



CIVIL AVIATION AUTHORITY

# **CAR-101**

## **Civil Aviation Regulation**

### **Air Recreational Activities**

- (1) Balloon (unmanned free Balloon and Captive Balloon)**
- (2) Kite**
- (3) Parasail**
- (4) Autogyro (Gyroplane/Gyrocopter)**
- (5) Unpowered/Powered Sailplane**
- (6) Powered Parachute**
- (7) Hang Glider**
- (8) Weight-shift-control aircraft**
- (9) Model aircraft**
- (10) Model Rocket**

**Effective: 25<sup>th</sup> November 2021**

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**President of the CAA**

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## FOREWORD

- (a) The Civil Aviation Requirements for the operation of **Balloons (unmanned free Balloons and Captive Balloons), Kites, Hang Gliders, Parasails, Autogyro (Gyroplane/Gyrocopter), Weight-shift-control, Unpowered/Powered Sailplane, Powered Parachute, Model aircraft and Model Rockets** (hereinafter called the Air Recreational Activities) have been issued by the Civil Aviation Authority (hereinafter called the AUTHORITY) under the provisions of the Civil Aviation Law of the Sultanate of Oman.
- (b) Definitions and abbreviations of terms used in this CAR that are considered applicable are contained in CAR-1, Definitions and Abbreviations. However, definitions and abbreviations of terms used in this CAR that are specific to a Subpart of this CAR are normally given in the Subpart concerned or, exceptionally, in the associated compliance or interpretative material.
- (c) Amendments to the text in this CAR are issued as amendment pages containing revised paragraphs.
- (d) The editing practices used in this document are as follows:
- (1) 'Shall' is used to indicate a mandatory requirement and may appear in CARs.
  - (2) 'Should' is used to indicate a recommendation and normally appears in GMs and IEMs.
  - (3) 'May' is used to indicate discretion by the Authority, the industry or the applicant, as appropriate.
  - (4) 'Will' indicates a mandatory requirement and is used to advise of action incumbent on the Authority.

***NOTE: The use of the male gender implies the female gender and vice versa***

## SUBPART A – GENERAL

### CAR 101.001      **Applicability**

This Subpart prescribes rules governing the operation of air recreational activities (see Appendix A):

- (1) Balloon (unmanned free Balloon and Captive Balloon)
- (2) Kite
- (3) Airship
- (4) Parasail
- (5) Autogyro (Gyroplane/Gyrocopter)
- (6) Unpowered/Powered Sailplane
- (7) Powered Parachute
- (8) Weight-shift-control aircraft
- (9) Hang Gliders
- (10) Model aircraft
- (11) Model Rocket

### CAR 101.003      **Scope**

This CAR-101 establishes the requirements to be met by an Air Recreational Activities applicant and may only be granted approval if the CAA satisfies that all Civil Aviation Law, Regulations and procedures in force are effectively implemented.

### CAR 101.005      **Definitions**

**An aircraft:** is defined as any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface. An aircraft which is intended to be operated with no pilot on board is classified as unmanned. An unmanned aircraft which is piloted from a remote pilot station is a "remotely piloted aircraft" (RPA).

**The Air Recreational Activities Operator:** is a person, organization or enterprise engaged in or offering to engage in Air Recreational Activities.

**Airship:** Engine-driven lighter-than-air aircraft that can be steered.

*Note: CAR-77 (Manned Balloons) may be applied for transport and tour airship as appropriate*

**Autogyro (Gyroplane/Gyrocopter):** Means a heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors.

*Note: "autogyro" "Rotorcraft" "gyrocopter" and "gyroplane", all mean the same thing, and the most important feature shared by gliders, airplanes, helicopters and gyroplanes is that they all use wings to fly. It's just that on helicopters and autogyros the wings are mounted on pylons and spin in circles, but they are rigidly affixed to the sides of airplanes and gliders. Other than that, they all get into the sky the same way: You move a wing rapidly through the air and it produces Lift. The rotating wings of a helicopter are directly-driven by the engine, enabling it to hover; whereas the rotating wings of the gyroplane are free-spinning, meaning it can't hover – though it can come astonishingly close to it, because it needs very little forward speed to stay airborne.*



*The cardinal virtue of the gyroplane is its ability to do nearly everything a helicopter can do, at only a fraction of the cost, while doing it more safely than any other kind of flying machine. While an autogyro (self-turning), also known as a gyroplane or gyrocopter, is a type of rotorcraft that uses an unpowered rotor in free autorotation to develop lift. Forward thrust is provided independently, typically by an engine-driven propeller. A gyroplane or gyrocopter rotor is similar to a helicopter rotor in appearance.*

**Captive balloon (captive, tethered or captive)** means; a pilotless balloon that is captive to the surface of the earth, or to an object on the surface of the earth, and has a maximum diameter of more than 1.5 m or a gas capacity of more than 3 m<sup>3</sup>:

**Controlled aerodrome** means; an aerodrome at which air traffic control service (ATS) is provided to aerodrome traffic.

