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NIGERIA CIVIL AVIATION AUTHORITY REGULATIONS 2023

PART 11—AERIAL WORK

APRIL 2023

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Record of Amendment

Amendment Number	*Date of Amendment*	*Affected Sections*	*Description*
4	April, 2023	All	Updated to latest amendment of applicable ICAO annexes as per the status stated in Part 1 of this regulations and the introduction to this Part

Made this 17th day of May, 2023

CAPTAIN MUSA SHUAIBU NUHU
Director-General of Civil Aviation

B 2946

INTRODUCTION

Part 11 of the Nigeria Civil Aviation Regulations (Nig.CARs) sets forth the requirements for aerial work operations, including agricultural aviation, external-load operations, glider and banner towing operations, television and motion picture filming operations, sightseeing flights, fish spotting, and news media and traffic reporting. Although the requirements of this part appear to address operations within Nigeria, in some instances, aircraft registered in Nigeria will perform aerial work in contiguous States.

The Annexes to the International Civil Aviation Organization (ICAO) Convention on International Civil Aviation (Chicago Convention) do not specifically address aerial work. ICAO Annex 1, Personnel Licensing, and Annex 6, Operation of Aircraft, contain a definition of aerial work, but the Foreword, or historical background section, of ICAO Annex 6, Part II, International General Aviation - Aeroplanes, notes that this definition is included so that States will know that Annex 6 does not address aerial work. Because aerial work operations may be conducted outside the boundaries of Nigeria, it is necessary that aircraft used for aerial work operations be operated and maintained in accordance with the ICAO Standards set forth in other parts of these regulations.

This Part is based on ICAO Annex 2, Amendment 47; Annex 6, Part I, International commercial Air Transport--Aeroplanes, Amendment 48; Annex 6, Part II, International General Aviation-- Aeroplanes, Amendment 40; and Annex 6, Part III, International Operations--Helicopters, Amendment 24.

NIGERIA CIVIL AVIATION AUTHORITY REGULATIONS 2023

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NIGERIA CIVIL AVIATION AUTHORITY REGULATIONS 2023

PART 11—AERIAL WORK

11.1. General

General.

11.1.1.1.—(*a*) This part prescribes the requirements for those operators that are conducting aerial work and operations that are considered to be aerial work in Nigeria.

Applicability.

(*b*) All persons who conduct aerial work in Nigeria shall, at all times, continue in compliance with the certification requirements of this part.

(*c*) All persons who conduct aerial work in Nigeria shall, at all times, continue in compliance with the applicable airworthiness requirements and operating rules of this part, except where this part grants relief from those requirements.

(*d*) All persons who conduct remotely piloted aircraft (RPA) aerial work in Nigeria shall, at all times, continue in compliance with :

(1) The RPA requirements in Part 21 of these regulations.

(2) The RPA requirements for foreign air operators in Part 10 of these regulations ;

(3) The personnel licensing requirements for RPA in Part 2 of these regulations ; and

(4) The applicable requirements of this part, except where this part may be less prescriptive than 8.8.1.33 of these regulations.

(*e*) A person operating an RPA and its remotely piloted aircraft systems (RPAS), registered in Nigeria or holding an operator certificate from Nigeria, shall :

(1) Not operate in Nigeria without appropriate authorisation from the Authority ;

(2) Not engage in international air navigation without appropriate authorisation from the State from which the take-off of the RPA is made ;

(3) Not operate across or within the territory of another State without special authorisation issued by each State, and shall be obtained authorisation prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned ;

(4) Not operate over the high seas without prior coordination with the appropriate air traffic service authority, and shall obtain authorisation prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned ;

(5) Operate in accordance with conditions specified by the State of Registry, the State of the Operator, if different from the State of Registry, or the State(s) the flight is to operate within ; and

(6) Ensure that the RPAS meets the performance and equipment carriage requirements for the specific airspace in which the flight is to operate.

(*f*) All persons who intend to conduct RPA aerial work in Nigeria shall submit an application to the Authority on a form and in a manner as prescribed in IS 11.1.1.1(F).

(*g*) All foreign air operators who intend to conduct RPA aerial work in Nigeria shall submit an application to the Authority on a form and in a manner as prescribed in IS 10.8.1.1(*a*).

Definitions.

11.1.1.2.—Definitions are contained in Part 1 of these regulations.

Abbreviations.

11.1.1.3.—The following abbreviations are used in this part :

AGL - above ground level

ATC - air traffic control

ATPL - airline transport pilot licence

CG - centre of gravity

CPL - commercial pilot licence

IFR - instrument flight rules

PIC - pilot-in-command

PPL - private pilot licence

RPA - remotely piloted aircraft

VFR - visual flight rules

General Rule.

11.1.1.4.—(*a*) No person may engage in aerial work operation unless he/she is a holder of a Permit for Aerial Aviation Services (PAAS) and an Aerial Work Certificate issued by the Authority under Part 18 of these Regulations.

(*b*) Each Aerial Work Certificate holder shall carry a certified true copy of the Certificate on board its Aircraft or in the case of unmanned aircraft, at its base of operations.

11.2. AGRICULTURAL AIRCRAFT OPERATIONS

11.2.1. *General*

Applicability.

11.2.1.1.—(*a*) This subpart prescribes the requirements governing :

(1) Agricultural aircraft operations within Nigeria ; and

(2) The issue of commercial and private agricultural aircraft operator certificates for those operations.

(*b*) In a public emergency, a person conducting agricultural aircraft operations under this part may, to the extent necessary, deviate from the operating rules of this part in order to perform relief and welfare activities approved by an agency of Nigeria or a local government.

(*c*) Each person who deviates from a rule of this part shall, within 10 days after the deviation, send to the Authority a complete report of the aircraft operation involved, including a description of the operation and the reasons for it.

11.2.2. CERTIFICATION RULES

Certificate Required.

11.2.2.1.—(*a*) Except as provided in paragraphs 11.2.2.1(c) and (d) of this subsection, no person may conduct agricultural aircraft operations without, or in violation of, an agricultural aircraft operator certificate issued under this part.

(*b*) An operator may, if it complies with this subpart, conduct agricultural aircraft operations with a rotorcraft with external dispensing equipment in place without a rotorcraft external-load operator certificate.

(*c*) A local or national government conducting agricultural aircraft operations with public aircraft need not comply with this subpart.

(*d*) The holder of a rotorcraft external-load operator certificate under this part conducting agricultural aircraft operations, involving only the dispensing of water on forest fires by rotorcraft external-load means, need not comply with this subpart.

Application for Certificate.

11.2.2.2.—(*a*) An applicant for an agricultural aircraft operator certificate shall apply on a form and in a manner prescribed by the Authority.

Amendment of Certificate.

11.2.2.3.—(*a*) An agricultural aircraft operator certificate may be amended :

(1) On the Authority's own initiative, under applicable laws and regulations ; or

(2) Upon application by the holder of that certificate.

(*a*) A certificate holder shall submit an application to amend an agricultural aircraft operator certificate on a form and in a manner prescribed by the Authority. The applicant shall file the application at least 15 days before the date that the applicant proposes the amendment shall become effective, unless the Authority approves a shorter filing period.

(*b*) The Authority will grant a request to amend a certificate if it determines that safety in air commerce and the public interest so allow.

(*c*) Within 30 days after receiving a denial to amend, the certificate holder may petition the Authority to reconsider the denial.

Certification Requirements.

11.2.2.4.—(*a*) *General*. Except as provided in paragraph 11.2.2.4(*a*)(3) of this subsection :

(1) The Authority will issue a private agricultural aircraft operator certificate to an applicant that meets the requirements of this subpart for that certificate.

(2) The Authority will issue a commercial agricultural aircraft operator certificate to an applicant that meets the requirements of this subpart for that certificate.

(3) An applicant who applies for an agricultural aircraft operator certificate containing a prohibition against the dispensing of economic poisons is not required to demonstrate knowledge specific to economic poisons.

(*b*) *Pilots*.

(1) A private operator - pilot applicant shall hold a PPL, CPL, or ATPL issued by the Authority and shall be properly rated for the aircraft to be used.

(2) A commercial operator - pilot applicant shall have available the services of at least one pilot who holds a current CPL or ATPL issued by the Authority and shall be properly rated for the aircraft to be used.

(*c*) *Aircraft*. The applicant shall have at least one certificated and airworthy aircraft, equipped for agricultural operation.

(*d*) *Knowledge and Skill Tests*. The applicant shall show, or shall have the person who is designated as the chief supervisor of agricultural aircraft operations for him or her show, that the applicant meets the following knowledge and skill requirements for agricultural aircraft operations :

(1) The test of knowledge, which consists of the following :

(*i*) Steps to be taken before starting operations, including a survey of the area to be worked ;

(*ii*) Safe handling of economic poisons and proper disposal of used containers for those poisons ;

(*iii*) The general effects of economic poisons and agricultural chemicals on plants, animals, and persons, with emphasis on those normally used in the areas of intended operations, and the precautions to be observed in using poisons and chemicals ;

(*iv*) Primary symptoms of poisoning of persons from economic poisons, the appropriate emergency measures to be taken, and the location of poison control centres ;

(*v*) Performance capabilities and operating limitations of the aircraft to be used ; and

(*vi*) Safe flight and application procedures.

(2) The test of skill, which consists of the following manoeuvres that must be shown in any of the aircraft specified in paragraph 11.2.2.4(c) of this subsection at that aircraft's maximum certificated take-off mass or the maximum mass established for the special purpose load, whichever is greater :

(*i*) Short-field and soft-field take-offs (aeroplanes and gyroplanes only) ;

(*ii*) Approaches to the working area ;

(*iii*) Flare-outs ;

(*iv*) Swath runs ;

(*v*) Pullups and turnarounds ; and

(*vi*) Rapid deceleration (quick stops) in helicopters only.

Duration of Certificate.

11.2.2.5.—(*a*) An agricultural aircraft operator certificate is effective and valid for twenty four (24) months unless it is surrendered, suspended, or revoked.

(*b*) The holder of an agricultural aircraft operator certificate that is suspended or revoked shall return it to the Authority.

11.2.3. OPERATING RULES AND RELATED REQUIREMENTS

Operating Rules.

11.2.3.1.—(*a*) Except as provided in paragraph 11.2.3.1(c) of this subsection, this section prescribes rules that apply to persons and aircraft used in agricultural aircraft operations conducted under this part.

(*b*) The holder of an agricultural aircraft operator certificate may deviate from the requirements of Part 9(6) of these regulations without a certificate of waiver, as authorised in this subpart, for dispensing operations when conducting nondispensing aerial work operations related to agriculture, horticulture, or forest preservation in accordance with the operating rules of this section.

(*c*) The operating rules of this subpart apply to rotorcraft external-load operator certificate holders conducting agricultural aircraft operations involving only the dispensing of water on forest fires by rotorcraft external-load means.

Carrying of Certificate.

11.2.3.2.—(*a*) No person may operate an aircraft in an agricultural aircraft operation unless a certified true copy of the agricultural aircraft operator certificate under which the operation is conducted is carried on that aircraft. The copy shall be presented for inspection upon the request of the Authority or any government law enforcement officer.

(*b*) The certificate of aircraft registration and the certificate of airworthiness issued for the aircraft need not be carried in the aircraft, provided that the certificates are kept available for inspection at the base from which the dispensing operation is conducted.

Limitations on Private Agricultural Aircraft Operator.

11.2.3.3.—(*a*) No person may conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate :

(1) For compensation or hire ;

(2) Over a congested area ; or

(3) Over any property, unless that person is the owner or lessee of the property or has ownership or other property interest in the crop located on that property.

Manner of Dispensing.

11.2.3.4.—(*a*) No persons may dispense, or may cause to be dispensed, from an aircraft any material or substance in a manner that creates a hazard to persons or property on the surface.

Economic Poison Dispensing.

11.2.3.5.—(*a*) Except as provided in paragraph 11.2.3.5(*b*) of this subsection, no person may dispense, or may cause to be dispensed, from an aircraft any economic poison that is registered with Nigeria :

(1) For a use other than that for which it is registered ;

(2) Contrary to any safety instructions or use limitations on its label ; or

(3) In violation of any law or regulation of Nigeria.

(*b*) This section does not apply to any person dispensing economic poisons for experimental purposes under :

(1) The supervision of a Nigeria agency authorised by law to conduct research in the field of economic poisons ; or

(2) A permit from Nigeria.

Personnel.

11.2.3.6.—(*a*) *Information*. The holder of an agricultural aircraft operator certificate shall ensure that each person used in the certificate holder's agricultural aircraft operation is informed of that person's duties and responsibilities for the operation.

(*b*) *Supervisors*. No person may supervise an agricultural aircraft operation unless he or she has met the knowledge and skill requirements of this subpart.

(*c*) *PIC*. No person may act as PIC of an aircraft operated under this subpart unless that pilot :

(1) Holds a pilot licence and rating prescribed by this subpart as appropriate to the type of operation conducted ; or

(2) Has demonstrated to the holder of the agricultural aircraft operator certificate conducting the operation, or to a supervisor designated by that certificate holder, that the person has met the knowledge and skill requirements of this subpart. However, a demonstration of the knowledge and skill requirements is not necessary for any PIC who :

(*i*) Is, at the time of the filing of an application by an agricultural aircraft operator, working as a PIC for that operator ; and

(*ii*) Has a record of operation under that applicant that does not disclose any question regarding the safety of his or her flight operations or his or her competence in dispensing agricultural materials or chemicals.

Operations in Controlled Airspace Designated for an Aerodrome.

11.2.3.7.—(*a*) Except for flights to and from a dispensing area, no person may operate an aircraft within the lateral boundaries of the surface area of Class D airspace designated for an aerodrome unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.

(*b*) No person may operate an aircraft in weather conditions below VFR minimums within the lateral boundaries of a Class E airspace area that extends upward from the surface unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.

(*c*) A certificate holder may operate an aircraft under special VFR weather minimums without meeting the requirements prescribed in Part 8 of these regulations.

(*d*) The holder of a rotorcraft external-load operator certificate shall submit to the Authority a current and valid standard or restricted certificate of airworthiness, as described in 11.2.3.5 of this part, for each aircraft to be added to the certificate.

Operation Over Congested Areas : General.

11.2.3.8.—(*a*) No person may operate an aircraft over a congested area except in accordance with the requirements of this paragraph.

(1) Prior written approval shall be obtained from the appropriate official or governing body of the political subdivision over which the operation is conducted.

(2) Notice of the intended operation shall be given to the public by some effective means, such as daily newspapers, radio, television, or door-to- door notice.

(3) A plan for each complete operation shall be submitted to and approved by the Authority and include :

(*i*) Consideration of obstructions to flight ;

(*ii*) The emergency landing capabilities of the aircraft to be used ; and

(*iii*) Any necessary coordination with ATC.

(*b*) A certificate holder may operate, or may cause the operation of, an aircraft over a congested area at altitudes required for the proper accomplishment of the agricultural aircraft operation if the operation is conducted :

(1) With the maximum safety to persons and property on the surface, consistent with the operation ; and

(2) In accordance with the requirements of l l.2.3.8(*a*) of this subsection.

(*c*) Each certificate holder shall ensure that all single-engine aircraft, while over a congested area, operate :

(1) Except for helicopters , not loaded during take-offs and turnarounds;

(2) Not below the altitudes prescribed in Part 8 of these regulations except during the actual dispensing operation, including the approaches and departures necessary for that operation; and

(3) During the actual dispensing operation, including the approaches and departures for that operation, not below the altitudes prescribed in Part 8 of these regulations unless it is in an area and at such an altitude that the aircraft can make an emergency landing without endangering persons or property on the surface.

