



## **Part 104**

### **Light/Microlight Sport Aircrafts**

## **TABLE OF CONTENTS**

<b>Part 104 .....</b>	<b>1</b>
<b>Light/Microlight Sport Aircrafts .....</b>	<b>1</b>
<b>SUBPART A .....</b>	<b>4</b>
<b>General .....</b>	<b>4</b>
104.1 Applicability .....	4
104.3 ECAA Inspection Authority .....	4
104.5 Waivers .....	4
104.7 Certification and registration .....	4
104.9 Reserved .....	4
<b>SUBPART B .....</b>	<b>5</b>
<b>Operating Rules .....</b>	<b>5</b>
104.11 Hazardous operations .....	5
104.13 Daylight operations (VFR) .....	5
104.15 Operation near aircraft; right of way rules .....	5
104.17 Operations over congested areas .....	5
104.19 Operations in certain airspace .....	5
104.21 Operations in prohibited or restricted areas .....	5
104.23 Flight restrictions in the proximity of certain areas designated by notice to airmen .....	5
104.25 Visual reference with the surface .....	5
104.27 Flight visibility and cloud clearance requirements .....	5
104.29 Flight visibility and clouds clearance for LSAs in Visual Meteorological Conditions (V.M.C.) .....	5
<b>SUBPART C .....</b>	<b>6</b>
104.31 Certificate required .....	6
104.33 Application for certificate .....	6
104.35 Amendment of certificate .....	6
104.37 Certification requirements .....	6
<b>SUBPART D .....</b>	<b>8</b>
104.41 General .....	8

104.43 thru 104.49 Reserved .....	8
<b>SUBPART E .....</b>	<b>9</b>
104.51 Recordkeeping requirements .....	9
104.53 Airmen: Limitations on use of services .....	9
104.55 Airworthiness checks .....	9
104.57 Minimum altitudes .....	9
104.59 Operating limitations .....	9
104.61 Performance: Climb .....	10
104.63 Conspicuity .....	10
104.65 Emergency operations .....	10
<b>Subpart F .....</b>	<b>11</b>
<b>Microlight .....</b>	<b>11</b>
104.67 Applicability .....	12
104.69 Certification and registration .....	12
104.71 Operating rules For Individuals .....	12
104.73 Maintenance .....	12
104.75 Operating rules For Commercial entities purpose .....	13
104.77 Maintenance .....	13

## **SUBPART A**

### **General**

#### **104.1 Applicability**

This Part prescribes rules governing the operation of Light Sport Aircraft (LSA) in the Arab Republic of Egypt. For the purposes of this Part, a LSA, means an aircraft:

- (a) Used or intended to be used for manned operation in the air by a single or double occupant;
- (b) Used or intended to be used for commercial or non commercial purposes;
- (c) Having an airworthiness certificate issued under the provisions of Parts 21 and 22 or equivalent standards;
- (d) Having not more than two seats including the pilot seat, with a Maximum Certificated Take-off Weight of not more than 750 kg.
- (e) If powered: having a single engine.
- (f) With maximum stall speed of 45 knots.
- (g) With fixed landing gear, except, if a seaplane repositionable or if a glider, fixed or retractable.
- (h) If a glider, a maximum never exceed speed of 135 knots.
- (i) If applicable, an unpressurised cabin.

**Note:** These categories include aeroplanes, gliders, gyroplanes, weight shift aircraft such as trikes and powered parachutes, and lighter-than-air aircraft. The definition is not intended to include helicopters. Light sport aircraft are in practice small, simple to operate, low performance aircraft.

#### **104.3 ECAA Inspection Authority**

- (a) Each person holds a certificate under this part (or applied for such certificate) shall grant unrestricted and unlimited access for ECAA inspectors to inspect his personnel, facilities, equipment, documents and records to determine:
  - (1) Eligibility to continue to hold his certificate.
  - (2) Compliance with this ECAR part
- (b) Failure to comply with paragraph (a) above shall be a basis to suspend, withdraw or revoke any certificate issued under this part.

#### **104.5 Waivers**

No person may conduct operations of a LSA that require a deviation from this Part except under a written waiver issued by the ECAA.

