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The following circular is hereby promulgated for information, guidance and necessary action.

F. J. Manongi
Director General

REGISTRATION, CERTIFICATION AND OPERATION OF MICROLIGHT AND ULTRALIGHT AEROPLANES IN TANZANIA

1.0 GENERAL

The purpose of this circular is to give guidance on the minimum requirements for certification and operation of microlight and ultralight aeroplanes in Tanzania.

1.1 MICROLIGHT AEROPLANE

1.1.1 DEFINITION

A microlight aeroplane is one designed to carry not more than two persons which has a Maximum Total Mass Authorized (MTWA) not exceeding:

- (a) 300 kg for a single seat landplane
- (b) 450 kg for a two seat landplane
- (c) 330 kg for a single seat amphibian or floatplane
- (d) 495 kg for a two seat amphibian or floatplane

A microlight must also have either a wing loading at the maximum total mass authorized not exceeding 25 kg per square metre or a stalling speed at the maximum weight authorized not exceeding 35 knots calibrated speed.

1.2 ULTRALIGHT AEROPLANE

1.2.1 DEFINITION

An ultralight aeroplane is one designed to carry not more than two persons which has a Maximum Total Mass Authorized (MTWA) not exceeding 390 kgs and:

- (a) a wing loading at the maximum total mass authorized not exceeding 25 kg per square metre or a stalling speed at the maximum mass authorized not exceeding 24 knots calibrated speed;
- (b) a maximum fuel capacity not exceeding 20 litres;

- (c) at full power in level flight is not capable of performing more than 55 knots calibrated airspeed

Note: The above definition of Microlight is not applicable to rotorcraft or gyroplanes.

2. CERTIFICATION AND REGISTRATION

2.1 Microlight/Ultralight aeroplanes shall be required to be registered with the Authority. All applications for registration shall therefore be submitted to the Authority. The application shall be accompanied with data and documentation giving details concerning the aircraft (see also 2.5 and 3.6)

2.2 A pre-registration inspection will be carried by the inspectors of the Authority and if accepted, a certificate of registration shall be issued by the Authority.

This certificate, which contains particulars of the nationality mark of the aircraft and the registration mark assigned to it by the Authority, shall be subject to the conditions specified in the relevant regulations.

2.3 The microlight/Ultralight shall not fly until the nationality and registration marks have been painted thereon, or affixed there as per Regulation 7 of the Civil Aviation (Operation of Aircraft) Regulations, 2006 and Regulation 10 of the Civil Aviation (Aircraft Registration and Marking) Regulations, 2006 as amended.

2.4.1 All microlight/ultralight aeroplanes registered in Tanzania shall not fly unless they hold a valid Restricted Certificate of Airworthiness issued and renewed every twelve (12) months by the Authority.

2.5 Microlight/Ultralight type aeroplanes may be accepted by the Authority as eligible for the issue of permits to fly if:

(a) evidence is provided that: -

(i) a permit to fly or an experimental airworthiness certificate issued by a competent Authority is in force in respect of an aeroplane of the type; or

ii) the type design conforms to the standards accepted by the Authority as equivalent; or

iii) aeroplanes of the type have achieved a satisfactory airworthiness history in a Contracting State on a number of aeroplanes of the same type and this should be confirmed in writing by the responsible Authority.

(b) an aeroplane of the type has been inspected by an Inspector and found to conform to good design practice; and

(c) data in the form of drawings, parts catalogues, operating manuals and any other manuals sufficient to define the aeroplane is provided by the applicant for retention by the Authority.

2.6 The Authority may, issue a Restricted Certificate of Airworthiness for a microlight/ultralight aeroplane if:

(a) The aeroplane is of a type which the Director General of the Authority has accepted as in 2.5 above as eligible for issue of a Restricted Certificate of Airworthiness; and

(b) the aeroplane has been inspected by an Inspector of the Authority and found to be in a safe condition for flight.

The Authority may, in a Restricted Certificate of Airworthiness for a microlight/ultralight aeroplane, prescribe conditions and limitations as he/she thinks fit, and such conditions and limitations shall be complied with.

- 2.7 The Authority may issue safety airworthiness requirements to the owner in respect of a microlight/ultralight aeroplane, individually or in general, requiring such action, as he/she consider necessary in the interests of safety and such a directive shall be complied with.
- 2.8 A microlight/ultralight aeroplane, which has been modified in any way, which may affect airworthiness, shall not be flown unless the Authority has been informed, and any requirements notified by him have been complied with.

3. **AMATEUR BUILT MICROLIGHT/ULTRALIGHT**

- 3.1 A microlight/ultralight may be accepted by the Authority as suitable for amateur construction and be eligible for a Restricted Certificate of Airworthiness if:
 - (a) It can be constructed and maintained with the facilities ordinarily available to amateurs but may not be accepted if the design is considered too complicated for the capability and experience of the constructor.
 - (b) it follows under the definition of a micro light detailed in 1.1 above
 - (c) An approved engine and propeller combination is to be used.
 - (d) The facility including personnel is acceptable to the Authority.