(d) Each certificate holder shall ensure that all multi-engine aircraft, while over a congested area, operate :

(1) During take-off , under conditions that will allow the aeroplane to be brought to a safe stop within the effective length of the runway from any point on take-off up to the time of attaining, with all engines operating at normal take-off power, 105 p*er cent* of the minimum control speed with the critical engine inoperative in the take-off configuration or 115 *per cent* of the power-off stall speed in the take-off configuration , whichever is greater;

Note.—Assume still-air conditions and no correction for any uphill gradient of 1 per cent or less when the percentage is measured as the difference between elevations at the end points of the runway divided by the total length. For uphill gradients greater than 1 per cent, the effective take- off length of the runway is reduced 20 *per cent* for each 1 per cent grade.

(2) At a weight greater than the weight that, with the critical engine inoperative, would permit a rate of climb of at least 50ft per minute at an altitude of at least 1,000 ft above the elevation of the highest ground or

obstruction within the area to be worked or at an altitude of 5,000 ft, whichever is higher. Assume that the propeller of the inoperative engine is in the minimum drag position; that the wing flaps and landing gear are in the most favourable positions; and that the remaining engine or engines are operating at the maximum continuous power available ; and

(3) Below the altitudes prescribed in Part 8 of these regulations except during the actual dispensing operation, including the approaches, departures, and turnarounds necessary for that operation.

(*e*) Each certificate holder shall issue notice of the intended operation to the public as may be specified by the Authority.

Operation Over Congested Areas : Pilots and Aircraft.

11.2.3.9.—(*a*) *General*. No person may operate an aircraft over a congested area except m accordance with the pilot and aircraft rules of this subsection.

(*b*) *Pilots.* Each PIC shall have :

(1) 25 hours of PIC flight time in the make and basic model of the aircraft, at least 10 hours of which shall have been acquired within the preceding 12 calendar months; and

(2) 100 hours of flight experience as PIC in dispensing agricultural materials or chemicals.

(*c*) *Aircraft*.

(1) Each aircraft shall :

(*i*) If it is an aircraft not specified in paragraph l l.2.3.9(*c*)(l)(*ii*) of this subsection, have had within the preceding 100 hours of time in service a 100-hour or annual inspection by a person authorised in accordance with Part 8 of these regulations or have been inspected under a progressive inspection system ; and

(*ii*) If it is a large or turbine-powered multi-engine civil airplane of Nigeria registry , have been inspected in accordance with the applicable inspection programme requirements of Part 8 of these regulations.

(2) Except for helicopters , each aircraft shall be equipped with a device capable of jettisoning at least one-half of the aircraft's maximum authorised load of agricultural material within 45 seconds. If the aircraft is equipped with a device for releasing the tank or hopper as a unit, there shall be a means to prevent inadvertent release by the pilot or other crew members.

Availability of Certificate.

11.2.3.10.—(*a*) Each holder of an agricultural aircraft operator certificate shall keep that certificate at the main base of operations and shall present it for inspection on the request of the Authority or any government law enforcement officer.

11.2.4. Records and Reports

Records : Commercial Agricultural Aircraft Operator.

11.2.4.1.—(*a*) Each holder of a commercial agricultural aircraft operator certificate shall maintain and keep current, at the main base of operations designated in its application, the following records :

(1) The name and address of each person for whom agricultural aircraft services were provided ;

(2) The date of the service;

(3) The name and quantity of the material dispensed for each operation conducted ; and

(4) The name, address, and licence number of each pilot used in agricultural aircraft operations and the date that pilot met the knowledge and skill requirements of this subpart.

(*b*) The records required by this section shall be kept for at least 12 months and shall be made available for inspection by the Authority upon request.

Change of Address.

11.2.4.2.—(*a*) Each holder of an agricultural aircraft operator certificate shall notify the Authority in writing in advance of any change in the address of its main base of operations.

Termination of Operations.

11.2.4.3.—(*a*) Whenever a certificate holder ceases operation under this part, it shall surrender that certificate to the designated office of the Authority.

11.3. Rotorcraft External-Load Operations

11.3.1. *General*

Applicability.

11.3.1.1.—(*a*) This subpart prescribes :

(1) Airworthiness requirements for rotorcraft used in external-load operations ; and

(2) Operating and certification rules governing the conduct of rotorcraft external-load operations in Nigeria.

(*b*) The certification requirements of this part do not apply to :

(1) Rotorcraft manufacturers when developing external load attaching means ;

(2) Manufacturers demonstrating compliance of equipment utilised under this part ;

(3) Operations conducted by a person demonstrating compliance for the issuance of a certificate under this part ;

(4) Training flights conducted in preparation for the demonstration of compliance with this part ; or

(5) A local or national government conducting operations with public aircraft.

(*c*) For the purpose of this part, a person other than a crew member or a person who is essential and directly connected with the external-load operation may be carried only in approved Class D rotorcraft-load combinations.

11.3.2. Certification Rules

Certificate Required.

11.3.2.1.—(*a*) No person subject to this part may conduct rotorcraft external-load operations within Nigeria without, or in violation of the special limitations

and specific approvals of, a rotorcraft external-load operator certificate issued by the Authority.

Duration of Certificate.

11.3.2.2.—(*a*) Unless sooner surrendered, suspended, or revoked, a rotorcraft external-load operator certificate shall expire at the end of the 24th month after the month in which it is issued or renewed.

Application for Certificate Issuance or Renewal.

11.3.2.3.—(*a*) Application for an original certificate or renewal of a certificate issued under this part shall be made on a form and in a manner prescribed by the Authority.

Certification Requirements.

11.3.2.4.—(*a*) The Authority will issue a rotorcraft external-load operator certificate to an applicant that meets the requirements of this subpart for that certificate.

(*b*) The Authority will issue authorisation to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable requirements of this subpart.

Rotorcraft.

11.3.2.5.—(*a*) An applicant shall have the exclusive use of at least one rotorcraft that :

(1) Is type certificated under, and meets the requirements of, those regulations that prescribe requirements for rotorcraft external-load operations ;

(2) Complies with the certification requirements in this subpart that apply to the rotorcraft-load combinations for which authorisation is requested ; and

(3) Has a valid certificate of registration and a valid standard or restricted category certificate of airworthiness.

(*b*) For the purposes of this subsection, a person has exclusive use of a rotorcraft if he or she has sole possession, control, and use of it for flight, as owner, or has a written agreement (including arrangements for the performance of required maintenance) giving him or her that possession, control, and use for at least 6 consecutive months.

(*c*) For the purposes of this subsection, Class A, B, C, and D are defined in subpart 1.5 of these regulations under rotorcraft-load combinations.

Personnel.

11.3.2.6.—(*a*) An applicant shall hold, or shall have available the services of at least one person who holds, a current CPL or ATPL issued by the Authority, with a rating appropriate for the rotorcraft to be used.

(*b*) An applicant shall designate one pilot, who may be the applicant, as chief pilot for rotorcraft external-load operations.

(*c*) An applicant may designate qualified pilots as assistant chief pilots to perform the functions of the chief pilot when the chief pilot is not readily available.

(*d*) The chief pilot and assistant chief pilots shall be acceptable to the Authority , and each shall hold a current CPL or ATPL, with a rating appropriate for the rotorcraft to be used.

(*e*) The holder of a rotorcraft external-load operator certificate shall report any change in designation of chief pilot or assistant chief pilot immediately to the Authority.

(*f*) A newly designated chief pilot shall comply with the knowledge and skill requirements of this subpart within 30 days or the operator shall not conduct further operations under the rotorcraft external-load operator certificate, unless otherwise authorised by the Authority.

Amendment of Certificate.

11.3.2.7.—(*a*)) The holder of a rotorcraft external-load operator certificate may apply to the Authority for an amendment of the certificate to add or delete a rotorcraft-load combination authorisation.

(*b*) The holder of a rotorcraft external-load operator certificate may apply for an amendment to add or delete a rotorcraft-load combination authorisation by submitting to the Authority a new list of rotorcraft , by registration number , with the classes of rotorcraft-load combinations for which authorisation is requested.

Availability, Transfer, and Surrender of Certificate.

11.3.2.8.—(*a*) Each holder of a rotorcraft external-load operator certificate shall keep that certificate and a list of authorised rotorcraft at the main base of operations and shall make it available for inspection by the Authority upon request.

(*b*) Each person conducting a rotorcraft external-load operation shall carry a copy of the rotorcraft external-load operator certificate in each rotorcraft used in the operation.

(*c*) The holder of a rotorcraft external-load operator certificate shall return the certificate to the Authority :

(1) If the Authority suspends or revokes the certificate ; or

(2) If the certificate holder discontinues operations under the certificate and does not resume operations within 2 years.

11.3.3. OPERATING RULES AND RELATED REQUIREMENTS

Operating Rules.

11.3.3.1.—(*a*) No person may conduct a rotorcraft external-load operation without, or contrary to, the Rotorcraft-Load Combination Flight Manual prescribed in 11.3.4.4 of this part.

(*b*) No person may conduct a rotorcraft external-load operation unless :

(1) The rotorcraft complies with 11.3.2.5 of this part ; and

(2) The rotorcraft and rotorcraft-load combination are authorised under the rotorcraft external- load operator certificate.

(*c*) Before a person may operate a rotorcraft with an external-load configuration that differs substantially from any that person has previously carried with that type of rotorcraft (whether or not the rotorcraft-load combination is of the same class), that person shall conduct, in a manner that shall not endanger persons or property on the surface, those of the following flight operational checks that the Authority determines are appropriate to the rotorcraft-load combination:

(1) Make a determination that the mass of the rotorcraft-load combination and the location of its CG are within approved limits and that the external load is securely fastened and does not interfere with devices provided for its emergency release.

(2) Make an initial lift-off and verify that controllability is satisfactory.

(3) While hovering, verify that directional control is adequate.

(4) Accelerate into forward flight to verify that no attitude (whether of the rotorcraft or of the external load) is encountered in which the rotorcraft is uncontrollable or which is otherwise hazardous.

(5) In forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot , other crew members or ground personnel may make this check and signal the pilot.

(6) Increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.

(*d*) Notwithstanding the requirements of Part 8, the holder of a rotorcraft external-load operator certificate may conduct rotorcraft external-load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with the following :

(1) The operator shall develop a plan for each complete operation and shall obtain approval for the operation from the Authority ; and

Note.—The plan shall include an agreement with the appropriate political subdivision that local officials will exclude unauthorised persons from the area in which the operation will be conducted; coordination with ATC, if necessary; and a detailed chart depicting the flight routes and altitudes.

(2) Each flight shall be conducted at an altitude, and on a route, that shall allow a jettisonable external load to be released and the rotorcraft to be landed in an emergency without hazard to persons or property on the surface.

(*e*) Notwithstanding the requirements of Part 8, and except as provided by paragraph l l.3.4.3(*a*)(4) of this part, the holder of a rotorcraft external-load operator certificate may conduct external-load operations, including approaches, departures, and load-positioning manoeuvres necessary for the operation, below 500 ft above the surface and closer than 500ft to persons, vessels, vehicles, and structures, if the operations are conducted without creating a hazard to persons or property on the surface.

(*f*) No person may conduct rotorcraft external-load operations under IFR unless specifically approved by the Authority. However, under no circumstances may a person be carried as part of the external-load under IFR.

Carriage of Persons.

11.3.3.2.—(*a*) No certificate holder may allow a person to be carried during rotorcraft external-load operations unless that person :

(1) Is a flight crew member;

(2) Is a flight crew member trainee ;

(3) Performs an essential function in connection with the external-load operation ; or

(4) Is necessary to accomplish the work activity directly associated with that operation.

(*b*) The PIC shall ensure that all persons are briefed before take-off on all pertinent procedures to be followed (including normal, abnormal, and emergency procedures) and equipment to be used during the external-load operation.

Crew Member Training, Currency, and Testing Requirements.

11.3.3.3.—(*a*) No certificate holder may use, nor may any person serve as, a pilot in rotorcraft external-load operations unless that person :

(1) Has successfully demonstrated to the Authority knowledge and skill with respect to the rotorcraft-load combination ; and

(2) Has in his or her personal possession a letter of competency or an appropriate logbook entry indicating compliance with paragraph 11.3.3.3(*a*)(1) of this subsection.

(*b*) No certificate holder may use, nor may any person serve as, crew member or other operations personnel in Class D operations unless within the preceding 12 calendar months that person has successfully completed either an approved initial or continuation training programme.

(*c*) Notwithstanding paragraph 11.3.3.3(*b*) of this subsection, a person who has performed a rotorcraft external-load operation of the same class and in an aircraft of the same type within the past 12 calendar months need not undergo continuation training.

11.3.4. AIRWORTHINESS REQUIREMENTS

Flight Characteristics Requirements.

11.3.4.1.—(*a*) The applicant shall demonstrate to the Authority, by performing the following operational flight checks, as applicable, that the rotorcraft-load combination has satisfactory flight characteristics, unless these operational flight checks have been demonstrated previously and the rotorcraft-load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external-load mass (including the external-load attaching means) is the maximum mass for which authorisation is requested.

(*b*) *Class A Rotorcraft-Load Combinations*. The operational flight check shall consist of at least the following manoeuvres :

(1) Take-off and landing ;

(2) Demonstration of adequate directional control while hovering ;

(3) Acceleration from a hover ; and

(4) Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested.

(*c*) *Class B and Class D Rotorcraft-Load Combinations*. The operational flight check shall consist of at least the following manoeuvres :

(1) Pickup of the external load ;

(2) Demonstration of adequate directional control while hovering ;

(3) Acceleration from a hover ;

(4) Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested;

(5) Demonstration of appropriate lifting device operation; and

(6) Manoeuvring of the external load into release position and release of the external load, under probable flight operation conditions, by means of each of the quick-release controls installed on the rotorcraft.

(d) *Class C Rotorcraft-Load Combinations*. For Class C rotorcraft-load combinations used in wire-stringing, cable-laying, or similar operations, the operational flight check shall consist of the manoeuvres, as applicable, prescribed in paragraph 11.3.4.l(*c*) of this subsection.

Structures and Design.

11.3.4.2.—(*a*) *External-Load Attaching Means*. Each external-load attaching means shall be approved by the Authority.

(*b*) *Quick-Release Devices*. Each quick-release device shall be approved by the Authority.

(*c*) *Mass and Centre of Gravity.*

(1) *Mass*. The total mass of the rotorcraft-load combination shall not exceed the total mass approved for the rotorcraft during its type certification.

(2) *CG*. The location of the CG shall, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft-load combinations, the magnitude and direction of the loading force shall be established at those values for which the effective location of the CG remains within its established range.

Operating Limitations.

