

BHUTAN AIR NAVIGATION REGULATIONS

SECTION 8 - Rules of the Air

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SECTION 8 - Rules of the Air

Chapter 2. General

8.2.1 Protection of Persons and Property

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

8.2.1.2 *Minimum Heights.* Except when necessary for take-off or landing, or except by permission from the Director, aircraft shall not be flown over the congested areas of cities, towns or settlements or over an open-air assembly of persons unless;

- a) At such a height as will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property on the surface; or
- b) At a height of 1500 feet above the highest fixed object within 2000 feet of the aircraft, whichever is the higher.

8.2.1.2.1 An aircraft shall not fly, except with the permission in writing of the Director and in accordance with any conditions therein specified,:-

- a) over, or within 3000 feet of, any assembly in the open air of persons assembled for the purpose of witnessing or participating in any organised event, and with the consent in writing of the organisers of the event; or
- b) below such height as would enable it to alight clear of the assembly in the event of failure of a power unit and if such an aircraft is towing a banner such height shall be calculated on the basis that the banner shall not be dropped within 3000 feet of the assembly:
- c) closer than 500 feet to any person, vessel, vehicle or structure.

8.2.1.2.2 A helicopter shall not fly, except with the permission in writing of the Director, and in accordance with any conditions therein specified,:

- a) 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.
- b) over a congested area of a city, town or settlement below a height of 1500 feet above the highest fixed object within 2000 feet of the helicopter.

8.2.1.2.3 Nothing in this Rule shall prohibit an aircraft from flying in such a manner as is necessary for the purpose of saving life.

8.2.1.2.4 Nothing in this Rule shall Prohibit an aircraft from flying in accordance with normal aviation practice, for the purpose of taking off from, landing at or practising approaches to landing at, or checking the navigational aids or procedures at an aerodrome owned or managed by the CAD or a licensed aerodrome in Bhutan or at any aerodrome at any other country. Provided that the practising of approaches to land shall be confined to the airspace customarily used by aircraft when landing or taking off at an aerodrome.

8.2.1.2.4 Nothing in this Rule shall apply to any captive balloon or kite.

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

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

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

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

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

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

8.2.1.8 *Formation Flights.* Aircraft shall not be flown in formation except under conditions prescribed by the Director and by pre-arrangement among the pilots-in-command of the aircraft taking part in the flight.

8.2.1.9 *Unmanned Free Balloons.* An unmanned free balloon shall be operated in such a manner as to minimise hazards to persons, property or other aircraft and in accordance with the conditions specified in Appendix A to Annex 2 to the Convention on International Civil Aviation.

8.2.1.10 *Prohibited and Restricted Areas.* Aircraft shall not be flown in a prohibited area, or in a restricted area, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the State over whose territory the areas are established.

8.2.2 Avoidance of Collisions. Notwithstanding that the flight is being made with air traffic control clearance it shall remain the duty of the commander for an aircraft to take all possible measures to ensure that this aircraft does not collide with any other aircraft.

8.2.2.1 *Proximity.* An aircraft shall not be flown in such proximity to other aircraft as to create a collision hazard.

8.2.2.2 *Right of Way.* The aircraft that has the right-of-way shall maintain its heading and speed but nothing in these rules shall relieve the pilot-in-command of an aircraft from the responsibility of taking such action, including collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment, as will best avert collision.

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

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

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

- a) power-driven heavier-than-air aircraft shall give way to airships, gliders and balloons;
- b) airships shall give way to gliders and balloons;
- c) gliders shall give way to balloons;
- d) power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.

8.2.2.6 *Overtaking.* An overtaking aircraft is an aircraft which approaches another from the rear on a line forming an angle of less than 70 degrees with the plane of symmetry of the latter, i.e. is in such a position with reference to the other aircraft that at night it should be unable to see either of the aircraft's left (port) or right (starboard) navigation lights. An aircraft that is being overtaken has the right-of-way and the overtaking aircraft, whether climbing, descending or in horizontal flight, shall keep out of the way of the other aircraft by altering its heading to the right, and no subsequent change in the relative positions of the two aircraft shall absolve the overtaking aircraft from this obligation until it is entirely past and clear.

8.2.2.7 *Landing.*

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

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

8.2.2.7.3 *Emergency Landing.* An aircraft that is aware that another is compelled to land shall give way to that aircraft.

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

8.2.2.8 *Right-hand Traffic Rule.* An aircraft which is flying in sight of the ground and is following a line feature shall keep such line feature on its left.

8.2.2.9 *Surface Movement of Aircraft.*

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

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

8.2.2.9.2 An aircraft taxiing on the manoeuvring area shall stop and hold at all taxi-holding positions unless otherwise authorised by the aerodrome control tower.

8.2.2.9.3 An aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars and may proceed further only when the lights are switched off.

8.2.3 Lights to be Displayed by Aircraft

8.2.3.1 By day or night an aircraft fitted with an anti-collision light shall display such a light from immediately before engine start to immediately after engine shut-down.

8.2.3.2 From sunset to sunrise, or during any other period which may be prescribed by the appropriate authority, all aircraft in flight shall display:

- a) anti-collision lights intended to attract attention to the aircraft; and
- b) navigation lights intended to indicate the relative path of the aircraft to an observer and other lights shall not be displayed if they are likely to be mistaken for these lights.

8.2.3.3 Lights fitted for other purposes, such as landing lights and airframe floodlights, may be used in addition to the lights specified above to enhance aircraft conspicuity.

8.2.3.4 From sunrise to sunset, or during any other period prescribed by the appropriate 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.

8.2.3.5 Notwithstanding the provisions of this section of these Rules the commander of an aircraft may switch off or reduce the intensity of any flashing light fitted to the aircraft if such a light does or is likely to:

- a) adversely affect the satisfactory performance of the duties of any member of the flight crew; or
- b) subject an outside observer to unreasonable dazzle.

8.2.3.6 The systems of lights referred to in paragraph 8.2.3.2.b) of this Rule are as follows:

- a) a steady green light of at least five candela showing to the starboard side through an angle of 110° from the dead ahead in the horizontal plane; and
- b) a steady red light of at least five candela showing to the port side through an angle of 110° from dead ahead in the horizontal plane; and

- c) a steady white light of at least five candela showing through angles of 70° from dead astern to each side in the horizontal plane.

8.2.3.7 *Gliders and Free Balloons.* Gliders and/or Free Balloons are not permitted to fly in Bhutan between sunset and thirty minutes before sunrise.

