority, a PIC shall submit a flight plan to the appropriate ATS unit —

(*a*) at least sixty minutes before departure for IFR flights or thirty minutes for VFR flights; or

(*b*) if submitted during flight, at a time which shall ensure its receipt by the appropriate ATC unit at least ten minutes before the aircraft is estimated to reach —

(i) the intended point of entry into a CTA or advisory airspace, or

(ii) the point of crossing an AWY or advisory route.

(5) Where a through flight plan, containing such particulars as may be notified is submitted to and accepted by an ATS unit in respect of a flight through a number of intermediate aerodromes, this regulation shall be deemed to have been satisfied in respect of each sector of the flight.

(6) An ATC unit may exempt the PIC from the requirements of this regulation in respect of an intended flight which is to be made in a notified local flying area and in which the aircraft will return to the aerodrome of departure without making an intermediate landing.

(7) In order to comply with the IFR, before an aircraft either takes off from a point within any controlled airspace, or enters any controlled airspace, or in other circumstances prescribed for this purpose, the PIC shall cause a flight plan to be communicated to the appropriate ATC unit and shall obtain an ATC clearance based on that flight plan.

(8) The PIC after he has flown in controlled airspace shall, unless he has requested the appropriate ATC unit to close his flight plan, forthwith inform that unit when the aircraft lands within or leaves that controlled airspace.

Contents of a flight plan

47. (1) A flight plan submitted under these regulations shall contain information, as applicable —

(*a*) on relevant items up to and including an alternate aerodrome regarding the whole route or the portion thereof for which the flight plan is submitted; and

(*b*) on all other items when so prescribed by the Authority or when otherwise deemed necessary by the person submitting the flight plan.

(2) A person filing an IFR or VFR flight plan shall include in it the following information —

(*a*) aircraft identification;
(*b*) flight rules and type of flight;
(*c*) number and type of aircraft and wake turbulence category;
(*d*) equipment;
(*e*) departure aerodrome;
(*f*) EOBT;
(*g*) cruising speed;
(*h*) cruising level;
(*i*) route to be followed;
(*j*) destination aerodrome and total estimated elapsed time;
(*k*) alternate aerodrome;
(*l*) fuel endurance;
(*m*) total number of persons on board;
(*n*) emergency and survival equipment; and
(*o*) other information that may be necessary.

Changes to a flight plan

48. (1) Where a change occurs to a flight plan submitted for an IFR flight or a VFR flight operated as a controlled flight, the PIC shall report that change as soon as practicable to the appropriate ATS unit.

(2) In the case of a VFR flight other than that operated as a controlled flight, the PIC shall report significant changes to a flight plan as soon as practicable to the appropriate ATS unit

(3) Any information submitted prior to departure regarding fuel endurance or total number of persons carried on board, if incorrect at the time of departure, shall be reported to the ATS unit.

(4) A PIC of an aircraft who has caused notice of the aircraft's intended arrival at any aerodrome to be given to the ATS unit or other authority at that aerodrome shall ensure that the ATS unit or other authority at that aerodrome is informed as quickly as possible of any change of intended destination and any estimated delay in arrival of forty five minutes or more.

Closing a flight plan

49. (1) A PIC shall make a report of arrival in person or by radio, via data link or other means of communication to the appropriate ATS unit immediately after landing at the destination aerodrome, unless ATC automatically closes the flight plan.

(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, the PIC shall, when required, close it by an appropriate report to the relevant ATS unit.

(3) When no ATS unit exists at the arrival aerodrome, the PIC shall contact the nearest ATS unit to close the flight plan immediately after landing.

(4) When communication facilities at the arrival aerodrome are known to be inadequate and alternate arrangements for the handling of arrival reports on the ground are not available, the PIC shall immediately prior to landing, transmit to the appropriate ATS unit, a message comparable to an arrival report, where such a report is required.

(5) The transmission referred to in subregulation (4) shall normally be made to the aeronautical station serving the ATS unit in charge of the flight information region in which the aircraft is operated.

(6) A PIC shall include the following elements of information in his arrival reports —

(*a*) aircraft identification;
(*b*) departure aerodrome;
(*c*) destination aerodrome, in the case of a diversionary landing;
(*d*) arrival aerodrome; and
(*e*) time of arrival.

Part VI – *Air traffic services*

Air traffic control clearances

50. (1) A PIC shall not commence a flight in an aircraft unless he has obtained an ATC clearance prior to operating a controlled flight, or a portion of a flight as a controlled flight.

(2) A PIC shall request ATC clearance referred to in subregulation (1) through the submission of a flight plan to an ATC unit.

(3) Where a PIC has requested a clearance involving priority, that PIC shall submit a report explaining the necessity for such priority, if requested by the appropriate ATC unit.

(4) A PIC who fails to adhere to a taxi clearance or instruction issued under subregulation (1) commits an offence and is liable to a fine not exceeding P5 000 or a term of imprisonment not exceeding three months, or to both.

(5) A person operating an aircraft at a controlled aerodrome shall not taxi on the manoeuvring area without clearance from the aerodrome control tower and shall comply with any instructions given by that unit.

(6) The PIC of an aircraft shall fly in conformity with the ATC clearance issued for the flight as amended by any further instructions given by an ATC unit, and with the holding and IAPs, notified in relation to the aerodrome of destination, unless the PIC —

(*a*) is able to fly in uninterrupted visual meteorological conditions for so long as he remains in controlled airspace; and

(*b*) has informed the appropriate ATC unit of his intention to continue the flight in compliance with VFR and has requested that unit to cancel his IFR flight plan.

(7) Where an emergency arises which requires an immediate deviation from an ATC clearance, the PIC of the aircraft shall, as soon as possible, inform the appropriate ATC unit of the deviation.

(8) A PIC who operates within a restricted or prohibited area or within a positive CTA without clearance commits an offence and is liable to a fine not exceeding P50 000 or a term of imprisonment not exceeding 10 years, or to both.

(9) A PIC who deviates from an IAP commits an offence and is liable to a fine not exceeding P10 000 or a term of imprisonment not exceeding six months, or to both.

Potential re-clearance in flight

51. If prior to departure, a PIC anticipates that, depending on fuel endurance and subject to re-clearance in flight, a decision may be taken to proceed to a revised destination aerodrome, he shall notify the appropriate ATC units by the insertion, in the flight plan, of information concerning the revised route, where known, and the revised destination.