11.3.4.3.—(*a*) In addition to the operating limitations set forth in the manufacturer's approved Rotorcraft Flight Manual, and to any other limitations the Authority may prescribe, the operator shall establish at least the following limitations and shall set them forth in its Rotorcraft-Load Combination Flight Manual for rotorcraft-load combination operations :

(1) The rotorcraft-load combination shall be operated only within the mass and CG limitations established in accordance with this subpart ;

(2) The rotorcraft-load combination shall not be operated with an external-load mass exceeding that used in showing compliance with this subpart ;

(3) The rotorcraft-load combination shall not be operated at airspeeds greater than those established in accordance with this subpart ;

(4) No person may conduct an external-load operation under this part with a rotorcraft type certificated in the restricted category over a densely populated area, in a congested airway, or near a busy aerodrome where passenger transport operations are conducted ; and

(5) The rotorcraft-load combination of Class D shall be conducted only in accordance with the following:

(*i*) The rotorcraft to be used shall be type certificated under transport Category A for the operating mass and shall provide hover capability with one engine inoperative at that operating mass and altitude;

(*ii*) The rotorcraft shall be equipped to allow direct radio inter-communication among required crew members ;

(*iii*) The personnel lifting device shall be approved by the Authority ; and

(*iv*) The lifting device shall have an emergency release requiring two distinct actions.

Rotorcraft-Load Combination Flight Manual.

11.3.4.4.—(*a*) The applicant shall prepare a Rotorcraft-Load Combination Flight Manual and shall submit it for approval by the Authority. The limiting height-speed envelope data need not be listed as operating limitations. The manual shall set forth :

(1) Operating limitations, procedures (normal and emergency), performance, and other information established under this subpart ;

(2) The class of rotorcraft-load combinations for which the airworthiness of the rotorcraft has been demonstrated in accordance with this subpart ; and

(3) In the information section of the Rotorcraft-Load Combination Flight Manual :

(*i*) Information on any peculiarities discovered when operating particular rotorcraft-load combinations ;

(*ii*) Precautionary advice regarding static electricity discharges for Class B, Class C, and Class D rotorcraft-load combinations ; and

(*iii*) Any other information essential for safe operation with external loads.

Markings and Placards.

11.3.5.—(*a*) The following markings and placards shall be displayed conspicuously and shall be such that they cannot be easily erased, disfigured, or obscured :

(1) A placard (displayed in the flight deck or cabin) stating the class of rotorcraft-load combination and the occupancy limitation for which the rotorcraft has been approved ; and

(2) A placard, marking, or instruction (displayed next to the external-load attaching means) stating the maximum external load approved.

11.4. GLIDER TOWING

Applicability.

11.4.1.1.—(*a*) This subpart applies to those operations involving towing gliders by aircraft.

Aerial Work Certificate Required.

11.4.1.2.—(*a*) The Authority will require each person conducting operations in accordance with this subpart to hold an Aerial Work Certificate.

(*b*) The Authority will issue an Aerial Work Certificate to an applicant that meets the requirements of this subpart for that certificate or authorisation.

Aircraft Requirements.

11.4.1.3.—(*a*) No person may operate an aircraft that is towing a glider unless :

(1) The aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness ; and

(2) The towline used has a breaking strength not less than 80 per cent of the maximum certificated operating mass of the glider and not more than twice the maximum certificated operating mass.

(3) The towline used may have a breaking strength more than twice the maximum certificated operating mass of the glider if :

(*i*) The PIC of the towing aircraft is qualified under Part 2 of these regulations ;

(*ii*) A safety link is installed at the point of attachment of the towline to the glider with a breaking strength not less than 80 per cent of the maximum certificated operating mass of the glider and not greater than twice this operating mass ; or

(*iii*) A safety link is installed at the point of attachment of the towline to the towing aircraft with a breaking strength greater, but not more than 25 per cent greater, than that of the safety link at the towed glider end of the towline and not greater than twice the maximum certificated operating mass of the glider.

Experience and Training Requirements.

11.4.1.4.—(*a*) No person may act as a PIC for towing a glider unless that person has :

(1) At least a PPL with a category rating for the tow aircraft ;

(2) Logged at least 100 hours of PIC time in the same aircraft category, class, and type, if applicable, as the tow aircraft ;

(3) Received training in and an instructor endorsement for :

(*i*) The techniques and procedures essential to the safe towing of gliders, including airspeed limitations ;

(*ii*) Emergency procedures ;

(*iii*) Signals used ; and

(*iv*) Maximum angles of bank ;

(4) Except as provided in paragraph 11.4.1.4(*b*) of this subsection, completed at least three flights as the sole manipulator of the controls of an aircraft towing a glider or simulating glider-towing flight procedures while accompanied by a pilot who meets the requirements of this subsection;

(5) Except as provided in paragraph l l.4. l.4(*b*) of this subsection, received a logbook endorsement from the pilot, described in paragraph 11.4.l.4(*a*)(4) of this subsection, certifying that the person has accomplished at least three flights in an aircraft while towing a glider; and

(6) Within the preceding 12 months :

(*i*) Made at least three actual glider tows while accompanied by a qualified pilot who meets the requirements of this subsection; or

(*ii*) Made at least three flights as PIC of a glider towed by an aircraft.

(*b*) The pilot, described in paragraph 11.4.1.4(*a*)(4) of this subsection, who endorses the logbook of a person seeking glider-towing privileges shall have :

(1) Met the requirements of this subsection prior to endorsing the logbook of the person seeking glider-towing privileges ; and

(2) Logged at least 10 flights as PIC of an aircraft while towing a glider.

(*c*) If the pilot described in paragraph 11.4.1.4(*a*)(4) of this subsection holds only a PPL, then that pilot shall have :

(1) Logged at least 100 hours of PIC time in aeroplanes or 200 hours of PIC time in a combination of powered and other-than-powered aircraft; and

(2) Performed and logged at least three flights within the 12 calendar months preceding the month that the pilot accompanies or endorses the logbook of a person seeking glider-towing privileges :

(*i*) In an aircraft while towing a glider accompanied by another pilot who meets the requirements of this section ; or

(*ii*) As PIC of a glider being towed by another aircraft.

Operating Rules.

11.4.1.5.—(*a*) No pilot mayconduct any towing operation in controlled airspace until he or she has received the appropriate clearance from the ATC service.

(*b*) No pilot mayconduct any towing operation in uncontrolled airspace until he or she has notified the appropriate Authority for such activity to be entered into the NOTAM service of Nigeria.

(*c*) No pilots shall engage in towing operations, either as the pilot of the towing aircraft or as the pilot of the towed glider, until all pilots have agreed upon a general course of action, including take-off and release signals, airspeeds, and emergency procedures for each pilot.

(*d*) No pilot of a civil aircraft may intentionally release a towline, after release of a glider, in a manner that endangers the life or property of another.

11.5. BANNER TOWING

Applicability.

11.5.1.1.—(*a*) This subpart applies to those operations involving towing aircraft banners or other signs, lit or unlit.

Aerial Work Certificate Required.

11.5.1.2.—(*a*) The Authority will require each person conducting operations in accordance with this subpart to hold an Aerial Work Certificate.

(*b*) The Authority will issue an Aerial Work Certificate to an applicant that meets the requirements of this subpart for that certificate orauthorisation.

(*c*) A helicopter operating under the requirements of 11.3 of this part may tow a banner using an external-load attaching means without an Aerial Work

Certificate only if the operator has at least a Class B authorisation on the operating certificate.

Aircraft Requirements.

11.5.1.3.—(*a*) No person may operate an aircraft that is towing a banner unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.

(*b*) No person may operate a helicopter that is towing a banner unless the helicopter has a means to prevent the banner from becoming entangled in the helicopter 's tail rotor during all phases of flight, including autorotations.

Note.—The only way to prevent the banner from tangling in the tail rotor during autorotation may be tojettison the banner.

Experience and Training Requirements.

11.5.1.4.—(*a*) For non-revenue flights, the pilot of the tow aircraft shall hold at least a valid PPL and shall have a minimum of 200 hours PIC time.

(*b*) When banner-towing operations are conducted for compensation or hire, the pilot shall have at least a CPL (instrument rating not required) and at least a valid second-class medical certificate.

(*c*) All pilots engaged in banner-towing operations shall demonstrate competence to the Authority by performing at least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder.

Note.—This demonstration should be observed from the ground to allow the inspector to evaluate the competence of any essential ground personnel as well as theflight operation.

Operating Rules.

11.5.1.5.—(*a*) All banner-towing operations shall be conducted only :

(1) In VFR weather conditions as described in Part 8 of these regulations; and

(2) Between the hours of official sumise and official sunset.

(*b*) No person may conduct banner-towing operations :

(1) Over congested areas or open-air assemblies of persons lower than 1,000 ft ; and

(2) Elsewhere lower than the minimum safe altitude requirements of Part 8 of these regulations.

(*c*) Helicopters may be operated at less than the minimums prescribed in paragraph 11.5.1.5(*b*) of this subsection if the operation is conducted without hazard to persons or property on the surface.

(*d*) The certificate holder shall obtain the aerodrome manager's approval to conduct banner-towing operations.

(*e*) If banner-towing operations take place at an aerodrome with a control tower, the certificate holder shall inform that control tower of the time of the banner-towing operation.

(*f*) The certificate holder shall notify the appropriate aerodrome officials in advance when banner-towing operations will be in close proximity to an uncontrolled aerodrome.

(*g*) Only essential crew members shall be carried when conducting banner-towing operations.

(*h*) When banner-towing operations are conducted over congested areas, the pilot shall exercise due care, so that an emergency release of the banner and/ or tow rope shall not cause undue hazard to persons or property on the surface.

(*i*) Each pilot shall drop the tow rope in a predesignated area at least 500 ft from persons, buildings , parked automobiles, and aircraft.

Note.—If the tow plane lands with the rope attached, due care shall be exercised to avoid trailing the rope and endangering other aircraft in the air or persons, property, or aircraft on the surface.

(*j*) Each pilot conducting banner-towing operations shall carry on board the aircraft a current copy of the Aerial Work Certificate allowing banner-towing operations.

11.6. MOTION PICTURE AND TELEVISION FILMING OPERATIONS

Applicability.

11.6.1.1.—(*a*) This subpart applies to those operations involving motion picture and television filming, appearance in-flight in motion pictures , and airborne direction or production of such filming when those operations are conducted as part of a business enterprise or for compensation or hire.

(*b*) For purposes of this subpart, "motion picture" shall include film, videos, and live broadcast in any format and the preparation and rehearsal for those operations.

Aerial Work Certificate Required.

11.6.1.2.—(*a*) The Authority will require each person conducting operations in accordance with this subpart to hold an Aerial Work Certificate.

(*b*) The Authority will issue an Aerial Work Certificate to an applicant that meets the requirements of this subpart for that certificate or authorisation.

Aircraft Requirement.

11.6.1.3.—(*a*) In order to be used in motion picture and television filming operations, an aircraft in the experimental category shall have a certificate of airworthiness or any other Certification issued to it by the Original Equipment Manufacturer for the purpose of exhibition or intended operation ;

(*b*) For any specific type of tethered or moored balloon or aerostat operation, the requirements of 8.8 of these Regulations apply.

Experience and Training Requirements.

11.6.1.4.—(*a*) No pilot may conduct motion picture and television filming operations unless that pilot has :

(1) A CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the authorisation ;

(2) At least 500 hours as PIC, including :

(*i*) At least 20 hours as PIC in the aircraft type;

(*ii*) A minimum of 100 hours in the category and class of aircraft to be used;

(*iii*) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the authorisation ; and

(3) If the pilot intends to perform acrobatics below 1500ft AGL, the pilot shall hold a Statement of Acrobatic Competency for the operations to be performed.

Operating Rules.

11.6.1.5.—(*a*) Each operator shall conduct motion picture and television filming operations so as not to endanger persons or property on the surface or aircraft in flight.

(*b*) Each operator shall obtain an Aerial Work Certificate from the Authority if filming sequences require an aircraft to be flown :

(1) In acrobatic flight below 1,500ft AGL ;

(2) Over a congested area ;

(3) In controlled airspace ; or

(4) In other instances where a departure from the requirements of Part 8 of these requirements is needed.

(*c*) The holder of the Aerial Work Certificate shall provide aschedule of events that lists the :

(1) Identification of the aircraft ; and

(2) Performers in the sequence of their appearance.

(*d*) Any manoeuvres added or time changes made to the schedule of events shall be approved by the Authority.

(*e*) The holder of the Aerial Work Certificate shall develop, have approved by the Authority, and comply with a Motion Picture and Television Filming Operations Manual.

(*f*) When conducting any motion picture or television filming operation requiring an Aerial Work Certificate, the holder of the certificate or authorisation shall ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorised persons or vehicles enter the airspace where manoeuvres are being performed during the filming production event, efforts shall be made to remove those persons or vehicles.

Contents of a Motion Picture and Television Operations Manual.

11.6.1.6.—(*a*) Each Motion Picture and Television Operations Manual shall contain at least the following :

(1) *Company Organisation*.

(*i*) The business name, address, and telephone number of the applicant ;

(*ii*) A list of pilots involved in the filming production, including their pilot licence numbers, grade and class, and date of medical certification ; and

(*iii*) A list of aircraft by make and model.

(2) *Distribution and Revision*. Procedures for revising the manual to ensure that it is kept current and procedures for the distribution of the manual to concerned personnel.

(3) *Persons Authorised*. Procedures for ensuring that no persons , except those persons consenting to be involved and necessary for the filming production, are allowed within 150 m (500 ft) of the filming production area.

(4) *Area of Operations*. The area that shall be used during the term of the authorisation.

(5) *Plan of Activities*. Procedures for the submission, within 3 days of scheduled filming, of a written plan of activities to the Authority, including at least the following :

(*i*) Dates and times for all flights ;

(*ii*) The name and phone number of the person responsible for the filming production event ;

(*iii*) The make and model of aircraft to be used and the type of certificate of airworthiness, including category ;

(*iv*) The names of pilots involved in the filming production event ;

(*v*) A statement that permission to conduct the filming production event has been obtained from property owners and/or local officials ;

(*vi*) The signature of the certificate holder or a designated representative ; and

(*vii*) A general outline, or summary, of the production schedule, to include maps or diagrams of the specific filming location, if necessary.

(6) *Permission to Operate*. Requirements and procedures for obtaining permission from property owners and/or local officials (e.g., police, fire department), as appropriate for the conduct of all filming productions when using the Aerial Work Certificate.

(7) *Security*. The method of security that shall be used to exclude from the location all persons not directly involved with the operation.

Note.—This shall include the requirement used to stop activities when unauthorised persons, vehicles, and/or aircraft enter the operations area, or for any other reason, in the interest of safety.

(8) *Briefing of Pilot/Production Personnel.* Procedures for briefing personnel on the risks involved and on emergency procedures and safeguards to be followed during the filming production event.

(9) *Certification/Airworthiness*. Procedures for ensurmg that required inspections will be conducted.

(10) *Communications*. Procedures for communicating with all participants during the actual operation and filming.

Note.—The applicant may use oral, visual, and/or radio communications, as long as participants are continuously apprised of the current status of the operation.

(11) *Accident and Incident Notification*. Procedures for receiving notification of and reporting accidents and incidents.

11.7. SIGHTSEEING FLIGHTS

Applicability.

11.7.1.1.—(*a*) This subpart applies to those operations involving the carriage of persons for viewing natural formations, manmade objects, or wildlife on the ground when :

(1) Those operations are conducted as part of a business enterprise or for compensation or hire ;

(2) The flight is unquestionably advertised as "sightseeing" ;

(3) The flight returns to the aerodrome of departure without having landed at any other aerodrome ;

(4) The flight is conducted within a 25-statute-mile radius of the departure aerodrome ; and

(5) The certificated passenger capacity of the aircraft does not exceed nine passengers.