8.2.3.8 *Captive balloons and kites.* A captive balloon or kite while flying at night at a height exceeding 60 metres above the surface shall display lights as follows:

- a) a group of two steady lights consisting of a white light placed 4 metres above a red light, both being of at least five candela and showing in all directions, the white light being placed not less than 5 metres or more than 10 metres below the basket, or if there is no basket, below the lowest part of the balloon or the kite;
- b) on the mooring cable, at intervals of not more than 300 metres measured from the group of lights referred to in sub-paragraph a) of this paragraph, a group of two lights of the colour and the power and in the relative positions specified in that sub-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 measures at least 25 metres; 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 so placed that the triangle encloses the object on the surface to which the balloon or kite is moored.

8.2.3.9 A captive balloon, while flying by day at a height exceeding 60 metres above the surface, shall have attached to its mooring cable at intervals of not more than 200 metres measured from the basket, or, if there is no basket, from the lowest part of the balloon, tubular streamers not less than 40 centimetres in diameter and 2 metres in length, and marked with alternate bands of red and white, 50 centimetres wide.

8.2.4 Simulated instrument flight

8.2.4.1 An aircraft shall not be flown in simulated instrument conditions unless:-

- a) no passengers are carried; and
- b) fully functioning dual controls are installed in the aircraft; and
- c) a qualified pilot occupies a control seat to act as safety pilot for the person who is flying under simulated instrument conditions. The safety pilot shall have adequate vision forward and to each side of the aircraft, or a competent observer in communication with the safety pilot shall occupy a position in the aircraft from which the observer's field of vision adequately supplements that of the safety pilot.

For the purpose of this Rule the expression "simulated instrument conditions" means a flight during which mechanical or optical devices are used in order to reduce the field of vision of the person flying.

8.2.5 Practice instrument approaches.

8.2.5.1 Within Bhutan an aircraft shall not carry out instrument approach practice when flying in Visual Meteorological Conditions unless:-

- a) the appropriate air traffic control 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 being carried out in simulated instrument conditions, a safety pilot and, if required, a competent observer is carried.

8.2.6 Flight Plans.

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

8.2.6.2 A flight plan shall be submitted prior to operating:

- a) any flight or portion thereof to be provided with air traffic control service; or
- b) any IFR flight within advisory airspace; or
- 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; or
- 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 air traffic service units in adjacent States in order to avoid the possible need for interception for the purpose of identification; or
- e) any flight across international borders.

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

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

- a) the intended point of entry into a control area or advisory area; or
- b) the point of crossing an airway or advisory route.

8.2.7 Contents of a Flight Plan. A flight plan shall comprise information regarding such of the following items as are considered relevant by the appropriate ATS authority:

- Aircraft identification
- Flight rules and type of flight
- Number and type(s) of aircraft and wake turbulence category
- Equipment
- Departure aerodrome
- Estimated off-block time
- Cruising speed(s)
- Route to be followed
- Destination aerodrome and total estimated elapsed time
- Alternate aerodrome(s)
- Fuel endurance
- Total number of persons on board

- Emergency and survival equipment
- Other information

8.2.8` Completion of a Flight Plan.

8.2.8.1 Whatever the purpose for which it is submitted, a flight plan shall contain information, as applicable, on relevant items up to and including "Alternate aerodrome(s)" regarding the whole route or the portion thereof for which the flight plan is submitted.

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

8.2.9 Changes to a Flight Plan.

8.2.9.1 All changes to a flight plan submitted for an IFR flight, or a VFR flight operated as a controlled flight, shall be reported as soon as practicable to the appropriate air traffic services unit. For other VFR flights, significant changes to a flight plan shall be reported as soon as practicable to the appropriate air traffic services unit.

8.2.10 Closing a Flight Plan.

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

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

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

8.2.10.4 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 following action shall be taken. Immediately prior to landing the aircraft shall, if practicable, transmit to the appropriate air traffic services unit, a message comparable to an arrival report, where such a report is required. Normally, this transmission shall be made to the aeronautical station serving the air traffic services unit in charge of the flight information region in which the aircraft is operated.

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

- a) Aircraft identification;
- b) departure aerodrome;
- c) destination aerodrome (only in the case of a diversionary landing);
- d) arrival aerodrome;
- e) time of arrival.

8.2.11 Time.

8.2.11.1 Co-ordinated Universal Time (UTC) shall be used and shall be expressed in hours and minutes and, when required, seconds of the 24-hour day beginning at midnight.

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

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

8.2.12 Air Traffic Control Service.

8.2.12.1 Air Traffic Control Clearances. An air traffic control clearance shall be obtained prior to operating a controlled flight, or a portion of a flight as a controlled flight. Such clearance shall be requested through the submission of a flight plan to an air traffic control unit.

8.2.12.2 Whenever an aircraft has requested a clearance involving priority, a report explaining the necessity for such priority shall be submitted, if requested by the appropriate air traffic control unit.

8.2.12.3 *Potential Reclearance in Flight.* If prior to departure it is anticipated that, depending on fuel endurance and subject to reclearance in flight, a decision may be taken to proceed to a revised destination aerodrome, the appropriate air traffic control units shall be so notified by the insertion in the flight plan of information concerning the revised route (where known) and the revised destination.

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

8.2.13 Adherence to Flight Plan

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

8.2.13.2 Unless otherwise authorised or directed by the appropriate air traffic control unit, controlled flights shall, in so far as possible:

- a) when on an established ATS route, operate along the defined centre line of that route; or
- b) when on any other route, operate directly between the navigation facilities and/or points defining the route.

8.2.13.3 Subject to the overriding requirement in 8.2.13.2, and aircraft operating along an ATS route segment defined by reference to a very high frequency omnidirectional radio ranges (VOR) shall change over for its primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the change-over point, where established.

8.2.13.4 Deviation from the requirements in 8.2.13.2 shall be notified to the appropriate air traffic services unit.

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

- a) *Deviation from track.* If the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain track as soon as practicable.
- b) *Variation in True Airspeed.* If the average true airspeed at cruising level between reporting points varies or is expected to vary by plus or minus 5 per cent of the true airspeed, from that given in the flight plan, the appropriate air traffic services unit shall be so informed.
- c) *Change in Time Estimate.* If the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of three minutes from that notified to air traffic services, or such other period of time as is prescribed by the appropriate ATS authority or on the basis of air navigation regional agreements, a revised estimated time shall be notified as soon as possible to the appropriate air traffic services unit.

8.2.13.5.1 Additionally when an ADS agreement is in place, the air traffic services unit (ATSU) shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.

8.2.13.6 *Intended Changes.* Requests for flight plan changes shall include information as indicated hereunder:

- a) *Change of Cruising Level:*
 - aircraft identification;
 - requested new cruising level and cruising speed at this level; and
 - revised time estimates (when applicable) at subsequent flight information region boundaries.
- b) *Change of Route:*
 - 1) *Destination Unchanged:*
 - aircraft identification;
 - flight rules;
 - description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence;
 - revised time estimates; and
 - any other pertinent information.
 - 2) *Destination Changed:*
 - aircraft identification;
 - flight rules;
 - description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which the requested change of route is to commence;
 - revised time estimates;
 - alternate aerodrome(s); and
 - any other pertinent information.