**Control line model aircraft** means; a model aircraft primarily controlled in flight by a single or multiple wire system operated by the person flying the aircraft and restricted to circular flight about a central point.

**Free Balloon** means; a pilotless aerostat without propulsion in free flight, having a gas capacity greater than 1.5 m<sup>3</sup>.

**Free balloon** means; a free balloon, that:

- (1) carries a payload with—
  - (a) a combined mass of 6 kg or more; or
  - (b) a payload package of 3 kg or more; or
  - (c) a payload package of 2 kg or more with an area density of more than 13 g/cm<sup>2</sup>; and
- (2) uses a rope or other device for suspension of the payload that requires an impact force of 230 N or more to separate the suspended payload from the balloon.

*Note: applying for manned free balloon (hot air or Gas) refer to CAR 77*

**Free flight model aircraft** means; a model aircraft with a maximum wing loading of 62 g/dm<sup>2</sup> (20 oz/ft<sup>2</sup>), with a flight path that, once launched, is uncontrollable.

**Hang glider** means; a glider, that is capable of being launched and landed solely by the use of the pilot's legs.

**Kite** means; a pilotless aerodyne without propulsion that is tethered to a fixed point, or is hand held, and is sustained by the wind:

**Light Aircraft** means the following manned aircraft:

- (1) an Aeroplane with a Maximum Certified Take-off Mass (MCTOM) of 2 000 kg or less that is not classified as complex motor-powered aircraft;
- (2) a sailplane or powered sailplane of 2 000 kg MCTOM or less;
- (3) a balloon with a maximum design lifting gas or hot air volume of not more than 3400 m<sup>3</sup> for hot air balloons, 1 050 m<sup>3</sup> for gas balloons, 300 m<sup>3</sup> for tethered gas balloons;
- (4) a Very Light Rotorcraft with a MCTOM not exceeding 600 kg which is of a simple design, designed to carry not more than two occupants, not powered by turbine and/or rocket engines; restricted to VFR day operations

**Large model rocket** means a rocket that:

- (1) uses more than 25 g but not more than 125 g of propellant; and
- (2) produces more than 20 but not more than 320 Newton seconds of total impulse; and

- (3) uses a slow-burning propellant; and
- (4) is made of lightweight materials such as paper, wood, rubber and plastic; and
- (5) does not have the nose cone, fins, or body fabricated from metal; and
- (6) has a gross mass, including the propellant of more than 453 g but not more than 1.5 kg:

**Medium free balloon** means; a free balloon, that:

- (1) carries a payload of 2 or more payload packages with a combined mass of—
  - (a) more than 4 kg; and
  - (b) less than 6 kg; and
- (2) does not meet any of the criteria specified in the definition of the term heavy free balloon:

**Model Rocketry Safety Code** means the code of that name that is approved by the State.

**Model aircraft** means; a pilotless aircraft with a gross mass of between 100 g to 25 kg and includes:

- (1) control line model aircraft:
- (2) free flight model aircraft:
- (3) radio-controlled model aircraft:

**Parasail** means; an aerodyne, having the general form of an open, circular parachute carrying a person or persons towed behind a vehicle or motorboat to sustain flight:

**Powered Parachute:** A powered aircraft comprised of a flexible or semi-rigid wing connected to a fuselage so that the wing is not in position for flight until the aircraft is in motion. The fuselage of a powered parachute contains the aircraft engine, a seat for each occupant and is attached to the aircraft's landing gear.

*Note: example: Trike paramotor PPG and Foot launch Paramotor-PPG.*

**Powered Sailplane (Motor glider):** A fixed wing aircraft that contains at least one engine; primary function is sustained non-powered flight.

**Radio controlled model aircraft** means; a model aircraft that is primarily controlled by radio signals from a remote transmitter being operated by a person:

**Remotely piloted aircraft** means an unmanned aircraft that is piloted from a remote station and;

- (1) includes a radio-controlled model aircraft; but
- (2) does not include a control line model aircraft or a free flight model aircraft.

**Rocket** means a pilotless vehicle propelled by a system that contains every ingredient needed to form its own jet other than:

- (1) an aerial firework; or
- (2) a rocket propelled by a model rocket motor of size A-D which achieves no more than 20 Newton-seconds of total impulse:

**Right of Way; means**

- (1) Notwithstanding any other provision of this CAR;
  - (a) the pilot-in-command of an aircraft that has the right of way shall, if there is any risk of collision, take such action as is necessary to avoid collision; and
  - (b) where the pilot-in-command of an aircraft is aware that another aircraft is in an emergency situation, the pilot-in-command shall give way to that other aircraft.
- (2) When two aircraft are converging at approximately the same altitude, the pilot-in-command of the aircraft that has the other on its right shall give way, except as follows:
  - (a) a power-driven, heavier-than-air aircraft shall give way to airships, gliders and balloons;
  - (b) an airship shall give way to gliders and balloons;