Note.—Any other passenger-carrying flight for remuneration, hire, or valuable consideration shall be conducted under an air operator certificate in accordance with Part 9 of these regulations.

Aerial Work Certificate Required.

11.7.1.2.—(*a*) The Authority will require each person conducting operations in accordance with this subpart to hold an Aerial work Certificate.

(*b*) The Authority will issue an Aerial Work Certificate to an applicant that meets the requirements of this subpart for that certificate or authorisation.

Experience and Training Requirements.

11.7.1.3.—(*a*) No pilot may conduct sightseeing operations unless that pilot has :

(1) At least a CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the Aerial Work Certificate ;

(2) At least 500 hours as PIC, including :

(i) At least 20 hours as PIC in the aircraft type ;

(*ii*) A minimum of 100 hours in the category and class of aircraft to be used ; and

(*iii*) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the Aerial Work Certificate.

Operating Rules.

11.7.1.4.—(*a*) Each operator shall conduct operations so as not to endanger persons or property on the surface or aircraft in flight.

(*b*) All sightseeing operations shall be conducted only :

(1) In VFR weather conditions ; and

(2) Between the hours of official sumise and official sunset.

(*c*) No person may conduct sightseeing operations :

(1) Over congested areas or open-air assemblies of persons lower than 1,000 ft ; and

(2) Elsewhere lower than the minimum safe altitude requirements of Part 8 of these regulations.

(*d*) In addition to any operational or equipment requirements of this subpart for manned free balloon operation, the following equipment is required for specific types of manned free balloon operation :

(1) For all balloons, an altimeter and a rate-of-climb indicator ;

(2) For hot air balloons :

(*i*) If fuel cells are used, a means (e.g., fuel quantity gauge) to indicate to the crew the quantity of fuel in each cell during flight, calibrated in appropriate units or in per cent of fuel cell capacity ; and

(*ii*) An envelope temperature indicator; and. For captive gas balloons, a compass.

(*e*) In addition to any requirements of this subpart for a specific type of tethered or moored balloon operation, the requirements of 8.8 of these regulations apply.

(*f*) The requirements of Part 8 of these regulations apply to sightseeing operations described by this subpart.

11.8. FISH SPOTTING

Applicability.

11.8.1.1.—(*a*) This subpart applies to those operations involving locating, tracking, and reporting on the location of fish and fish schools, when those operations are conducted as part of a business enterprise or for compensation or hire.

Aerial Work Certificate Required.

11.8.1.2.—(*a*) The Authority will require each person conducting operations in accordance with this subpart to hold an Aerial Work Certificate.

(*b*) The Authority will issue an Aerial Work Certificate to an applicant that meets the requirements of this subpart for that certificate or authorisation.

Experience and Training Requirements.

11.8.1.3.—(*a*) No pilot mayconduct fish spotting operations unless that pilot has :

(1) At least a CPL with ratings appropriate to the category and class of aircraft to be used under the terms of the Aerial Work Certificate ;

(2) At least 500 hours as PIC, including:

(*i*) A minimum of 100 hours in the category and class of aircraft to be used ;

(*ii*) A minimum of 25 hours as PIC the category and class of aircraft to be used ; and

(*iii*) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the Aerial Work Certificate.

Operating Rules.

11.8.1.4.—(*a*) Each operator shall conduct operations so as not to endanger persons or property on the surface or aircraft in flight.

(*b*) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an Aerial Work Certificate under 11.8 of this part.

11.9. News Media and Traffic Reporting

Applicability.

11.9.1.1.—(*a*) This subpart applies to those operations involving observation of, and reporting on, news media events and/or vehicular traffic conditions on the highways and streets, when conducted by aircraft or airmen, or both.

Aerial Work Certificate Required.

11.9.1.2.—(*a*) The Authority will require each person conducting operations in accordance with this subpart to hold an Aerial Work Certificate.

(*b*) The Authority will issue an Aerial Work Certificate to an applicant that meets the requirements of this subpart for that certificate orauthorisation.

Experience and Training Requirements.

11.9.1.3.—(*a*) No pilot may conduct news media or traffic reporting operations unless that pilothas :

(1) At least a CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the Aerial Work Certificate.

(2) At least 500 hours as PIC, including :

(*i*) At least 20 hours as PIC in the aircraft type;

(*ii*) A minimum of 100 hours in the category and class of aircraft to be used; and

(*iii*) A minimum of 5 hours in the make and model of aircraft to be used under the Aerial Work Certificate.

Operating Rules.

11.9.1.4.—(*a*) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.

(*b*) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 of these regulations do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an Aerial Work Certificate under 11.9 of this part.

Reserved.

11.10. Reserved

Reserved.

11.11. Reserved

11.12. Aviation Recreation Organisations

11.12.1. *Applicability*

11.12.1.1.—(*a*) This Part applies to the approval and operation of organisations whose members operate for recreational purposes :

(1) microlight aeroplanes and powered paragliders ;

(2) gliders ;

(3) free balloons ;

(4) gyroplanes ;

(5) hang gliders and non-powered paragliders ;

(6) parachutes ; or

(7) non-type certificated aircraft.

(b) This Part does not apply in respect of—

(1) the holder of an ATL Nig. CARs Part 18.2 and AOP Nig. CARs Part 18.2.3.

(2) any person who wishes to operate on an ATL or AOP.

(3) any person exempted by the Authority under Nig. CARs Part 1.

Display of Aviation Recreation Organisation Approval.

11.12.1.2.—The holder of an aviation recreation organisation approval shall display the approval in a prominent place, generally accessible to the public at such holder's principal place of business and, if a copy of the approval is displayed, shall produce the original approval to an authorised officer, inspector or authorised person if so requested by such officer, inspector or person.

Advertise-ments.

11.12.1.3.—(*a*) Any advertisement by an organisation indicating that it is an aviation recreation organisation, shall :

(1) reflect the number of the aviation recreation organisation approval issued by the Authority ; and

(2) contain a reference to the aviation recreation for which such approval was issued.

Safety Inspections and Audits.

11.12.1.4.—(*a*) An applicant for the issuance of an aviation recreation organisation approval shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to verify the validity of any application made in terms of regulation 11.12.2.5.

(*b*) The holder of an aviation recreation organisation approval shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

Register of Approvals.

11.12.1.5.—(*a*) The Authority shall maintain a register of all aviation recreation organisation approvals issued in terms of the regulations in this Part.

(*b*) The register shall contain the following particulars—

(1) the full name of the holder of the approval ;

(2) the postal address of the holder of the approval ;

(3) the date on which the approval was issued or renewed ;

(4) particulars of the scope of the approval issued to the holder of the approval ; and

(5) the nationality of the holder of the approval.

(*c*) The particulars referred to in sub-regulation (2) shall be recorded in the register within seven days from the date on which the approval is issued by the Authority.

(*d*) The register shall be kept in a safe place at the office of the Authority.

(*e*) A copy of the register shall be furnished by the Authority, on payment of the appropriate fee, to any person who requests the copy.

Approval of Aviation Recreation Organisation Requirement of Approval.

11.12.2.—No organisation shall undertake aviation recreation except under the authority of, and in accordance with the provisions of, an aviation recreation organisation approval issued under this Subpart.

Manual of Procedure.

11.12.2.1.—(*a*) An applicant for the issuance of an aviation recreation organisation approval to undertake aviation recreation, shall provide the Authority with its manual of procedure which shall :

(1) comply with the requirements prescribed in this Subpart ; and

(2) contain the information as prescribed in IS 11.12.2.1.

Quality Control System.

11.12.2.2.—(*a*) The applicant shall establish a quality control system for the control and supervision of the aviation covered by the application.

(*b*) The minimum standards for a quality control system shall be as prescribed in IS 11.12.2.2.

Personnel Requirements.

11.12.2.3.—(*a*) The applicant shall engage, employ or contract :

(1) a senior person identified as the accountable manager and compliance officer of the organisation concerned, to whom contractual authority has been granted to ensure that all activities undertaken by the organisation are carried out in accordance with the applicable requirements prescribed in this Subpart, and who shall in addition be vested with the following powers and duties in respect of the compliance with such requirements :

(*i*) Unrestricted access to work perform ed or activities undertaken by all other persons as employees of, and other persons rendering service under contract with, the organisation ;

(*ii*) full rights of consultation with any such person in respect of such compliance by him or her ;

(*iii*) powers to order cessation of any activity where such compliance is not affected ;

(*iv*) a duty to establish liaison mechanisms with the Authority with a view to ascertain correct manners of compliance with the said requirements, and interpretations of such requirements by the Authority, and to facilitate liaison between the Authority and the organisation concerned ; and

(*v*) powers to report directly to the management of the organisation on his or her investigations and consultations generally, and in cases contemplated

in subparagraph (*iii*), and with regard to the results of the liaison contemplated in subparagraph (*iv*) ;

(2) a competent person who is responsible for quality control, and who has direct access to the accountable manager and compliance officer referred to in paragraph (*a*) on matters affecting airworthiness and aviation safety ; and

(3) adequate personnel to carry out and supervise the aviation recreation covered by the application.

(*b*) The applicant shall :

(1) establish a procedure for initially assessing, and a procedure for maintaining, the competence of those personnel authorised by the applicant to carry out and supervise the aviation recreation covered by the application ; and

(2) provide the personnel referred to in paragraph (a) with written proof of the scope of their authorisation.

Resource Requirements.

11.12.2.4.—The applicant shall ensure that the resources are adequate to enable the personnel to carry out and supervise the aviation recreation covered by the application.

Application for approval or amendment thereof.

11.12.2.5.—(*a*) An application for the issuance of an aviation recreation organisation approval to undertake aviation recreation, or an amendment thereof, shall be—

(1) made to the Authority in the appropriate form ; and

(2) accompanied by—

(*i*) the appropriate fee and

(*ii*) the manual of procedure referred to in regulation 11.12.2.1.

Issuing of Approval.

11.12.2.6.—(*a*) The Authority shall issue to an applicant approval to undertake aviation recreation, if the applicant complies with the requirements prescribed in regulations 11.12.2.1. to 11.12.2.4. inclusive.

(*b*) The Authority shall issue the approval on the appropriate form.

Scope of Approval.

11.12.2.7.—(*a*) An aviation recreation organisation approval to undertake aviation recreation shall specify—

(1) the aviation recreation which the holder of the approval is entitled to undertake ; and

(2) the procedures which the holder of the approval is authorised to establish and administer.

Period of Validity.

11.12.2.8.—(*a*) An aviation recreation organisation approval to undertake aviation recreation, shall be valid for the period determined by the Authority, which period shall not exceed two years, calculated from the date of issuing or renewal thereof.

(*b*) The approval shall remain in force until it expires or is suspended by an authorised officer, inspector or authorised person, or cancelled by the Authority.

(*c*) The holder of an approval which is revoked or suspended, shall, within 30 days from the date on which the approval is revoked or suspended, surrender such approval to the Authority.

Transferability.

11.12.2.9.—(*a*) Subject to the provisions of sub-regulation (2), an aviation recreation organisation approval to undertake aviation recreation, shall not be transferable.

(*b*) A change in ownership of the holder of an approval to undertake aviation recreation, shall be deemed to be a change of significance referred to in regulation 11.12.2.10.

Changes in Quality Control System.

11.12.2.10.—(*a*) If the holder of an aviation recreation organisation approval to undertake aviation recreation, desires to make any change in the quality control system referred to in regulation 11.12.2.2, which is significant to the showing of compliance with the appropriate requirements prescribed in this Part, such holder shall apply to the Authority for the approval of such change.

(*b*) The provisions of regulation 11. 12.2.5 shall apply with the necessary changes to an application for the approval of a change in the quality control system.

(*c*) An application for the approval of a change in the quality control system shall be granted if the applicant satisfies the Authority, upon submission of appropriate proposed changes to its manual of procedure, that it will continue to comply with the provisions of regulations 11.12.2.1. to 11.12.2.4 inclusive, after the implementation of such approved change.

Renewal of Approval.

11.12.2.11.—(*a*) pplication for the renewal of an aviation recreation organisation approval to undertake aviation recreation, shall be—

(1) made to the Authority in the appropriate form as prescribed by the Authority ; and

(2) accompanied by—

(*i*) the appropriate fee.

(*ii*) the manual of procedure referred to in regulation 11.12.2.1.

(*b*) holder of the approval shall at least 60 days before the date on which such approval expires, apply for the renewal of such approval.

Duties of Holder of Approval.

11.12.2.12.—The holder of an aviation recreation organisation approval to undertake aviation recreation, shall—

(*a*) hold at least one complete and current copy of its manual of procedure referred to in regulation 11.12.2.1, at each recreation facility specified in the manual of procedure ;

(*b*) comply with all procedures detailed in the manual of procedure ;

(*c*) make each applicable part of the manual of procedure available to the personnel who require those parts to carry out their duties ; and

(*d*) continue to comply with the appropriate requirements prescribed in this Part.

Technical and Regulatory Data.

11.12.2.13.—(*a*) The holder of an aviation recreation organisation approval shall keep copies of all relevant equipment manuals, technical bulletins and instructions, legislation, and any other documents which may be necessary to establish procedures for the aviation recreation specified in its manual of procedure.

(*b*) The holder of the approval shall establish procedures to control and amend the documents referred to in sub-regulation (1).

(*c*) The procedures referred to in sub-regulation (2) shall ensures that—

(1) all documents are reviewed and authorised before the issuing thereof ;

(2) changes to documents are reviewed and authorised by the holder of the approval ;

(3) the current version of each document can be identified to preclude the use of out of date editions ;

(4) current issues of data and documents are held by those personnel within the aviation recreation organisation who require such data and documents to carry out their duties ; and

(5) obsolete documents are promptly removed from circulation.

Records.

11.12.2.14.—(*a*) The holder of an aviation recreation organisation approval shall establish procedures to identify, collect, index, store, maintain and dispose of, the records which are necessary for the aviation recreation specified in its manual of procedure.

(*b*) The procedures referred to in sub-regulation (*a*) shall ensure that :

(1) a record is kept of each quality control review of the holder of the approval ;

(2) all records are legible ; and

(3) all records are kept for a period of at least five years calculated from the date of the last entry made in such records.

Operational and Maintenance Procedures.

11.12.2.15.—(*a*) The holder of an aviation recreation organisation approval which authorises operational and maintenance procedures to be established, shall establish operational and maintenance procedures for the aviation recreation specified in its manual of procedure.

(*b*) The procedures referred to in sub-regulation (1) shall :

(1) be relevant and not in conflict with the appropriate procedures prescribed in the Regulations ; and

(2) be administered to ensure that the requirements -

(*i*) remain valid for their intended use ; and

(*ii*) are reviewed on a regular basis.

(3) The procedures referred to in sub-regulation (1) shall include details of—

(*i*) the manner in which the holder selects launching, flying and landing sites ;

(*ii*) the holder's use of ground signals ;

(*iii*) the holder's use of aerodromes or heliports ;

(*iv*) the holder's launching methods ; and

(*v*) an emergency response plan.

11.13. Operation of Non-Type Certificated Aircraft

11.13.1. *General Provisions*

Applicability.

11.13.1.1.—(*a*) This Sub-Part applies to :

(1) non-type certificated aircraft operated in Nigeria ;

(2) non-type certificated aircraft registered in Nigeria ;

(3) persons acting as flight crew members of non-type certificated aircraft registered in Nigeria ; and

(4) persons who are on board a non-type certificated aircraft operated in terms of this Part.