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

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

8.2.14 Position Reports.

8.2.14.1 Unless exempted by the appropriate ATS authority or by the appropriate air traffic services unit under conditions specified by that authority, a controlled flight shall report to the appropriate air traffic services unit, as soon as possible, the time and level of passing each designated compulsory reporting point, together with any other required information. Position reports shall similarly be made in relation to additional points when requested by the appropriate air traffic services unit. In the absence of designated reporting points, position reports shall be made at intervals prescribed by the appropriate ATS authority or specified by appropriate air traffic services unit.

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

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

8.2.16 Communications.

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

8.2.16.1.1 SELCAL or similar automatic signalling devices satisfy the requirement to maintain an air-ground voice communications watch.

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

8.2.16.2 *Communication Failure.* If a communication failure precludes compliance with 8.2.16.1, the aircraft shall comply with the communication failure procedures of Volume II of Annex 10 to the Convention on International Civil Aviation, and with such of the following procedures as are appropriate. In addition, the aircraft, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by visual signals.

8.2.16.2.1 If in visual meteorological conditions, the aircraft shall:

- a) continue to fly in visual meteorological conditions;
- b) land at the nearest suitable aerodrome; and

- c) report its arrival by the most expeditious means to the appropriate air traffic control unit.

8.2.16.2.2 If in instrument meteorological conditions or when conditions are such that it does not appear feasible to complete the flight in accordance with 8.2.16.2.1 the aircraft shall:

- a) unless otherwise prescribed on the basis of regional air navigation agreement, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan;
- b) proceed according to the current flight plan route to the appropriate designated navigation aid serving the destination aerodrome and, when required to ensure compliance with c) below, hold over this aid until commencement of descent;
- c) commence descent from the navigation aid specified in b) at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to, the estimated time of arrival resulting from the current flight plan;
- d) complete a normal instrument approach procedure as specified for the designated navigation aid; and
- e) land, if possible, within thirty minutes after the estimated time of arrival specified in c) or the last acknowledged expected approach time, whichever is later.

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Chapter 3. Visual Flight Rules

8.3.1 Minimum Visibility and Distance from Cloud. Except when operating as a special VFR flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in Table 8.3.1 below.

Airspace Class	B	C D E	F G
			ABOVE 3,000 ft (900 m) AMSL or above 1,000 ft (300 m) above terrain, whichever is the higher At and below 3,000 ft (900 m) or 1,000 ft (300 m) above terrain whichever is the higher
Distance from cloud	Clear of cloud	1 nm (1,500 m) horizontally 1,000 ft (300 m) vertically	Clear of cloud and in sight of the surface
Flight Visibility	5 nm (8 Km) at and above 10,000 ft (3050 m) 3 nm (5 Km) below 10,000 ft (3050 m)		3 nm (5 Km)

Table 8.3.1

8.3.2 Limitations on aerodromes within a control zone. Except when a clearance is obtained from an air traffic control unit, VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or traffic pattern:

- a) when the ceiling is less than 1,500 ft (450 m); or
- b) when the ground visibility is less than 3 nautical miles (5 Km).

8.3.3 Limitations on VFR flights between sunset and sunrise. VFR flights are not permitted between sunset and sunrise.

8.3.4 Limitations on Flight Levels and Speeds. VFR flights shall not be operated:

- a) above FL 290; or
- b) at transonic and supersonic speeds.

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

- a) over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 1,000 ft (300 m) above the highest obstacle within a radius of 600 m from the aircraft;
- b) elsewhere, at a height less than 500 ft (150 m) above the ground or water.

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Chapter 4. Instrument Flight Rules

8.4.1 Rules applicable to all IFR flights.

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

8.4.1.2 *Minimum Levels.* Except when necessary for take-off and landing, or except when specifically authorised by the appropriate authority, an IFR flight shall be flown at a level which is not below the minimum flight altitude established by the STATE whose territory is overflown, or, where no such minimum flight altitude has been established:

- a) over high terrain or in mountainous areas, at a level which is at least 2,000 ft (600 m) above the highest obstacle located within 5 nautical miles (8 Km) of the estimated position of the aircraft;
- b) elsewhere, at a level which is at least 1,000 ft (300 m) above the highest obstacle located within 5 nautical miles (8 Km) of the estimated position of the aircraft.

8.4.2.3 *Change from IFR to VFR Flight.*

8.4.2.3.1 An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall, if a flight plan was submitted, notify the appropriate air traffic services unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.

8.4.2.3.2 When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued in uninterrupted visual meteorological conditions.

8.4.2 Rules applicable to IFR flights within controlled airspace.

8.4.2.1 IFR flights shall comply with the provisions of 8.2.12 when operating in controlled airspace.

8.4.2.2 An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level, or, if authorised to employ cruise climb techniques, between two levels or above a level, selected from Table 8.4.1 below, except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority in Aeronautical Information Publications.

8.4.3 Rules applicable to IFR flights outside controlled airspace.

8.4.3.1 *Cruising Levels.* An IFR flight operating in level cruising flight outside of controlled airspace shall be flown at a cruising level appropriate to its track as specified in Table 8.4.1 below.

8.4.3.2 *Communications.* An IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by appropriate ATS authority in accordance with 8.2.6.2 c) or d) shall maintain air-ground voice communication watch on the appropriate communication channel and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

BHUTAN AIR NAVIGATION REGULATIONS

SECTION 8 - Rules of the Air

Chapter 5. Signals

8.5.1 Distress and Urgency Signals.

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

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

8.5.1.2 *Urgency signals.* 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;
- b) the repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

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

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

8.5.2 Signals for Use in the Event of Interception.

8.5.2.1 *Radiocommunication between the intercept control unit or the intercepting aircraft and the intercepted aircraft.* When an interception is being made, the intercept control unit and the intercepting aircraft will:

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

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

8.5.2.1.1 If radio contact is established during interception but communication in a common language is not possible, attempts must be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table 8.5.1 below and transmitting each phrase twice.