- (c) a glider shall give way to balloons; and
  - (d) a power-driven aircraft shall give way to aircraft that are seen to be towing gliders or other objects or carrying a slung load.
- (3) When two balloons operating at different altitudes are converging, the pilot-in-command of the balloon at the higher altitude shall give way to the balloon at the lower altitude.
  - (4) Where an aircraft is required to give way to another aircraft, the pilot-in-command of the first-mentioned aircraft shall not pass over or under, or cross ahead of, the other aircraft unless passing or crossing at such a distance as will not create a risk of collision.
  - (5) Where two aircraft are approaching head-on or approximately so and there is a risk of collision, the pilot-in-command of each aircraft shall alter its heading to the right.
  - (6) An aircraft that is being overtaken has the right of way and the pilot-in-command of the overtaking aircraft, whether climbing, descending or in level flight, shall give way to the other aircraft by altering the heading of the overtaking aircraft to the right, and no subsequent change in the relative positions of the two aircraft shall absolve the pilot-in-command of the overtaking aircraft from this obligation until that aircraft has entirely passed and is clear of the other aircraft.
  - (7) Where an aircraft is in flight or maneuvering on the surface, the pilot-in-command of the aircraft shall give way to an aircraft that is landing or about to land.
  - (8) The pilot-in-command of an aircraft that is approaching an aerodrome for the purpose of landing shall give way to any aircraft at a lower altitude that is also approaching the aerodrome for the purpose of landing.
  - (9) The pilot-in-command of an aircraft at a lower altitude, as described in subsection (8), shall not overtake or cut in front of an aircraft at a higher altitude that is in the final stages of an approach to land.
  - (10) No person shall conduct or attempt to conduct a take-off or landing in an aircraft until there is no apparent risk of collision with any aircraft, person, vessel, vehicle or structure in the take-off or landing path.

**Shielded operation** means an operation of an aircraft within 100 m of, and below the top of, a natural or man-made object.

**Unpowered Sailplane:** A heavier-than-air aircraft which is supported in flight by the dynamic reaction of the air against its fixed lifting surfaces, the free flight of which does not depend on an engine.

**Weight-shift-control aircraft:** A powered aircraft with a framed pivoting wing and a fuselage controllable only in pitch and roll by the pilot's ability to change the aircraft's centre of gravity with respect to the wing. Flight control of the aircraft depends on the wing's ability to flexibly deform rather than the use of control surfaces.

*Note: Flying Inflatable Boat (FIB) is a kind of Weight-shift-control aircraft launched from the water using a boat.*

### **CAR 101.007            Registration:**

The requirements in CAR-47 shall not apply to Balloons (unmanned free Balloons and Captive Balloons), Hang Gliders, Kites, Parasails, Unpowered Sailplanes, Paramotor (PPG), Flying Inflatable Boat (FIB), Model aircraft and Rockets.

The requirements in CAR-47 shall apply in whole or in part as appropriate to Autogyro (Gyroplane/Gyrocopter), and Powered Sailplanes.

**CAR 101.009            Emergency Response Plan**

For the purpose of safely practicing these Air Recreational Activities an applicant shall have an Emergency Response Plan (ERP) in order to mitigate any potential risk and to improve the survivability of the people and properties. This can be achieved by, but not limited:

- (a) Identify the surrounding risk;
- (b) Proactively mitigating the potential or recognised risk;
- (c) Medical aid and response availability;
- (d) A way of effectively communicating to the Civil Defense in case of emergency;
- (e) Reporting to the competent authority;
- (f) A method for managing (or mitigating) any recurrence of an identified risk.

**CAR 101.011            Airspace knowledge**

- (a) This rule applies to a person who operates any of the following:
  - (1) unpowered Sailplane:
  - (2) a hang glider:
  - (3) a kite:
  - (4) a rocket:
  - (5) a parasail
- (b) A person to whom this rule applies must—
  - (1) ensure that before each flight, the person is aware of the airspace designation under CAR-180 and any applicable airspace restrictions in place in the area of intended operation; or
  - (2) conduct the operation under the direct supervision of a person who is aware of the airspace designation under CAR-180 and any applicable airspace restrictions that may apply.

**CAR 101.013            Restricted, military operating, and danger areas**

- (a) A person must not operate a captive balloon, hang gliders, kite, rockets, free balloon, model aircraft, Unpowered/Powered Sailplane, or parasail within a restricted area designated under CAR-180 unless the person has approval to do so from the administering authority responsible for the restricted area.
- (b) A person must not operate a captive balloon, hang glider, kite, free balloon, model aircraft, Unpowered/Powered Sailplane, rocket or parasail within a military operating area designated under CAR-180 unless the person has approval to do so from the administering authority responsible for the military operating area.
- (c) A person must not operate an Unpowered/Powered Sailplane, hang glider or parasail within a danger area designated under CAR-180 unless the person has established that the activity associated with the danger area will not affect the safety of the Unpowered/Powered Sailplane, hang glider or parasail.