(*b*) The provisions of the various other Parts of these regulations shall apply with the necessary changes to any non-type certificated aircraft unless specifically exempted by the provisions of this Part.

(*c*) Non-type certificated aircraft operated in terms of this Part are prohibited from providing a commercial air transport operation, as defined in Part 1 of the regulations.

(*d*) Although flying training is not considered to be a commercial air transport operation, any non-type certificate aircraft used in flight training shall be operated in terms of Part 11.13.

(*e*) Notwithstanding the provision of Sub-Part (3) and (4), non-type certificated aircraft operated in terms of this Part may be used for the training of its registered owner : Provided the training is provided by an ATO approved in terms of Part 3 and the airworthiness requirements in respect of a non-type certificated aircraft used in training are met.

(*f*) The proviso in sub-Part (5), does not apply in respect of the conversion training contemplated if—

(1) The owner shall be a licensed pilot, holding the appropriate category and class rating, and having been converted on type by an appropriately rated flight instructor.

(2) Apart from any conversion training, which may be required in terms of (*a*) above, no flight training may be conducted on an aircraft, operated in terms of a proving flight authority.

11.13.1.2.—(*a*) No person may operate a non-type certificated aircraft unless— Authority to Fly.

(1) in the case of aircraft classified in the paragraphs (*i*) to (*vii*) below :

(*i*) Aeroplanes, including microlight aeroplanes ;

(*ii*) Helicopters ;

(*iii*) Gyroplanes and gyrogliders ;

(*iv*) Gliders, including self-launching gliders and touring gliders ;

(*v*) Manned captive and manned free balloons ;

(*vi*) Airships ;

(*vii*) Unmanned aerial vehicles for such aircraft an authority to fly or proving flight authority has been issued in terms of these regulations ;

(2) the aircraft is in an airworthy condition ; and

(3) the PIC is the holder of a valid pilot licence with the appropriate rating for the particular category and type of non-type certificated aircraft.

(*b*) In the case of a foreign-registered non-type certificated aircraft, prior written permission by the Authority is required before such aircraft may enter Nigeria.

(c) The permission referred to in sub-Part (2) shall normally be granted only—

(1) for a limited period of time ;

(2) for the purpose of participation in international events within Nigeria, for recordbreaking purposes or demonstration flights, or at the discretion of the Authority if an acceptable level of safety can be shown and public safety is not jeopardized ;

(3) proof is submitted that for the aircraft an authority to fly or similar certificate was issued by the foreign civil aviation authority or an organisation designated for the purpose by such authority ; and

(4) if the aircraft is made available for inspection by a licensed AME or AMO or an Approved Person with the relevant rating or approval, or by any other person designated for the purpose by the Authority, as soon as possible after its arrival in Nigeria, and an inspection report has been submitted to the Authority.

11.13.2. Flight Crew

11.13.2.1.—(*a*) *Pilot Licensing—General Requirements* Ex-Military Aircraft.

(1) No person may act as pilot of a Nigerian registered ex-military aircraft unless such person is the holder of a PPL or higher category pilot licence with the appropriate category and type rating, issued or validated in terms of Part 2.3.

(2) A type-rating will be issued by the Authority once the licence holder has completed the required training as detailed in Part 2, as applicable, and has submitted the required type rating forms, logbook copies, technical examination and payment as specified in these regulations to the Authority. The currency

of the type rating shall be in accordance with the provisions of Part 2.3 of these regulations.

(3) Before performing acrobatic flight in an aircraft that has been certificated for, or is capable of performing acrobatic flight, the PIC shall also be the holder of an acrobatic rating issued by the Authority or by an organisation designated for the purpose in terms of Part 11.12, as the case may be.

(4) The Authority may exempt a candidate from undergoing all or part of the prescribed training if he or she is satisfied that the candidate—

(*i*) has sufficient flying experience on similar types of aircraft ; or

(*ii*) is the holder of a foreign type rating for the aircraft type and the Authority is satisfied that the training was of an acceptable standard.

(*b*) Pilot Training on Ex-Military Jet Aircraft.

(1) Pilots wishing to be rated to fly ex-military jet aircraft shall have the appropriate flying experience. Conversion, refresher and technical training requirements for these aircraft will be assessed on an individual basis by the Authority, after receiving the relevant documentation.

(2) Flying training is not allowed prior to the approval of the applicable syllabus.

(3) Pilots who have little or no military jet or high-performance piston-engine or turbo-prop aircraft experience shall be required to undergo rigorous and detailed conversion training according to the syllabus prescribed in IS 11.13.2.1.

(4) Guidelines for the establishment of training and acrobatic training criteria for individual applicants are provided in IS 11.13.2.1.

(5) The applicant shall supply the information as detailed in IS 11.13.2.1 when applying for approval of the training criteria referred to in paragraph (*a*).

(6) The Authority may allow a Grade II or Grade I flight instructor with the appropriate category and type rating to determine how many hours of acrobatic training may be counted towards the conversion training prescribed by paragraph (*c*).

(7) In the case of an ex-military aircraft that is available in a single- seat version only, the Authority may accept the training requirements for single-seat aircraft of the air force of the country of origin, or - where not available - training may be simulated in a similar aircraft. The Authority will treat each application for a type rating on a single-seat type on its merits.

(8) For training purposes, the Authority may permit the candidate to enter into an arrangement with an owner of a similar aircraft type that has a valid Authority to Fly, e.g. a dual-seat training variant or dual-seat aircraft of similar performance : Provided that :

(*i*) the candidate has obtained permission from the Authority to place the

aircraft type for which the training is required on the Nigerian Civil Aircraft Register ;

(*ii*) the candidate and the owner of the training variant submit to the Authority for approval the commercial agreement for the use of the aircraft ;

(*iii*) the owner submits to the Authority the insurance documentation stating that the candidate may undergo training on the aircraft ; and

(*v*) the Authority issues a revised authority to fly for the aircraft stipulating that it may be used for the training of the candidate.

11.13.3. DOCUMENTATION AND RECORDS

11.13.3.1.—(*a*) The owner or operator of— Operations Manual.

(1) a veteran aeroplane with a maximum all-up mass in excess of 5 700 kg or with more than 9 passenger seats ;

(2) a veteran helicopter with a maximum all-up mass in excess of 3,175 kg ;

(3) an ex-military jet aircraft ; or

(4) any non-type certificated aircraft, classified in any of the paragraphs (*i*) to (*vii*) in regulation 11.13.1.2(1)(*a*) and operated by an ATO approved in terms of Part 3 for the purpose of providing flying training, shall draw up an operations manual containing all information required under this Part, and if applicable, required under Part 11.13 of these Regulations, whether the aircraft is to be operated in commercial air transport operations or not. The operations manual shall set out the manner in which the owner will operate and maintain the aircraft.

(*b*) The owner shall submit the operations manual in duplicate for approval to the Authority.

(*c*) If the Authority is satisfied that the owner will comply with the provisions of the relevant Parts of the Regulations, he or she shall certify in writing on both copies of the operations manual that such manual has been approved and shall return one copy of the approved operations manual to the owner.

(*d*) The owner shall submit any amendment to an approved operation manual in duplicate for approval to the Authority.

(*e*) If the Authority is satisfied that the owner will comply with the provisions of the relevant Parts of the Regulations, he or she shall certify in writing on both copies of the amendment to the approved operations manual that such amendment has been approved and shall return one copy of the approved amendment to the owner.

(*f*) The owner shall at all times operate the aircraft, referred to in sub-regulation (1), in accordance with the approved operations manual or an approved amendment thereto.

(*g*) The owner shall—

(1) ensure that all operations personnel are able to understand the technical

language used in those sections of the operations manual which pertain to their duties ;

(2) ensure that every flight is conducted in accordance with the operations manual and that those parts of the operations manual which are required for the conduct of a flight, are easily accessible to the flight crew members on board ;

(3) make the operations manual available for the use and guidance of operations personnel ;

(4) provide the flight crew members with their own personal copy of the sections of the operations manual which are relevant to the duties assigned to them ;

(5) keep the operations manual up to date ; and

(6) keep the operations manual in a safe place.

(*h*) The contents of the operations manual shall not contravene the conditions contained in the authority to fly issued to the owner in terms of Part 2 of these Regulations.

(*i*) The structure and contents of the operations manual referred to in sub-Part (1) shall be as prescribed in Part 9 of these Regulations.

Logbooks.

11.13.3.2.—(*a*) For any veteran or ex-military aircraft, and for any non-type certificated aircraft used in a commercial air transport operation or for the provision of flight training, appropriate airframe, engine and propeller logbooks, as applicable, shall be maintained in accordance with the provisions of these Regulations.

(*b*) Notwithstanding the provisions of sub-Part (1), the owner or operator of an ex-military aircraft may continue to use the equivalent document or documents used by the previous military operator for the recording of flight times and maintenance carried out.

(*c*) Notwithstanding the provisions of these, the following non-type certificated aircraft are exempted from keeping the logbooks, prescribed by these regulations to the extent stated :

(1) *balloons* : record of maintenance to be kept in accordance with the approved maintenance programme ;

(2) *parachutes* : record of maintenance assembly packing to be kept in a logbook or a separate log page approved by the Authority or the organisation designated for the purpose in terms of Part 11.12, as the case may be ;

(3) model aircraft.

11.13.4. COMMUNICATION AND NAVIGATION EQUIPMENT

Communication Equipment.

11.13.4.1.—(*a*) Notwithstanding the provisions of Sub-Part (7.3) of these Regulations, the prescribed communication equipment is not required for aircraft operated in Class G airspace under VFR.

(*b*) Unmanned free balloons and unmanned aerial vehicles shall carry the equipment as prescribed in the authority to fly or in terms of regulation 11.13.6.6.

(*c*) Notwithstanding the provisions of paragraph (a), at sites where and when paragliding, hang-gliding, or parachute descents takes place, the persons involved shall preferably arrange for the automatic transmission on the applicable flight information frequency of a warning that such activity takes place, or alternatively make use of a hand-held transceiver to warn other aircraft in the vicinity.

(*d*) Notwithstanding the provisions of paragraph (*a*) and (*c*), at sites where aero-towing of hang-gliders takes place, the use of the appropriate communication equipment, either airborne or ground-based, to warn other air traffic in the vicinity that aero-towing is in progress is mandatory.

(*e*) The Authority may authorise in writing the Nigerian Airspace Management Agency (NAMA) to allocate a temporary segregated airspace (TSA) to separate aircraft operating without radio from other air traffic.

11.13.5. RULES OF THE AIR

Conditions for Flight.

11.13.5.1.—(*a*) Unless granted permission by the Authority or the organisation designated for the purpose in terms of Part 11.12, as the case may be, on a case-by-case basis, a non-type certificated aircraft may not be flown -

(1) by night ;

(2) in meteorological conditions less than those prescribed as suitable for flight under VFR ;

(3) within controlled airspace, unless cleared by and on conditions prescribed by ATC ; or

(4) within 5 NM from the aerodrome reference point of an aerodrome, licensed or approved in terms of Part 14 of these regulations and situated in Class G airspace, unless established unmanned aerodrome procedures for the particular aerodrome can be adhered to ; or

(5) unless unavoidable, over built-up areas and open-air assemblies of persons except for the purpose of take-off, transit and landing.

(*b*) Notwithstanding the provisions of paragraph (*a*), a non-type certificated aircraft may operate under IFR conditions by day if it has been granted permission in terms of these Regulations, depending on the results of the proving flights and equipment installed.

(*c*) Notwithstanding the provisions of paragraph (*a*)(5), paragliders and hangliders, and powered versions thereof, may fly over built up areas provided they are foot-launched.

Aircraft Speed.

11.13.5.2.—Notwithstanding the provisions of Part 8, the Authority may authorise in writing the NAMA to allocate a TSA in which aircraft may be flown at —

(1) Mach 0.90 if below 5,000 ft AGL ;

(2) Mach 0.95 if between 5,000 ft AGL and FL 300 ; and

(3) supersonic speeds if at or above FL 300.

11.13.6. FLIGHT OPERATIONS

Standards and Procedures.

11.13.6.1.—(*a*) Any person operating a non-type certificated aircraft for aviation recreational purposes or in air displays, shall comply with the standards and procedures determined by the organisation designated for the purpose in terms of Part 11.12, if any, and if applicable.

(*b*) Any person operating a non-type certificated aircraft for aviation recreational purposes shall be a bona fide member of an applicable aviation recreation organisation designated by the Authority in terms of Part 11.12 and abide by its constitution and code of conduct, if any.

(*c*) For the purposes of this Subpart, and until such time that an organisation has been approved in terms of Part 11.12, any person operating a non-type certificated aircraft for aviation recreational purposes or in air displays, shall comply with the flight operation standards and procedures prescribed for its members by the national body representative of the particular aviation sport, provided that these standards and procedures include those prescribed in, and are not in conflict with, the provisions of this Part.

Operation of Paragliders, including Powered Paragliders and Paratrikes.

11.13.6.2.—(*a*) Notwithstanding the provisions of —

(1) Regulation 8.2.1.6 and regulation 8.2.1.8, a person may operate a paraglider without carrying on board a current, approved flight manual or flight folio ;

(2) Regulation 8.2.1.8, a person may operate a paraglider without a certificate of release to service ;

(3) Part 7, a person may operate a paraglider if the paraglider has been equipped with—

(*i*) a safety harness or safety belt for each person on board the paraglider ;

(*ii*) in the case of flights above 500ft AGL, an altimeter that is accurate to within approximately 100ft ; and

(*iii*) in the case of flight over water beyond gliding distance from shore, one lifejacket or individual flotation device for each person on board, worn by such persons.

(4) Regulation Part 8.8.1.13(*f*), the PIC of a paraglider, overtaking another paraglider or hangglider soaring on a ridge, shall pass on the ridge side of the overtaken paraglider or hangglider ;

(5) Regulation Part 8.8.3.1, a person may operate a paraglider to 500ft vertically below cloud -

(*i*) up to a maximum altitude of 19,500 ft above MSL in class G airspace ; and

(*ii*) up to a maximum altitude of 19,500 ft above MSL in Class E airspace, other than transponder-mandatory airspace ;

(6) Regulation Part 8.14.2.7, the PIC of a paraglider may fly the paraglider

below 500 ft AGL for the purpose of ridge soaring if such paraglider is flown in a manner that does not endanger persons or property on the ground ;

(7) Part 14, the pilot in-command of a paraglider may use any suitable area to launch the paraglider : Provided permission has been obtained from the owner of the site or the local authority having jurisdiction ; and provided further that in the case of flight training or tandem operations, only launch sites approved by the Authority or by the organisation designated for the purpose in terms of Part 11.12, as the case may be, shall be used.

(*b*) Each person on board a paraglider shall wear a serviceable, rigid, protective helmet of a type approved by the Authority or by the organisation designated for the purpose in terms of Part 11.12.

(*c*) In addition to the restrictions imposed by Part 8, no paraglider operation shall be conducted over a built-up area higher than 19,500 ft above MSL.

(*d*)—(1) On every winch, used for the launching of paragliders, a means shall be provided for the severing of the launching cable.

(2) The means referred to in paragraph (a) shall be subject to the approval of the Authority or the organisation, approved for the purpose in terms of Part 11.12, as the case may be, and shall be so positioned that it can be easily and readily operated by the winch operator.

(*e*)—(1) No person may operate a paraglider with a passenger, unless that person holds a valid tandem rating.

(2) Tandem operations shall be limited to two persons, including the pilot.

