PART 2. EN-ROUTE (ENR)

ENR 1. GENERAL RULES AND PROCEDURES

ENR 1.1 GENERAL RULES

1. INTRODUCTION

The air traffic rules and procedures applicable to air traffic within the South Sudan FIR conform with Annexes 2 and 11 of the Convention on Civil Aviation and to those portions of the DOC 4444, Procedures for Air Navigation Services – Air Traffic Management, and the Regional Supplementary Procedures applicable to the AFI Region, except for the differences as listed in GEN 1.7.

2. FLIGHTS ON AIRWAYS (AREA CONTROL)

2.1. Introduction

2.1.1. Areas of responsibility for the control of flights on airways and the units providing this service are shown in ENR 2.1

2.1.2. Separation is based on:

a) Estimated and actual times over position reporting points;
b) Reports of visual sighting;
c) Surveillance identification.

Note: As position reports are most commonly used it is important for estimates to be revised and notified to the ACC if more than 3 minutes in error.

2.2. Communications and Radio Navigation Requirements

2.2.1. All aircraft operating under IFR or VFR within controlled airspace shall be equipped with appropriate communications and navigation equipment enabling them to:

a) maintain two-way communication with the appropriate ATC unit. The minimum requirement is VHF R/F equipment suitable for communicating on ATC frequencies.
b) maintain track within the lateral limits of the Airway/RNAV Route and to navigate in accordance with ATC instructions. The minimum requirement is one radio compass.

2.3. Air Traffic Clearance

2.3.1. An Air Traffic Clearance is an authorization by ATC for an aircraft to proceed under specified conditions within controlled airspace. If for any reason an air traffic clearance is not acceptable to the pilot-in-command, he may request an alternative clearance.

2.3.2. The pilot-in-command of an aircraft on an IFR or SVFR flight plan shall obtain an air traffic clearance prior to operating in a controlled airspace.

2.3.3. The pilot-in-command of an aircraft not operating on an IFR or SVFR flight plan shall at all times maintain appropriate VFR in-flight weather minimums and obtain an air traffic clearance prior to operating in Class A, Class B, Class C, or Class D airspace.

2.3.4. An air traffic clearance will contain the following items:

a) Aircraft identification;
b) Clearance limit and route instruction;
c) Level assignment;

d) Departure instruction when necessary;
e) Approach instruction when necessary;
f) Clearance expiry time when necessary;
g) Any special instructions and information.

2.3.5. Request for Amended Clearance. If the amended clearance is requested at a time a position report is made the information contained in that report shall be given on the assumption that the aircraft is proceeding in accordance with the current clearance, and not with that which is being requested.

2.3.6. The contents of an air traffic control clearance or any revision thereto shall apply only to those portions of the flight conducted within controlled airspace.

2.3.7. An air traffic control clearance may be issued direct to an aircraft by an ACC or through an aerodrome control unit or an air-ground HF R/F communications unit.

2.3.8. Phrases used in air traffic clearances will have the following meanings:

a) Clearance expires at (Time). If the aircraft is not airborne by the time stated, a new clearance shall be obtained.
b) Depart not before (Time). An aircraft will not be cleared for departure until the time specified.
c) Unable to approve. When ATC is unable to approve the flight planned level, an alternative level will be offered whenever possible, to avoid or reduce delay.

2.3.9. A pilot-in-command operating under VFR in controlled airspace's shall not enter instrument meteorological conditions without first obtaining an ATC clearance in accordance with the procedure laid down for flights joining airways. Until such clearance is received, the aircraft must remain in VMC.

2.3.10. Where a flight plan specifies IFR for the first portion of a flight and VFR for the latter portion, the aircraft will normally be cleared to the point where IFR terminates (clearance is not necessary beyond that point unless within the TMAs and all CTRs).

2.3.11. If an ATC clearance stipulates VFR climb or descent and it becomes evident to the pilot-in-command that VMC cannot be maintained, he shall hold in VMC and request an alternative clearance.

2.3.12. The pilot-in-command having acknowledged an air traffic control clearance shall not deviate from the provisions of the clearance unless an amended clearance has been obtained.

2.3.13. A flight shall normally be cleared to the aerodrome of first intended landing, the point of leaving controlled airspace or in the case of a flight where prior coordination with an adjacent unit cannot be established the FIR boundary: this is known as the clearance limit.

2.3.14. When an aircraft is cleared to an intermediate point en-route and further ATC clearance is required, this will, wherever possible be issued at least 15 minutes before the aircraft arrives at the clearance limit, unless the pilot-in-command is instructed to hold over the intermediate point until a specified time.

2.3.15. In the event of an aircraft arriving at the clearance limit without having received a further clearance, the pilot-in-command shall immediately request a further clearance and hold in accordance with the specified holding pattern maintaining the last assigned cruising level until coordination facilities between Regional Control Centers exist, pilots on such routes must endeavor, when airborne, to contact the Area Control Centre of the next FIR which the aircraft is entering and obtain clearance to enter its Control Area before reaching the transfer point of the two ACCs.

2.3.16. When a flight operates successively in a control area subsequently along the advisory route or area, the clearance issued for the flight or any revisions thereto will only apply to those portions of the flight conducted within controlled airspaces.

2.4. Route and Level Assignment

2.4.1. The pilot-in-command shall fly in strict accordance to the route specified by ATC. Deviation from the specified route may be permitted by ATC if traffic conditions permit.

2.4.2. Traffic permitting ATC will assign the flight planned level if in accordance with the table of semi-circular system of Cruising Levels. Cruising levels below the minimum specified in ENR 3.1 will not be assigned.

2.5. Essential Traffic Information

2.5.1. Essential traffic is that controlled traffic to which the provision of separation by ATC is applicable but, which in relation to a particular controlled traffic, does not have the required minimum separation.

2.5.2. Essential traffic information shall be issued to controlled flights concerned whenever they constitute essential traffic to each other.

Note: This information will inevitably relate to controlled flights which are cleared subject to maintaining own separation and remaining in visual meteorological conditions.

2.5.3. Essential traffic information shall include:

a) Direction of flight of aircraft concerned;
b) Type of aircraft concerned;
c) Level(s) of aircraft concerned and estimated time of passing or if this is not available, the estimated time of arrival for the reporting point nearest to where the level will be crossed.

2.6. Aircraft Joining or Crossing Airways

2.6.1. Pilot-in-command of aircraft joining or crossing an airway will:

a) When flying under VFR in Class B, Class C, or Class D airspace, notify the appropriate ATC authority; or
b) When flying under IFR, request clearance from the appropriate ATC authority not later than 10 minutes on VHF R/T or 20 minutes on HF R/T before joining or crossing.

2.6.2. An in-flight request or notification of intention to join an airway shall include the following information, as appropriate:

a) Aircraft identification
b) Aircraft type
c) Position
d) Level and flight conditions
e) Estimated time at point of joining
f) Desired level
g) Route and point of first intended landing
h) True airspeed
i) The words "request joining clearance·

2.6.3. An in-flight request or notification of intention to cross an airway shall include the following information:

a) Aircraft identification
b) Aircraft type
c) True track

d) Place and estimated time of crossing
e) Desired crossing level
f) Ground speed
g) The words "request crossing clearance•

2.7. VFR flight Crossing Airways

2.7.1. VFR flights intending to cross airways below FL 145 outside the Terminal Class D Areas shall only cross them at various levels plus 500 ft at an angle of 90° to the direction of the airways, or as close as possible to this angle.

2.7.2. In an emergency, where neither surveillance nor a procedural crossing can be obtained, an airway may be crossed at various levels plus 500 ft. The various levels referred to are flight levels of whole thousands in feet.

2.8. VFR flights shall NOT be operated:

a) In Class A airspace; or
b) by night in all airspace;
c) by day in Class B, Class C, and Class D airspace without an appropriate ATC clearance.

2.9. Temporary Danger Areas on Airways

2.9.1. Military operations, both air and ground may take place within the Juba FIR. Danger areas will be promulgated by NOTAM, giving the reference point, vertical extent. radius and duration of the operation.

2.9.2. Where danger areas infringe controlled airspace, the areas will not be available for use by civil aircraft at the levels affected.

2.10. IFR Flights outside Terminal Areas and CTRs in VMC

2.10.1. The pilot-in-command of an aircraft operating under IFR outside the Terminal Areas/CTRs below FL 245 may request a VFR clearance for any portion of the flight. In the absence of such a request, ATC will issue a full IFR clearance regardless of weather conditions.

2.10.2. Outside the Terminal Areas/CTRs when necessary to expedite traffic, ATC may request a pilot-in-command operating under IFR below FL 245 to conduct portion of the flight under VFR. An alternative clearance will be issued if the pilot-in-command has any doubt as to his ability to maintain VFR.

3. AIR TRAFFIC ADVISORY SERVICE

3.1. Introduction

3.1.1. Air Traffic Advisory Service is provided in areas or airspace where it is desirable to make information on collision hazards more effective than Flight Information Service provides, but facilities for the introduction of positive control are inadequate, or positive control cannot be applied for some reason.