<i>Phrases for use by INTERCEPTING aircraft</i>			<i>Phrases for use by INTERCEPTED aircraft</i>		
<i>Phrase</i>	<i>Pronunciation</i>	<i>Meaning</i>	<i>Phrase</i>	<i>Pronunciation</i>	<i>Meaning</i>
CALL SIGN	<u>KOL</u> SA-IN	What is your call sign?	CALL SIGN (call sign)	<u>KOL</u> SA-IN (call sign)	My call sign is (call sign)
FOLLOW	<u>FOL</u> -LO	Follow me	WILCO	<u>VILL</u> - KO	Understood, will comply
DESCEND	DEE - <u>SEND</u>	Descend for landing	CAN NOT	<u>KANN</u> NOTT	Unable to comply
YOU LAND	<u>YOU</u> LAAND	Land at this aerodrome	REPEAT	REE - <u>PEET</u>	Repeat your instruction
PROCEED	PRO - <u>SEED</u>	You may proceed	AM LOST	<u>AM</u> LOSST	Position unknown
			MAYDAY	<u>MAYDAY</u>	I am in distress
			HIJACK	<u>HI</u> JACK	I have been hijacked
			LAND (place name)	LAAND (place name)	
					I request to land at (place name)
			DESCEND	DEE- <u>SEND</u>	I require descent
Notes: 1. In the second column, syllables to be emphasised are underlined. 2. The call sign required to be given is that used in radiotelephony communications with air traffic service 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".					

Table 8.5.1.1

8.5.2.2 Visual Signals initiated by **INTERCEPTING** aircraft and responses by **INTERCEPTED** aircraft

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1	DAY or NIGHT - Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right of if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn. normally to the left (or to the right in the case of a helicopter) on the desired heading.	You have been intercepted. Follow me.	DAY or NIGHT - Rocking aircraft, flashing navigational lights at irregular intervals and following.	Understood, will comply.
2	DAY or NIGHT - An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn 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

Table 8.5.2.1

8.5.2.3 *Visual Signals initiated by **INTERCEPTED** aircraft and responses by **INTERCEPTING** aircraft.*

Series	INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responds	Meaning
4	DAY or NIGHT - Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 1,000 ft (300 m) but not exceeding 2,000 ft (600 m) (in the case of a helicopter, at a height exceeding 170 ft (50 m) but not exceeding 330 ft (100 m)) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT - If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me Understood, you may proceed.
5	DAY or NIGHT - Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT - Irregular flashing of all available lights.	In distress.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft	Understood.

Table 8.5.2.2

8.5.3 Unlawful Interference. An aircraft which is being subjected to unlawful interference shall endeavour to notify the appropriate ATS unit of this fact, any significant circumstances associated therewith and any deviation from the current flight plan necessitated by the circumstances, in order to enable the ATS unit to give priority to the aircraft and minimise conflict with other aircraft.

8.5.3.1 *Procedures.* Unless considerations aboard the aircraft dictate otherwise, the pilot-in-command should attempt to continue flying on the assigned track and at the assigned cruising level at least until able to notify an ATS unit or within radar coverage. When an aircraft subjected to an act of unlawful interference must depart from its assigned track or its assigned cruising level without being able to make radiotelephony contact with ATS, the pilot-in-command should, whenever possible:

- a) attempt to broadcast warnings on the VHF emergency frequency and other appropriate frequencies, unless considerations aboard the aircraft dictate otherwise. Other equipment, such as on-board transponders, data links etc., should also be used when it is advantageous to do so and circumstances permit; and
- b) proceed in accordance with applicable special procedures for in-flight contingencies, where such procedures have been established; or

- c) if no applicable regional procedures have been established, proceed at a level which differs from the cruising levels normally used for IFR flight in the area by 1,000 ft (300 m) if above FL 290 or by 500 ft (150 m) if below FL 290.

8.5.4 Visual Signals used to warn an unauthorised aircraft flying in, or about to enter, a Restricted, Prohibited or Danger Area.

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

8.5.5 Signals for Aerodrome Traffic.

8.5.5.1 *Light and pyrotechnic signals.* The following light and pyrotechnic signals will be used to aircraft in flight or on the ground:

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

8.5.5.2 *Acknowledgement by an aircraft.*

- a) When in flight:
 - 1) during the hours of daylight:
 - by rocking the aircraft's wings;
 - 2) during the hours of darkness:
 - by flashing on an off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.
- b) When on the ground:
 - 1) during the hours of daylight:
 - by moving the aircraft's ailerons or rudder;
 - 2) during the hours of darkness:
 - by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

8.5.6 Ground signals visible from the air.

8.5.6.1 *Signals area.* When any signal specified in the following paragraphs of this Rule is displayed it shall be placed in a signals area, which shall be a square visible in all directions bordered by white strip 30 centimetres wide, the internal sides measuring 12 metres.

8.5.6.2 *Prohibition of landing.* A horizontal red square panel with yellow diagonals (Figure 8.5.1) when displayed in a signal area indicates that landings are prohibited and the prohibition is liable to be prolonged.

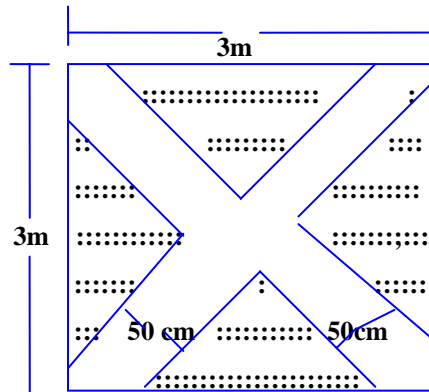


Fig 8.5.1

YELLOW STRIPES ON RED BACKGROUND

8.5.6.3 *Need for special precautions.* A horizontal red square panel with one yellow diagonal (Figure 8.5.2) when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, of for any other reason, special precautions must be observed in approaching to land or in landing.

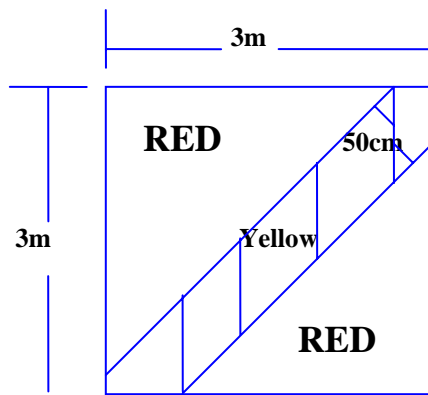


Fig. 8.5.2

YELLOW STRIPE ON RED BACKGROUND

8.5.6.4 Use of runways and taxiways.

8.5.6.4.1 A horizontal white dumb-bell (Figure 8.5.3) when displayed in a signal area indicates that aircraft are required to land, take-off and taxi on runways and taxiways only.