**CAR 101.015            Security Clearance:**

All kinds of the air recreational activities described in this CAR shall obtain military and security clearance through National Survey Authority (NSA), local area leaders and according to their requirements.

**CAR 101.017 Low flying zones**

A person must not operate a captive balloon, hang glider, kite, free balloon, model aircraft, Unpowered/Powered Sailplane, rocket or parasail within a low flying zone designated under CAR-180.

**CAR 101.019 Area/s of practicing these activities**

- (a) For the purpose of issuing a NOTAM (Notice to Airmen), the applicant shall provide the CAA with an accurate location and coordinates where the activities will be conducted.
- (b) Applicant shall provide evidence of approval from the landowner allowing for the utilisation of the dedicated land area for practicing the described activities.
- (c) The activities shall be fully described within the application with any applicable restrictions that will be applied by the applicant. (e.g. hours of operation, and or maximum heights allowed)
- (d) The applicant operational location plan map and coordinates submitted to CAA shall be evaluated for approval.

**CAR 101.021 Controlled airspace**

A person shall not operate a captive balloon, hang glider, kite, free balloon, model aircraft, Unpowered/Powered Sailplane, rocket or parasail in controlled airspace without prior authorisation from the ATC unit responsible for that airspace.

**CAR 101.023 Exposition Manual**

Exposition Manual means the document or documents that contain the material specifying the scope of work deemed to constitute approval and showing how the applicant intends to comply with CAR-101, shall containing the following information:

- (a) A statement signed by the accountable manager confirming continuous compliance with CAR-101 at all times;
- (b) A general description of the scope of work authorized under the organization's terms of approval, a description of the organization's procedures;
- (c) The quality and safety policies;
- (d) An organization chart showing associated chains of responsibility between the persons nominated by the organisation as accountable post holders;
- (e) Consistent with the provisions of Annex 6 &19, the aircraft operator is responsible for the safe conduct of all operations. This includes establishing and implementing a safety management system (SMS). as described in CAR 100;
- (f) The total safety responsibility falls under the operator.
- (g) The DGCA may terminate or issue restrictions to the approval issued, for any safety related matter.

**CAR 101.025 Hazardous operations**

A person shall not operate a captive balloon, hang glider, kite, free balloon, model aircraft, Unpowered/Powered Sailplane, rocket, or parasail in a manner that creates a hazard to aircraft or to persons or property or to aviation safety.

**CAR 101.027 Maintenance and storage**

- (a) Each operator of any of Air Recreational Activities, ensures that they are maintained in accordance with the designer or kitset manufacturer maintenance requirements and meet a type design standard.
- (b) Storage of Air Recreational pieces, parts and any accessory devices shall be as per the conditions of storage recommended by the manufacturer's instructions, that provides adequate security and prevent deterioration of, and damage to, stored items.
- (c) Storage facilities for serviceable components should be clean, well-ventilated, and maintained at a constant dry temperature to minimize the effects of condensation. Manufacturer's storage recommendations should be followed for those aircraft components identified in such published recommendations.

**CAR 101. 029 Safety inspections and audits**

- (a) The Authority may in writing require the Air Recreational Activities certificate holder to undergo or carry out such inspections and audits of the holder's facilities, documents, and records as the Authority considers necessary.
- (b) The Authority may require the Air Recreational Activities certificate holder to provide such information as the Authority considers relevant to the inspection or audit.

**CAR 101.031 Training and licensing**

- (a) **Training:** A person shall not operate any kind of these Air Recreational Activities unless he/she received appropriate and accepted training and the experience gained entitles him/her to cope with all operational situations and conditions, in addition they can be well-composed in the event of an abnormality.
- (b) **Licensing Authority.** The approval designated by the Authority responsible for the licensing of personnel.

*Note: In the provisions of this ICAO Annex 1, the Licensing Authority is deemed to have been given the following responsibilities by the Contracting State:*

- (1) assessment of an applicant's qualifications to hold a license or rating;*
- (2) issue and endorsement of licenses and ratings;*
- (3) designation and authorization of approved persons;*
- (4) approval of training courses;*
- (5) approval of the use of flight simulation training devices and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a license or rating; and*
- (6) validation of licenses issued by other Contracting States.*

**CAR 101.033 Approved training organization/Club**

- (a) An approved training organisation is an organisation that has been approved by the Authority under the provisions of CAR- ORA (Aviation Training Organisations) to provide specific training services.
- (b) An Approved Club is an incorporated body approved by the Authority to provide guidance and assistance in the aviation activities described within the Articles of Incorporation.

**CAR 101.035 Dropping of articles and environment protection**

- (a) A person operating the Air Recreational Activities shall not allow any object to be dropped in flight if such action creates a hazard to other persons or property.
- (b) The Environment shall be protected from the effects of Air Recreational Activities in accordance with the international standards and applicable legislation in the Sultanate, in coordination with the concerned parties.