#### **104.7 Certification and registration**

- (a) No person shall operate a LSA without having a certificate of registration and bearing its registration marks.
- (b) The LSA and its components, parts and equipment are required to meet the airworthiness standards specified in the appropriate manufacturer's manuals.
- (c) No person may conduct operation of a LSA without having a valid certificate of airworthiness and flight permission issued from ECAA.
- (d) The pilots of the LSA are required to meet the aeronautical knowledge and experience requirements to operate those airplanes and to have an airman medical certificate issued in accordance to Parts 62 and 67
- (e) No person may conduct maintenance to a LSA without holding valid license issued in accordance with Part 65, or having a special authorization issued from ECAA to maintain a specific type of LSA.

#### **104.9 Reserved**

## **SUBPART B** **Operating Rules**

### **104.11 Hazardous operations**

- (a) No person may operate any LSA in a manner that creates a hazard to other persons or property.
- (b) No person may allow an object to be dropped from a LSA if such action creates a hazard to other persons or property.
- (c) Unless otherwise authorized by ECAA and appropriate authorities, no person may be allowed to drop any object from a LSA.

### **104.13 Daylight operations (VFR)**

No person may operate a LSA except between the hours of sunrise and sunset.

### **104.15 Operation near aircraft; right of way rules**

- (a) Each person operating a LSA shall maintain vigilance so as to see and avoid aircraft and shall yield the right of way to all aircraft.
- (b) No person may operate a LSA in a manner that creates a collision hazard with respect to any aircraft.
- (c) A powered LSA shall yield the right of way to any unpowered aircraft.

### **104.17 Operations over congested areas**

Unless otherwise authorized by ECAA, no person may operate a LSA over any congested area of a city, town or settlement or over any open-air assembly of persons.

### **104.19 Operations in certain airspace**

No person may operate a LSA within class A, class B, or class D airspace, unless that person has prior authorization from the ATS facility having jurisdiction over that airspace.

### **104.21 Operations in prohibited or restricted areas**

No person may operate a LSA in prohibited or restricted areas unless that person has permission from the ECAA and the using or controlling agency, as appropriate.

### **104.23 Flight restrictions in the proximity of certain areas designated by notice to airmen**

No person may operate a LSA in areas designated in a notice to airmen under Part 91.143 or 91.141, unless authorized by ATS.

### **104.25 Visual reference with the surface**

No person may operate a LSA except by visual reference with the surface.

### **104.27 Flight visibility and cloud clearance requirements**

No person may operate a LSA when the flight visibility or distance from clouds is less than that in the table found below. All operations in Class A, Class B and Class D airspace or Class B airspace designated for an airport must receive prior ATC authorization as required in 104.17 of this Part.

### **104.29 Flight visibility and clouds clearance for LSAs in Visual Meteorological Conditions (V.M.C.)**

<b>Class</b>	<b>Visibility and distance from clouds</b>
Class A	Not applicable
Class B and D	8 Km at and above 3.050m. (10000ft) AMSL 5 Km below 3.050m. (10000ft) AMSL 1500 m. horizontally 300 m. vertical distance from clouds

## **SUBPART C** **Certification Rules**

### **104.31 Certificate required**

No person may conduct LSA operations without or in violation of either:

- (a) A LSA operator certificate and operation specifications issued under this subpart, if it is intended to be used by an operator for commercial purposes;
- (b) The rules of a certified EAC 91-2, Egyptian Civil Aviation Clubs, if it operates under the responsibilities and supervision of that club;
- (c) The requirements of Part 91 if it is intended to be used for private international operations only;
- (d) The requirements of Part 121 if it is intended to be used for commercial international operations only;
- (e) The requirements of ECAR Part 105 along with the requirements of this Part if intended to be used for sky diving operations; or
- (f) The requirements of EAC 91\_3 along with the requirements of this Part if intended to be used for sign towing operations.

**Note:** If the LSA is intended to be used for aerobatic operations, the aircraft shall be certified for that kind of non commercial operations.

### **104.33 Application for certificate**

An application for a LSA operator certificate is made on a form and in a manner prescribed by the ECAA

### **104.35 Amendment of certificate**

- (a) A LSA operator certificate may be amended:
  - (1) On the initiative of the ECAA; or
  - (2) Upon application by the holder of that certificate.
- (b) An application to amend a LSA operator certificate is submitted on a form and in a manner prescribed by the ECAA, at least 15 days before the proposed amendment effective date.
- (c) The ECAA will grant a request to amend a certificate if it determines that safety in air commerce and the public interest so allow.
- (d) Within 30 days after receiving a refusal to amend, the holder may petition the Chairman of the ECAA, to reconsider the refusal.