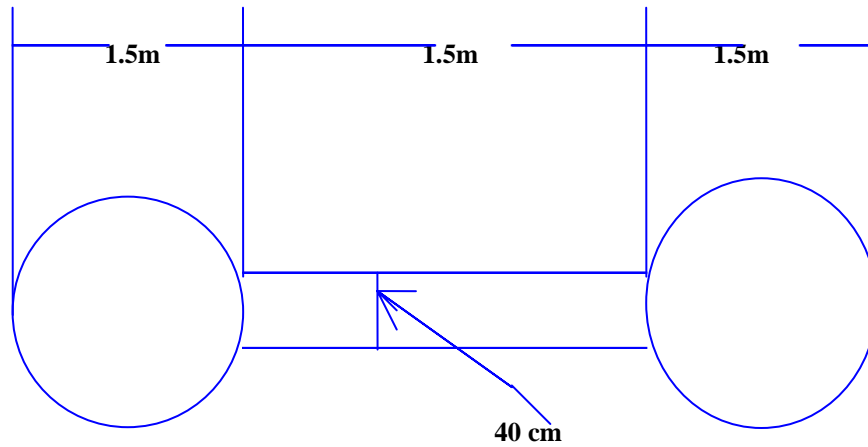


Fig. 8.5.3

8.5.6.4.2 The same horizontal white dumb-bell as illustrated in Fig 8.5.3 but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 8.5.4) 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.

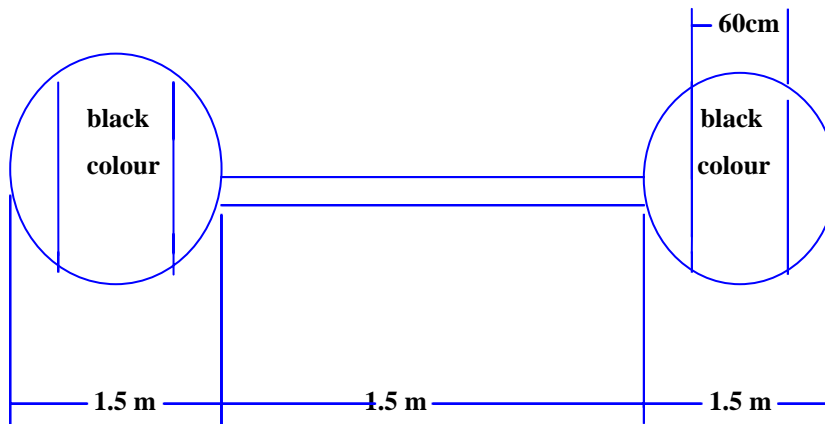


Fig. 8.5.4

8.5.6.5 *Closed runways or taxiways.* Crosses of a single contrasting colour, yellow or white, (Figure 8.5.5) displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for the movement of aircraft.

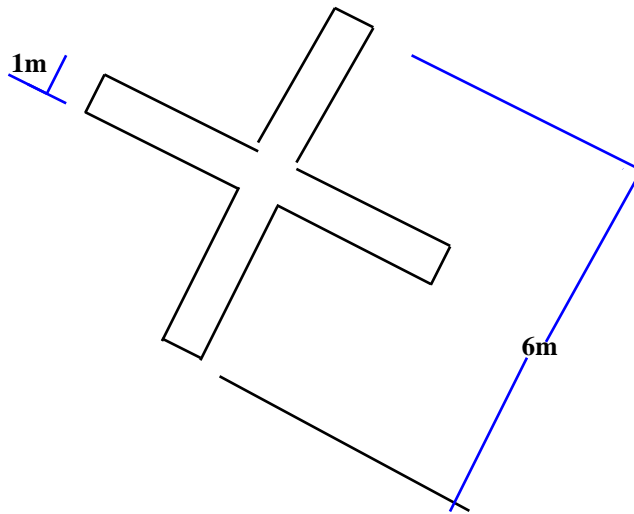


Fig. 8.5.5

8.5.6.6 *Directions for landing or take-off.*

8.5.6.6.1 A horizontal white or orange landing **T** (Figure 8.5.6) 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.

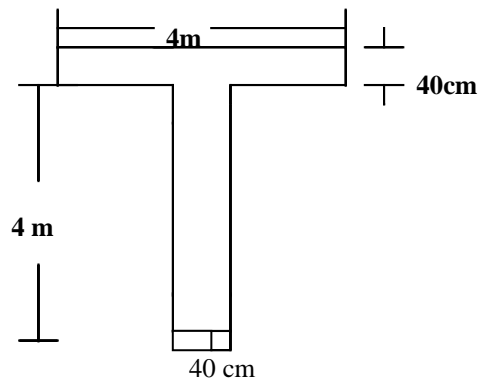


Fig.8.5.6

8.5.6.6.2 A white disc 60 centimetres in diameter displayed alongside the cross arm of the **T** and in line with the shaft of the **T**, as illustrated in Figure 8.5.7 indicates that the direction of take-off and landing do not necessarily coincide.

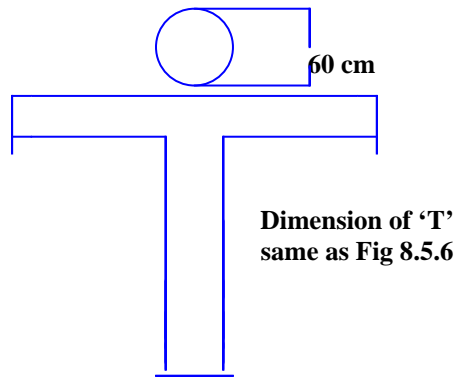


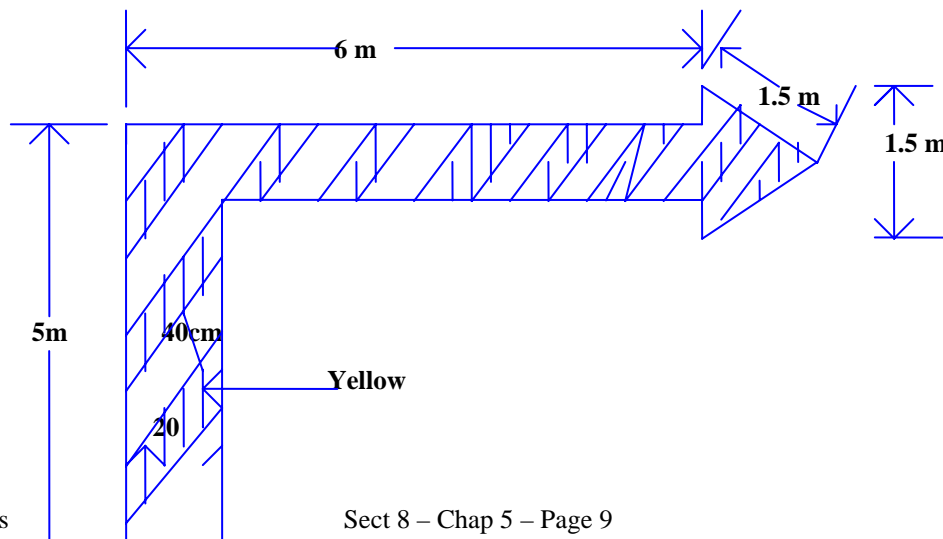
Fig 8.5.7

8.5.6.6.3 A set of two digits (Figure 8.5.8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.

09

Fig. 8.5.8

8.5.6.7 *Right-hand traffic.* When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure 8.5.9) indicates that turns are to be made to the right before landing and after take-off.