NOTE: An approved engine and propeller combination is to have a combination previously type certificated or similarly approved by a Contracting State or which is acceptable to the Authority.

- 3.2 An applicant for acceptance of an aircraft type and permission to build it shall submit to the Authority, in the English language, such documents, data and other evidence as are necessary to establish that the aircraft type and model meets the airworthiness standards and requirements. The application shall reach the Authority well in advance and at least thirty (30) days prior to start of any construction
- 3.3 The Applicant shall arrange with the Authority at his cost to have his facility inspected for acceptance prior to commencement of the construction. The build-up shall commence only when a written consent is obtained from the Authority on the facility and the type of aeroplane to be built.
- 3.4 The type design of a microlight may be accepted by the Authority and authorized for amateur construction if it complies with requirement mentioned in 2.5 above.
- 3.5 For every amateur built aircraft of a type which has not previously been granted a Restricted Certificate of Airworthiness in Tanzania, the applicant, in addition to documents submitted as specified in 3.2 above, shall submit the following type documentation:
 - (a) A complete set of drawings, including details of any modifications incorporated in the aircraft or proposed, giving sufficient details and data to permit satisfactory identification, manufacture and inspection of all parts of the aircraft.
 - (b) If not included in the drawings, a schedule of the materials for all primary structural components and details of their heat treatment.

- (c) Detail of all flight limitations, mandatory operating procedure and loading restrictions together with information on the operation of the aircraft, its engine, propeller and equipment.
- (d) Such additional information as the Authority may require in respect of any particular type. The above document will be retained for use by the Authority.

NOTE: For the purpose of this requirement, primary structure includes all portions of the aircraft, whose failure during flight or ground maneuvers is likely to cause catastrophic structural collapse or loss of control of the airplane, endangering the safety of the aircraft and or its passengers.

The drawings or the schedule of materials shall prescribe the specifications of construction materials and standard parts. Unless otherwise approved by the Authority, the specifications for primary structure materials shall be approved aerospace material specification or by the aircraft designer.

4. EQUIPMENT AND MAINTENANCE REQUIREMENTS

4.1 A microlight/ultralight shall have the following minimum equipment installed prior to its certification:

4.1.1 Flight and Navigation:

- (a) One Air speed indicator
- (b) One Altimeter
- (c) One direct reading compass
- (d) VHF communication radio (trans/receiver)

4.1.2 Power plant:

- (a) A fuel quantity indicator for each fuel tank, visible by pilot when strapped in;
- (b) An oil quantity indicator for each tank. [A dipstick for each tank would be an Acceptable alternative to an indicator;]
- (c) Tachometer (RPM indicator), pressure and temperature indications as the engine Manufacturer may require or as are necessary to operate the engine within its limitations;
- (d) Engine "Kill" Switch
- (e) A manifold pressure indicator for an engine equipped with a variable pitch propeller, where manifold pressure and rotational speed are independently controllable.
- (f) Any Engine instrumentation as required by engine Manufacturer.

4.1.3 Miscellaneous Equipment

- (a) Safety harness for each occupant
- (b) Master Switch and Electrical protective devices when an Electrical System is installed.

NOTE: In addition to the above the Director General may direct additional equipment to be installed if in his opinion it will ensure safe operation of the aircraft.

4.2 Radio trans/receiver installation in a microlight/ultralight shall be approved by the Authority.

4.3 A simple drawing of the Aircraft (or photos) showing the position of the aerial, the location of the set, and the location of the power supply and associated wiring shall be presented to the Authority, who shall inspect the workmanship to ensure it complies to drawing. A test shall be carried out by an authorized person and a report furnished to the authority for approval on the radio station survey form.

- 4.4 All microlight/ultralight aeroplanes shall, as a minimum, conform to the manufacturers recommended inspection procedures and check cycles, and shall maintain a logbook for the purpose of the upkeep of all technical records. It is highly recommended to have two separate logbooks one for the airframe and the other for the engine.
- 4.5 Microlight/ultralight aeroplane shall be maintained by persons in accordance with Regulation 25 of the Civil Aviation (Airworthiness) Regulation 2006
- 4.6 Microlight/ultralight aeroplanes shall be maintained in accordance with performance rules prescribed in Regulation 29 of the Civil Aviation (Airworthiness) Regulation 2006
- 4.7 Microlight/ultralight aeroplanes shall be inspected in accordance with Regulation 30 of the Civil Aviation (Airworthiness) Regulation 2006
- 4.8 Approval for return to service of a microlight/ultralight aeroplanes shall be made in accordance with Regulation 40 of the Civil Aviation (Airworthiness) Regulation 2006

5. RESTRICTED CERTIFICATE OF AIRWORTHINESS; ISSUE AND RENEWAL.

- 5.1 An aircraft in respect of which a Restricted Certificate of Airworthiness is in force shall be used only for private operations and shall be subject to such conditions as the Authority may endorse on it. If a microlight/ultralight is to be used for commercial purposes or aerial work, then the restricted certificate of airworthiness shall be endorsed to the respective category.
- 5.2 An application for Restricted Certificate of Airworthiness issue/renewal shall be made by completing form AC-AWS002A, AC-AWS002B, AC-AWS002C and forwarded to the Authority together with the relevant fee.