### **104.37 Certification requirements**

- (a) Private glider operator-pilot: The applicant must hold a current Egyptian private, commercial, or airline transport pilot license and be properly rated for the aircraft to be used.
- (b) Commercial glider operator-pilot: The applicant must have available the services of at least one person who holds a current Egyptian commercial glider operator-pilot and who is properly rated for the aircraft to be used. The applicant himself may be the person that fulfills this requirement.
- (c) Aircraft: The applicant must have at least one certificated and airworthy LSA.
- (d) Knowledge and skill tests for private operations: The applicant must show, or have a person who is designated as the chief supervisor of LSA operations to show, that he has satisfactory knowledge and skill regarding LSA operations, such as knowledge of:
  - (1) Performance capabilities and operating limitations of the LSA to be used; and
  - (2) Safe flight and application procedures.
- (e) Management personnel required for commercial operations
  - (1) Each LSA operating certificate holder must have enough qualified management personnel in the following or equivalent positions to ensure safety in its operations:
    - (i) Director of operations; and
    - (ii) Director of maintenance.

- (2) Upon application by the LSA operating certificate holder, the ECAA may approve different positions or numbers of positions than those listed in paragraph (a) of this section for a particular operation if the LSA operating certificate holder shows that it can perform its operations safely under the direction of fewer or different categories of management personnel.
- (3) Each LSA operating certificate holder shall:
  - (i) Set forth the duties, responsibilities, and authority of the personnel required by this section in the manual required by this Part;
  - (ii) List in the manual required by this Part the name of the person or persons assigned to those positions; and
  - (iii) Within 10 working days, notify the ECAA of any change made in the assignment of persons to the listed positions.
- (f) Manual requirements for commercial operations
  - (1) Each LSA operating certificate holder shall prepare and keep current a manual setting forth the LSA operating certificate holder's procedures and policies acceptable to the ECAA. The LSA operating certificate holder's flight, ground, and maintenance personnel in conducting its operations must use this manual. However, the ECAA may authorize a deviation from this paragraph if the ECAA finds that, because of the limited size or nature of the operation, part of the manual is not necessary for guidance of flight, ground, or maintenance personnel.
  - (2) Each LSA operating certificate holder shall maintain at least one copy of the manual at its principal base of operations.
  - (3) The manual must not be contrary to any applicable ECAA regulations or the LSA operating certificate holder's operating certificate.
  - (4) A copy of the manual, or appropriate portions of the manual (and changes and additions) shall be made available to maintenance and ground operations personnel by the LSA operating certificate holder and furnished to:
    - (i) Its cockpit crewmembers; and
    - (ii) The ECAA.
    - (iii) Each employee of the LSA operating certificate holder to whom a manual or appropriate portions of it are furnished shall keep it up to date with the changes and additions furnished to them.
- (g) Manual contents for commercial operations

Each manual shall have the date of the last revision on each revised page. The manual must include:

  - (1) The name and title of each person authorized to exercise maintenance and operation duties;
  - (2) Procedures for ensuring compliance with weight limitations;
  - (3) Procedures for complying with accident notification requirements;
  - (4) Procedures for ensuring that the pilot in command knows that required airworthiness inspections have been made and that the LSA has been approved for return to service in compliance with applicable maintenance requirements;
  - (5) Procedures for planning a flight;
  - (6) Procedures for conducting the required training;
  - (7) Procedures for reporting and recording mechanical irregularities that come to the attention of the pilot in command before, during, and after completion of a flight;
  - (8) Procedures to be followed by the pilot in command for determining that mechanical irregularities or defects reported from previous flights have been corrected or that correction has been deferred; and
  - (9) Other procedures and policy instructions regarding the LSA operating certificate holder's operations, which are issued by the LSA operating certificate holder.

#### **104.39 Duration of certificate**

A LSA operator certificate is effective for one year, or until it is surrendered, suspended, or revoked whichever occurs first. The holder of a LSA certificate that is suspended or revoked shall return it to the ECAA.