Note: Air Traffic Advisory Service is normally implemented as a temporary measure pending the implementation of positive control

3.1.2. In addition to the provision of information on known traffic, Advisory Service offers suggestions and advice to assist the pilot-in-command to avoid collision with other aircraft.

3.1.3. Generally, procedures in advisory areas or airspace are similar to those in control areas.

3.1.4. Juba Center provides Air Traffic Advisory Service within defined areas of responsibility using ICAO standard separation. Units and the areas or routes they serve are shown in ENR 3.

3.1.5. Air Traffic Advisory Service does not provide for terrain clearance, which is the responsibility of the pilot-in-command.

3.1.6. There is no obligation on the part of a pilot-in-command to make use of this service and it does not therefore afford the same degree of safety and cannot assume the same responsibilities as air traffic control service since there may be unknown or unreported traffic operating in the advisory area or airspace.

3.1.7. The words "Advice" or "suggested" will be used in advisory messages passed to the pilot-in-command by ATC. The pilot-in-command shall then indicate whether he intends to comply with the advice or suggestion.

3.1.8. A flight in an advisory area or airspace will not be subject to an air traffic clearance, but any changes in flight plan or flight progress should be notified to ATC.

3.2. Procedures

3.2.1. In electing to use the air traffic advisory service within the specified advisory areas and airspace, the pilot-in-command shall comply with the procedures applicable to flights within controlled airspace.

3.2.2. Requirements for the submission of a flight plan prior to departure or in flight are similar to those for flights in controlled airspace.

3.2.3. Traffic intending to cross an advisory area or airspace should request the permission of ATC. If unable to effect direct contact, notification should be passed relay by another unit.

3.2.4. In crossing the advisory area or airspace the pilot-in-command should in so far as possible select a point associated with a radio facility to assist accurate navigation; and should cross as nearly as possible at right angle to minimize the time spent in the advisory area or airspace and at a level, appropriate to its track selected from the table of quadrantal cruising levels for use by flights operating outside controlled airspace.

3.2.5. If operating IFR in an advisory area or airspace and not electing to use the air traffic advisory service, pilot-in-command should maintain a listening watch on the appropriate frequency and notify ATC of

a) Position, true airspeed, cruising level and route, at hourly intervals; and
b) Any intended change in route or cruising levels.

3.2.6. The clearance limit of a flight will be the point at which the aircraft leaves the advisory area or airspace. Where the destination airfield is situated on an advisory area or airspace in Juba FIR the clearance limit will be the destination airfield.

4. FLIGHT INFORMATION SERVICE (FIS)

4.1. Introduction

4.1.1. Flight Information Service (FIS) is provided both within and outside controlled or advisory airspace by all ATS units.

4.1.2. Within the South Sudan FIR but outside controlled or advisory airspace, the Flight Information and Alerting Service established at Juba ACC will, for ease of reference, be known as Juba Flight Information and the Area Controller will normally carry out the duties of the Flight Information Controller.

4.1.3. In addition to the normal Flight Information and Alerting Service provided by all ATS Units, the Flight Information Controller Will provide extra services to aircraft, which communicate with him whilst they are flying outside controlled and advisory airspace.

4.2. Scope of Flight Information Service

4.2.1. FIS shall include pertinent information concerning:

a) SIGMET warnings, both reported and forecast which may affect the safety of flight;
b) changes of serviceability of navigational and approach aids;
c) conditions of aerodromes and associated facilities;
d) other information which is considered pertinent to safety.

4.2.2. In addition to the information outlined in 4.2.1, FIS provided to IFR flights outside controlled and advisory airspace will include:

a) the acceptance of airborne flight plans;
b) the provision, when requested, of clearance to join or cross controlled airspace;
c) the passing of EA Ts to destination aerodromes outside controlled airspace under special circumstances (e.g. diversions);
d) warnings of proximity hazards;
e) weather conditions, both reported and forecast, at destination and alternate aerodromes.

4.2.3. In addition to the information outlined in 4.2.1, FIS provided to VFR flights will include weather conditions, both reported and forecast, which could make flight under VFR impracticable.

4.3. General Application

4.3.1. FIS is provided at the discretion of the controller concerned or at the request of the pilot made either before departure or whilst in flight.

4.3.2. In providing FIS, the controller is not provided with sufficient reliable information on all of the flights within the airspace for which he has limited responsibility to enable him to offer aircraft more than an information service. He has no authority to issue either clearances or instructions to aircraft in communication with him except when acting on behalf of other ATS units possessing positive powers of control. Accordingly, the controller will usually preface his remarks with "you are informed that…", when, in his opinion, an aircraft should be given certain information which may affect the conduct of flight.

4.3.3. The provision of ATC Service shall normally take precedence over the provision of FIS.

4.4. Proximity Warnings

4.4.1. Due to many factors the Flight Information Controller cannot be provided with an accurate display of air traffic flying outside controlled airspace and advisory area. He cannot, therefore, supply an ATC Service, but is empowered to offer a proximity warning service to aircraft in communication with him.

4.4.2. The Flight Information Controller cannot be expected to have a knowledge of all the geographical positions in the FIR and their proximity to each other, neither can he plot aircraft position reports given by different methods (i.e. latitude and longitude, bearing and distance, geographical positions, etc.) in order to forecast possible collision hazards.

4.4.3. The Flight Information Controller may offer a limited proximity warning service and may give traffic information to aircraft in communication with him as follows:

a) proximity warnings may be issued to aircraft when positive and self-evident information is received by the Fight Information Controller indicating that aircraft are, or will be in dangerous proximity to each other;

b) the Flight Information Controller may at his discretion, or on request, inform a pilot of the presence of other known traffic in the vicinity;

c) the issue of proximity warnings and traffic information is wholly at the discretion of the Flight Information Controller. As indicated above such information may be based on data of doubtful accuracy and completeness, therefore, the Flight Information Controller cannot assume responsibility for their issuance at all times nor for their accuracy.

4.4.4. The provision of ATC Service shall normally take precedence over the provision of FIS.

5. AERODROME/ APPROACH CONTROL SERVICE

5.1. Introduction

5.1.1. Aerodrome/Approach Control issue air traffic clearances, instructions and information to aircraft to ensure the safe, orderly and expeditious flow of air traffic.

5.1.2. In VMC, all aircraft flying in a control zone (CTR) or aerodrome traffic zone (ATZ) and all traffic on the maneuvering area of the aerodrome (with the exception of the marshalling area) come under Aerodrome Control. This does not, however, relieve the pilot- in-command from the responsibility for avoiding collisions.

5.1.3. In IMC, control of traffic on the runway in use in the air is shared between Aerodrome Control and Approach Control. Normally departing aircraft are transferred to Approach Control when airborne, whilst arriving aircraft are transferred to Aerodrome Control when properly sequenced for approach to land. The actual point of transfer depends on traffic conditions between the two units, accordingly control of traffic on other parts of the maneuvering area, with the exception of the marshalling area, is the responsibility of Aerodrome Control.

5.1.4. CTR dimensions and controlling authorities are specified in ENR 3.

5.2. Procedures

5.2.1. Holding instrument approach, arrival and departure procedures are specified in ENR 1.5.

5.2.2. Radio communication shall be established with the appropriate Aerodrome/Approach Control Unit:

5.2.3. For IFR or VFR operations in a CTR, aircraft shall be equipped with appropriate two-way VHF radio apparatus, plus a radio compass. The appropriate Controlling Authority may grant exemptions.

5.2.4. Aircraft shall call aerodrome/approach control on VHF approximately 10 minutes before ETA at the Zone boundary (or 20 minutes, where communications are on HF R/T).

5.2.5. A pilot-in-command under lFR or VFR about to enter, cross or operate within a CTR or ATZ shall:

a) notify aerodrome/approach control on the appropriate radio frequency of the aircraft's position, level and track;

b) estimated time of crossing the zone boundary;

c) maintain a continuous listening watch of that frequency while the aircraft is within the zone;

d) navigate in accordance with the flight plan and ATC clearance;

e) carry out instructions received from aerodrome/approach control.

5.2.6. All flights within a control zone, by night or in IMC, shall be conducted in accordance with IFR or special authorization by ATC. However, at any time, in order to expedite traffic, ATC may authorize IFR flights to execute visual approaches if the pilot reports that he has the aerodrome in sight, can maintain visual reference to the surface and:

a) the reported cloud ceiling is not below the initial approach level for the aircraft cleared;

b) the pilot reports at any time during the initial or the intermediate approach procedure, that the visibility will permit a visual approach and he has reasonable assurance that the landing can be accomplished.

5.2.7. VFR flights specially authorized by ATC and without radio, may be permitted in a CTR under special circumstances, subject to traffic permitting. In this case, permission shall be obtained before departure and the flight shall be conducted in strict accordance with such conditions as may be specified.