Adherence to air traffic control clearances

52. (1) A PIC shall, except as provided for in regulations 50 and 54, adhere to the CPL or the applicable portion of a CPL submitted for a controlled flight unless a request for a change has been made and clearance obtained from the appropriate ATC unit, or unless an emergency situation arises which necessitates immediate action by the PIC, in which event as soon as circumstances permit, after such emergency authority is exercised, the appropriate ATC unit shall be notified of the action taken and that this action has been taken under emergency authority.

(2) Subregulation (1) does not prohibit a PIC from cancelling an IFR clearance when operating in visual meteorological conditions or cancelling a controlled flight clearance when operating in airspace that does not require controlled flight.

(3) When operating in airspace requiring controlled flight, a PIC shall not operate contrary to ATC instructions, except in an emergency.

(4) A PIC who deviates from an ATC clearance or instructions in an emergency shall notify ATC of that deviation as soon as possible.

Route to be flown

53. (1) Unless otherwise authorised or directed by the appropriate ATC unit, a PIC of a controlled flight shall, in so far as practicable —

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

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

(2) A PIC shall notify the appropriate ATC unit of any deviation from the requirements in subregulation (1).

(3) A PIC of a controlled flight operating along an ATS route defined by reference to very high frequency omnidirectional (VOR) range shall change over for primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the change-over point, where established.

Air traffic control clearance inadvertent changes

54. (1) A PIC of an aircraft shall take the following action in the event that a controlled flight inadvertently deviates from its CPL —

(*a*) if the aircraft is off track, the PIC shall adjust the heading of the aircraft to regain track as soon as practicable;

(*b*) the PIC shall inform the appropriate ATC unit if the average true airspeed at cruising level between reporting points varies from that given in the flight plan or is expected to vary by plus or minus five per cent of the true airspeed; and

(*c*) the PIC shall notify the appropriate ATC unit and give a revised estimated time as soon as possible if the time estimate for the next applicable reporting point is found to be in error in excess of three minutes from that notified to ATC unit, or such other period of time as is prescribed by the appropriate ATS authority or on the basis of air navigation regional agreements.

(2) Where an ADS agreement is in place, air traffic service unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.

Air traffic control clearance-intended changes

55. A PIC requesting for ATC clearance changes shall include the following information in the request —

(*a*) for change of cruising level —

(i) aircraft identification,

(ii) requested new cruising level and cruising speed at this level, and

(iii) revised time estimates, when applicable, at subsequent flight information region boundaries; or

(*b*) for change of route —

(i) destination unchanged —

(*aa*) aircraft identification;

(*bb*) flight rules;

(*cc*) description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence;

(*dd*) revised time estimates; and

(*ee*) any other pertinent information,

(ii) destination changed —

(*aa*) aircraft identification;

(*bb*) flight rules;

(*cc*) 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;

(*dd*) revised time estimate;

(*ee*) alternate aerodrome; and

(*ff*) any other relevant information.

Position reports

56. (1) A PIC of a controlled flight shall report to the appropriate ATC unit, as soon as possible —

(*a*) the time and level of passing a designated compulsory reporting point, except that while the aircraft is under radar control, only the passing of those reporting points specifically requested by an ATC unit need be reported, together with any other required information, unless exempted from this requirement by the appropriate ATC unit under conditions specified by the Authority;

(*b*) any unforecasted weather conditions encountered; and

(*c*) any other information relating to the safety of flight, such as hazardous weather or abnormal radio station indications.

(2) A PIC of a controlled flight shall make position reports in relation to additional points when requested by the appropriate ATC unit.

(3) In the absence of designated reporting points, a PIC of a controlled flight shall make position reports at intervals prescribed by the Authority or specified by the appropriate ATC unit.

(4) A PIC of a controlled flight providing position information to the appropriate ATC unit via data link communications shall only provide voice position reports when requested.

(5) A PIC of a controlled flight shall, except when landing at a controlled aerodrome, advise the appropriate ATC unit as soon as the flight ceases to be subject to ATC service.

Communications

57. (1) A person operating an aircraft as a controlled flight shall maintain a continuous air-ground voice communication watch on the appropriate radio frequency of, and establish two-way communication as required, with, the appropriate ATC unit.

(2) Automatic signalling devices may be used to satisfy the requirement to maintain a continuous listening watch, if authorised by the Authority.

Communication failure – air-to-ground

58. (1) Where a PIC has been unable to establish contact with an aeronautical ground station in order to comply with regulation 57 the PIC shall attempt to establish communications with the appropriate ATC unit using all other available means.

(2) Where an aircraft forms part of the aerodrome traffic at a controlled aerodrome, the PIC shall keep a watch for instructions that may be issued by visual signals.

(3) Where an aircraft is equipped with SSR transponder, the PIC shall select Mode A, Code 7600.

(4) If a PIC is unable to establish communication in accordance with subregulation (1) and is in visual meteorological conditions, the PIC shall —

(*a*) continue to fly in visual meteorological conditions; and

(*b*) land at the nearest suitable aerodrome and report his arrival by the most expeditious means to the appropriate ATC unit; or

(*c*) if considered advisable, complete an IFR flight in accordance with subregulation (5).

(5) Where a PIC is unable to establish communication in accordance with subregulation (1) and is in IMC or when the PIC of an IFR flight considers it inadvisable to complete the flight in accordance with subregulation (4) (*a*) and (*b*), the PIC shall —

(*a*) in airspace where radar is not used in the provision of ATC, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of twenty minutes following the PIC's failure to report the aircraft's position over a compulsory reporting point and thereafter adjust level and speed in accordance with the FLT;

(*b*) proceed according to the CPL route to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure compliance with sub-paragraph (*c*) below, hold over this aid or fix until commencement of descent;

(*c*) commence descent from the navigation aid or fix specified in sub-paragraph (*b*) at, or as close as possible to the EAT last received and acknowledged or, if no EAT has been received and acknowledged, at or as close as possible to the ETA resulting from the CPL;

(*d*) complete a normal IAP as specified for the designated navigation aid or fix;

(*e*) land, if possible, within thirty minutes after the ETA specified in subparagraph (*e*) or the last acknowledged EAT, whichever is later; and

(*f*) if unable to land as specified in sub-paragraph (*e*), the PIC shall not approach to land visually but shall leave the vicinity of the aerodrome and any associated controlled airspace at the specified altitude on a specified route, and if no altitude or route is specified the PIC shall fly at the last assigned altitude or minimum sector altitude, whichever is the higher, to avoid areas of dense traffic, then the PIC shall either —

(i) fly to an area in which flight may be continued in visual meteorological conditions and land at a suitable aerodrome there, or

(ii) select a suitable area in which to descend through cloud, fly visually to a suitable aerodrome and land as soon as practicable.