## **SUBPART D** **Maintenance**

### **104.41 General**

- (a) No person may operate a LSA unless it is maintained and released to service in accordance with Part 43.
- (b) No person may conduct operation of a LSA unless it is maintained in accordance with maintenance program approved by ECAA, and with a certificate of release to service.
- (c) The LSA should be equipped at least with the following equipments and instruments:
  - (1) One altimeter indicator;
  - (2) One airspeed indicator;
  - (3) One vertical speed indicator;
  - (4) One magnetic compass;
  - (5) One tachometer indicator;
  - (6) One suitable radio communication equipment which may be a HF and/or VHF portable unit with suitable range;
  - (7) An approved shoulder harness and seat belt for each occupent;
  - (8) One fire extinguisher;
  - (9) One first aid kit;
  - (10) In case of flying over water: a life jacket for each occupent; and
  - (11) A fuel quantity gauge or other means which indicate the remaining fuel quantity

### **104.43 thru 104.49 Reserved**



## **SUBPART E** **Flight Operations**

### **104.51 Recordkeeping requirements**

Each operating certificate holder shall keep at its principal business office or at other places approved by the ECAA, and shall make available for inspection by the ECAA the following:

- (a) The operating certificate holder's operating certificate;
- (b) An individual record of each pilot used in operations under this Part, including the following information:
  - (1) The full name of the pilot;
  - (2) The pilot operating certificate (by type and number) and ratings that the pilot holds;
  - (3) The pilot's aeronautical experience in sufficient detail to determine the pilot's qualifications to pilot LSAs in operations under this Part;
  - (4) The effective date and class of the medical certificate that the pilot holds;
  - (5) Any action taken concerning the pilot's release from employment for physical or professional disqualification;
  - (6) The training required by 104.53(c); and
  - (7) Each operating certificate holder must keep each record required by this section for at least 12 months.

### **104.53 Airmen: Limitations on use of services**

No operating certificate holder may use the services of any person as an airman unless the person performing those services:

- (a) Holds an appropriate and current airman certificate with at least a commercial LSA license and appropriate medical certification;
- (b) Is qualified, under Part 61, for the operation for which the person is to be used; and
- (c) Has received sufficient ground and flight training to be familiar with the operator's policies and procedures, area of operation and local weather conditions. Familiarization flight training shall consist of at least two flights at the operator's area of operation. The operator shall record, for ground training, the subject and time in hours of that training, and for flight training, the hours and number of flights in that airman's training record. The training record must also state that the operator considers the airman competent to perform the duties to which assigned and the date of assignment to those duties.

### **104.55 Airworthiness checks**

The pilot in command may not begin a flight unless the pilot determines that all required airworthiness inspections have been made and that the LSA is in condition for safe flight with all required instruments and equipment in working order.

### **104.57 Minimum altitudes**

Except when necessary for takeoff and landing, no person may operate a LSA at an altitude less than 300 feet above the surface, or at a higher altitude over any area that would require a higher altitude to effect an emergency landing without undue hazards to the passengers or persons or property on the surface.

### **104.59 Operating limitations**

- (a) LSA operations shall not be conducted in the vicinity of airports operations.
- (b) The operation shall be conducted from a suitable, level launching area free of obstacles that may cause damage to the LSA fabric. The operator shall provide an area for occupants and spectators located at least 20 meters from the location of LSA inflation and launching. Occupants must be briefed to board the basket only when directed to do so by the pilot and that they must remain in their places during flight. A cockpit crewmember shall be assigned to direct this activity in addition to taking

necessary precautions during refueling such as prevention of smoking and prevention of static electricity in the area of fueling.

- (c) LSA shall not fly for the purposes of positioning the aircraft.
- (d) The pilot shall be responsible for obtaining all information necessary for the safety of the flight, including the suitability of weather and wind conditions for the operation, emergency procedures and alternate landing area in case of diversion.

#### **104.61 Performance: Climb**

Each LSA must be capable of climbing at least 300 feet in the first minute after takeoff with a steady rate of climb. Compliance with the requirements of this section must be shown by performance charts or graphs at each altitude and ambient temperature for which the LSA will be operated.

#### **104.63 Conspicuity**

The exterior surface of the aircraft must be of a contrasting color or colors so that it will be conspicuous during operation, to make the LSA conspicuous during flight.

#### **104.65 Emergency operations**

- (a) In an emergency involving the safety of persons or property, the operating certificate or permit holder may deviate from the rules of this Part relating to aircraft and equipment to the extent required meeting that emergency.
- (b) In an emergency involving the safety of persons or property, the pilot in command may deviate from the rules of this Part to the extent required to meet that emergency.
- (c) Each person who, under the authority of this section, deviates from a rule of this Part shall, within 10 days after the deviation, send to the ECAA a complete report of the operation involved, including a description of the deviation and reasons for it.