(3) For tandem operations the carriage of a back-up parachute is compulsory.

Operation of Gyroplanes.

11.13.6.3.—(*a*) Notwithstanding the provisions of—

(1) Regulations 8.2.1.6 and 8.5.1.8, a person may operate a non-type certificated gyroplane or gyroglider without carrying on board a current, approved flight manual or flight folio ;

(2) Part 7, a person may operate a non-type certificated gyroplane or gyroglider if the gyroplane or gyroglider has been equipped with—

(*i*) a seat with an approved safety harness or safety belt for each person on board the gyroplane or gyroglider ;

(*ii*) a map which covers the complete route of the proposed flight ;

(*iii*) in the case of flights above 500 ft AGL, an altimeter that is accurate to within approximately 100ft ;

(*iv*) a rotor brake ; and

(*v*) in the case of flight over water beyond autorotative distance from shore, one lifejacket or individual flotation device for each person on board, stored in a position easily accessible for such persons, or alternatively worn by such persons.

(*b*) In addition to the restrictions imposed by Part 8.8, no gyroplane or gyroglider operation shall be conducted above 500 ft AGL unless fitted with an approved, serviceable compass.

Operation of Manned Free Balloons.

11.13.6.4.—(*a*) Notwithstanding the provisions of Part 7, a person may operate a non-type certificated manned free balloon if the balloon has been equipped with—

(1) a map which covers the complete route of the proposed flight ;

(2) an approved sensitive altimeter ;

(3) a rate-of-climb indicator ;

(4) a fire extinguisher ;

(5) gloves ;

(6) a handling line ;

(7) in the case of a hot-air balloon :

(*i*) two alternate methods of ignition ;

(*ii*) a fuel quantity gauge ;

(*iii*) envelope temperature indicator ; and

(8) in the case of flight over water, one lifejacket or individual flotation device for each person on board, stored in a position easily accessible for such persons, or alternatively worn by such persons.

Operation of Captive Balloons.

11.13.6.5.—(*a*) Captive balloons are exempted from these regulations—

(1) except from Sub-Part 8.8 ; and

(2) provided that no captive balloon operation shall be conducted—

(*i*) higher than 150 ft above the surface ; or

(*ii*) from or above a public road ; unless with the prior approval of the Authority and on conditions determined by him or her.

(*b*) In the event of a captive balloon breaking free from its moorings, the operator thereof shall immediately report the occurrence to the nearest ATC, indicating the direction in which the balloon is drifting.

Operation of Unmanned Free Balloons.

11.13.6.6.—(*a*) Unmanned free balloons are exempted from these regulations, except that no unmanned free balloon operations shall take place without the prior permission of the Authority and on the conditions determined by him or her.

(*b*) For purposes of this regulation, the mass release of toy balloons shall be considered to be the launch of an unmanned free balloon.

Operation of Amateur-Built or Production-Built Aircraft, including Microlight Aeroplanes.

11.13.6.7.—(*a*) Notwithstanding the provisions of—

(1) Regulation 8.2.1.6 and Regulation 8.2.1.8, a person may operate an amateur-built or production-built aircraft, including a microlight aeroplane, without carrying on board a current, approved flight manual or flight folio should such carriage not be safely possible ;

(2) Part 7, a person may operate an amateur-built or production-built aircraft, including a microlight aeroplane, if the aircraft has been equipped with -

(*i*) a seat with an approved safety harness or safety belt for each person on board the aircraft ;

(*ii*) a map which covers the complete route of the proposed flight ; and

(*iii*) in the case of flight over water beyond gliding distance from shore, one lifejacket or individual floatation device for each person on board, stored in a position easily accessible for such persons, or alternatively worn by such persons.

Operation of Gliders.

11.13.6.8.—(*a*) Notwithstanding the provisions of—

(1) Regulation 8.2.1.6 and Regulation 8.2.1.8, a person may operate a non-type certificated glider without carrying on board a current, approved flight manual or flight folio should such carriage not be safely possible ;

(2) Part 7, a person may operate a non-type certificated glider if the glider has been equipped with—

(*i*) a seat with an approved safety harness or safety belt for each person on board the glider ;

(*ii*) a map which covers the complete route of the proposed flight ;

(*iii*) in the case of flights above 500ft, an altimeter that is accurate to within approximately 100ft ;

(*iv*) vertical speed indicator or similar instrument ; and

(*v*) in the case of flight over water beyond gliding distance from shore, one lifejacket or individual flotation device for each person on board, stored in a position easily accessible for such persons, or alternatively worn by such persons ;

(3) Part 14, in the event of an unavoidable out-landing a person may land a glider, at a suitable site other than an airfield.

(*b*)—(1) On every winch, used for the launching of gliders, a means shall be provided for the severing of the launching cable.

(2) The means referred to in paragraph (*a*) shall be subject to the approval of the Authority or the organisation, approved for the purpose in terms of Part 11.12, as the case may be, and shall be so positioned that it can be easily and readily operated by the winch operator.

Operation of Hang-Gliders.

11.13.6.9.—(*a*) Notwithstanding the provisions of—

(1) Regulation 8.2.1.6 and Regulation 8.2.1.8, a person may operate a hang-glider without carrying on board a current, approved flight manual or flight folio ;

(2) Regulation 8.2.1.8, a person may operate a hang-glider without a certificate of release to service ;

(3) Part 7, a person may operate a hang-glider if the hang-glider has been equipped with—

(*i*) an approved safety harness or safety belt for each person on board the hangglider ;

(*ii*) in the case of flights above 500ft AGL, an altimeter that is accurate to within approximately 100ft ; and

(*iii*) in the case of flight over water one lifejacket for each person on board and worn by such persons ;

(4) Regulation 8.8.1.12(*f*) the person operating a hang-glider overtaking another hang-glider or paraglider soaring on a ridge shall pass on the ridge side of the overtaken hang-glider or paraglider ;

(5) Regulation 8.8.3.1, a person may operate a hang-glider to 500 ft vertically below cloud—

(*i*) up to a maximum altitude of 19 500 ft above MSL in class G airspace ; and

(*ii*) up to a maximum altitude of 19 500 ft above MSL in Class E airspace, other than transponder-mandatory airspace ;

(6) Regulation 8.8.1.6, a person may operate a hang-glider below 500 ft AGL for the purpose of ridge soaring : Provided such hang-glider is flown in a manner that does not endanger persons or property on the surface ;

(7) Part 14, the pilot in-command of a hang-glider may use any suitable area to launch the hang-glider : Provided permission has been obtained from the owner of the site or the local authority having jurisdiction ; and Provided furthermore that in the case of flight training or tandem operations, only launch sites approved by the Authority or by the organisation designated for the purpose in terms of Part 11.12, as the case may be, shall be used.

(*b*) Each pilot and passenger of a hang-glider shall wear a serviceable, rigid, protective helmet of a type approved by the Authority or by the organisation designated for the purpose in terms of Part 11.12.

(*c*) In addition to the restrictions imposed by Part 8.8, no hang-glider operation shall be conducted -

(1) over a built-up area ; or

(2) higher than 19 500 ft above MSL.

(*d*)—(1) On every winch, used for the launching of hang-gliders, a means shall be provided for the severing of the launching cable.

(2) The means referred to in paragraph (*a*) shall be subject to the approval of the Authority or the organisation, approved for the purpose in terms of Part 11.12, as the case may be, and shall be so positioned that it can be easily and readily operated by the winch operator.

(*e*)—(1) No person may operate a hang-glider with a passenger, unless that person holds a valid tandem rating.

(2) Tandem operations shall be limited to two persons, including the pilot.

(3) The PIC shall carry a tandem-rated reserve parachute during tandem operations.

(*f*)—(1) No person may operate a hang-glider in an aero-tow operation unless such person is the holder of an appropriately endorsed licensed.

(2) The requirements for the issue of an aero-tow endorsement are those prescribed in Part 2.

11.13.6.10.—Line-controlled kites are exempted from these regulations— Operation of Line-Controlled Kites.

(1) except from Part 8.8 ; and

(2) provided that no line-controlled kite shall be flown—

(*i*) higher than 150 ft above the surface ;

(*ii*) from or above a public road ; or

(*iii*) on the approaches to any aerodrome licensed or approved in terms of Part 14 of these regulations, unless with the prior approval of the Authority and on conditions determined by him or her.

11.13.6.11.—Model aircraft are exempted from these regulations— Operation of Model Aircraft.

(1) except from Part 8.8 ; and

(2) provided that no model aircraft shall be flown—

(*i*) higher than 150 ft above the surface ; or

(*ii*) from or above a public road, unless with the prior approval of the Authority and on conditions determined by him or her ; or in airspace specifically approved for the purpose by the Authority and on conditions set by him or her for the use of such airspace.

11.13.7. Operation of Parachutes and Drop Zones

11.13.7.1. *General*

11.13.7.2.—(*a*) This Part applies to the operation of parachutes. Applicability.

(*b*) This Part does not apply to -

(1) persons making emergency descents ; or

(2) persons making base jumps.

11.13.7.3.—(*a*) Any person making a parachute descent shall— Persons Making Parachute Descent.

(1) be a bona fide member of an aviation recreation organisation designated by the Director or organisation designated for the purpose as the case may be in terms of Part 11.12 ;

(2) be authorised by such approved aviation recreation organisation to make such parachute descent ;

(3) comply with the privileges and limitations of the authorisation referred to in paragraph (*b*) ;

(4) comply with the standards and procedures determined by such approved aviation recreation organisation ;

(5) comply with the currency requirements determined by such approved aviation recreation organisation.

(*b*) Notwithstanding anything in this part, no parachuting activities shall be undertaken in conflict with the applicable the aviation recreation organisation's approved manual of procedures.

Alcohol and Drugs.

11.13.7.4.—No person may make a parachute descent while under the influence of alcohol or a drug having a narcotic effect, to the extent where the safety of such person or other persons is likely to be endangered.

Securing of Articles.

11.13.7.5.—Any article or object that forms part of the parachutist's acceptable gear or accessories, may be carried on board if secured through acceptable means by the respective person performing the parachute jump.

Hazard.

11.13.7.6.—No person may make a parachute descent if such parachute descent constitutes, or is likely to constitute, a safety hazard to air traffic, persons or property in the air or on the ground, the aircraft concerned or its occupants.

Exit from aircraft.

11.13.7.7.—(*a*) The loadmaster or chief instructor or instructor on duty or jump master on board the aircraft, shall give an instruction to proceed with the parachute descent, after approval has been received from the PIC, or when the aircraft is positioned correctly.

(b) Each person making a parachute descent shall only exit from the aircraft and commence the parachute descent, on instruction of the loadmaster or chief instructor or instructor on duty or jump master on board the aircraft nominated to do so.

Minimum parachute opening altitude.

11.13.7.8.—Each person making a parachute descent shall activate the main parachute at not less than 2,000ft AGL, except for—

(*a*) a student parachutist, who shall activate the main parachute at not less than 2,500ft AGL ;

(*b*) a person carrying out a tandem parachute descent, who shall activate the main parachute at not less than 4,000ft AGL ;

(*c*) a demonstration or display parachutist who may exit and activate their parachute at an altitude less than 2000ft AGL as per the aviation recreation organisation's approved manual of procedures ; or

(*d*) a parachutist performing a jump as part of a unusual descent may exit and activate their parachute at an altitude less than 2000ft AGL as approved by the aviation recreation organisation's national safety and training officer and the body designated for the purpose.

Parachute drop zone.

11.13.7.9.—(*a*) All parachute descents, except emergency and display parachute descents, shall be made within a parachute drop zone approved by the designated body.

(*b*) A person may make a parachute descent outside a parachute drop zone, if the descent is authorised by the designated body.

Parachute landing area.

11.13.7.10.—(*a*) Each person making a parachute descent is required to land on a parachute landing area authorised by the designated body.

(*b*) Simultaneous parachute and aircraft movements may be conducted at aerodromes if the parachute landing area is located clear of—

(1) any movement area in use ;

(2) the strip area of any runway in use ;

(3) the taxiway minimum separation distances ; and

(4) the approach and take-off area of any runway or heliport in use.

Ground signal.

11.13.7.11.—(*a*) A person making a parachute descent shall not land at an unattended aerodrome unless the ground signal, as prescribed in IS 11.13.7.12, is displayed.

(*b*) When parachute descents are being performed by night, the ground signal shall be illuminated.

Controlled airspace.

11.13.7.12.—Each person making a parachute descent in controlled airspace shall—

(*a*) have an air traffic control clearance ; and

(*b*) within a CTA/E, coordinate the parachute descent with the appropriate ATS.

Descents into attended aerodromes.

11.13.7.13.—Each person making a parachute descent onto an attended aerodrome shall have prior approval from the owner or operator of the aerodrome.

Descents into unattended aerodromes.

11.13.7.14.—Each person making a parachute descent onto an aerodrome where no ATS is provided, shall—

(*a*) have prior approval from the owner or operator of the aerodrome ;

(*b*) observe other aerodrome traffic operating within the parachute descent zone for the purpose of avoiding collision ;

(*c*) conform with or avoid the pattern of traffic formed by other aircraft operating within the parachute descent zone at the aerodrome ; and

(*d*) land within the parachute landing area.

Descents within restricted areas.

11.13.7.15.—A person may not make a parachute descent within the restricted area of an aerodrome unless he or she has obtained the authorisation referred to in Part 8.8.1.21

Visibility and clearance from cloud.

11.13.7.16.—No person may make a parachute descent above or though cloud if the visibility is less than the visibility and distance from cloud as prescribed in IS 11.13.7.12 unless—

(*a*) performed in accordance with the aviation recreation organisation's approved manual of procedures ; and

(*b*) has the prior approval from the Chief Instructor responsible at a particular drop zone.

Descent from unpressurised aircraft.

11.13.7.17.—Each person making a parachute descent from an unpressurised aircraft shall—

(*a*) if between an altitude of FL120 and FL170 for longer than 30 minutes continuously, use supplementary oxygen ;

(*b*) if between an altitude of FL150 and FL180 for longer than 15 minutes continuously, use supplementary oxygen until immediately prior to exiting the aircraft and has received instruction on the use of oxygen equipment and the effects of Hypoxia ; and

(*c*) if between an altitude of FL180 or higher for more than 10 minutes continuously, use supplementary oxygen until immediately prior to exiting the aircraft.

Descent from pressurised aircraft.

11.13.7.18.—Each person making a parachute descent from a pressurised aircraft up to FL200 shall use supplementary oxygen during the period from immediately prior to decompression to immediately prior to exiting the aircraft.

Descent from above FL 200.

11.13.7.19—(*a*) Each person making a parachute descent from above FL200 shall comply with the standards, procedures and training requirements determined by the applicable aviation recreation organisation's approved manual of procedures.

(*b*) No person may make a parachute descent from above FL200 unless he or she has the prior written approval of the designated body.

(*c*) Each person making a parachute descent from above FL200 shall, in addition to sub-regulation (1) above and subpart 11.13.7.18, use individual supplementary oxygen during the dispatch and descent.

Seats, safety belts and harnesses.

11.13.7.20.—Notwithstanding anything contained in regulation 7.9.1.20 parachutists shall not be required to occupy a seat or berth with a safety belt or harness as the case may be unless such a person is a passenger who does not intend to perform a parachute or tandem descent.

NTCA aircraft used for parachute drop operations.