5.2.8. Flights within a CTR may be specially authorized by ATC when weather conditions fall below the minima for VFR flights. Such flights when so authorized, shall be flown clear of cloud and in sight of the ground or water.

5.2.9. Separation shall be effected between all specially authorized flights and between such flights and all IFR flights.

5.3. Separation Standards applied shall be in accordance with ICAO Doc 4444 (PANS-ATM)

5.4. Traffic and Taxi Circuits

The following positions in the traffic and taxi circuits are the positions where aircraft normally request and, depending on the traffic situation, receive air traffic control clearances and instructions:

a) Parking Position. Aircraft requests start-up approval, if required, and taxi instruction for departure.

b) Holding Point Aircraft reports ready for departure, if requested. Departing aircraft are held at this point until permission to line up or take-off clearance can be issued.

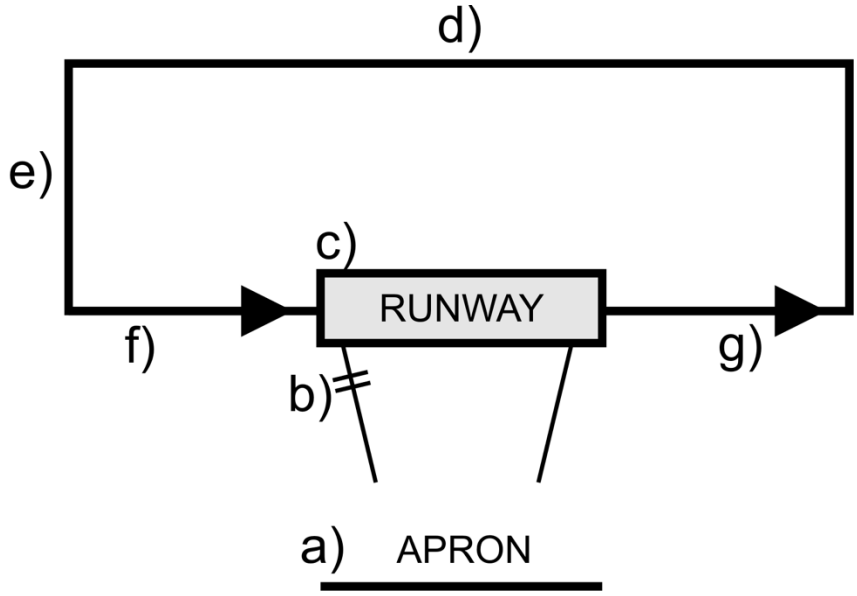
c) Take-off Position. Take-off clearance shall be issued here if not practicable at position b).

d) Downwind. Aircraft reports on downwind if requested. Landing clearance may be issued.

e) Base. Aircraft reports on base leg if requested. Landing clearance may be issued if not practicable at position d).

f) Final. Aircraft reports on final if requested. Landing clearance shall be issued if not practicable at positions d) or e).

g) Turn-off Position. Taxi instruction to the apron or the instruction to contact ground control resp. apron shall be issued.



Note: At grass or unpaved aerodromes, the area to be used for landing is regarded as the runway for the purpose of reporting position in the circuit.

5.5. Use of Runway

5.5.1. The Aerodrome/Approach Controller will nominate the runway direction according to prevailing circumstances.

5.5.2. Notwithstanding the runway direction nominated by ATC, the pilot-in-command shall ensure that there is sufficient length of run and that the crosswind or downwind component is within the operational limits of each particular operation. If the nominated runway direction is not suitable for these reasons or for any other safety reason, the pilot-in-command may request for an alternative runway direction. The decision to undertake a take-off or a landing on a water-affected runway or when the presence of birds has been advised rests solely with the pilot-in-command.

5.5.3. Unless prior permission has been obtained from ATC, the pilot-in-command of an aircraft that has been cleared for takeoff shall not hold on the runway-in-use.

5.5.4. During daylight hours, in VMC, an aircraft may be cleared to continue approach to a runway occupied by a proceeding aircraft but clearance to land will not be given until the runway is vacated.

5.6. Closure of Aerodromes

5.6.1. Aircraft will not be refused permission to land or take-off from airfields in Juba FIR solely because of adverse weather conditions. The pilot-in-command of public transport aircraft shall be responsible for operations in accordance with applicable company weather minima.

5.6.2. Aerodromes will be closed:

a) when the surface of the landing area is unfit e.g. soft surface or dangerous obstruction on the maneuvering area; or

b) at such other times and in conditions specified by NOTAM.

5.6.3. In an emergency an aircraft will be permitted to land regardless of the conditions of the aerodrome or aerodrome facilities, but the pilot will be advised of these conditions.

5.7. Air Traffic Clearance

5.7.1. All flights within a CTR or ATZ, irrespective of weather conditions, require an air traffic clearance. This is not applicable in Class E airspace where VFR flights are permissible and for such flights an ATC clearance is not necessary.

5.7.2. The pilot-in-command of an aircraft departing from a CTR shall obtain an air traffic clearance prior to departure.

5.7.3. A clearance to enter or to cross a CTR or ATZ will include the following information:

a) a clearance limit and holding instructions, if necessary;

b) the route to be flown; and

c) the altitude or flight level.

5.8. Suspension of VFR Flights

5.8.1. VFR flights shall not be permitted to take-off or land at an aerodrome within a control zone/aerodrome traffic zone or enter the traffic pattern when:

a) 1/2 or more of cloud ceiling is less than 2500 ft; or

b) the ground visibility is less than 9.2 km (5 NM).

5.9. Start Up Procedure

5.9.1. The pilot-in-command of an aircraft shall listen out on the appropriate aerodrome control tower frequency as early as possible prior to starting engines in anticipation of an instruction or a message that may come from ATC. When ready to start, ATC must be immediately advised so that there would be sufficient time for the issue of airway clearance to the aircraft.

5.9.2. For all aircraft operating at the airfields within Control Zones at which Aerodrome Control Services are provided, prescribed procedures below shall apply. The pilot-in-command shall:

a) just prior to starting engines, obtain a start-up clearance;

b) after start-up, obtain ATC clearance;

c) report ready for take-off.

5.9.3. Departing aircraft will be instructed when to change from aerodrome/approach to en-route/airways control frequency.

5.10. Aerodrome Traffic Zone

5.10.1. Pilots-in-command of aircraft operating at airfields within Aerodrome Traffic Zones are also requested to comply with the above procedures.

5.11. Taxiing

5.11.1. The pilot-in-command shall obtain clearance before leaving the parking area.
Note: Taxi clearance will relate to movement on the maneuvering area, but exclude the marshalling area.

5.11.2. Aircraft taxiing on the maneuvering area will be regulated by ATC to avoid or reduce possible conflict and will be provided with a traffic information and alerting service.

5.11.3. The pilot-in-command shall not taxi his aircraft on to the runway in use except with the permission of aerodrome control.

5.12. Take-Off and Landing

5.12.1. The pilot-in-command shall not take-off or land without a clearance from aerodrome control.

5.12.2. The pilot-in-command shall not run-up on the runway in use unless authorised by aerodrome control. Engine run-ups may be carried out in the holding pan or taxiway holding point clear of the runway in use.

5.12.3. After landing, the pilot-in-command shall vacate the runway by the shortest possible route or in accordance with instructions from aerodrome control.

5.12.4. Non-radio equipped aircraft shall stop after vacating the runway and watch for light signals from aerodrome control tower.

5.13. Arriving Aircraft

5.13.1. The pilot-in-command of an arriving aircraft shall contact the appropriate approach control 10 minutes before entering the CTR or ATZ.

5.13.2. Arriving IFR traffic operating into a controlled aerodrome will be issued with the following weather information:

a) wind direction and speed;
b) visibility;
c) present weather;
d) cloud base and amount;
e) QNH; and
f) Any other significant meteorological information.

Note If the aircraft reports VMC below cloud and it is apparent that it can maintain VMC, only the surface wind and appropriate pressure need be given unless a full report is requested by the pilot.

5.14. Instrument Approach

5.14.1. Instrument approaches are specified in AD.

5.14.2. An expected approach time will be issued on initial contact with approach control. Any revisions will be notified immediately to the pilot-m-command.

5.15. Missed Approach

5.15.1. In the event of a missed approach the pilot-in-command shall carry out the published missed approach specified in AD.

5.16. Aerodrome Flight Information Service

5.16.1. A flight information service is provided at certain notified aerodromes where no Air Traffic Control is established.

5.16.2. The Service called "Aerodrome Flight Information Service" may be provided at some of the less busy aerodromes and airstrips where lack of suitable staff or scarcity of movements precludes the establishment of an Aerodrome Control Service.

5.16.3. The function of the “Aerodrome Flight Information Service" is to provide certain vital information to pilots wishing to land. It is not an Air Traffic Service.

5.16.4. Pilots will be given the information they require but will be expected to decide for themselves what action they should take. For example, they will be told the wind direction and speed but they will have to make up their own decision as to which runway should be used. They can however be advised of the direction of the runway nearest in to wind, but this need not necessary be used.