(6) Where a PIC is unable to establish communication in accordance with subregulation (1) and is in IMC or when the PIC of an IFR flight considers it inadvisable to complete the flight in accordance with subregulation (4) (*a*) and (*b*), the PIC shall —

(*a*) in airspace where radar is used in the provision of ATC, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of seven minutes following —

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

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

(iii) the PIC's failure to report the aircraft's position over a compulsory reporting point; whichever is later, and thereafter adjust level and speed in accordance with the FLT;

(*b*) when being radar vectored or having been directed by ATC to proceed offset using Area Navigation without a specified limit, rejoin the CPL route no later than the next significant point, taking into consideration the applicable minimum flight altitude; and

(*c*) the provisions of regulation 5 (*b*), (*c*), (*d*), (*e*) and (*f*) shall also apply.

Communication failure – ground-to-air

59. (1) Where an aeronautical station has been unable to establish contact with a PIC after calls on the frequencies on which the PIC is believed to be listening, the station shall —

(*a*) request other aeronautical stations to render assistance by calling the PIC and relaying traffic information, if necessary; or

(*b*) request the PIC of other aircraft on the route to attempt to establish communication with the aircraft and relay traffic information, if necessary.

(2) The provisions of subregulation (1) shall also be applied —

(*a*) on request of the air traffic service unit concerned; or

(*b*) when an expected communication from a PIC has not been received within thirty minutes of a communication failure being suspected.

(3) Where the attempts specified in subregulation (1) fail, the aeronautical station shall transmit messages addressed to the PIC, other than messages containing ATC clearances, by blind transmission on the frequency on which the PIC is believed to be listening.

Unlawful interference of aircraft

60. (1) A PIC of an aircraft which is being subjected to an unlawful interference shall endeavour to notify the appropriate ATS unit —

(*a*) of the unlawful interference;

(*b*) of any significant circumstances associated with the unlawful interference; and

(*c*) of any deviation from the CPL 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) A PIC shall, when and if possible, operate the SSR Mode A Code 7500 to indicate that the aircraft is being subjected to an unlawful interference, and where circumstances require, a SSR Mode A, Code 7700 to indicate that it is threatened by grave and imminent danger and requires immediate assistance.

(3) When an air traffic service unit knows or believes that an aircraft is being subjected to an 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.

Lawful interception of aircraft

61. (1) Interception of a civil aircraft shall —

(*a*) be undertaken only as a last resort;

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

(*c*) not be undertaken for practice of interception of civil aircraft;

(*d*) ensure that navigational guidance and related information will be given to an intercepted aircraft by RTF, whenever radio contact can be established; and

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

(2) A PIC of a civil aircraft when intercepted shall immediately —

(*a*) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in regulation 40;

(*b*) notify, if possible, the appropriate air traffic service unit;

(*c*) attempt to establish radio communication with the intercepting aircraft or with the appropriate intercepting 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, repeat this call on the emergency frequency 243 MHz; or

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

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

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

(5) In intercepting a civil aircraft, the intercepting aircraft shall take due account of the performance limitations of civil aircraft, the need to avoid flying in such proximity to the intercepted aircraft that a collision hazard may be created and the need to avoid crossing the intercepted aircraft's flight path or to perform any other manoeuvre in such a manner that the wake turbulence may be hazardous, particularly if the intercepted aircraft is a light aircraft.

(6) PICs of intercepting aircraft equipped with a SSR transponder shall suppress the transmission of pressure-altitude information (in Mode C replies or in the AC field of Mode S replies) within a range of at least 37 kilometres of the aircraft being intercepted in order to prevents the ACAS in the intercepted aircraft from using resolution advisories in respect of the interceptor, while the ACAS traffic advisory information will remain available.

(7) 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 6 in Schedule VII and transmitting each phrase twice.

Miscellaneous

Reporting of hazardous conditions

62. A PIC shall, on encountering with hazardous conditions in the course of a flight, or as soon as possible thereafter, send, to the appropriate air traffic service unit by the quickest means available, information containing such particulars of the hazardous conditions as may be pertinent to the safety of other aircraft.

Classification of airspace

63. ATS airspaces classification in Botswana is shown in the Aeronautical Information Publication and classified and designated in accordance with Table 7 in Schedule VIII.

Powers of pilot-in-command

64. The PIC shall have the final authority as to the disposition of the aircraft while in command.

Flight in Class A airspace

65. A PIC shall, in relation to flights in visual meteorological conditions in Class A airspace, comply with regulations 68 and 52 as if the flights were IFR flights but shall not elect to continue the flight in compliance with the VFR for the purposes of regulation 68.

Co-ordination of activities potentially hazardous to civil aircraft

66. (1) A person shall not carry out activities potentially hazardous to aircraft whether flying over Botswana or over the territorial waters of Botswana without approval from the Authority.

(2) Notwithstanding the generality of subregulation (1) —

(*a*) a person shall not intentionally project, or cause to be projected, a laser beam or other directed high intensity light at an aircraft in such a manner as to create a hazard to aviation safety, damage to the aircraft or injury to its crew or passengers;

(*b*) a person using or planning to use lasers or other directed high-intensity lights outdoors in such a manner that the laser beam or other light beam may enter navigable airspace with sufficient power to cause an aviation hazard shall provide written notification to the competent authority; and

(*c*) a PIC shall not deliberately operate an aircraft into a laser beam or other directed high-intensity light unless flight safety is ensured.

(3) A person shall not release into the atmosphere any radio active material or toxic chemicals which could affect the safety of aircraft.

PART VII – *Visual Flight Rules*

Weather limitations for visual flight rules flights

67. (1) A person shall not commence a flight to be conducted in accordance with VFR unless —

(*a*) available current meteorological reports, or a combination of current reports and forecasts, indicate that the meteorological conditions along the route; or

(*b*) part of the route to be flown under VFR, shall, at the appropriate time, allow VFR operations.

(2) Any person who contravenes the provision of subregulation (1) commits an offence and is liable to a fine not exceeding P25 000 or a term of imprisonment not exceeding five years, or to both.

Visual meteorological conditions

68. Except when operating a SVFR flight, a person shall conduct a flight so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in Table 8 in Schedule IX.

Visual flight rules within a control zone

69. A PIC of a VFR flight shall not take off or land at an aerodrome within a CTR, or enter the aerodrome traffic zone or traffic pattern when —

(*a*) the ceiling is less than 1 500 feet; or

(*b*) the ground visibility is less than five kilometres, except when a VFR clearance is obtained from an ATC unit.