11.13.7.21.—No NTCA aircraft may be used for parachute drop operations unless—

(*a*) such aircraft has been considered and found as suitable for the purpose by the applicable aviation recreation organisation and the designated body ; and

(*b*) such aircraft is issued with a valid authority to fly.

Pilots performing flights for purposes of parachute operations.

11.13.7.22.—Any pilot performing a flight for the purposes of a parachute drop shall—

(*a*) be the holder of a valid pilot licence issued in terms of Part 2.3 or Part 2 as the case may be ;

(b) have no less than 100 hours as PIC ;

(*c*) have received an appropriate briefing on the intended parachute drop operations in accordance with the applicable the aviation recreation organisation's approved manual of procedures ; and

(*d*) have the briefing in paragraph (3) above entered and signed in the pilot's logbook.

11.13.8.—(*a*) *Main parachute*

Parachute equipment.

Each person or tandem pair making a parachute descent shall be equipped with a main parachute which complies with the requirements prescribed by the applicable aviation recreation organisation's approved manual of procedures.

(*b*) *Reserve parachute*

Each person or tandem pair making a parachute descent shall be equipped with a reserve parachute assembly which—

(1) complies with the requirements prescribed by the applicable aviation recreation organisation's approved manual of procedures ;

(2) has been inspected, re-packed and signed-off within the previous six months by a parachute technician authorised by the applicable aviation recreation organisation's approved manual of procedures ;

(3) where necessary, has been repaired in accordance with—

(*i*) the standards of such designated body or institution ; and

(*ii*) the instructions of the manufacturer.

(*c*) *Night descent*

Each person making a parachute descent by night shall be equipped with an illuminated altimeter.

(*d*) *Water descent*

(1) Each person making a parachute descent into water shall wear a serviceable, flotation device capable of supporting the person and equipment.

(2) Each person or group of persons making a parachute descent shall ensure that there is a rescue tender stationed at the parachute landing area to retrieve such persons.

(3) Each person making a parachute descent into water shall be briefed on the procedures for water jumps

(*e*) *Altimeter*

Each student parachutist or solo jumper making a free-fall descent of more than 15 seconds shall—

(1) be equipped with, and use, a serviceable altimeter of a type suitable for parachuting ; and

(2) prior to take-off, zero the altimeter to the parachute landing area height.

(*f*) Automatic activation devices

Each student parachutist or tandem master making a parachute descent, and every person making a parachute descent from above FL200, shall, in addition

to being equipped with a reserve parachute, be equipped with an automatic activation device on the reserve parachute, which has been—

(1) certified as compatible with the reserve parachute assembly on the parachute assembly packing-record by a parachute technician authorised by the designated body ; and

(2) calibrated in accordance with the manufacturer's operating instructions ;

(3) set to operate the reserve parachute at a minimum altitude of -

(*i*) for an individual parachute descent, 1 000 ft AGL or such lower altitude as predetermined and set within the automatic activation device by the manufacturer of such device for the category of use ; and

(*ii*) for a tandem parachute descent, 2 000 ft AGL or such lower altitude as predetermined and set within the automatic activation device by the manufacturer of such device for use on tandem descents ;

(4) inspected by the parachute technician in accordance with the manufacturer's Instructions.

(*g*) *Helmets*

Each student parachutist making a parachute descent shall wear a serviceable, rigid, protective helmet of a type authorised by the applicable aviation recreation organisation's approved manual of procedures.

(*h*) *Parachute descent near water*

Each student parachutist making a parachute descent within one nautical mile of a coastline, harbour, lake or major river shall wear a serviceable flotation device capable of supporting the person and equipment.

(*i*) *Tandem harness*

Each tandem rider making a tandem descent shall wear a harness which is—

(1) authorised by the applicable aviation recreation organisation's manual of procedures ; and

(2) properly secured to the matching tandem master harness approved by the applicable aviation recreation organisation's manual of procedures.

Parachute maintenance.

11.13.9.—(*a*) *Parachute technician* (*Rigger*)

Each parachute technician shall—

(1) be a current bona fide member of the holder of an aviation recreation organization approval issued in terms of Part 11.12 ;

(2) be at least 18 years old ;

(3) be authorised as a parachute technician by the applicable aviation recreation organisation ;

(4) comply with the currency requirements determined by such aviation recreation organisation ;

(5) comply with the privileges and limitations of his or her authorisation ; and

(6) comply with the operational standards and procedures determined by the applicable aviation recreation organisation.

(*b*) *Safety directives*

A person may not make a parachute descent unless the parachute assembly complies with—

(1) any applicable safety directive issued by the aviation recreation organisation or the designated body ; and

(2) all mandatory modifications or instructions issued by the manufacturer.

(*c*) *Parachute serviceability*

(1) Any person who finds a parachute assembly to be unserviceable or not airworthy shall have the assembly—

(*i*) re-inspected and returned to a serviceable and airworthy state ; or

(*ii*) withdrawn from service.

(2) Each owner of a parachute assembly shall ensure that it is in a serviceable and airworthy condition before use.

(*d*) *Modification and repair*

A person may not make a parachute descent with an emergency or reserve parachute, or harness and container system, which has been modified or repaired, in a manner that may affect the airworthiness of the parachute assembly, unless such emergency or reserve parachute has been re-inspected and re-assessed by a parachute technician authorised by the applicable aviation recreation organisation.

(*e*) *Parachute assemblies*

(1) Subject to the provisions of sub-regulations (2) and (3), No person may make a parachute descent unless he or she has checked the state of serviceability of the parachute assembly by—

(*i*) reference to the assembly packing record with the equipment ;

(*ii*) a comprehensive external check ; and

(*iii*) checking the correct setting of the applicable equipment.

(2) A student parachutist shall not make a parachute descent unless his or her parachute assembly has been checked in accordance with sub-regulation (a) by a person, authorised to supervise the descent by the applicable the aviation recreation organisation's approved manual of procedures.

(*f*) *Parachute records*

(1) Each owner of an emergency or reserve parachute assembly, shall maintain a permanent record of the assembly in—

(*i*) a logbook ; or

(*ii*) a separable log page, approved by the applicable aviation recreation organisation.

(2) The owner referred to in sub-regulation (*a*) shall make the record available for inspection when required by an authorised officer, inspector or authorised person.

Operation of ex-military jet aircraft.

11.13.10.—(*a*) Further to the provisions of regulation 8.6.2.13, an ex-military jet aircraft shall carry sufficient fuel—

(1) to divert from its destination aerodrome to an alternate aerodrome that is at least 100 km distant from the destination aerodrome ; and

(2) to allow for at least 10 minutes of flight at cruise-power settings when arriving over the alternate aerodrome referred to in sub-regulation (*a*).

(*b*)—(1) Only if the Authority on the authority to fly has approved the carriage of passengers may passengers be carried in an ex- military jet aircraft.

(2) Where applicable, the owner of an ex-military jet aircraft shall ensure that the medical and physical condition of the passenger complies with the conditions prescribed by the manufacturer of the ejection seat of the aircraft.

(3) It is the responsibility of the owner of an ex-military jet aircraft to provide the passenger with suitable and serviceable flying equipment, protection gear and clothing.

(*c*) The owner of an ex-military jet aircraft shall ensure that the passenger is thoroughly briefed on—

(1) all the dangers associated with the flying in an ex-military jet aircraft, including the possible injuries following ejection ; and

(2) actions during flight :

(*i*) the operation of switches and handles, if applicable ;

(*ii*) the actions and execution of commands during emergency situations ;

(*iii*) the actions should the PIC become incapacitated during flight ; and

(*iv*) any other information as seen fit by the owner or the PIC.

(*d*) *MEL*

(1) *Oxygen Systems*

Oxygen system shall be fully serviceable, unless specifically exempted, whether or not it is intended to fly the aircraft above FL 100.

(2) *Aircraft Pressurisation*

Aircraft pressurisation systems shall be fully serviceable, unless specifically exempted, irrespective of the altitudes it is intended that the aircraft be flown.

(3) *Ejection Seats*

Where ejection seats are an integral part of the aircrew escape system, as specified in the relevant Flight Manual or Aircrew Notes, they shall be fully

serviceable for all flights unless specifically exempted, and all occupants shall have been suitably instructed in their use.

(4) *Flying Clothing and Equipment*

(*i*) Certain items of flying clothing and personal equipment are an integral part of the aircraft safety equipment, such as life-saving jackets with dinghy connections or personal equipment connectors with oxygen connections. Where the appropriate clothing, equipment or systems are required for flight, these additional items shall be made available and be fully serviceable.

(*ii*) Unless specifically exempted, all occupants of an ex- military jet or turbo-prop aircraft shall wear protective helmets, equipped with suitable visors and facilitating communication.

(*iii*) Aircraft that are to be operated over large water masses beyond gliding distance from shore shall be equipped with suitable survival equipment, and the occupants shall wear suitable survival clothing and equipment.

(5) *Emergency and Backup Systems*

Systems under this heading are invariably an integral part of the aircraft build standard and will have been installed with certain emergencies in mind (i.e. emergency undercarriage lowering, or hood opening or jettison). All such systems shall be serviceable for flight, unless specifically exempted.

(6) *Instrumentation for Flight under IFR and Standby Instrumentation*

Where permission has been granted to operate the aircraft in IMC, all instrumentation and equipment normally required for operation in IMC according to IFR shall have been fitted and be serviceable in accordance with the provisions of Part 8 of the Regulations.

(7) *Weaponry*

(*i*) Where weaponry are an integral part of the aircraft, such weaponry shall be permanently de-activated, or be removed and replaced by ballast to ensure that the correct mass and centre of gravity of the aircraft is maintained.

(*ii*) The carriage of external weaponry is prohibited.

(8) *External Equipment*

Where aircraft are capable of carrying external fuel tanks, whether jettisonable or not, such fuel tanks may be used : Provided that all systems applicable to the fuel tanks are serviceable. The pilot must also be fully qualified in the handling of the aircraft with and without the external fuel tanks (including asymmetric flight) and conversant with the
jettison restrictions, limits and implications.

Display authorization.

11.13.11.—(*a*) When a non-type certificated aircraft, classified in the paragraphs (*a*) to (*g*) below—

(1) Aeroplanes, including microlight aeroplanes

(2) Helicopters

(3) Gyroplanes and gyrogliders

(4) Gliders, including self-launching gliders and touring gliders

(5) Manned captive and manned free balloons

(6) Airships

(7) Unmanned aerial vehicle

is to participate in a public flying demonstration, the PIC shall be the holder of an appropriate Display Authorization.

(*b*) The Display Authorization may be issued by the Authority or by an organization designated for the purpose in terms of Part 11.12, as the case may be, in writing if he, she or it is satisfied that—

(1) the pilot has the required experience ; and

(2) the proposed display sequence can be executed safely with the particular aircraft.

(*c*) The Display Authority shall be issued on the prescribed form, and shall detail the aircraft to be used, its configuration, the sequence to be flown, and any other condition that may be imposed by the Authority or by the organisation designated for the purpose in terms of Part 11.12, as the case may be, at his, her or its discretion in the interest of flight and public safety.

(*d*) The following information shall be submitted to the Authority or the organization designated for the purpose in terms of Part 11.12, as the case may be, when applying for a Display Authorization :

(1) a summary of the pilot's total flying experience and details of experience on the type of aircraft to be flown in the display ;

(2) a detailed list of previous air display experience, to include events, dates, duration, aircraft types, and sequences flown ;

(3) the details of the sequence for which Display Authorization is sought, including :

(*i*) good weather sequence ; and

(*ii*) bad weather sequence, where the weather conditions, such as cloud ceiling, impose a restriction on the good weather display sequence. The sequences shall be submitted in textual and graphical form, with the minimum meteorological conditions for each sequence specified.

(4) The specific procedures to be followed for possible emergencies that may arise during the display, including the listing of diversion aerodromes.

(5) Details of the aircraft in the configuration to be used in the display, including take-off mass, take-off fuel and landing fuel.

(*e*) The application shall be made in the form prescribed in IS 11.13.11.

(*f*) The application shall be accompanied by the appropriate fee prescribed in NCAA Fees schedule.

11.13.12.—(*a*) *General*

Maintenance.

(1) No owner, operator or PIC of a non-type certificated aircraft, classified in paragraphs (*i*) to (*vii*) below—

(*i*) Aeroplanes, including microlight aeroplanes

(*ii*) Helicopters

(*iii*) Gyroplanes and gyrogliders

(*iv*) Gliders, including self-launching gliders and touring gliders

(*v*) Manned captive and manned free balloons

(*vi*) Airships

(*vii*) Unmanned aerial vehicle

(*viii*) Hang-gliders, including powered hang-gliders

(*ix*) Paragliders, including powered paragliders and paratrikes

(*xi*) Parachutes

(*xii*) Model aircraft

(*xiii*) Rockets

shall operate the aircraft unless such aircraft is maintained and released to service in accordance with the provisions of Part 8.

(2) No owner, operator or PIC of a non-type certificated aircraft, classified in paragraphs (viii) to (xiii) in regulation 11.13.12(1)(a) shall operate the aircraft unless such aircraft has been properly maintained and is in an airworthy condition.

(*b*) *Maintenance control manual*

Where an owner or operator is required in terms of Part 9 to maintain an operations manual, the latter shall include a maintenance control manual in the format as prescribed in IS.9.4.1.4.

B 3004

NIGERIA CIVIL AVIATION REGULATIONS

PART 11—IMPLEMENTING STANDARDS

B 3006

IS 11.1.1.1(F) APPLICABILITY

(*a*) The following application shall be used by an operator that intends to apply for approval to operate an RPA within Nigeria.