5.16.5. The fundamental difference between the “Aerodrome Flight Information Service" and an Air Traffic Control Service such as Aerodrome or Approach Control Service is that in the “Aerodrome Flight Information Service”, no "Control" of aircraft is exercised nor are instructions passed to pilots. It is essentially an advisory only service.

5.16.6. The Aerodrome Flight Information Service will operate as follows:

a) provision of aerodrome weather information;
b) information of the state of serviceability of the aerodrome and its facilities;
c) provision of information on vehicular traffic on the maneuvering area;
d) provision of aerodrome crash and fire services and alerting of other local emergency services;
e) provision of emergency aerodrome lighting.

5.17. Special VFR Flight

5.17.1. A Special VFR Flight provides flexibility during Instrument Meteorological Conditions (or at night, if so authorized by the Civil Aviation Authority), in a control zone to a pilot who is unable to comply with Instrument Flight Rules.

5.17.2. Special VFR flights may be authorized to enter a control zone for the purpose of landing or take-off and depart directly from a control zone.

5.17.3. Special VFR flights may be authorized only when the ground visibility is not less than 1 NM, (1.85 KM).

5.17.4. Special VFR flights must not be allowed to hinder or interfere with IFR flights and must therefore be regarded as a concession, which will only be granted when traffic conditions permit. IFR flights take precedence over Special VFR Flights.

5.17.5. A Special VFR clearance shall be issued only when specifically requested by a pilot.

5.17.6. A pilot requesting a Special VFR clearance shall:

a) submit a flight plan or a flight notification;
b) comply with ATC instructions;
c) be responsible for ensuring that he flies within the limitations of his license;
d) be responsible for ensuring that he is able to remain clear of cloud, in sight of the surface and keep clear of obstacles;
e) be responsible for maintaining the minimum safe altitude/low flying restrictions as prescribed in ENR 3.

5.17.7. Authorization for Special VFR Flights will depend upon traffic conditions, the extend of the proposed flight and whether or not air/ground communications can be maintained.

5.17.8. Special VFR Flights will not normally be given a specific level to fly; they will be merely instructed to remain clear of clouds and in sight of the surface. However, if it is necessary to maintain vertical separation from other aircraft above, the Special VFR aircraft may be required to remain below a specified level.

5.17.9. Aircraft flying under Special VFR authorization are subject to the general flight rules. Compliance with these rules is the responsibility of the pilot.

6. LIGHT AIRCRAFT OPERATION

6.1. General

6.1.1. Light aircraft operations will normally be conducted under VFR. Request for operation under IFR may be approved if the aircraft is suitable equipped and the pilot appropriately rated. IFR flights will be regulated in accordance with the procedural system.

6.1.2. Flight notification shall be given by telephone or by filing a flight plan prior to departure. Flight notification by means of R/T should be avoided.

6.1.3. For circuits and landings or local flights in the vicinity of an aerodrome of not more than one hour's duration, verbal flight notification is acceptable. The following information should be given:

a) aircraft identification;

b) numbers of persons on board;

c) ETD;

d) flight duration;

e) total endurance;

f) area of flight.

6.1.4. For flights other than those classified in 6.1.3, a flight plan shall be filed.

6.1.5. Light aircraft engaged on flying training or proceeding outside a CTR/ATZ shall maintain VHF communication.

6.1.6. Non-radio equipped aircraft may operate at an airfield at the discretion of ATC when traffic conditions permit. The light signals specified in Appendix "A" shall be strictly adhered to.

6.1.7. Light aircraft engaged on airways procedural flights shall, in addition to radio communication apparatus, be equipped with a radio compass.

6.1.8. Where a grass strip Is available, light aircraft will use the grass strip, but if the strip is unserviceable ATC approval may be sought for the runway to be used.

6.1.9. Non-radio equipped aircraft will be controlled by the prescribed lamp from the Tower and, in-flight shall acknowledge by rocking the wings.

6.1.10. Aircraft not in radio contact will be given light signals on downwind and final positions as shown in Section 7, below.

7. LIGHT SIGNALS

LIGHT (towards aircraft concerned)	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 AERODROME AND PROCEED TO APRON*	RETURN TO STARTING POINT ON THE AERODROME
RED Flares of pyrotechnique	NOTWITHSTANDING ANY PREVIOUS INSTRUCTIONS; DO NOT LAND FOR THE TIME BEING	
*Authorization to land will be there after given as a Steady Green Light.		

ENR 1.2 VISUAL FLIGHT RULES

1. Unless otherwise assigned by ATC, VFR flights shall set their transponder at 2077.

2. 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 1500 ft (450 m); or
   b. when the ground visibility is less than 3 nm (5 km).

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

4. Unless authorized by the appropriate ATS authority, VFR flights shall not be operated:
   a. above FL 200;
   b. at transonic and supersonic speeds.

5. Except when necessary for take-off or landing, or except by permission from the appropriate authority, a VFR flight shall not be flown:
   a. over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 1000 ft (300 m) above the highest obstacle within a radius of 2000 ft (600 m) from the aircraft;
   b. elsewhere than as specified in 5 a), at a height less than 500 ft (150 m) above the ground or water

6. VFR flights shall comply with the provision of 3.6 (Air traffic control service) of Annex2:
   a. when operated within Classes B, C and D airspace
   b. when operating in the vicinity of controlled aerodrome or maneuver area
   c. when operated as special VFR flights

7. An aircraft operated in accordance with the visual flight rules which wishes to change to compliance with the instrument flight rules shall;
   a. if a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan, or
   b. when so required by 3.3 of Annex 2, submit a flight plan to the appropriate air traffic services unit and obtain a clearance prior to proceeding IFR when in controlled airspace.

8. A pilot-in-command operating under VFR in controlled airspace's shall not enter instrument meteorological conditions without first obtaining an ATC clearance in accordance with the procedure laid down for flights joining airways. Until such clearance is received, the aircraft must remain in VMC.

9. VMC visibility and distance from cloud minima are contained in the following table:

VFR Visibility and Distance Minima

Altitude	Airspace Class	Flight Visibility	Distance From Clouds
AT and above FL100 (3050m)	A, B, C, D, E, G	8 km (4.3 nm)	1000 ft (300m) below, 1000 ft (300m) above, 5000 ft (1500m) horizontally
Below FL100 (3050 m) AMSL and above 3000 ft (900 m) AMSL, or above 1000 ft (300 m) above terrain, whichever is the higher	A, B, C, D, E, G	5 km (2.7 nm)	1000 ft (300m) below, 1000 ft (300m) above, 5000 ft (1500m) horizontally
At and below 3000 ft (900 m) AMSL, or 1000 ft (300 m) above terrain, whichever is the higher	A, B, C, D, E	5 km (2.7 nm)	1000 ft (300m) below, 1000 ft (300m) above, 5000 ft (1500m) horizontally
	G	5 km (2.7 nm)**	Clear of cloud and with the surface in sight

**flight visibilities reduced to not less than 5000 ft (1500 m) are permitted for flights operating:

a. at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; and
b. in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels.

VFR Visibility and Distance Minima

Altitude	Airspace Class	Flight Visibility	Distance From Clouds
AT and above FL100 (3050m)	A, B, C, D, E, G	8 km (4.3 nm)	1000 ft (300m) below, 1000 ft (300m) above, 5000 ft (1500m) horizontally
Below FL100 (3050 m) AMSL and above 3000 ft (900 m) AMSL, or above 1000 ft (300 m) above terrain, whichever is the higher	A, B, C, D, E, G	5 km (2.7 nm)	1000 ft (300m) below, 1000 ft (300m) above, 5000 ft (1500m) horizontally
At and below 3000 ft (900 m) AMSL, or 1000 ft (300 m) above terrain, whichever is the higher	A, B, C, D, E	5 km (2.7 nm)	1000 ft (300m) below, 1000 ft (300m) above, 5000 ft (1500m) horizontally
	G	5 km (2.7 nm)**	Clear of cloud and with the surface in sight

**flight visibilities reduced to not less than 5000 ft (1500 m) are permitted for flights operating:

a. at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; and
b. in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels.

ENR 1.3 INSTRUMENT FLIGHTS RULES

1. RULES APPLICABLE TO ALL IFR FLIGHTS

1.1. Aircraft equipment

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

1.2. Minimum levels

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

1.3. Change from IFR flight to VFR flight

1.3.1. 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.

1.3.2. 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 for a reasonable period of time in uninterrupted visual meteorological conditions.

2. RULES APPLICABLE TO IFR FLIGHTS WITHIN CONTROLLED AIRSPACE

2.1. IFR flights shall comply with the provisions of 3.6 of ICAO Annex 2 based upon Convention of International Civil Aviation when operated in controlled airspace.