Minimum safe visual flight rules altitudes

70. A VFR flight shall not be flown, except when necessary for take-off or landing, or except by permission from the Authority —

(*a*) over congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 1 500 feet above the highest obstacle within a radius of 600 metres from the aircraft; or

(*b*) elsewhere than specified in paragraph (*a*), at a height less than 500 feet above the ground or water.

Air traffic control clearances for visual flight rules flights

71. A PIC of a VFR flight shall comply with the provisions of regulations 50, 51, 52, 54, 55, 56 and 58 when —

(*a*) operating within Class C airspace;

(*b*) forming part of aerodrome traffic at controlled a aerodrome; or

(*c*) operating as a special VFR flight.

Weather deterioration below visual meteorological conditions

72. A PIC of a VFR flight operated as a controlled flight shall, when it becomes evident that flight in visual meteorological conditions in accordance with its current control flight plan will not be practicable —

(*a*) request an amended clearance enabling the aircraft to continue in visual meteorological conditions to its destination or to an alternative aerodrome, or to leave the airspace within which an ATC clearance is required;

(*b*) if no clearance can be obtained in accordance with paragraph (*a*), continue to operate in visual meteorological conditions 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;

(*c*) if operating within a CTR, request authorisation to operate as a SVFR; or

(*d*) request clearance to operate in IFR, if currently rated for IFR operations.

Visual flight rules flight within designated areas

73. A PIC operating a VFR flight within or into areas, or along routes, designated by the Authority in accordance with regulation 46 (2) (*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 ATS unit providing FIS.

Choice of visual flight rules or instrument flight rules

74. (1) Subject to regulation 65 a person shall fly an aircraft in accordance with VFR or IFR, provided that —

(*a*) an aircraft flying at night shall be flown in accordance with the IFR, or, in a CTR, in accordance with the IFR or the provisions of regulation 75; and

(*b*) irrespective of meteorological conditions, the PIC shall, when operating at or above flight level 150, fly in accordance with IFR.

(2) A person shall not operate an aircraft in VFR unless authorised by the Authority to operate —

(*a*) above flight level 145;

(*b*) at night; or

(*c*) at supersonic or transonic speeds.

Special visual flight rules flight

75. (1) A PIC flying an aircraft in a CTR, in the case of a SVFR flight shall remain clear of cloud and in sight of the ground or water and shall fly the aircraft in accordance with any instructions given by the appropriate ATC unit.

(2) A PIC flying a SVFR flight shall not fly in a CTR when the flight visibility is less than 1 500 metres or the ceiling is less than 500 feet.

Changing from visual flight rules to instrument flight rules

76. A PIC operating in VFR who wishes to change to IFR shall —

(*a*) where a flight plan was submitted, communicate the necessary changes to be effected to the CPL; or

(*b*) when so required by the provisions of regulation 46, submit a flight plan to the appropriate ATC unit and obtain a clearance prior to proceeding to operate in IFR when in controlled airspace.

PART VIII – *Instrument Flight Rules*

Aircraft equipment

77. (1) A PIC shall ensure that an aircraft is equipped with suitable instruments and with navigation equipment appropriate to the route to be flown to enable the operation of an IFR flight.

(2) A PIC who operates an aircraft without the required equipment in accordance subregulation (1) commits an offence and is liable to a fine not exceeding P5 000 or a term of imprisonment not exceeding three months, or to both.

Instrument flight rules flights in controlled airspace

78. A PIC of an aircraft operating an IFR flight in controlled airspace shall —

(*a*) fly the aircraft at a cruising level, or, if authorized to employ cruise climb techniques between two levels or above a level, selected from —

(i) Table 1 in Schedule I in areas where, on the basis of regional air navigation agreements and in accordance with conditions specified therein, a vertical separation minimum of 1000 feet is applied between flight level 290 and flight level 410 inclusive, or

(ii) a modified table of cruising levels, when so prescribed in accordance with Table 1 in Schedule I for flight above FL410;

except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in ATC clearances or specified by the Authority in the Aeronautical Information Publication; and

(*b*) comply with the provisions of regulations 50, 51, 52, 54, 55, 56 a nd 57.

Instrument flight rules flights outside controlled airspace

79. A PIC operating an IFR flight outside a controlled airspace —

(*a*) shall fly at a cruising level selected from Table 1 in Schedule I;

(*b*) but within or into areas, or along routes specified in regulation 46 subregulation (2) (*c*) or (*d*), shall maintain a listening watch on the appropriate communication channel and establish two-way communication, as necessary with ATS unit providing FISs; and

(*c*) shall report the aircraft's position as required by the provisions of regulation 56.

Malfunction reports-operation under instrument flight rules in controlled airspace

80. (1) A PIC of an aircraft operated in controlled airspace under IFR shall report as soon as practical to ATC unit any malfunctions of navigation, approach, or communication equipment occurring in flight.

(2) The PIC shall include in each report specified in subregulation (1) —

(*a*) the aircraft identification;

(*b*) the equipment affected;

(*c*) the degree to which the capability of the PIC to operate under IFR in the ATC system is impaired; and

(*d*) the nature and extent of assistance desired from ATC unit.

Minimum flight altitudes for instrument flight rules operations

81. (1) A PIC shall, except when necessary for take off or landing, fly an IFR flight at a level which is not below the minimum flight altitude established by the authority of the State whose territory is overflown.

(2) A PIC shall, where the authority of a State whose territory is overflown has not established a minimum flight attitude —

(*a*) operate an IFR flight for flights over high terrain or in mountainous areas, at a level which is at least 2 000 feet above the highest obstacle located within eight kilometres of the estimated position of the aircraft; or

(*b*) operate an IFR flight for flights elsewhere than as specified in sub-paragraph (*a*), at a level which is at least 1 000 feet above the highest obstacle located within eight kilometres of the estimated position of the aircraft.

Change from instrument flight rules flight to visual flight rules flight

82. (1) A PIC electing to change from IFR flight to VFR flight shall notify the appropriate ATC unit specifically, that the IFR flight is cancelled and then communicate the changes to be made to the CPL.

(2) Where a PIC operating under IFR is flying in or encounters visual meteorological conditions, the PIC shall not cancel the IFR flight unless it is anticipated, and intended, that the flight shall be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

(3) A PIC who contravenes the provisions of this regulation commits an offence and is liable to a fine not exceeding P5 000 or a term of imprisonment not exceeding three months, or to both

PART IX – *Offences and Penalties*

Offences and Penalties

83. (1) A person who contravenes any direction issued under these Regulations commits an offence.