# **Subpart F**

# **Micro light sport**

# **aircraft**

#### **104.67 Applicability**

This subpart prescribes the rules governing the operation of Microlight Aircrafts in the Arab Republic of Egypt for the purpose of this subpart the microlight aircraft

- 1) Is used or intended to be used for manned operation the Air by a single or double occupant.
- 2) Is used or intended to be used for recreation or sport purpose.
- 3) Have an Egyptian certificates of registration and Airworthiness in accordance with applicable ECAR's .
- 4) An empty weight from 120 KG to 300 Kg.
- 5) Used or intended to be used for commercial or non commercial purposes

#### **104.69 Certification and registration**

- 1) No person shall operate microlight aircraft without having a certificate of registration and bearing its registration marks.
- 2) The Microlight aircraft and its components, parts and equipment are required to meet the airworthiness standards and specified in the appropriate manufacturer manuals.
- 3) No person may conduct operation of a Microlight aircraft without having a valid certificate of airworthiness in accordance with part 21 and flight permission issued from ECAA.
- 4) The pilot of Microlight aircrafts are required to meet the aeromedical knowledge and experience requirements to operate those aircrafts and to have airman medical certificate issued in accordance to parts 62 and 67.
- 5) No person may conduct maintenance to a Microlight Aircraft without holding a valid license issue in accordance with part 65 or a qualified technician approved from the manufacturer and having a special authorization issued from ECAA to maintain a Microlight Aircraft.

#### **104.71 Operating rules For Individuals**

- 1) Acquire the needed permission under this subpart from ECAA this is permission annually renewal.
- 2) Pilot must have a valid license from ECAA.
- 3) Only MCPL licensed pilots may carry passenger.
- 4) Must abide by the wind speed limitations for the wing being used.
- 5) Must abide by the limitations set in the Engine Manual.
- 6) Must submit an operation Manual / instruction operation manual to the ECAA containing all operation limitations and restrictions containing the manufacturer specifications, ECAA restrictions and any others required for operation for ECAA approval.

#### **104.73 Maintenance**

- 1- Must abide by the maintenance schedule set in the manufacturer maintenance manual

And approved from ECAA

- 2- Must keep a valid maintenance record ( according to ECAR 43) to be presented to the ECAA with each permission renewal or at any inspection if required by the ECAA
- 3- Must keep sufficient tools, spare parts and materials as described by the manufacturer in appropriate store

No person may operate a Microlight Aircraft unless it is maintained and released to surface in accordance to part 43.

#### **104.75 Operating rules For Commercial entities purpose**

- 1) Acquire the needed Air operator Certificate and operation specification from ECAA under this subpart . This certificate is renewed annually.
- 2) Pilot must have a valid license from ECAA.
- 3) Only MCPL licensed pilots may carry passenger.
- 4) Must abide by the wind speed limitations for the wing being used.
- 5) Must abide by the limitations set in the Engine Manual.
- 6) Must submit an operation Manual / instruction operation manual to the ECAA containing all operation limitations and restrictions containing the manufacturer specifications , ECAA restrictions and any others required for operation for ECAA approval
- 7) Must have Director of operations approved from ECAA
- 8) Operating certificate holder's procedures and policies acceptable to the ECAA according item to 104.37.g

#### **104.77 Maintenance**

- 1- Must abide by the maintenance schedule set in the manufacturer maintenance manual and approved from ECAA
- 2- Must keep a valid maintenance record to be presented to the ECAA with each Certificate renewal or at any inspection if required by the ECAA
- 3- Must keep sufficient tools, spare parts and materials as described by the manufacturer in appropriate store .
- 4- Must have a Certified maintenance person according to ECAR 65.
- 5- No person may operate a Microlight Aircraft unless it is maintained and released to service in accordance to part 43.
- 6- No person may operate a Microlight Aircraft unless it is maintained in accordance with Maintenance Program approved by ECAA and with certificate of release to service.
- 7- Must have a maintenance Manager approved from ECAA
- 8- The micro light Aircraft should be equipped with the following indicators at least :
  - 1) One altimeter indicator.
  - 2) One Airspeed indicator.
  - 3) One magnetic compass.
  - 4) One tachometer indicator.
  - 5) One portable VHF.

- 6) One vertical speed indicator;
- 7) An approved shoulder harness and seat belt for each occupant;
- 8) One fire extinguisher;
- 9) One first aid kit;
- 10) In case of flying over water: a life jacket for each occupant; and
- 11) A fuel quantity gauge or other means which indicate the remaining fuel quantity