**SUBPART B -- CAPTIVE BALLOONS AND KITES****CAR 101.037      Applicability**

This Subpart prescribes rules governing the operation of captive balloons and kites.

**CAR 101.039      Aerodrome area**

A person shall not operate a captive balloon or kite:

- (a) On or over any active aircraft movement area of an aerodrome; or
- (b) On or over any runway or runway strip area.

**CAR 101.041      Aerodrome boundary**

Except for a shielded operation, a person shall not operate a captive balloon or kite within 5.5 km (3nm) of an aerodrome boundary unless:

- (a) The balloon or kite does not exceed 400 feet AGL; and
- (b) The balloon or kite remains at least 400 feet vertically below cloud; and
- (c) The horizontal visibility is not less than five (5) km; and
- (d) If the aerodrome is a controlled aerodrome, they have an ATC authorization; and
- (e) If the aerodrome is an uncontrolled aerodrome, the operation is performed in accordance with an agreement established with the aerodrome operator.
- (f) In the event of a captive balloon breaking free from its moorings, the operator thereof shall immediately report the occurrence to the nearest Air Traffic Service Unit (ATSU), indicating the direction in which the balloon is drifting and last known estimated height.

**CAR 101.043      Airspace**

- (a) Except for a shielded operation, each person operating a captive balloon or kite at a height of more than 400 feet AGL must:
  - (1) operate in a danger area designated for that purpose under CAR-180; or
  - (2) operate in accordance with the restrictions specified in paragraph (b).
- (b) Each person operating a captive balloon or kite at a height of more than 400 feet AGL outside of a danger area must ensure that:
  - (1) the balloon or kite remains more than 5.5 km (3nm) from any aerodrome unless approval is granted by the CAA if inside controlled airspace or the aerodrome owner if outside controlled airspace; and
  - (2) the balloon or kite remains within Class G airspace; and
  - (3) the weight of the kite does not exceed 15 kg; and
  - (4) the balloon or kite remains at least 400 feet vertically below cloud; and
  - (5) the horizontal visibility is not less than five (5) km (3 nm);  
*Note: VMC conditions shall exist as per CAR-180.101*
  - (6) they provide the following information to the Oman NOTAM office at least 24 hours before the operation:
    - i. their name, address and telephone numbers:



- ii. the date, time and duration of the operation:
- iii. a brief description of the captive balloon or kite, including size and predominant colour:
- iv. the weight of the captive balloon or kite:
- v. the height to which the captive balloon or kite will be operated.

**CAR101.045 Night operation**

A person shall not operate a captive balloon or kite at night.

**CAR 101.047 Balloon mooring line marking**

A person shall not operate a captive balloon by day unless the mooring lines have coloured streamers or pennants attached at intervals of not more than 15 m commencing no more than 150 feet above ground level and visible for at least one (1) nautical mile.

**CAR 101.049 Balloon rapid deflation device**

A person shall not operate a captive balloon unless it contains a device that will automatically and rapidly deflate the balloon if it escapes from its moorings.

**CAR 101.051 Balloon escape**

Each person operating a captive balloon that escapes from its mooring without the deflation device functioning properly shall immediately notify the nearest ATS unit of:

- (a) The original location of the balloon; and
- (b) The time the balloon broke free; and
- (c) The estimated flight path and height of the balloon.

## SUBPART C- UNMANNED FREE BALLOONS

### **CAR 101.053      Applicability**

This Subpart prescribes rules governing the operation of Unmanned Free Balloons.

### **CAR 101.055      Meteorological limitations**

Except where authorised by the appropriate ATS, a person shall not operate a heavy free balloon at or through any altitude below 60 000 feet (FL600) pressure-altitude at which:

- (a) There are clouds or obscuring phenomena of more than four-eighths coverage; and
- (b) The horizontal visibility is less than eight (8) km; and
- (c) Unauthorised entry into the airspace of another State's territory is imminent.

### **CAR 101.057      Operating limitation**

A person shall not release a heavy or medium free balloon in a manner that will cause it to fly:

- (a) Below 1000 feet over a congested area of a city, town, or settlement; or
- (b) Over an open-air assembly of persons.

### **CAR 101.059      Equipment**

A person shall not operate a heavy free balloon unless:

- (a) It is equipped with:
  - (1) at least two payload flight-termination devices or systems, whether automatic or by telemetry, that operate independently of each other; and
  - (2) in an area where ground-based SSR equipment is in use, a secondary surveillance radar transponder, with an altitude reporting capability, which is continuously operating on an assigned code, or which can be turned on when necessary by the tracking station; and
- (b) For polyethylene zero pressure balloons, at least two methods, systems, devices, or combinations thereof, that function independently of each other and are employed for terminating the flight of the balloon envelope; and
- (c) The balloon envelope is equipped with:
  - (1) at least one radar reflective device; or
  - (2) radar reflective material that will present an echo to surface radar operating in the 200 MHz to 2,700 MHz frequency range.