(2) Where any provision of these Regulations is contravened in relation to an aircraft, the operator of that aircraft and the PIC, if the operator or the PIC is not the person who contravened that provision shall, without prejudice to the liability of any other person under these Regulations for that contravention, be deemed for the purposes of the following provisions of this regulation to have contravened that provision unless he proves that the contravention occurred without his consent or connivance and that he exercised all due diligence to prevent the contravention.

(3) Any person who commits an offence or unlawful act for which no specific penalty has been specified shall be liable to a fine not exceeding P50 000, or to a term of imprisonment not exceeding 10 years, for each offence.

SCHEDULE I
(reg. 13 (3) and (4))

TABLE 1 – TABLE OF CRUISING LEVELS

TRACK**											
From 000 Degrees to 179 Degrees***						From 180 Degrees to 359 Degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
FL	Altitude Meters	Feet	FL	Altitude Meters	Feet	FL	Altitude Meters	Feet	FL	Altitude Meters	Feet
-90	–	–	–	–	–	0	–	–	–	–	–
10	300	1000	–	–	–	20	600	2000	–	–	–
30	900	3000	35	1050	3500	40	1200	4000	45	1350	4500
50	1500	5000	55	1700	5500	60	1850	6000	65	2000	6500
70	2150	7000	75	2300	7500	80	2450	8000	85	2600	8500
90	2750	9000	95	2900	9500	100	3050	10000	105	3200	10500
110	3350	11000	115	3500	11500	120	3650	12000	125	3800	12500
130	3950	13000	135	4100	13500	140	4250	14000	145	4400	14500
150	4550	15000				160	4900	16000			
170	5200	17000				180	5500	18000			
190	5800	19000				200	6100	20000			
210	6400	21000				220	6700	22000			
230	7000	23000				240	7300	24000			
250	7600	25000				260	7900	26000			
270	8250	27000				280	8550	28000			
290	8850	29000		300	9150	30000					
310	9450	31000		320	9750	32000					
330	10050	33000		340	10350	34000					
350	10650	35000		360	10950	36000					
370	11300	37000		380	11600	38000					
390	11900	39000		400	12200	40000					
410	12500	41000		430	13100	43000					
450	13700	45000		470	14350	47000					
490	14950	49000		510	15550	51000					
etc.	etc.	etc.		etc.	etc.	etc.					

NB: in areas where on the basis of regional air navigation agreements and in accordance with conditions specified therein, a vertical separation minimum (VSM) of 300 m (1000 ft) is applied between FL 290 and FL 410 inclusive.

Note: Guidance material relating to vertical separation is contained in ICAO Doc 9574, Manual on the Implementation of a 300 m (1,000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive. The system of flight levels is prescribed in ICAO Doc 8168, Procedures for Air Navigation Services.

SCHEDULE II
(reg. 21)

Lights to be displayed by an aircraft

(1) An aircraft when in flight shall be equipped with the following navigation lights as illustrated in Figure 1 —

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

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

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

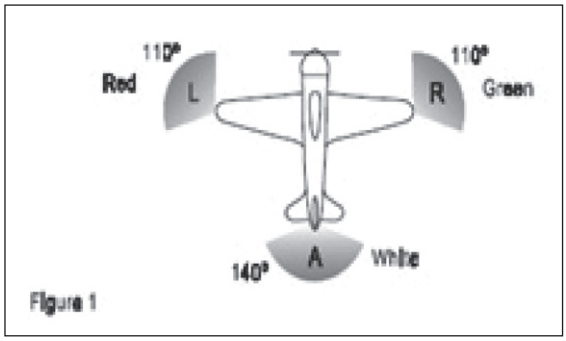


Figure 1

(2) The following lights shall be displayed on the water in each of the following circumstances —

(*a*) when under way, appearing as steady unobstructed lights, as illustrated in Figure 2 —

(i) a red light projected above and below the horizontal through angle of coverage L visible at a distance of at least 3.7 kilometres;

(ii) a green light projected above and below the horizontal through angle of coverage R visible at a distance of at least 3.7 kilometres;

(iii) a white light projected above and below the horizontal through angle of coverage A visible at a distance of at least 3.7 kilometres;

(iv) a white light projected through angle of coverage F shall be visible at distance of 9.3 kilometres when fitted to an aeroplane of 20 m or more in length or visible at a distance of 5.6 kilometres when fitted to an aeroplane of less than 20 m in length.;

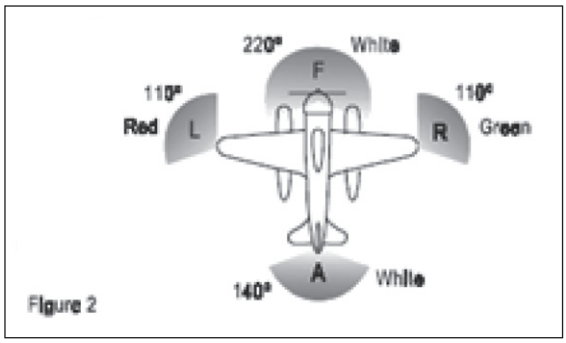


Figure 2

(*b*) when towing another vessel or aeroplane, appearing as steady unobstructed lights, as illustrated in Figure 3 —

(i) the lights described in (2)(*a*);

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

(iii) a yellow light having otherwise the same characteristics as the light described in (2) (*a*)

(iii) and mounted in a vertical line at least 2 m above it.

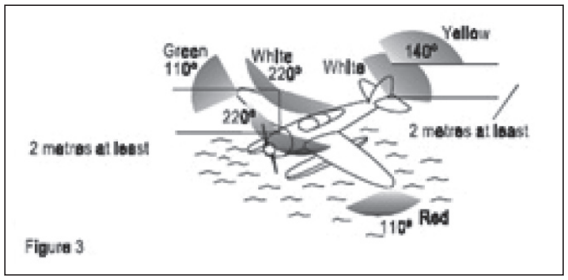


Figure 3

(*c*) when being towed, appearing as steady unobstructed lights, the lights described in (2)(*a*)(i) to (iii);

(*d*) when not under command and not making way, as illustrated in Figure 4, two steady red lights placed where they can best be seen, one vertically over the other and not less than 1 m apart, and of such a character as to be visible all around the horizon at a distance of at least 3.7 kilometres (2 nautical miles).