2.2. An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level selected from;

a. the level indicated in air traffic control clearances or specified by the appropriate ATS authority, or
b. the tables of cruising levels in Appendix 3 of ICAO Annex 2

3. RULES APPLICABLE TO ALL IFR FLIGHTS OPERATING OUTSIDE OF CONTROLLED AIRSPACE

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 the tables of cruising levels in Appendix 3 of ICAO Annex 2

3.2. Communications

An IFR flight operating outside of controlled airspace but within or into areas, or along routes, designated by the appropriate ATS authority in accordance with 3.3.1.2 c) or d) of ICAO Annex 2 shall monitor the appropriate radio frequency and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

ENR 1.4 ATS AIRSPACE CLASSIFICATION

1. AIR TRAFFIC SERVICES AIRSPACE CLASSIFICATION

1.1. ATS airspaces in the Republic of South Sudan are classified as A, B, C, D, E and G. Classes A, B, C, D, and E are controlled airspace. Class F is not used in South Sudan. Class G is uncontrolled airspace.

1.2. ATS airspaces are classified and designated in accordance with following:

Class A IFR flights only are permitted; all flights are subject to air traffic control service and are separated from each other.

Class B IFR and VFR flights are permitted; all flights are subject to air traffic control service and are separated from each other.

Class C IFR and VFR flights are permitted; all flights are subject to air traffic control service and IFR flights are separated from other IFR flights and from VFR flights. VFR flights are separated from IFR flights and receive traffic information in respect of other VFR flights.

Class D IFR and VFR flights are permitted and all flights are subject to air traffic control service. IFR flights are separated from other IFR flights and receive traffic information in respect of VFR flights. VFR flights receive traffic information in respect of all other flights.

Class E IFR and VFR flights are permitted; IFR flights are subject to air traffic control service and are separated from other IFR flights. All flights receive traffic information as far as practicable.

Class G IFR and VFR flights are permitted and receive flight information service if requested as far as practicable. South Sudan Class G airspace starts at 1000 ft (300 m) Above Ground Level (AGL) and goes upwards to the base of overlying controlled airspace

2. REQUIREMENTS FOR FLIGHTS

2.1. Class A – Controlled Airspace

CLASS A	
Controlled	YES
IFR Flight Allowed	YES
SVFR Flight Allowed	NO
VFR Flight Allowed	NO
ATC Clearance	REQUIRED
Separation Provided	ALL FLIGHTS
Speed Limitation	None
Radio Communications Requirement	Continuous two-way

2.2. Class B - Controlled Airspace

CLASS B	
Controlled	YES
IFR Flight Allowed	YES
SVFR Flight Allowed	YES
VFR Flight Allowed	YES
ATC Clearance	REQUIRED
Separation Provided	ALL FLIGHTS
Speed Limitation	None
Radio Communications Requirement	Continuous two-way

2.3. Class C - Controlled Airspace

CLASS C	
Controlled	YES
IFR Flight Allowed	YES
SVFR Flight Allowed	YES
VFR Flight Allowed	YES
ATC Clearance	REQUIRED
Separation and/or Traffic Information Provided	IFR/SVFR flights from: • IFR/SVFR/VFR flights by ATC. VFR flights separated from: • all IFR/SVFR flights by ATC. • Traffic information provided to VFR flights on other VFR flights and traffic avoidance advice on request.
Speed Limitation	250 KT IAS below FL100 (3050 m)
Radio Communications Requirement	Continuous two-way

2.4. Class D - Controlled Airspace

CLASS D	
Controlled	YES
IFR Flight Allowed	YES
SVFR Flight Allowed	YES
VFR Flight Allowed	YES
ATC Clearance	REQUIRED
Separation and/or Traffic Information Provided	IFR/SVFR flights: • from IFR/SVFR flights by ATC. • Traffic information provided on VFR flights and traffic avoidance advice on request. VFR flights: • ATC separation not provided. • Traffic information provided to VFR flights on other IFR/SVFR/VFR flights and traffic avoidance advice on request.
Speed Limitation	250 KT IAS below FL100 (3050 m)
Radio Communications Requirement	Continuous two-way

2.5. Class E - Controlled Airspace

CLASS E	
Controlled	YES
IFR Flight Allowed	YES
SVFR Flight Allowed	YES
VFR Flight Allowed	YES
ATC Clearance	• Required for IFR and SVFR. • Not required for VFR.
Separation and/or Traffic Information Provided	IFR/SVFR flights: • from IFR/SVFR flights by ATC. • Traffic information provided on known VFR flights when possible. VFR flights:

	• ATC separation not provided. • Traffic information provided to VFR flights when possible.
Speed Limitation	250 KT IAS below FL100 (3050 m)
Radio Communications Requirement	IFR: Continuous two-way VFR: Not required

2.6. Class G – Uncontrolled Airspace

CLASS G	
Controlled	NO
IFR Flight Allowed	YES
SVFR Flight Allowed	NO
VFR Flight Allowed	YES
ATC Clearance	• ATC Clearance Not Provided
Separation and/or Traffic Information Provided	IFR flights: • Traffic information provided when possible. VFR flights: • Traffic information provided when possible.
Speed Limitation	250 KT IAS below FL100 (3050 m)
Radio Communications Requirement	IFR: Continuous two-way VFR: Not required

1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

1. GENERAL

1.1. The holding, approach and departure procedures in use for the aerodromes listed in the table below are based on those contained in ICAO Doc 8168 - Procedures for Air Navigation Service-Aircraft Operations (PANS-OPS).

1.2. Initial approach tracks and holding patterns are detailed in AD on specific approach charts prepared for the purpose.

1.3. Pilots are expected to know the correct holding, approach and departure procedures (although ATC will provide this information on request).

1.4. When an aircraft making an instrument approach by day establishes continuous visual reference with the ground or water above the minimum altitude, it may discontinue instrument approach. The pilot-in-command shall be solely responsible for ensuring obstacle clearance from the time visual flight is assumed. In all cases ATC shall be advised.

2. ARRIVING FLIGHTS

2.1. IFR flights entering, and landing within a Terminal Control Area will be cleared to a specified holding point and instructed to contact Approach Control at a specified time, level or position. The terms of this clearance shall be adhered to until further instructions are received from Approach Control. If the clearance limit is reached before further instructions have been received, holding procedures shall be carried out at the level last authorised.

2.2. Pilots are strongly requested to inform ATC if for any reason the approach and/or holding cannot be performed as required and ask for permission to follow an alternative procedure. Permission will normally be given if traffic conditions permit.

2.3. Standard instrument arrival (STAR)

2.3.1. STAR's serve to connect the en-route structure with the instrument approach.

2.3.2. When cleared to "descend via" a STAR the pilot shall comply with all published altitude restrictions on the STAR, including the published entry altitude and published final altitude, unless otherwise instructed by ATC.

2.3.3. After completing a "descend via" STAR the pilot shall maintain the final STAR published altitude unless a specific ATC clearance is received. Clearance for an instrument approach procedure constitutes such a clearance.

Example: " … descend via XXX STAR, cleared RNAV Runway 13 Approach."

2.4. Approach Instructions

2.4.1. ATC clearance or control instructions for approach to an aerodrome or holding point will be issued to an arriving aircraft on initial contact or as soon thereafter as possible with the appropriate ATC unit.

2.4.2. The clearance will specify the clearance limit, route and level to be flown. An Expected Approach Time will be included if it is anticipated that the arriving aircraft will be required to hold.

2.4.3. An arriving IFR aircraft flight shall not be cleared for an initial approach below the appropriate minimum altitude as specified by the state concerned nor descend below the altitude unless:

a) the pilot has reported passing an appropriate point defined by a radio aid; or
b) the pilot reports that he has and can maintain the aerodrome in sight; or
c) the aircraft is conducting a visual approach; or
d) the aircraft's position has been positively determined by the use of surveillance.

2.5. Visual Approach

2.5.1. An IFR flight may be cleared to execute a visual approach provided:

a) the pilot reports that visual reference to the terrain can be maintained all the way to the aerodrome of intended landing; or
b) the pilot reports at the initial approach level or at any time during the instrument approach that the meteorological conditions are such that with reasonable assurance a visual approach and landing can be completed.

2.5.2. Separation shall be provided between an aircraft cleared to execute visual approach and other arriving and departing aircraft.

2.6. Weather Information

2.6.1. Weather information will be passed to inbound aircraft on request or when conditions fall below the following:

a) More than 3/8 cloud cover at or below 3000 ft; or
b) Visibility 5NM or less.

2.6.2. Deterioration and improvement weather reports and significant weather information, e.g. severe turbulence, thunderstorms, etc. will be passed to all aircraft concerned.

3. DEPARTING FLIGHTS

3.1. IFR flights departing from controlled aerodromes will receive initial ATC clearance from the local Aerodrome Control Tower. The clearance limit will normally be the aerodrome of destination. Such a clearance or revisions thereto shall apply to those portions of the flight conducted within controlled airspace.