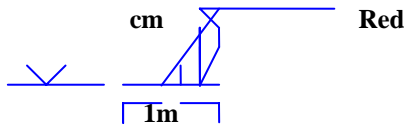
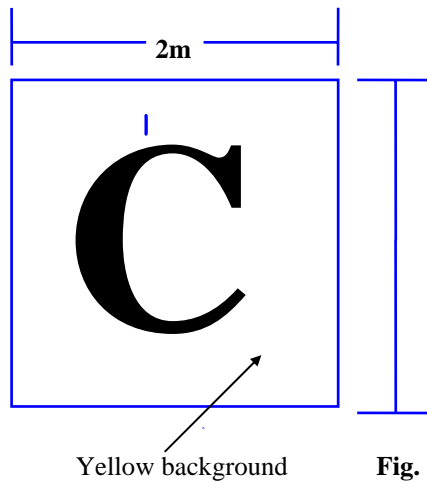


Fig. 8.5.9

8.5.6.8 *Air traffic services reporting office.* The letter **C** displayed vertically in black against a yellow background (Figure 8.5.10) indicates the location of the air traffic services reporting office.



8.5.6.9 *Glider flights in operation.* A double white cross displayed horizontally (Figure 8.5.11) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

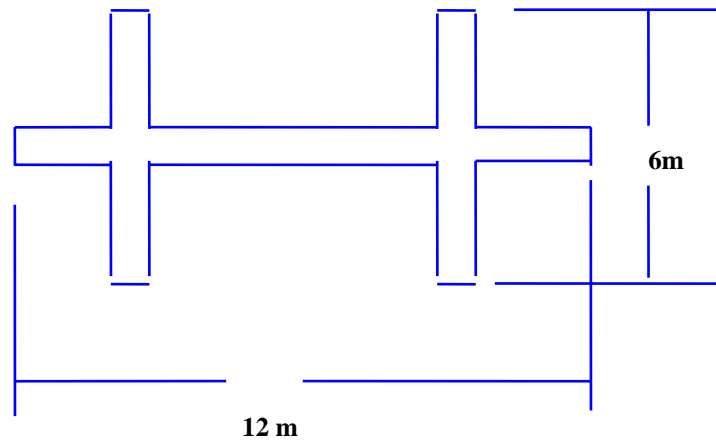


Fig. 8.5.11

8.5.6.10 *Helicopter Landing Area.* A white letter **H** (Figure 8.5.12) indicates an area designated as a landing area for helicopters.

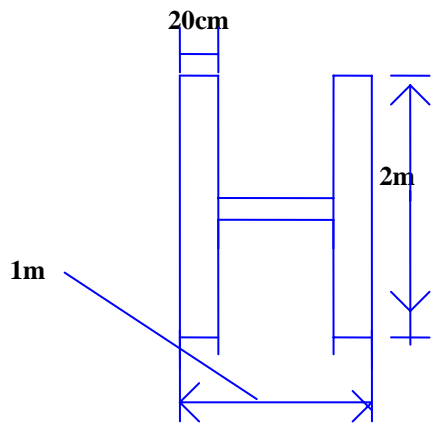
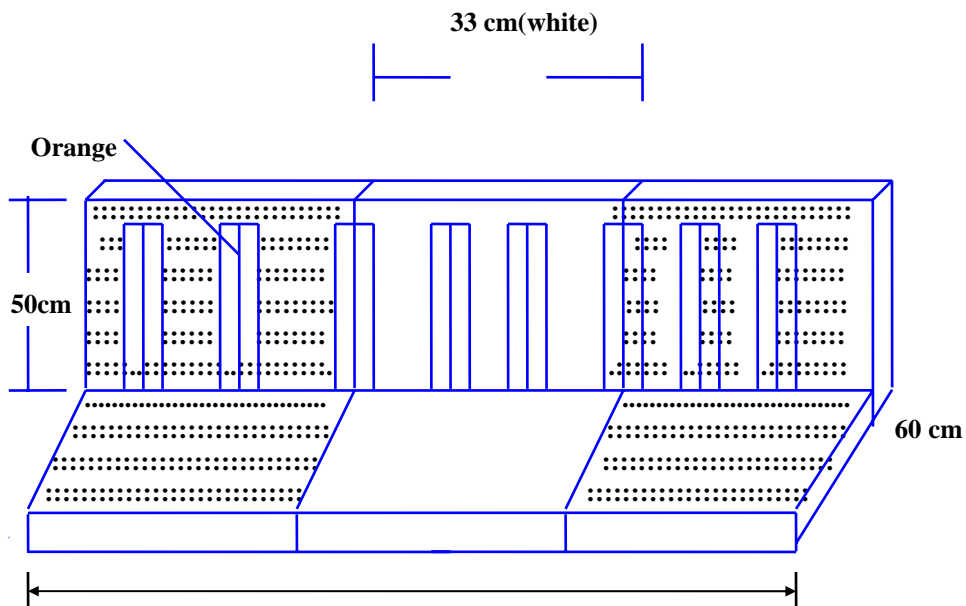


Fig. 8.5.12

8.5.6.11 *Boundary Markers.* Orange and white markers, as illustrated in Figure 8.5.13, spaced not more than 15 metres apart, indicate the boundary of that part of a paved runway, taxiway or apron which is unfit for the movement of the aircraft.



1 m

Fig. 8.5.13

8.5.7 Signals visible from the ground.

8.5.7.1 A black ball, 60 centimetres in diameter, suspended from a mast indicates that the directions of take-off and landing are not necessarily the same.

8.5.7.2 A checked flag or board, 1.2 metres by 90 centimetres containing twelve equal squares, 4 horizontally and 3 vertically, coloured red and yellow alternately, indicates that aircraft may move on the manoeuvring area and apron only in accordance with the permission of the air traffic control unit at the aerodrome.