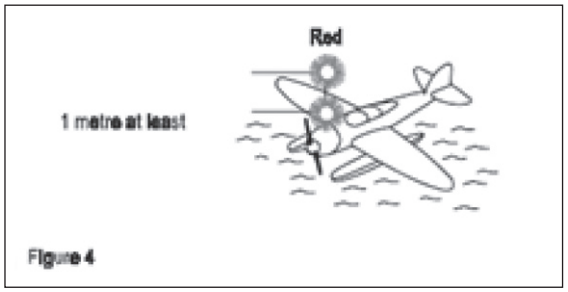


Figure 4

(*e*) when making way but not under command, as illustrated in Figure 5 the lights described in (2)(*a*)(i) to (iii) plus the lights described in (2)(*d*) and the display of lights prescribed in (2)(*e*)(i) shall be taken by other aircraft as signals that the aeroplane showing them is not under command and cannot therefore get out of the way and are not signals aeroplanes in distress and requiring assistance.

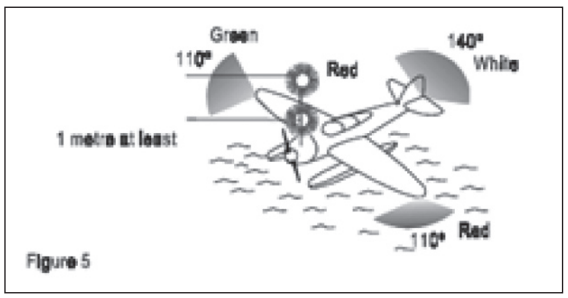


Figure 5

(*f*) when at anchor —

(ii) if less than 50 m in length, where it can best be seen, a steady white light, as illustrated in Figure 6, visible all around the horizon at a distance of at least 3.7 kilometres (2 nautical miles);

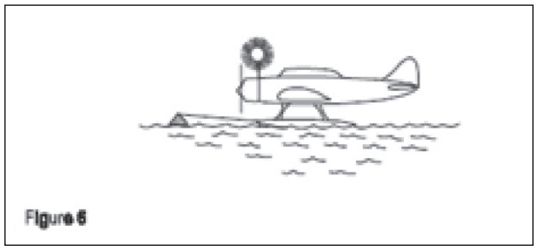


Figure 6

(iii) if 50m or more in length, where they can best be seen, a steady white forward light and a steady white rear light, as illustrated in Figure 7, both visible all around the horizon at a distance of at least 5.6 kilometres (3 nautical miles);

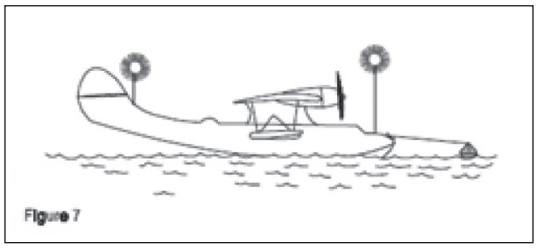
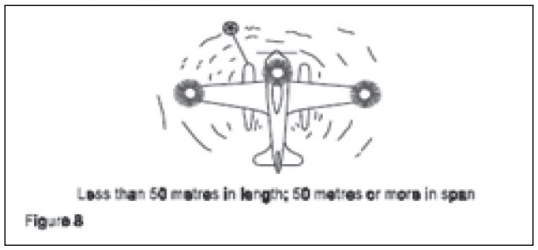


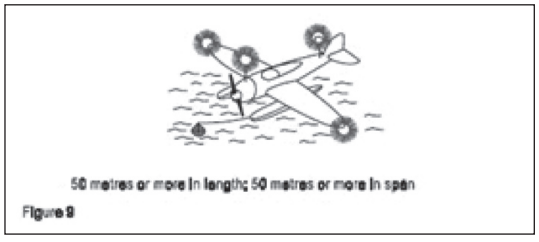
Figure 7

(iv) if 50 m or more in a span steady white light on each side, as illustrated in Figures 8 and 9, to indicate the maximum span and visible, so far as practicable, all around the horizon at a distance of at least 1.9 kilometres (1 nautical miles).



Less than 50 metres in length; 50 metres or more in span

Figure 8



50 metres or more in length; 50 metres or more in span

Figure 9

(*g*) when aground, the lights prescribed in (2)(*f*) and in addition two steady red lights in vertical line, at least 1 meter apart so placed as to be visible all around the horizon.

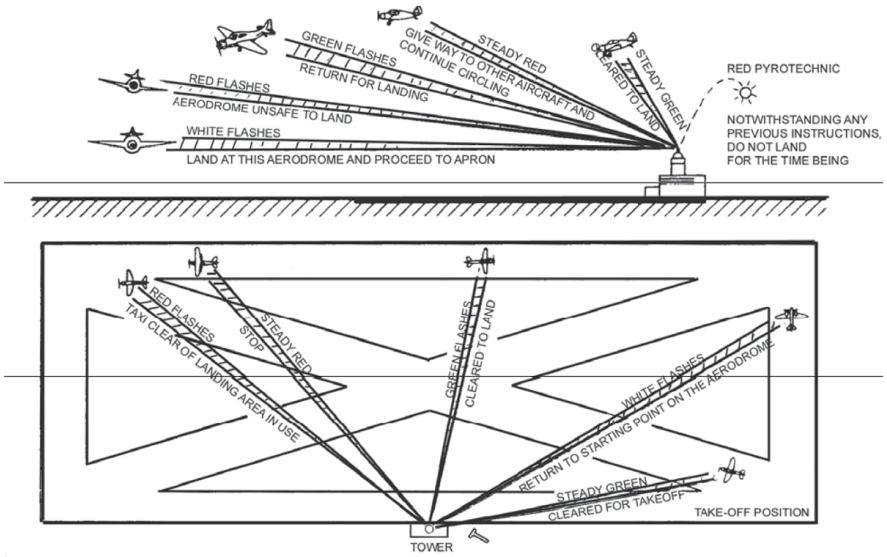
SCHEDULE III
(reg. 22 (1) and (3))

TABLE 4 – LIGHT AND PYROTECHNIC SIGNALS FROM AERODROME CONTROL

Light		From Aerodrome control tower to	
		Area in flight	Aircraft on the ground Stop
Directed towards aircraft concerned	Steady green	• Cleared to land	Cleared for takeoff
	Steady red	• Give way to other traffic and continue circling	Taxi clear of landing area in use
	Series of green flashed	• Return for landing	
	Series of red flashed	• Aerodrome unsafe, do not land	Return to starting point on the aerodrome
	Series of white flashes	• Land at this aerodrome and proceed to apron	
Red pyrotechnic		Notwithstanding any previous instructions, do not land for the time being.	