### **CAR 101.061      Termination**

Each person operating a heavy free balloon shall activate the respective termination devices required by CAR-101.059(a)(i) and (2) to terminate the flight where:

- (a) Meteorological conditions are less than those prescribed in CAR-101.055; or
- (b) Further operation is hazardous to other air traffic or to persons and property on the surface; or
- (c) Unauthorised entry into the airspace of another State's territory is imminent.

**CAR 101.063 Night operations**

A person shall not operate a heavy free balloon below 60 000 feet (FL600) pressure-altitude at night unless the balloon and its attachments and payload, whether or not they become separated during the operation, are each equipped with lights that:

- (a) Are visible at a distance of at least five (5) nm; and
- (b) Have a flash frequency of between 40 and 100 cycles per minute; and
- (c) Each have their own power supply.

**CAR 101.065 Trailing antenna**

A person shall not operate a free balloon that is equipped with a trailing antenna that requires a force of more than 230 N to break it at any point unless the antenna has coloured pennants or streamers that:

- (a) Are attached at not more than fifteen (15) m intervals; and
- (b) Are visible at a distance of at least one (1) nm.

**CAR 101.067 Suspension device**

A person shall not operate a heavy free balloon that is equipped with a suspension device more than fifteen (15) m long, other than a highly coloured open parachute, by day below 60 000 feet (FL600) pressure-altitude unless the suspension device:

- (a) is coloured in alternate bands of high visibility colours; or
- (b) has coloured pennants or streamers attached which are visible for at least one (1) nm.

**CAR 101.069 Pre-launch notice**

- (a) Except as provided in paragraph (b), a person shall not launch a medium or heavy free balloon unless they provide the following information to the Oman NOTAM office at least twenty-four (24) hours prior to the estimated launch time:
  - (1) their name and telephone number;
  - (2) the balloon identification or project code name;
  - (3) the balloon classification and description including:
    - i. the length and diameter of the balloon; and
    - ii. the length of the suspension device; and
    - iii. the weight of the payload; and
    - iv. the length of the trailing antenna;
  - (4) the SSR code as applicable;
  - (5) the location of the launch site;
  - (6) the estimated time of launch, or time of commencement and completion of multiple launches;
  - (7) the number of balloons to be launched or, for multiple launches, the scheduled interval between launches;
  - (8) the expected direction of ascent;
  - (9) the estimated time to reach cruising level or to pass 60 000 feet pressure-altitude, whichever is lower;
  - (10) the planned cruising levels (pressure-altitude);

- (11) the planned duration of the flight;
  - (12) the estimated time and location of impact with the surface of the earth.
- (b) A person operating a medium or heavy free balloon for solar or cosmic disturbance investigations involving a critical time element may supply the information in paragraph (a) not less than 30 minutes prior to the estimated time of commencement.
- (c) Where there are changes to the information supplied under paragraph (a), the operator shall forward the changes to the Oman NOTAM office, at least six (6) hours prior to the projected launch time.

#### **CAR 101.071          Launch notice**

Each person operating a medium or heavy free balloon shall notify the nearest ATS unit of the following information immediately after the balloon is launched:

- (a) The balloon flight identification:
- (b) The launch site:
- (c) The actual time of launch:
- (d) The estimated time at which 60 000 feet (FL600) pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 60 000 feet (FL600), with the estimated location: and
- (e) Any changes to the information provided under CAR-101.069 paras (a)(7) or (8).

#### **CAR 101.073          Cancellation notice**

Each person who has provided a pre-launch notice in accordance with CAR-101.117 who subsequently cancels the operation shall immediately notify the ATS unit of the cancellation.

#### **CAR 101.075          Balloon position reports**

Each person operating a medium or heavy free balloon shall:

- (a) Unless otherwise required by the ATS unit, monitor the course of the balloon and record its position at least every two (2) hours; and
- (b) Forward any balloon position reports requested by the ATS; and
- (c) Immediately notify the nearest ATS unit when a balloon position report is not recorded for any 2-hour period of flight. This notification shall include:
  - (1) the last recorded position; and
  - (2) any revision of the forecast trajectory; and
- (d) Immediately notify ATS when tracking of the balloon is re-established.

#### **CAR 101.077          Pre-descent position report**

Each person operating a medium or heavy free balloon shall provide the following information to the nearest ATS unit not less than one hour before the beginning of the planned descent:

- (a) The current geographical position:
- (b) The current altitude:

- (c) Where applicable, the forecast time of penetration of 60 000 feet (FL600) pressure-altitude:
- (d) The forecast descent trajectory:
- (e) The forecast time and location of the impact with the surface of the earth.

**CAR 101.079          Completion of operation**

Each person operating a medium or heavy free balloon shall notify the nearest ATS unit when the operation has ended.

## SUBPART D – PARASAIL

### CAR 101.081      **Applicability**

This Subpart prescribes rules governing the operation of parasail.