Application for Remotely Piloted Aircraft Operations by a Nigeria Operator *(To be completed by a Nigeria operator for an approval to conduct operations in Nigeria)*	
Section 1. Applicant Information	
1a. Operator's, or if applicable, company's registered name and trading name, if different; mailing address; telephone; fax; and email :	2. Remote aircraft pilot(s) mailing address; telephone; fax; and email :
1b. RPA operator certificate number:	2b. Remote pilot licence number(s) for each pilot:
3. Name of insurer and address, including telephone, fax, and email :	
Section 2: Aircraft Identification	
1. Aircraft registration number :_____ 2. Aircraft identification to be used in radiotelephony, if applicable**:** _____ 3. Aircraft type : _____ 4. Aircraft description (e.g., Engines, propellers, wing span) : _____ 5. Aircraft controlled via : Line of sight Satellite Computer programme Other_____ 6. Aircraft equipment (e.g., Sprayers,-camera, type, live feed or Photographs): _____ 7. If camera equipped, aircraft camera transmission destination: Operator/Company home base Other (identify):_____ 8. Frequency band to be used: _____ 9. Aircraft radio station licence number, if applicable: _____	

Section 3. Description of Intended Operation

1. Proposed type(s) of operation:
Aerial mapping; ☐ Aerial surveying; ☐ Aerial photography; ☐
Aerial advertising ☐ Aerial surveillance and inspection; ☐
Forest fire management; ☐ Meteorological service ☐ Search and rescue; ☐
Accident/incident investigation; ☐
Cargo, indicate type of cargo: ☐ _____
Is cargo classified as dangerous goods ☐ yes ☐ no
Is payload internal ☐ or external ☐
Other: _____

2. Flight rules:
VFR; ☐ IFR; ☐ IMC; ☐ VLOS ☐

3. Dates/Geographic areas/description of intended operations and proposed route structure:
(a) Date(s) of intended flight (dd/mm/yyyy) _____
(b) Point of departure: _____
(c) Destination: _____
(d) Route to be followed: _____
(e) Cruising speeds(s):
(f) Cruising level(s)/altitude:
(g) Duration/frequency of flight:
(h) Emergency set down sites along proposed route:
(i) For emergency landings:
i. Responsible person for aircraft recovery: _____
ii. Responsible person for clean up if impact occurs: _____
(j) Emergency contact telephone numbers: _____

Section 4. RPA Characteristics

1. RPA characteristics:
   a. Type of aircraft:
   b. Maximum certificated take-off mass:
   c. Number of engines:
   d. Take-off and landing requirements:
   e. Detect and avoid capabilities:
   f. Number and location of RPSs as well as handover procedures between RPSs, if applicable:
   g. Payload information/description:
   h. Visual control for take-off and/or landing or take-off and landing handled through camera on board

2. Performance characteristics:
   a. Operating speeds: _____
   b. Typical and maximum climb rates: _____

c. Typical and maximum descent rates: _____
d. Typical and maximum turn rates: _____
e. Maximum aircraft endurance: _____
f. Other, such as limitations for wind, icing, precipitation: _____

3. Communications, navigation, and surveillance capabilities:
   a. Aeronautical safety communications frequencies and equipment:
      i. ATC communications, including any alternate means of communication: _____
      ii. Command and control links (C2) including performance parameters and designated operational coverage area: _____
      iii. Communications between RP and RPA observer, if applicable: _____
   b. Navigation equipment: _____
   c. Surveillance equipment (e.g. SSR transponder, ADS-B out): _____

4. Emergency procedures :
   (a) Communications failure with ATC:_____
   (b) C2 failure :_____
   (c) RPA observer communications failure, if applicable:_____
   (d) Satellite failure, if applicable :_____
   (e) Recovery during unplanned landings: _____
   (f) Communication procedure with local law enforcement in case of impact:_____

Attach copies of the following, in English translation if original documents are not in the English language:

- Insurance certificate;
- Noise certification document issued in accordance with ICAO Annex 16;
- Operator security programme; and
- Proposed flight plan to be filed with ATC.

Applicant's signature:	Date (dd/mm/yyyy):	Name and title:

Section 5 (*to be completed by the NCAA*)

Evaluated by (name and office):	NCAA decision: Approval granted Not approved

Remarks:	
NCAA representative signature:	Date (dd/mm/yyyy):

NCAA form dated 11/2022

IS 11.12.2.1. MANUAL OF PROCEDURE

(*a*) Information to be contained in manual of procedure

The information referred to in Nig. CARs 11.12.2.1(1)(b), which must be contained in the manual of procedure of the applicant, must include the following :

(1) A statement signed by the accountable manager on behalf of the applicant's organisation confirming that the manual of procedure and any included manuals—

(*i*) define the organisation and demonstrate its means and methods for ensuring ongoing compliance with Part 11 ; and

(*ii*) will be complied with at all times.

(2) The titles and names of the personnel required by Nig. CARs 11.12.2.3.

(3) The duties and responsibilities of the personnel specified in Nig. CARs 11.12.2.3 including matters for which they have responsibility to deal directly with the Authority on behalf of the organisation.

(4) An organisation chart showing lines of responsibility of the personnel specified in Nig. CARs 11.12.2.3 and extending to each location listed under subparagraph (5).

(5) Details of those locations where members or personnel of the organisation are to exercise functions or powers delegated by the Authority.

(6) A summary of the resources at and the scope of activity to be conducted at each location listed under subparagraph (5).

(7) Details of the organisation's procedure for recording which of its members and personnel hold authorisations granted by the organisation or delegations of the Authority's functions or powers, or both, including the extent and scope of those authorisations and delegations.

(8) Details of the procedures required by—

(*a*) Nig. CARs 11.12.2.3 regarding the competence of personnel ;

(*b*) Nig. CARs Part 11.12.2.2 regarding quality assurance of the organisation.

(9) Procedures to control, amend and distribute the manual of procedure.

IS.11.12.2.2. QUALITY ASSURANCE SYSTEM

(*a*) Minimum standards for a quality assurance system :

(1) The quality assurance system referred to in Nig. CARs 11.12.2.2(2), must include—

(*i*) a clear definition of the level of quality the organisation intends to achieve ;

(2) a procedure that sets out the level and frequency of the internal reviews ;

(3) a procedure to record the findings and communicate them to management ;

(4) a list of responsible persons ;

(5) procedures by which other quality indicators such as facility malfunction reports, incidents, occurrences, complaints and defects are brought into the quality assurance system ;

(6) procedures for management analysis and overview ;

(7) procedures for rectifying any deficiencies which may be found ; and

(8) procedures for documenting the complete review process from the inspection to the satisfactory management review so that this is available to the Authority during a safety inspection and audit.

(*b*) Measures must be taken to ensure that the system is understood, implemented and complied with at all levels.

(*c*) The quality assurance system must be documented in the manual of procedure referred to in Nig. CARs 11.12.2.2.

IS 11.13.2.1. EX-MILITARY AIRCRAFT

(*a*) *Required training*

The additional training, required for conversion onto ex-military aircraft shall include ground as well as flight training.

(*b*) *Training syllabus*

(1) Ground Training

(*i*) Ground training may be done on a self-study or formal-lecture basis, after which the applicant must complete a written examination to prove his or her knowledge of all aircraft systems.

(*ii*) The technical examinations shall cover the following aspects :

(A) Engine

(B) Fuel system

(C) Oil system

(D) Hydraulic system

(E) Electrical system

(F) Pressurization system

(G) Ejection system

(H) Emergency systems

(*iii*) The technical examinations must be passed with the following minimum results :

(A) Limitations : 80 *per cent*

(B) Procedures : 80 *per cent*

(C) Emergency Procedures : 95 *per cent*

(iv) The ground course shall include an introduction to the use of the survival equipment. Special attention must be given to the use of the parachute, the dinghy and any medical equipment fitted in the aircraft. It would be beneficial for the trainee to do an introductory parachute course. This will enable the individual to brief any future passenger better on the use of a parachute.

(*b*) *Flying training*

(1) The flying training should only be initiated after the completion of the ground phase. During this phase it will be imperative to take previous experience into account. After completion of this phase, the applicant should be able to handle the aircraft safely during all flying conditions, to the satisfaction of the testing flight instructor and the Director.

(2) Aspects to be covered during the flying training phase, to the extent applicable to type, shall include the following :

(*i*) Aircraft familiarization

(*ii*) Effect of controls

(*iii*) Climbing and descending

(*iv*) Stalling at various speeds and configurations

(*v*) Medium and steep turning

(*vi*) Incipient spinning and spinning, if allowed

(*vii*) Acrobatic manoeuvres applicable to the specific type

(*viii*) Precautionary landings

(*ix*) Forced landings

(*x*) Approaches (different speeds and configurations as applicable to type)

(*xi*) Landings (different speeds and configurations as applicable to type)

(*xii*) Navigation (low, medium and high level)

(*xiii*) Introduction to instrument flying

(*xiv*) Introduction to night flying

(*xv*) Handling of emergencies

(*xvi*) Engine failures during different stages of flight

(*xvii*) Engine fire/overheat during different stages of flight

(*xviii*) Hydraulic failure

(*xix*) Flap failure

(xx) Dragchute failure

(*c*) *Guidelines for the establishment of training criteria*

(1) Guideline used by the Director for the approval of training criteria for an individual :

Candidate has less than 300 hours total flying time.	Minimum of 40 hours instruction on type, of which 5 hours could be on a simulator of that type. Minimum of 15 hours with a check pilot who should be a qualified instructor on type. If an instructor is not available, it must be someone who has done the conversion to the instructor's position on type.
Candidate has less than 300 hours total flying time of which 100 hours are on a jet-engine aircraft.	Minimum of 30 hours instruction on type, of which 5 hours could be on a simulator of that type. Minimum of 10 hours with a check pilot.
Candidate has more than 500 hours total flying time including more than 100 hours as pilot-in-command on a civilian jet aircraft.	Minimum of 10 hours instruction on type. Minimum of 10 hours with a check pilot.
Candidate has a military jet rating obtained as a civilian on a similar aircraft type.	Minimum of 7 hours instruction on type. Minimum of 5 hours with a check pilot.
Candidate has held a military jet licence issued by the air force.	Will be determined by NCAA.

(2) Guideline used by the Director-General for the approval of aerobatic training criteria for an individual :

Candidate has no previous aerobatic experience.	An aerobatic rating and a minimum of 10 hours aerobatic training on the aircraft type.
Candidate has an aerobatic rating issued in terms of Part 61 and has flown more than 6 hours of aerobatics during the preceding twelve months.	Minimum of 4 hours aerobatic training on type.
Candidate has previous aerobatic experience but does not have a civilian acrobatic rating.	An aerobatic rating and a minimum of 6 hours aerobatic training on aircraft type.
Candidate has more than 6 hours aerobatic experience on military jet aircraft during the preceding twelve months and has an aerobatic rating.	Minimum of 2 hour aerobatic training on type.

(*d*) *Information to be supplied*

(1) Information to be supplied to the Director in respect of the candidate when applying for approval of training criteria

(*i*) *Summary of the Pilot Logbook*

The pilot's logbook should be summarised and a copy of the summary page submitted to the Director

(*ii*) *Hours flown per month*

The average number of hours that the applicant flies per month.

(*iii*) *Aerobatic Experience*

The total number of hours aerobatic experience and the number of hours aerobatic flying during the preceding twelve months.

(*iv*) *Type of Aircraft*

The details of the aircraft type for which the applicant is applying.

(*v*) *Licence Details*

Details of the licences held, including aircraft types, systems, and night or instrument rating.

(2) Information to be supplied to the Director in respect of the person or organization to provide the training when applying for approval of training criteria :

(*i*) *Approved Training Organisation*

The name and certificate number of the Approved Training Organisation.

(*ii*) *Flight Instructor*

(A) the name and licence number of the flight instructor ; and

(B) the qualification of the flight instructor, including flying experience and type ratings held.

(*iii*) When applying for approval of training criteria the Information to be supplied to the Director shall include—

(A) the proposed emergency training procedures ; and

(B) the physical and medical requirements for the candidate to operate the aircraft and the limitations imposed.

(*e*) *Prescribed individual training programme*

Once the Director has studied the information submitted in terms of sub-paragraphs (3), (4) and (5), and is satisfied that the training will be done in a responsible and safe manner, minimum requirements regarding the training of the particular individual will be supplied in writing by the Director.

(*f*) *Continuation training*

After completion of the conversion onto type, it will be the responsibility of the pilot and the aircraft owner to ensure that the pilot remains current on type. As a guideline, the following should be used :

(1) Ground training :

An emergency, handling, limitations and procedural quiz must be completed at least every second month.

(2) Flying training :

To remain current, the pilot must—

(*i*) complete at least 12 hours, as pilot-in-command of an ex-military aircraft, over a twelve-months period ; or

(*ii*) should this not be the case, or if the pilot has not flown the specific type for a period exceeding three months, the pilot must undergo a check flight with a flight instructor who is current on type ; and

(*iii*) undergo at least one check flight on type not later than six months since the previous check flight on type with a flight instructor who is current on type.

(*g*) *Documentation*

All documentation generated during the conversion and continuation training shall be filed in the pilot's personal training file, which must be kept at the aircraft owner's office, and which must be made available on request to an authorized officer, an inspector, or an authorized person.

IS 11.13.11. DISPLAY AUTHORISATION

1. *Introduction*

When an applicant wishes to participate in public flying demonstrations the applicant should submit the information detailed below to the NCAA. The NCAA will, if it is satisfied that the aircraft can be operated in a safe manner during an air show, issue a Display Authorisation to the applicant.

2. *Information Required*

2.1. Flying Experience

The applicant should supply a summary of previous flying experience and details of experience on the type of aircraft to be flown during the display.

2.2. Air Show Experience

The applicant should provide the NCAA with a detailed list of previous air show experience. This should include the dates, duration, aircraft type and sequence flown.

2.3. Details of the Sequence

The applicant should submit the detail of the sequence to be flown which should include the following :

(*a*) *Good weather sequence*

The display sequence to be flown, in textual and graphical form, where the weather conditions do not impose any restriction. The minimum meteorological conditions for this sequence should be specified.

(*b*) *Bad Weather Sequence*

The display to be flown, in textual and graphical form, where the weather conditions such as cloud ceiling imposes a restriction on the display.

The minimum meteorological conditions for this sequence should be specified.

(*c*) *Emergency Procedures*

The specific procedures to be followed for the possible emergency situations that may occur including diversion aerodromes.

2.4. Aircraft Configuration

The applicant should supply details of the aircraft configuration including weight, takeoff fuel and landing fuel.

2.5. Fees

The applicant should supply the receipt for the payment of the prescribed fees.

3. *Display Authorisation*

Once the information has been reviewed, a display authorisation may be issued at the discretion of the Director or the organisation, designated for the purpose in terms of Part 11.13.11, as the case may be. The display authorisation details the sequence to be flown and any other conditions that may be imposed.

IS 11.13.7.12. OPERATION OF PARACHUTES

List of technical standards

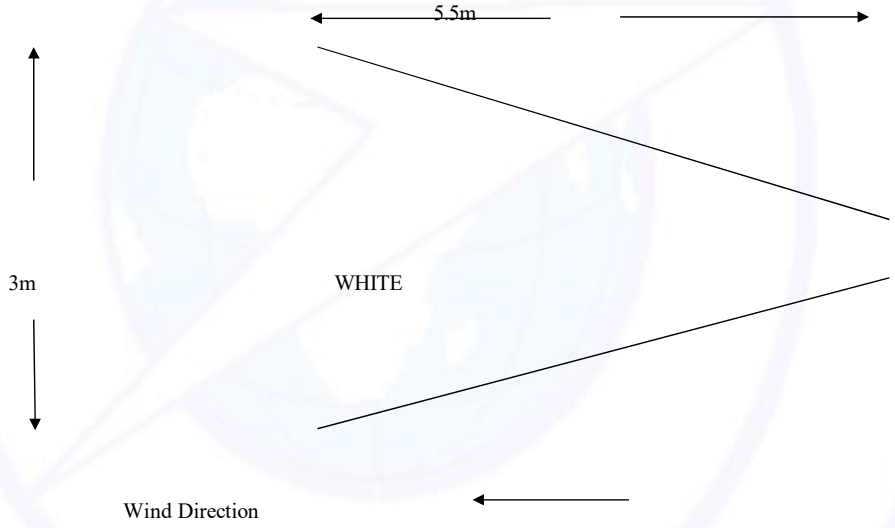
GROUND SIGNAL

1. *Ground signal*

VISIBILITY AND CLEARANCE FROM CLOUD

1. *Ground signal*

The ground signal for an unattended aerodrome is the following :



VISIBILITY AND CLEARANCE FROM CLOUD

1. *Visibility and clearance from cloud*

The visibility and clearance requirements are the following :

Airspace designation	*Visibility*	*Distance from clouds*
Class A	Not permitted	Not permitted
Class C, D and E	8 km	Horizontal..... 500 m Vertical..... 500 ft
Class G Above 3 000 ft above MSL or 1 000 ft above terrain whichever is higher	8 km	Horizontal..... 500 m Vertical..... 500 ft
At or below 3 000 ft above MSL or 1 000 ft above terrain whichever is higher	5 km	Clear of clouds and in sight of the surface