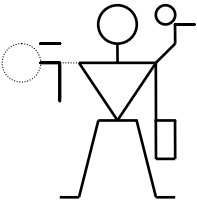
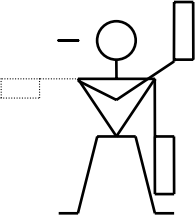
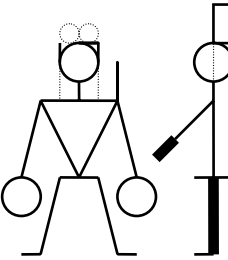
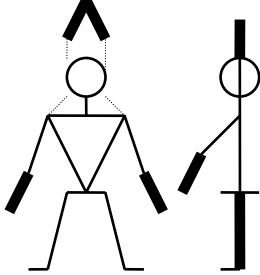
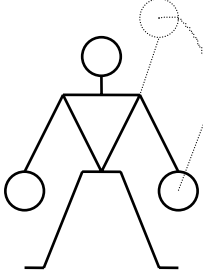
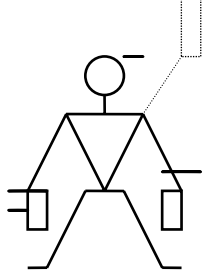
8.5.7.3 Two red balls, 60 centimetres in diameter, disposed vertically one above the other, 60 centimetres apart and suspended from a mast, signify that glider flying is in progress at the aerodrome.

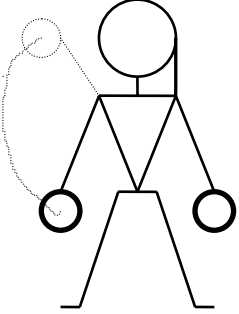

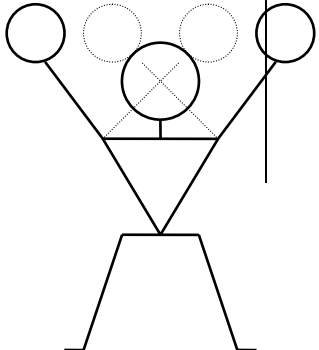

8.5.7.4 Black Arabic numerals in two-figures groups and, where parallel runways are provided the letter or letters L(left), LC(left centre), C(centre), RC(right centre) and R(right), placed against a yellow background, indicate the direction for take-off or the runway in use.

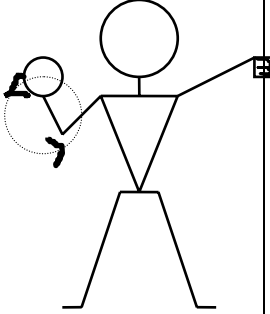

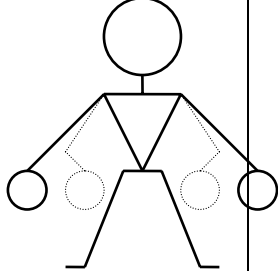

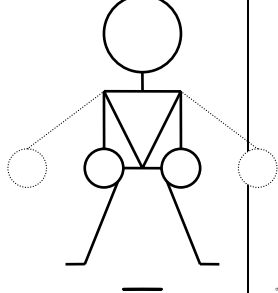

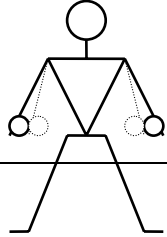
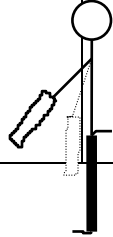
8.5.7.5 A rectangular green flag, of not less than 60 centimetres square, flown from a mast indicates that the right hand circuit is in force.

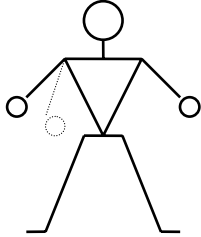

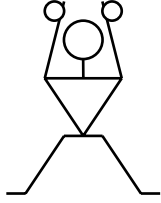

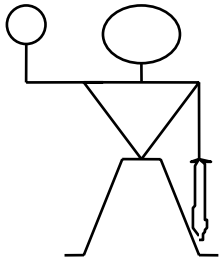
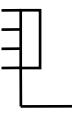
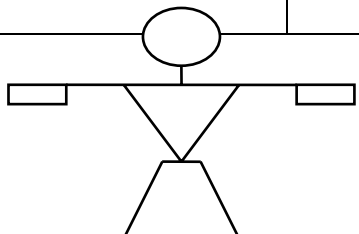
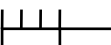
8.5.8 Marshalling Signals. Each of the signals for the guidance of aircraft manoeuvring on the ground described in the first column of the following tables have the meanings set forth in the second column opposite the description of the signal. By day any such signals shall be given by hand or by circular bats and by night by torches or illuminated wands.

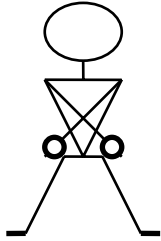
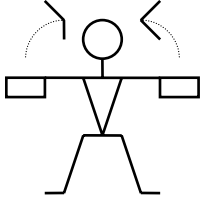

Marshalling signals (from a Marshaller to an aircraft)

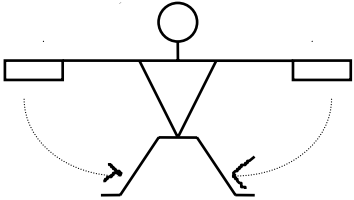
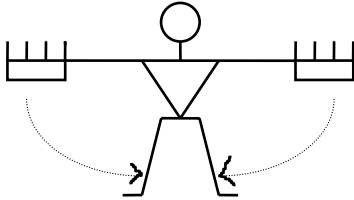
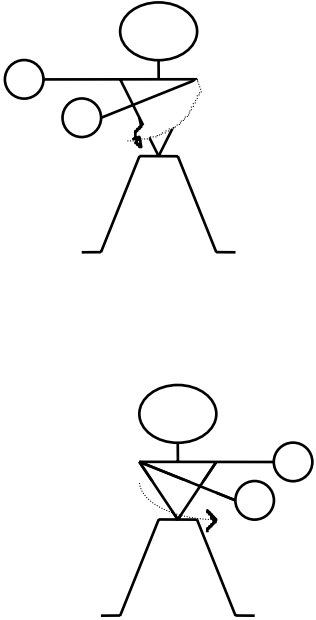
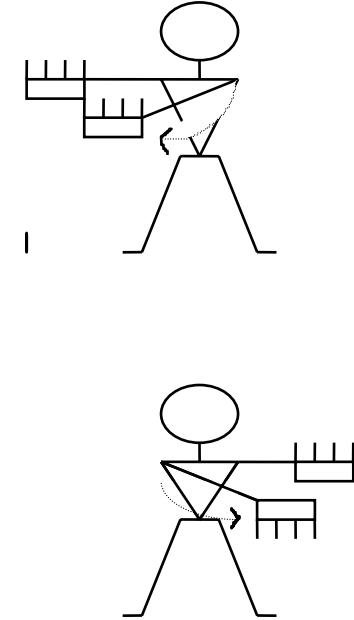
Description of Signal	Meaning of Signal	In daylight	By Night
(a) Right or left arm down, the other arm moved across the body and extended to indicate position of the other marshaller.	Proceed under guidance of another marshaller.		
(b) Arms repeatedly moved upward and backward, beckoning onward.	Move ahead.		
(c) Right arm down, left arm repeatedly moved upward and backward. The speed of the arm movement indicates the rate of turn.	Open up starboard engine or turn to port.		