### CAR 101.083      **Aerodromes**

- (a) A person shall not operate a parasail on or within 5.5 km (3NM) of an aerodrome boundary unless:
- (1) at an uncontrolled aerodrome, it is operated:
    - i. in accordance with an agreement with the aerodrome operator; and
    - ii. at a height not exceeding 400 feet AGL; or
  - (2) at a controlled aerodrome, it is operated in accordance with an authorisation from ATC.
- (b) When operating on an aerodrome a Parasail shall not be operated:
- (1) over any aircraft movement area; and
  - (2) over any active runway or runway strip area.

### CAR 101.085      **Airspace**

Each person operating a parasail above 400 feet AGL shall:

- (a) Ensure that the parasail remains more than 5.5 km (3NM) from any aerodrome boundary; and
- (b) Operate in Class G airspace; and
- (c) Provide the following information to the Oman NOTAM office at least twenty-four (24) hours before the operation:
  - (1) the name, address, and telephone number of the operator;
  - (2) the date, time, and duration of the operation;
  - (3) a brief description of the Unpowered/Powered Sailplane or parasail (including size and predominant colour); and
  - (4) the height to which the Parasail will be operated.

### CAR 101.089      **Meteorological limitations**

- (a) A person shall not operate a Parasail when the meteorological conditions are:
- (1) when the ceiling is less than 1500 feet (450 m); and
  - (2) not operate closer than 500 feet below cloud; and
  - (3) limit operations to an area where the ground visibility is at least five (5) km.

### CAR 101.091      **Night operations**

No person shall operate a parasail at night.

### CAR 101.093      **Airworthiness**

A person who operates a parasail must ensure that it is fit for the intended purpose and is stored and maintained in accordance with the manufacturer's instructions.

**CAR 101.095 Aircraft and Safety equipment**

A person shall only operate a Parasail between Sunrise and Sunset. (Day VFR)

Each person carried in a Parasail shall:

- (a) Wear a permanent positive buoyancy aid (within 500 feet of water); and
- (b) Be secured to the parasail by a harness; and
- (c) When the parasail operation conducted with an extended towline length exceeding 600 feet, as measured from the winch drum to the parasail canopy yoke, is equipped with a positive means of communicating with the parasail operator if an emergency occurs.

**CAR 101.097 Pre-flight briefing**

Each Parasail passenger shall receive a pre-flight briefing on:

- (a) The nature of the flight; and
- (b) The standard operating procedures; and
- (c) The emergency procedures including:
  - (1) the location and use of emergency equipment;
  - (2) the procedures to be followed in the event of a water landing, or towline separation; and
  - (3) the method for communicating with the parasail operator if an emergency occurs.

**CAR 101.099 Emergency towline release**

A person shall not release the Parasail in flight except in an emergency.

**CAR 101.101 Operating procedures**

Each person operating a Parasail shall do so in accordance with the operating procedures recommended by the manufacturer.

**CAR 101.103 Wind speed**

A person operating a Parasail shall:

- (a) Use a method or device to accurately determine and monitor the wind speed at the location where the parasailing operation is being conducted; and
- (b) Not conduct a parasailing operation in conditions where the sustained wind speed exceeds twenty (20) knots.

**CAR 101.105 Passenger age limitation**

A person operating a Parasail must not:

Perform a parasailing operation with an extended towline length of more than 300 feet, as measured from the winch drum to the parasail canopy yoke, when carrying any solo passenger who is between eight (8) and eleven (11) years old; and

Perform a parasailing operation with a passenger carried by a parasail who is less than eight (8) years old unless the passenger is accompanied by another passenger who is at least 18 years old, and able to render assistance the younger passenger if an emergency occurs.

## SUBPART E — UNPOWERED/POWERED SAILPLANE

### CAR 101.107      **Applicability**

This Subpart prescribes rules governing the operation of Unpowered/Powered Sailplane.

### CAR 101.109      **Aerodromes**

- (a) A person shall not operate an **Unpowered/Powered Sailplane** within 5.5 km (3nm) of an aerodrome, unless:
  - (1) at an uncontrolled aerodrome, it is operated:
    - i. in accordance with an agreement with the aerodrome operator; and
    - ii. at a height not exceeding 400 feet AGL; or
  - (2) at a controlled aerodrome, it is operated in accordance with an authorisation from ATC.
- (b) When operating on an aerodrome an Unpowered/Powered Sailplane shall not be operated:
  - (1) over any aircraft movement area; and
  - (2) over any active runway or runway strip area.

### CAR 101.111      **Airspace**

Each person operating an **Unpowered/Powered Sailplane** above 400 feet AGL shall:

- (a) Ensure that the Unpowered/Powered Sailplane remains more than 5.5 km (3 nm) from any aerodrome boundary; and
- (b) Operate in Class G airspace; and
- (c) When operating from an aerodrome located within Class G airspace, the owner of the aerodrome has granted approval; and
- (d) Provide the following information to the Oman NOTAM office at least twenty-four (24) hours before the operation:
  - (1) the name, address, and telephone number of the operator;
  - (2) the date, time, and duration of the operation
  - (3) a brief description of the Unpowered/Powered Sailplane (including size and predominant colour);
  - (4) the height to which the Unpowered/Powered Sailplane will be operated.