3.2. The _term "clearance" when used in connection with flights within the advisory airspace does not have the mandatory significance of a clearance relating to a flight within controlled airspace. A clearance given in respect of a flight within a route or area in which advisory service only is provided indicates that the information is of an advisory nature only.

3.3. Detailed instructions will normally be issued with regard to routes, turns etc, before take-off.

3.4. Departure Instructions

3.4.1. To expedite departure, ATC may require a succeeding aircraft to do a "step-up" climb beneath the altitude or level of preceding aircraft, maintaining at least 1000 (or 2000) ft vertical separation as applicable.

3.4.2. ATC may instruct a departing aircraft to leave a reporting point at a specified time or to be at a specified level at a specified point or time. The pilot-in-command shall notify ATC if these instructions cannot be complied with.

3.4.3. When cleared to “climb via” a SID the pilot shall comply with all published altitude restrictions on the SID, unless otherwise instructed by ATC.

Example: ”… climb via XXX departure maintain Flight Level 180.” The pilot will climb the aircraft in such a manner to meet all published SID restrictions and then maintain FL180 until further cleared by ATC.

4. AIR / GROUND COMMUNICATION FAILURE

4.1. Basic Procedure

4.1.1. In the radio failure procedures given below, the expression "E-A-T" will mean either an EAT given by the appropriate ATC unit or the ETA, over the holding point, if the pilot has been told "No delay expected".

4.1.2. The message "delay not determined" will not be considered to be an EAT for the purpose of radio failure procedures. Pilots whose radios fail after they have received this message but before an EAT is given should not attempt to land at their planned destination aerodrome, but should fly to another suitable aerodrome, following the procedure given in sub-paras 4.1.3 (c) and 4.1.3. (d).

4.1.3. The basic procedure is:

a) Continue the flight in accordance with the current flight plan to the holding point at the aerodrome of first intended landing. Maintain the last acknowledged cruising level(s) shown in the flight plan.
b) Arrange the flight so as to arrive over the holding point at, or as close as possible to, the ETA last acknowledged by ATC.
c) After passing the compulsory reporting point at which the pilot failed to contact ATC. he should turn by 60 degree left or right of his track and leave controlled airspace or advisory route maintaining the last cleared level;
d) If radio failure occurs inside a CTR or TMA, the pilot should proceed as cleared to the reporting point nearest to the boundary of the CTR or TMA before leaving controlled airspace as described above.
e) When clear of controlled airspace or advisory route, climb to either:
   i. the cruising level requested in the filed flight plan if operating on a RLCE clearance; or
   ii. the accepted level on a heading that will keep the aircraft clear of controlled airspace and/or advisory route for a minimum period of five minutes and is also compatible with rejoining the intended airway or advisory route when the cruising level is reached
f) When at cruising level, return to controlled airspace or advisory route and proceed in accordance with normal radio failure procedure.

4.1.4. if by day, the climb can be made in VMC; there is no need for the pilot to leave controlled airspace or an advisory route.

4.1.5. Should it be necessary to cross an airway during the climb, the airway should be crossed at right angles at an intermediate 500 ft level.

4.2. Action by ATC

As soon as it is known that two-way communication has failed, the appropriate ATC unit shall take action in accordance with the procedures laid down in the PANS-RAC PART III.

5. AIRCRAFT CATEGORIZATION

Aircraft performance has a direct effect on the airspace and visibility needed to perform the various maneuveres associated with the conduct of instrument approach procedures. The most significant performance factor is aircraft speed. Accordingly, the following five categories of typical aircraft have been established based on 1.3 times stall speed in the landing configuration at a maximum certificated landing weight, to provide a standardized basis for relating aircraft maneuverability to specific instrument approach procedures.

- Category A less than 91 knots IAS
- Category B 91 knots or more, but less than 121 knots
- Category C 121 knots or more, but less than 141 knots
- Category D 141 knots or more, but less than 166 knots
- Category E 166 knots or more, but less than 211 knots.

ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES

-NIL

ENR 1.7 ALTIMETER SETTING PROCEDURES

1. INTRODUCTION

1.1. The Altimeter Setting Procedures in use in Sudan are conforming to those contained in ICAO Doc 8168 OPS/611 Volume I Part 6.

1.2. The transition altitude in South Sudan is 6,000 ft., unless otherwise stated on the approach plate.

1.3. QNH reports and temperature information for use in determining adequate terrain clearance are available on request from the air traffic services units. QNH values are given in hectopascals (hpa).

2. BASIC ALTIMETER SETTING PROCEDURES

2.1. General

2.1.1. A transition altitude may be specified for each aerodrome. The transition altitude in South Sudan is 6,000 ft., unless otherwise stated.

2.1.2. Vertical positioning of aircraft when at or below the transition altitude is expressed in terms of altitude, whereas such positioning at or above the transition level is expressed in terms of flight levels. While passing through the transition layer, vertical positioning is expressed in terms of altitude when descending, and in terms of flight levels when climbing.

2.1.3. Flight level zero is located at the atmospheric pressure level of 1013,2 hPa (29,92 inches). Consecutive flight levels are separated by pressure intervals corresponding to 500 ft (152,4 m) in the standard atmosphere.

2.2. Take-off and climb

2.2.1. A QNH altimeter setting is made available to aircraft in taxi clearance.

2.3. Vertical Separation - En Route

2.3.1. Vertical separation during en-route flight shall be expressed in terms of flight levels at all times during an IFR flight and at night.

2.3.2. When complying with the specification of Annex 2 an aircraft at or above 1000 ft above the ground or water shall be flown at flight levels corresponding to the magnetic tracks shown in the table of cruising levels in Appendix 3 of Annex 2

2.3.3. Terrain clearance

2.3.3.1 Owing, to the scarcity of reporting stations, late QNH altimeter-setting reports cannot be provided to enable the determination of the flight level that will ensure terrain clearance. Therefore lowest safe flight levels to afford adequate terrain clearance are based on application of the climatologically method.

2.3.3.2 Such method will permit the application of lowest safe flight levels incorporating a margin of safety to cover variations in the actual atmosphere over Sudan. The level nominated shall be that level which in a standard atmosphere lies 500 ft above the minimum safe altitude for the route. For example, if the highest terrain en-route is 10.000 ft, the minimum safe altitude is 11.000 ft and the permanent lowest safe flight level is 115. If this level is inappropriate, the next higher level would apply.

2.4. Approach and landing

2.4.1. A QNH altimeter setting is made available in approach clearance and clearance to enter the traffic circuit.

2.4.2. QFE altimeter setting is made available on request.

2.4.3. Vertical positioning of aircraft during approach is by reference to flight levels until reaching the transition level below which vertical positioning is controlled by reference to altitudes.

2.5. Missed Approach

2.5.1. The relevant portions of 2.1 and 2.2 shall be applied in event of a missed approach.

3. DESCRIPTION OF ALTIMETER SETTING REGION

3.1. The altimeter-setting region is the South Sudan FIR. The areas covered by this region are shown on the Air Traffic Services Airspace Chart ENR 2.

4. PROCEDURES APPLICABLE TO OPERATORS (INCLUDING PILOTS)

4.1. Flight planning

The levels at which a flight is to be conducted shall be specified in a flight plan as follows:

a) in terms of flight levels if the flight is to be conducted at or above the transition level, and . . .
b) in terms of altitudes if the flight is to be conducted in the vicinity of an aerodrome or below the transition altitude

Notes: 1. Short flights in the vicinity of an aerodrome may often be conducted only at altitudes below the transition altitude.

2. Flight levels are specified in a flight plan by number and not in terms of feet or meters, as is the case with altitudes.

ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES

1. VISUAL FLIGHTS RULES (VFR)

VFR flights to be operated within a Control Zone established at an aerodrome serving International flights and in specified portions of the associated terminal control area shall:

a) have two-way radio communications;
b) obtain permission from the appropriate Air Traffic Control unit; and
c) report positions, as required.

2. AIR TRAFFIC ADVISORY SERVICE (PANS-ATM, 9.1.4)

ALL IFR flights shall comply with the procedures for air traffic advisory service when operating in advisory airspace.

3. ADHERENCE TO ATC APPROVED ROUTE (ICAO ANNEX 2, 3.6.2.2)

If an aircraft has inadvertently deviated from the Route specified in is its ATC clearance, it shall forthwith take action to regain such route.

ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT AND AIRSPACE MANAGEMENT

-NIL

ENR 1.10 FLIGHT PLANNING

1. PROCEDURES FOR THE SUBMISSION OF A FLIGHT PLAN

1.1. General

A flight plan shall be submitted in accordance with ICAO Annex 2, 3.3.1 prior to operating any IFR or any VFR flight:

- departing from or destined for an aerodrome within a control zone;
- across the FIR boundary, i.e. international flights.

1.2. Time of Submission

Except for repetitive flight plans, a flight plan shall be submitted at least 30 minutes prior to departure, taking in to account the requirements of ATS units along the route to be flown for timely information.