NB: An application for issue a restricted certificate of airworthiness shall be made at least 30 days the certificate is required.

For renewal a restricted certificate of airworthiness, application shall be made at least 14 days before the certificate expires.

- 5.3 The aircraft shall be weighed. The weight and balance report shall be retained in the aircraft records.
- 5.4 A microlight/ultralight aeroplane shall be returned to service in accordance to Regulation 26 of the Civil Aviation (Airworthiness) Regulations, 2006.
- 5.5 The aircraft records shall be made available to the Airworthiness Inspector
- 5.6 When the Authority is satisfied with the general condition of the aircraft, a Special flight permit is issued valid for the test flight only. The aircraft is then test flown to a flight test schedule of a comparable standard. The results shall be certified by the test pilot and retained in the aircraft records, and a copy submitted to the Authority.
- 5.7 On the satisfactory completion of test flying and any additional work required by the Authority, a Restricted Certificate of Airworthiness valid for a period not exceeding twelve (12) months may be issued.
- 5.8 The Restricted Certificate of Airworthiness may be renewed for a further period specified if the Authority is satisfied with the condition of the aircraft. The aircraft shall be subjected to an inspection prior to renewal of a Restricted Certificate of Airworthiness by an Airworthiness inspector of the Authority.

6. OPERATING REQUIREMENTS

- 6.1 Microlight/ultralights are aeroplanes and are therefore subject to the same regulations and rules, which apply to other aircraft. In particular, operators of Microlight/ultralights aeroplanes are reminded of the requirements that:
- 6.2.1 No person may operate a microlight/ultralight aeroplane in a manner that creates a hazard to other persons or property;
- 6.2.2 No person may allow an object to be dropped from a microlight/ultralight aeroplane if such action creates a hazard to other persons or property;
- 6.2.3 Persons operating microlight/ultralight aeroplanes shall maintain vigilance so as to see and avoid other aircraft and shall yield the right of way to unpowered craft;
- 6.2.4 No person shall operate a microlight/ultralight aeroplane in a manner that creates a collision hazard with regard to any other aircraft;
- 6.2.5 No person may operate a microlight/ultralight aeroplane over any congested area of a city, town or settlement below except:
- a) Such height as would enable the aircraft to alight clear of the area and without damage to persons or property on the surface in the event of the failure of the power unit; or
 - b) a height of 1,000 feet above the highest fixed object within 600 metres of the aircraft, whichever is the higher.
- 6.2.6 No person may operate a micro light aeroplane:-
- a) over, or within 1000 metres of any assembly in the open air of more than 1000. persons assembled for the purpose of witnessing or participating in any organized event, except with the permission, in writing, of the Authority and in accordance with any conditions therein specified and with the consent in writing of the organizers of the event; or
 - b) below such height as would enable it to alight clear of the assembly in the event of the failure of a power unit;
- 6.2.7 No person may operate a Microlight/ultralights aeroplane closer than 500 feet to any person, vessel, vehicle or structure except:
- a) when landing, or take off, in accordance with normal aviation practice; or
 - b) when flying under, and in accordance with the terms of an aerial application certificate granted to operator; or
 - c) while flying for the purpose of picking up or dropping tow ropes, banners or similar articles at an aerodrome;
- 6.2.8 No person may operate a Microlight/ultralights aeroplane in prohibited or restricted areas unless that person has permission from the using or controlling agency, as appropriate.
- 6.2.9 Microlight/ultralights aeroplane, being like any other aircraft, are treated no differently for Air Traffic Control purposes. However, because they are slow and extremely vulnerable and can be upset by wake turbulence from heavier aircraft, air traffic control therefore adopts a cautionary procedure of denying clearance for microlight/ultralight aeroplanes to enter regulated airspace in order to avoid unacceptable delays to other traffic and danger to the microlights.

It is, therefore, important that persons operating microlight/ultralights be made aware of any proposals to establish a microlight/ultralight aerodrome near to regulated airspace, prohibited or restricted areas and civil aerodromes. Such established aerodromes shall have to be licensed.

7. PILOT LICENSING REQUIREMENTS AND RESTRICTIONS

7.1 The pilot of a microlight/ultralight aeroplane must hold either a Private Pilot's license or be flying as Student Pilot under the direct supervision of a qualified Microlight/ultralights aeroplane flying instructor.

7.2 A microlight/ultralight pilot shall not fly at night.

7.3 Microlight/ultralight pilots shall not commence or continue a flight unless:

- a) the surface wind speed is less than 15 knots; and
- b) there is no cloud below 1000 ft above ground level over the take-off site and over the planned route, including the landing site; and
- c) the flight visibility is 5 nautical miles (8km) or more.

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