(reg. 22 (1))

Figure 10 – Light and Pyrotechnic Signals from Aerodrome Control



(reg. 22 (3))

Visual ground signals

(*a*)

Figure 11

prohibition of landing – a horizontal red square panel with yellow diagonals, as shown in Figure 11 when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged;

(*b*)

Figure 12

need for special precautions while approaching or landing – a horizontal red square panel with one yellow diagonal, as shown in Figure 12 when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions must be observed in approaching to land or in landing;

(*c*)

Figure 13

Figure 14

use of runways and taxiways-

(i) a horizontal white dumb-bell, as shown in Figure 13 when displayed in a signalarea indicates that aircraft are required to land, take off and taxi on runways and taxiways only;

(ii) the same horizontal white dumb-bell as in Figure 13 but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell, as shown in Figure 14 when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways;

(*d*)

Figure 15

closed runways or taxiways - crosses of a single contrasting colour, yellow or white, as shown in Figure 15, displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft;

(*e*)

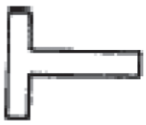


Figure 16

Figure 17

directions for landing or take-off —

(i) a horizontal white or orange landing T , as shown in Figure 16, 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 and when used at night, the landing T is either illuminated or outlined in white coloured lights.

(ii) a set of two digits , as shown in Figure 17, displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass;

(*f*)

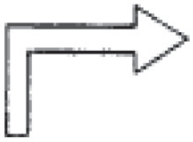


Figure 18

right-hand traffic - when displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour , as shown in Figure 18 indicates that turns are to be made to the right before landing and after take-off;

(*g*)

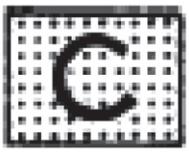


Figure 19

ATS reporting office - the letter C displayed vertically in black against a yellow background , as shown in Figure 19 indicates the location of the ATS reporting office;

(*h*)

Figure 20

glider flights in operation- a double white cross displayed horizontally , as shown in Figure 20 in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

SCHEDULE IV
(reg. 40 (1))

TABLE 3 – SIGNALS INITIATED BY INTERCEPTING 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. 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.	You have been intercepted. Follow me.	DAY or NIGHT - Rocking aircraft. Flashing navigational lights at irregular intervals and following.	Understood, will comply.
2	DAY or NIGHT - An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT - Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT - Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT - Lowering landing gear (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

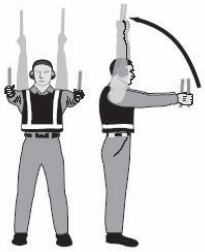
(reg. 40 (2))

TABLE 4 – SIGNALS INITIATED BY INTERCEPTING AIRCRAFT AND RESPONSES BY INTERCEPTING AIRCRAFT

Series	INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responds	Meaning
4	DAY or NIGHT - Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300m (1,000 ft) but not exceeding 600 m (2,000 ft) (in the case of a helicopter, at a height exceeding 50m (170 ft) but not exceeding 100m (330 ft) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT - If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the series 1 signals prescribed for intercepting aircraft. If it is decided to release the incepted aircraft. The intercepting aircraft uses the series 2 signals prescribed for intercepting aircraft.	Understood, follow me. I 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.

SCHEDULE V
(reg.42 (1))

MARSHALLING SIGNALS

 Figure 21	**Wingwalker/guide** Raise right hand above head level with wand pointing up; move left-hand wand pointing down toward body. *Note — This signal provides an indication by a person positioned at the aircraft wing tip, to the pilot/ marshaller/ push-back operator, that the aircraft movement on/off a parking position would be unobstructed.*
 Figure 22	**Identify gate** Raise fully extended arms straight above head with wands pointing up.
 Figure 23	**Proceed to next signalman or as directed by tower/ground control** Point both arms upward; move and extend arms outward to sides of body and point with wands to direction of next signalman or taxi area.
 Figure 24	**Straight ahead** Bend extended arms at elbows and move wands up and down from chest height to head.

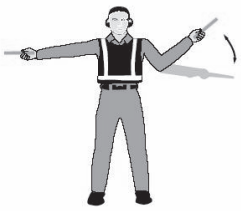
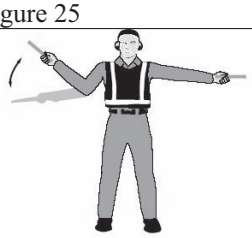
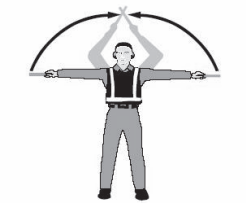
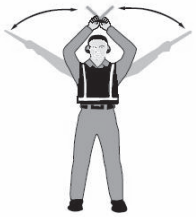
 Figure 25	**Turn left (from PIC's point of view)** With right arm and wand extended at a 90-degree angle to body, make "come ahead" signal with left hand. The rate of signal motion indicates to PIC the rate of aircraft turn.
 Figure 26	**Turn right (from PIC's point of view)** With left arm and wand extended at a 90-degree angle to body, make "come ahead" signal with right hand. The rate of signal motion indicates to PIC the rate of aircraft turn
 Figure 27	**Normal stop** Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.
 Figure 28	**Emergency stop** Abruptly extend arms and wands to top of head, crossing wands.

 Figure 29	**Set brakes** Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. **Do not** move until receipt of "thumbs up" acknowledgement from flight crew.
 Figure 30	**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.
 Figure 31	**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.
 Figure 32	**Chocks removed** With arms and wands fully extended above head, move wands outward in a "jabbing" motion. **Do not** remove chocks until authorized by flight crew.

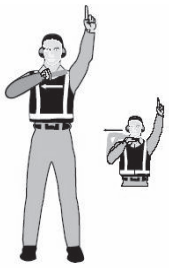
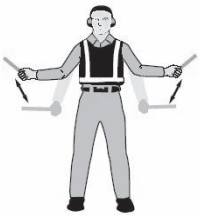
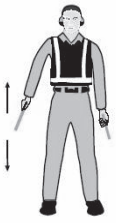
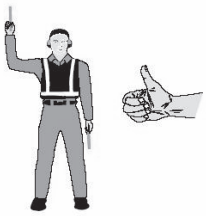
 Figure 33	**Start engine(s)** Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.
 Figure 34	**Cut engines** Extend arm with wand forward of body at shoulder level; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.
 Figure 35	**Slow down** Move extended arms downwards in a "patting" gesture, moving wands up and down from waist to knees.
 Figure 36	**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.