1.3. Place of Submission

Flight plans shall be submitted in person at the aerodrome control tower at the departure aerodrome. In the absence of such a tower at the departure aerodrome a flight plan shall be submitted to the aerodrome officer. For domestic flights between uncontrolled aerodromes a flight plan shall be submitted by telephone or any available means to the nearest ATS unit and/or to Juba ACC.

1.4. Contents and Form of Flight Plan

1.4.1. ICAO flight plan forms are available at the AIS briefing unit at Juba airport. ICAO flight plan forms are also available at other controlled Aerodromes, at control towers or the Aerodrome officer. At uncontrolled aerodromes the instructions for completing those forms shall be followed. When a flight plan is submitted by telephone the sequence of items in the flight plan form shall be strictly followed.

1.4.2. Operators of RVSM aircraft shall indicate the approval status by inserting the letter (w)in item 10 of the flight plan. And in item (Q) of repetitive flight plan regardless of the requested flight level.

1.4.3. Operators of non - RVSM approved state aircraft with the requested flight level of FL 290 or above shall insert (STS/NON RVSM) in item 18 of ICAO flight plan.

ENR 1.11 ADDRESSING OF THE FLIGHT PLAN MESSAGES

1. Khartoum FIR has control of airspace above FL245 overlying the South Sudan airspace. Thus flight movement messages relating to traffic into or via the South Sudan FIR shall be addressed as stated below as appropriate in order to warrant correct relay and delivery.

Note: Flight movement messages in this context comprises flight plan messages, amendment messages relating thereto and flight plan cancellation messages (ICAO DOC 4444 refers).

Category of flight (IFR/VFR/or Both)	Route (into or via FIR and/or TMA)	Message address
Both	Traffic overflying	HSSSZQZX; HSSSATSX
Both	Traffic landing and/or departing	HSSSZQZX; HSSSZTZX; HSSSZPZX; HSSSATSX

ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT

1. INTERCEPTION PROCEDURES

1.1. The following procedures and visual signals apply over the territory of South Sudan in the event of interception of aircraft. An aircraft which is intercepted by another aircraft shall immediately:

a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Appendix I of ICAO Annex 2;
b) notify, if possible, the appropriate air traffic service unit;
c) attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121,5 MHz, giving the identity of the intercepted aircraft and the nature of the flight. If no contact has been established and if practicable, repeat this call on the emergency frequency 243,0 MHz.

1.2. Phrases for use by intercepting aircraft:

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

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

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

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

2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

2.1. Signals initiated by intercepting aircraft and responses by intercepted aircraft

Series	**INTERCEPTING** Aircraft Signals	Meaning	**INTERCEPTED** Aircraft Responds	Meaning
1	DAY or NIGHT — Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left (or to the right in the case of a helicopter) on the desired heading. *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 racetrack patterns and to rock the aircraft each time it passes the intercepted aircraft.*	You have been intercepted. Follow me.	DAY or NIGHT — Rocking aircraft, flashing navigational lights at irregular intervals and following. *Note.— Additional action required to be taken by intercepted aircraft is prescribed in ANNEX 2, Chapter 3, 3.8.*	Understood, will comply.
2	DAY or NIGHT — An abrupt breakaway maneuver from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT — Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT — Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT — Lowering landing gear, (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

2.2. 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 1000 ft (300 m) but not exceeding 2000 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.	Understood, follow me.
			If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, you may proceed.
5	DAY or NIGHT — Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT — Irregular flashing of all available lights.	In distress.	DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood.

ENR 1.13 UNLAWFUL INTERFERENCE

1. GENERAL

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

2. PROCEDURES

2.1. 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 notification to an ATS unit is possible.

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

a) attempt to broadcast warnings on the VHF 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 and promulgated in Doc 7030 - Regional Supplementary Procedures; or

c) if no applicable regional procedures have been established, proceed at a level which differs from the cruising level normally used for IFR flight in the area by 1000ft (300m) if above FL 290 or by 500 ft (150m) if below FL 290.

ENR 1.14 AIR TRAFFIC INCIDENTS

1. DEFINITION OF AIR TRAFFIC INCIDENTS

1.1. "Air traffic incident" is used to mean a serious occurrence related to the provision of air traffic services, such as:

a) aircraft proximity (AIRPROX);
b) serious difficulty resulting in a hazard to aircraft caused, for example, by:
   i. runway incursion
   ii. obstruction on runway
   iii. faulty procedures
   iv. non-compliance with procedures, or
   v. failure of ground facilities.

1.1.1. Definitions for aircraft proximity and AIRPROX:

Aircraft Proximity.

A situation in which, in the opinion of the pilot or the air traffic services personnel, the distance between aircraft, as well as their relative positions and speed, has been such that the safety of the aircraft involved may have been compromised. Aircraft proximity is classified as follows:

Risk of collision.

The risk classification of aircraft proximity in which serious risk of collision has existed.

Safety not assured.

The risk classification of aircraft proximity in which the safety of the aircraft may have been compromised.

No risk of collision.

The risk classification aircraft proximity in which no risk of collision has existed.

Risk not determined.

The risk classification of aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

AIRPROX:

The code word used in an air traffic incident report to designate aircraft proximity.

1.2. Air traffic incidents are designated and identified in reports as follows:

Type	Designation
Air traffic incident	Incident
as a) above	AIRPROX (aircraft proximity)
as b) i) and b) ii) above	Procedure
as b) iii) above	Facility

2. USE OF THE AIR TRAFFIC INCIDENT REPORT FORM

2.1. The Air Traffic Incident Report Form is intended for use:

a) by a pilot for filing a report on an air traffic incident after arrival or for confirming a report made initially by radio during flight.

Note: The form, if available on board, may also be of use in providing a pattern for making the initial report in flight.

b) by an ATS unit for recording an air traffic incident report received by radio, telephone or teleprinter.

Note: The form may be used as the format for the text of a message to be transmitted over the AFS network.

3. REPORTING PROCEDURES (INCLUDING IN-FLIGHT PROCEDURES)

3.1. The following are the procedures to be followed by a pilot who is or has been involved in an incident:

a) during flight, use the appropriate air/ground frequency for reporting an incident of major significance, particularly if it involves other aircraft, so as to permit the facts to be ascertained immediately;
b) as promptly as possible after landing, submit a complete Air Traffic Incident Report Form:
   i. For confirming a report of an incident made initially as in a) above, or for making the initial report on such an incident if it had not been possible to report it by radio.
   ii. For reporting an incident which did not require immediate notification at the time of occurrence.

3.2. An initial report made by radio should contain the following information:

a) aircraft identification;
b) type of incident, e.g. aircraft proximity;
c) the incident; 1a) and b); 2a}, b}, c), d), n; 3a}, b), c), l); 4a), b);
d) miscellaneous: 1e)

3.3. The confirmatory report on an incident of major significance initially reported by radio or the initial report on any other incident should be submitted to:

Postal Address:

Civil Aviation Authority

Hai-Jalaba, Plot No. 90, Block No. A.-HQ

Juba, The Republic of South Sudan

TEL: (+211) 91 430 88 95

Fax:

eMail: caa@sscaa.aero

AFS: NIL

The pilot should complete the Air Traffic Incident Report Form supplementing the details of the initial report as necessary.

Note: Where is no ATS Flight Information Service, the report may be submitted to another ATS unit.

4. PURPOSE OF REPORTING AND HANDLING OF THE FORM

4.1. The purpose of the reporting of aircraft proximity incidents and their investigation is to promote the safety of aircraft. The degree of risk involved in an aircraft proximity incident should be determined in the incident investigation and classified as "risk of collision", "safety not assured" or "risk not determined" controlled by reference to altitude.

4.2. The purpose of the form is to provide investigating authorities with as complete information on an air traffic incident as possible and to enable them to report back, with the least possible delay to the pilot or operator concerned, the result of the investigation of the incident and, if appropriate, the remedial action taken.

4.3. Instruction for the completion of the Air Traffic Incident Report Form

Item:

A	Aircraft identification of the aircraft filing the report;
B	An AIRPROX report should be filed immediately by radio;
C1	Date/time UTC and position in bearing and distance from a navigation aid or in LAT/LONG;
C2	Information regarding aircraft filing the report, tick as necessary;
C2c)	E.g. FL 350/1013hPa or 2.500 ft/QNH 1007hPa or 1200ft/QFE 998hPa;
C3	Information regarding the other aircraft involved;
C4	Passing distance - state units used;
C6	Attach additional papers as required. The diagrams may be used to show aircraft's positions;
D1 f)	State name of ATS unit and date/time in UTC;
D1g)	Date and time in UTC.
F2	Include details of ATS unit such as service provided, radiotelephony frequency, altimeter setting. Use diagram to show the aircraft's position and attach additional papers as required.

4.4. Air Traffic Incident Reporting Form is shown on pages ENR 1.14-4 through ENR 1.14-7, below.

AIR TRAFFIC INCIDENT REPORT FORM

For use when submitting and receiving reports on air traffic incidents. In an initial report by radio, shaded items should be included.