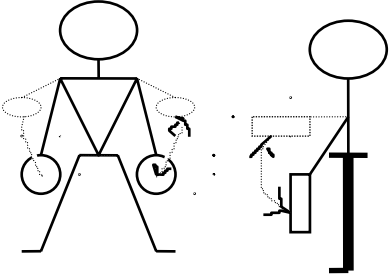
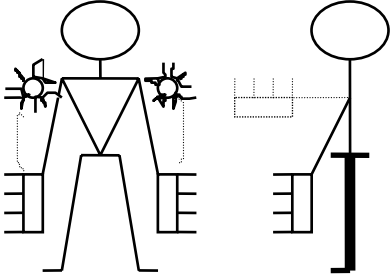
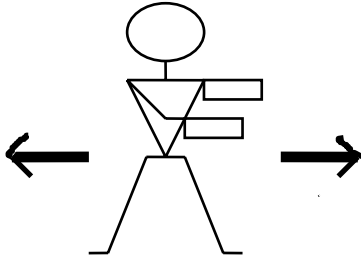
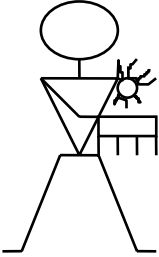
Description of Signal	Meaning of Signal	In Daylight	In night
(d) Left arm down, the right arm repeatedly moved upwards and backward. The speed of the arm movement indicates the rate of turn.	Open up port engine or turn to starboard.		
(e) Arms repeatedly crossed above the head. The speed of the arm indicates the urgency of the	Stop.		

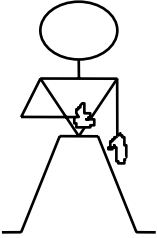
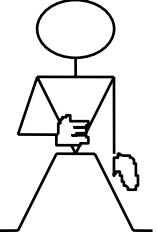
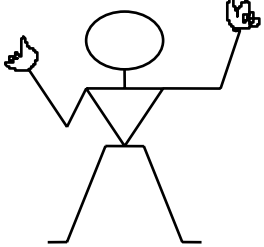
stop.			
(f) A circular motion of the right hand at the head level, with the left arm pointing to the appropriate engine.	Start engines.		
Description of Signal	Meaning of Signal	In Daylight	In night
(g) Arms extended, the palms facing inwards, then swung from the extended position inwards.	Chocks inserted		
(h) Arms down, the palms facing outwards, then swung outwards.	Chocks away.		
(k) Arms placed down, with the palms towards the ground, then moved up and down several times.	Slow down.		

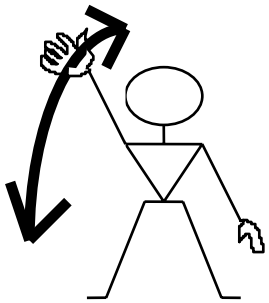
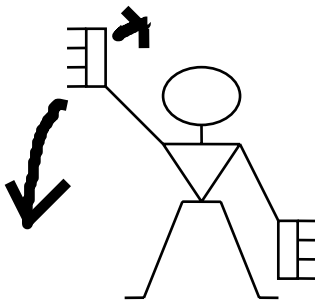
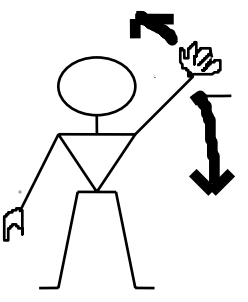
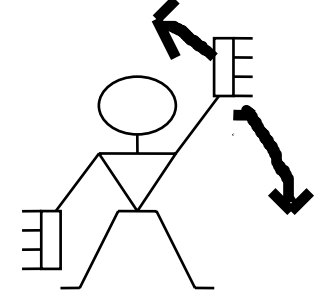
Description of Signal	Meaning of Signal	In Daylight	In night
(l) Arms placed down, with the palms towards the ground, then either the right or left arm moved, up and down indicating that the motors on the left or right side, as the case may be, should be slowed down.	Slow down engines on the indicated side.		
(m) Arms placed above the head in a vertical position.	This bay.		
(n) The right arm raised at the elbow, with the arm facing forward.	All clear. Marshalling finished.		
Description of Signal	Meaning of Signal	In Daylight	In night
(o) Arms placed horizontally sideways.	Hover.		

(p) Arms placed down and in front of the body.	Land.		
(q) Arms placed horizontally sideways with the palms beckoning upwards. The speed of arm movement indicates the rate of ascent.	Move upwards.		

Description of Signal	Meaning of Signal	In Daylight	In night
<p>(r) Arms placed horizontally sideways with the palms towards the ground beckoning downwards. The speed of the arm movement indicates the rate of descent.</p>	<p>Move downwards.</p>		
<p>(s) Either arm placed horizontally sideways, then the other arm moved in front of the body to that side, in the direction of the movement, indicating that helicopter should move horizontally to the left or right side, as the case may be, repeated several times.</p>	<p>Move horizontally.</p>		

Description of Signal	Meaning of Signal	In Daylight	In night
(t) Arms placed down, the palms facing forward, then repeatedly swept up and down to shoulder level.	Move back.		
(u) Left arm extended horizontally forward, then right arm making a horizontal slicing movement below left arm.	Release load.		

Description of Signal	Meaning of Signal	In Daylight	In night
(v) Raise arm with fist clenched, horizontally in front of body, then extend fingers.	Release brakes.		
Raise arm and hand, with fingers extended, horizontally in front of body, then clench fist.	Engage brakes.		
(w) Left hand overhead with number of fingers extended, to indicate the number of engine to be started, and circular motion of right hand at head level.	Start engine(s).		

Description of Signal	Meaning of Signal	In Daylight	In night
(x) Point left arm down, move right arm down from overhead, vertical position to horizontal forward position, repeating right arm movement.	Back aircraft's tail to starboard.		
Point right arm down, move left arm down from overhead, vertical position to horizontal forward position, repeating left arm movement.	Back aircraft's tail to port.		

Marshalling signals (from an aircraft to a marshaller). The following signals made by a pilot in an aircraft to a marshaller on the ground shall respectively have the following meanings:-

<i>Description of a signal</i>	<i>Meaning of a signal</i>
(a) Raise arm and hand with fingers extended horizontally in front of face, then clench fist.	Brakes engaged.
(b) Raise arms 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 one hand indicating number of engines 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 in the port outer engine, No. 2 engine shall be in the port inner engine, No. 3 engine shall be the starboard inner engine, and No. 4 engine shall be the starboard outer engine.	Ready to start engines.