 Figure 37	**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).
 Figure 38	**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.
 Figure 39	**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.
 Figure 40	**Affirmative/all clear** Raise right arm to head level with wand pointing up or display hand with “thumbs up”; left arm remains at side by knee. *Note. — This signal is also used as a technical/servicing communication signal.*

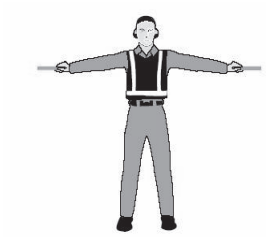
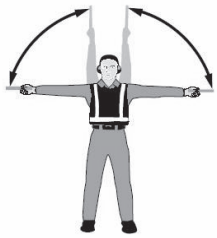
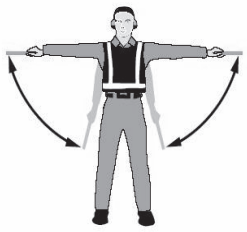
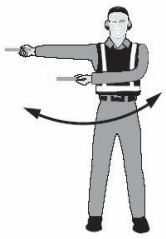
 Figure 41	***Hover** Fully extend arms and wands at a 90-degree angle to sides.
 Figure 42	***Move upwards** Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upwards. Speed of movement indicates rate of ascent.
 Figure 43	***Move downwards** Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downwards. Speed of movement indicates rate of descent.
 Figure 44	***Move horizontally left (from PIC'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.

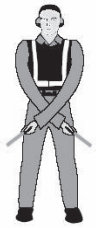
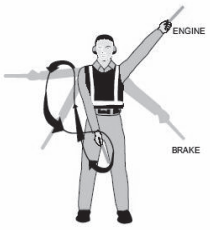
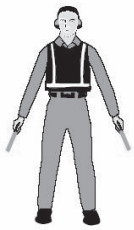
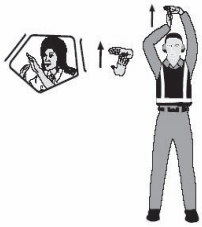
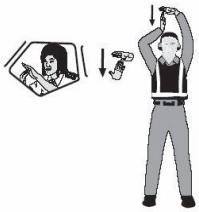
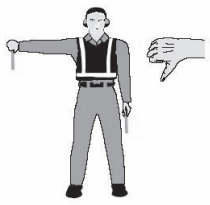
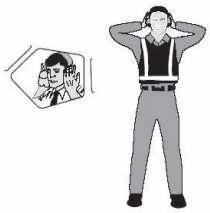
 Figure 45	***Move horizontally right (from PIC's point of view)** Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.
 Figure 46	***Land** Cross arms with wands downwards and in front of body.
 Figure 47	**Fire** Move right-hand wand in a "fanning" motion from shoulder to knee, while at the same time pointing with left-hand wand to area of fire.
 Figure 48	**Hold position/stand by** Fully extend arms and wands downwards at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.

 Figure 49	**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.
 Figure 50	**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.
 Figure 51	**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.
 Figure 52	**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.

 Figure 53	**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.
 Figure 54	**Establish communication via interphone (technical/servicing communication signal)** Extend both arms at 90 degrees from body and move hands to cup both ears.
 Figure 55	**Open/close stairs (technical/servicing communication signal)** With right arm at side and left arm raised above head at a 45-degree angle, move right arm in a sweeping motion towards top of left shoulder. *Note.— This signal is intended mainly for aircraft with the set of integral stairs at the front.*

SCHEDULE VI
(reg. 43)

TABLE 5 – MARSHALLING SIGNALS PILOT TO GROUND SIGNALMAN

Description of Signal	Meaning of Signal
(a) Raise arm and hand with fingers extended horizontal in front of face, then clench fist.	Brakes engaged.
(b) Raise arm with fist clenched horizontally in front of face, then extend fingers.	Brakes released.
(c) Arms extended palms facing outwards, move hands inwards to cross in front of face.	Insert chocks.
(d) Hands crossed in front of face, palms facing outwards, move arms outwards.	Remove chocks.
(e) Raise the number of fingers on the hand indicating the number of the engine to be started. For this purpose the aircraft engines shall be numbered in relation to the marshaller facing the aircraft, from his right to his left, for example No. 1 engine shall be the port outer engine, number 2 engine shall be the port inner engine, number 3 engine shall be the starboard inner engine and number 4 engine shall be the starboard outer engine.	Ready to start engine.

SCHEDULE VII
(reg. 61 (7))

TABLE 6 – PHRASES AND PRONUNCIATIONS USED DURING INTERCEPTION

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	FOO-LO	Follow me	WILCO will comply	VILL-KO	Understood
DESCEND	DEE-SEND	Descend for landing	CAN NOT	KANN NOTT	Unable to comply
YOU LAND	YOU LAAND	Land at this aerodrome	REPEAT	REE PEET	Repeat your instruction
PROCEED	PRO-SEED	You may proceed	AM LOST	AM LOSST	Position Unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK[3]	HI-JACK	I have been hijacked
			LAND	LAAND	I request to land at (place name)
			DESCEND	DEE-SEND	I require descent

1. In the second column, syllables to be emphasized are underlined.

2. The call sign required to be given is that used in RFT communications with ATS units and corresponding to the aircraft identification in the flight plan.

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

SCHEDULE VIII
(reg. 63 (1))

TABLE 7- CLASSIFICATION OF AIR TRAFFIC SERVICES AIRSPACES

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

* When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 should be used in lieu of 10 000 ft.

SCHEDULE IX
(reg. 68)

TABLE 8 – VISUAL METEOROLOGICAL CONDITIONS VISIBILITY AND DISTANCE FROM CLOUD MINIMA

Altitude band	Airspace class	Flight visibility	Distance from cloud
At and above 3 030m (10, 000ft) AMSL	A* B C D E F G	8 kilometres	1, 500m horizontally 300m (1,000ft) Vertically
Below 3 050m (10, 000ft) AMSL and above 900m (3, 000ft) AMSL, or above 300m (1, 000ft) above terrain, whichever is the higher	A* B C D E F G	5 kilometres	1, 500m horizontally 300m (1,000ft) Vertically
At and below 900m (3, 000ft) AMSL, or 300m (1, 000ft) above terrain, whichever is the higher	A* B C D E	5 kilometres	1, 500m horizontally 300m (1,000ft) Vertically
	F G	5 kilometres	Clear of cloud and with the surface in sight

* The visual meteorological conditions minima in Class A airspace are included for guidance to PIC and do not imply acceptance of VFR flights in Class A airspace.

MADE this 11th day of January, 2012.

HON. NONOFO E. MOLEFHI
Minister for Transport and Communications.

L2/7/ 57 XVIII (9)