A – AIRCRAFT IDENTIFICATION	**B – TYPE OF INCIDENT**
	AIRPROX / PROCEDURE / FACILITY[EP]

C – THE INCIDENT

1. General

a) Date / time of incident UTC

b) Position

2. Own aircraft

a) Heading and route

b) True airspeed Measured in ( ) kt ___ ( ) km/h ___

c) Level and altimeter setting

d) Aircraft climbing or descending

( ) Level flight ( ) Climbing ( ) Descending

e) Aircraft bank angle

( ) Wings level ( ) Slight bank ( ) Moderate bank

( ) Steep bank ( ) Inverted ( ) Unknown

f) Aircraft direction of bank

( ) Left ( ) Right ( ) Unknown

g) Restrictions to visibility (select as many as required)

( ) Sunglare ( ) Windscreen pillar ( ) Dirty windscreen

( ) Other cockpit structure ( ) None

h) Use of aircraft lighting (select as many as required)

( ) Navigation lights ( ) Strobe lights ( ) Cabin lights

( ) Red anti-collision lights ( ) Landing / taxi lights ( ) Logo (tail fin) lights

( ) Other ( ) None

i) Traffic avoidance advice issued by ATS

( ) Yes, based on radar ( ) Yes, based on visual sighting ( ) Yes, based on other information

( ) No

j) Traffic information issued

( ) Yes, based on radar ( ) Yes, based on visual sighting ( ) Yes, based on other information

( ) No

k) Airborne collision avoidance system – ACAS

( ) Not carried ( ) Type ( ) Traffic advisory issued

( ) Resolution advisory issued ( ) Traffic advisory or resolution advisory not issued

l)	**Radar identification**					
	( )	No radar available	( )	Radar identification	( )	No radar identification
m)	**Other aircraft sighted**					
	( )	Yes	( )	No	( )	Wrong aircraft sighted
n)	**Avoiding action taken**					
	( )	Yes	( )	No		
o)	**Type of flight plan**		**IFR / VFR / none**[6]			
3.	**Other aircraft**					
a)	**Type and call sign / registration (if known)**					
b)	**If a) above not known, describe below**					
	( )	High wing	( )	Mid wing	( )	Low wing
	( )	Rotorcraft				
	( )	1 engine	( )	2 engines	( )	3 engines
	( )	4 engines	( )	More than 4 engines		
	Marking colour or other available details					
c)	**Aircraft climbing or descending**					
	( )	Level flight	( )	Climbing	( )	Descending
	( )	Unknown				
d)	**Aircraft bank angle**					
	( )	Wings level	( )	Slight bank	( )	Moderate bank
	( )	Steep bank	( )	Inverted	( )	Unknown
e)	**Aircraft direction of bank**					
	( )	Left	( )	Right	( )	Unknown
f)	**Lights displayed**					
	( )	Navigation lights	( )	Strobe lights	( )	Cabin lights
	( )	Red anti-collision lights	( )	Landing / taxi lights	( )	Logo (tail fin) lights
	( )	Other	( )	None	( )	Unknown
g)	**Traffic avoidance advice issued by ATS**					
	( )	Yes, based on radar	( )	Yes, based on visual sighting	( )	Yes, based on other information
	( )	No	( )	Unknown		
h)	**Traffic information issued**					
	( )	Yes, based on radar	( )	Yes, based on visual sighting	( )	Yes, based on other information
	( )	No	( )	Unknown	( )	
i)	**Avoiding action taken**					
	( )	Yes	( )	No	( )	Unknown

4. Distance

a) Closest horizontal distance _____

b) Closest vertical distance _____

5. Flight weather conditions

a) IMC / VMC*

b) Above / below* clouds / fog / haze or between layers*

c) Distance vertically from cloud _____ m / ft* below _____ m / ft* above

d) In cloud / rain / snow / sleet / fog / haze*

e) Flying into / out of* sun

f) Flight visibility _____ m / km*

6. Any other information considered important by the pilot-in-command

_____

_____

_____

_____

_____

_____

D – MISCELLANEOUS

1. Information regarding reporting aircraft

a) Aircraft registration _____

b) Aircraft type _____

c) Operator _____

d) Aerodrome of departure _____

e) Aerodrome of first landing _____ destination _____

f) Reported by radio or other means to _____ (name of ATS unit) at time _____ UTC

g) Date / time / place of completion of form _____

2. Function, address and signature of person submitting report

a) Function

b) Address

c) Signature

d) Telephone number

3. Function and signature of person receiving report

a) Function _____ b) Signature _____

E – SUPPLEMENTARY INFORMATION BY ATS UNIT CONCERNED

1. Receipt of report

a) Report received via AFTN / radio / telephone / other (specify)* _____

b) Report received by _____ (name of ATS unit)

2. Details of ATS action

Clearance, incident seen (radar/visually, warning given, result of local enquiry, etc.)

_____

_____

_____

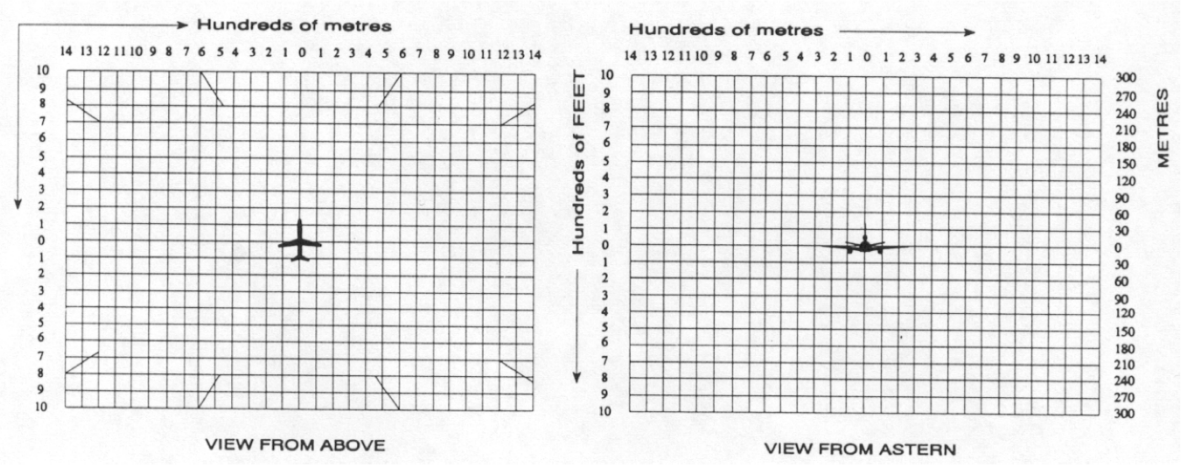
_____

_____

_____

DIAGRAMS OF AIRPROX

Mark passage of other aircraft relative to you, in plan on the left and in elevation on the right, assuming YOU are at the centre of each diagram. Include first sighting and passing distance.



ENR 1.15 UNMANNED AERIAL VEHICLES

1. DEFINITION UNMANNED AERIAL VEHICLES

1.1. An Unmanned Aerial Vehicle (also referred to as Drone, UAV, or UAS) is defined as any aircraft in flight without a pilot-in-command on board the aircraft.

1.2. UAV weighing less than 12 KG MTOW are classified as “Small”.

1.3. UAV weighing 12 KG or more MTOW are classified as “Large”.

2. UAV REQUIREMENTS

2.1. It is illegal to fly any UAV within 9 KM of an aerodrome without prior coordination with, and permission from, the Air Traffic Control unit at the aerodrome; or if no Air Traffic Control unit is present, the aerodrome operator.

2.2. No UAV may be flown at an altitude of less than 200 FT above any person or building, with the exception of the UAV operator.

2.3. No UAV may be operated in such a manner as to cause injury or damage to any person or property.

2.4. No UAV may be flown between the hours of sunset to sunrise without specific authorization from the CEO, SSCAA.

2.5. No UAV may be flown in conditions of less than VFR as defined in this AIP without specific authorization from the CEO, SSCAA.

2.6. Small UAV’s may be flown at an altitude not to exceed 1500 FT AGL as long as a line of sight with the UAV is maintained by the ground-based UAV operator at all times. The ground-based UAV operator is responsible for avoiding all other airborne traffic.

2.7. Operation of Large UAV’s are required to be approved in advance by the CEO, SSCAA and may be flown at altitudes below FL100 provided the following conditions are met:

a) Advance coordination of anticipated area of operation with the CEO, SSCAA.
b) SSR Mode-S Enhanced Surveillance transponder required.
c) ADS-B out required.
d) Appropriate flight levels for VFR direction of flight are maintained.
e) Failsafe return software and geofencing software is active.
f) Any other conditions prescribed by the CEO, SSCAA are complied with.

2.8. Large UAV flight at FL100 or above requires specific advance coordination with, and approval from, the CEO, SSCAA for each flight. Any conditions prescribed by the CEO, SSCAA are complied with prior to the flight.