### CAR 101.113      **Meteorological limitations**

- (a) A person shall not operate an Unpowered/Powered Sailplane when the meteorological conditions are:
  - (1) when the ceiling is less than 1500 feet (450 m); and
  - (2) not operate closer than 500 feet below cloud; and
  - (3) limit operations to an area where the ground visibility is at least five (5) km.

### CAR 101.115      **Night operations**

No person shall operate an **Unpowered/Powered Sailplane** at night.



**CAR 101.117      Airworthiness**

A person who operates an Unpowered/Powered Sailplane must ensure that it is fit for the intended purpose and is maintained in an airworthy condition in accordance with the manufacturer's instruction.

**CAR 101.119      Aircraft and Safety equipment**

No person shall operate an **Unpowered/Powered Sailplane** in day VFR flight unless it is equipped with the following:

- (a) An altimeter;
- (b) An airspeed indicator;
- (c) A magnetic compass or a magnetic direction indicator; and
- (d) A radio communication system adequate to permit two-way communication on the appropriate ATC frequency when the **Unpowered/Powered Sailplane** is operated inside controlled airspace.
- (e) Each person carried in an **Unpowered/Powered Sailplane** shall:
  - (1) when flying over water, or within gliding distance of water, wear a permanent positive buoyancy aid; and
  - (2) when flying over land or water, wear a rigid protective helmet; and
  - (3) be secured to the **Unpowered/Powered Sailplane** by a seat belt and harness system.

**CAR 101.121      Pre-flight briefing**

Each **Unpowered/Powered Sailplane** passenger shall receive a pre-flight briefing on the following:

- (a) The nature of the flight; and
- (b) The standard operating procedures; and
- (c) The emergency procedures including:
  - (1) the location and use of emergency equipment;
  - (2) the procedures to be followed in the event of a water landing, or towline separation; and
  - (3) the method for communicating with the Unpowered/Powered Sailplane or parasail operator if an emergency occurs.

**CAR 101.123      Operating procedures**

Each person operating an **Unpowered/Powered Sailplane** shall do so in accordance with the operating procedures recommended by the manufacturer.

**CAR 101.125      Wind speed**

A person operating a **Unpowered/Powered Sailplane** shall:

- (a) Use a method or device to accurately determine and monitor the wind speed at the location where the **Unpowered/Powered Sailplane** operation is being conducted; and
- (b) Not conduct a **Unpowered/Powered Sailplane** operation in conditions where the sustained wind speed exceeds twenty (20) knots.

## SUBPART F – AUTOGYRO (GYROPLANE/GYROCOPTER)

### CAR 101.127 Applicability

This Subpart prescribes rules governing the operation of **Autogyro (Gyroplane/Gyrocopter)**.

### CAR 101.129 Aerodromes

- (a) A person shall not operate an **Autogyro (Gyroplane/Gyrocopter)** on or within 5.5 km (3nm) of an aerodrome boundary unless:
- (1) at an uncontrolled aerodrome, it is operated—
    - i. in accordance with an agreement with the aerodrome operator; and
    - ii. at a height not exceeding 400 feet AGL; or
  - (2) at a controlled aerodrome, it is operated in accordance with an authorisation from ATC.
- (b) When operating on an aerodrome a **Autogyro (Gyroplane/Gyrocopter)** shall not be operated:
- (1) over any aircraft movement area; and
  - (2) over any active runway or runway strip area.

### CAR 101.131 Airspace

Each person operating an **Autogyro (Gyroplane/Gyrocopter)** above 400 feet AGL shall:

- (a) Ensure that the Unpowered/Powered Sailplane remains more than 5.5 km (3nm) from any aerodrome boundary; and
- (b) Operate in Class G airspace; and
- (c) When operating from an aerodrome located within Class G airspace, the owner of the aerodrome has granted approval; and
- (d) Provide the following information to the Oman NOTAM office at least twenty-four (24) hours before the operation:
  - (1) the name, address, and telephone number of the operator;
  - (2) the date, time, and duration of the operation
  - (3) a brief description of the Autogyro (Gyroplane/Gyrocopter) (including size and predominant colour);
  - (4) the height to which the Autogyro (Gyroplane/Gyrocopter) will be operated.

### CAR 101.133 Meteorological limitations

- (a) A person shall not operate an Autogyro (gyroplane/gyrocopter) when the meteorological conditions are:
- (1) when the ceiling is less than 1500 feet (450 m); and
  - (2) not operate closer than 500 feet below cloud; and
  - (3) limit operations to an area where the ground visibility is at least five (5) km.

### CAR 101.135 Night operations

No person shall operate an **Autogyro (Gyroplane/Gyrocopter)** at night.

**CAR 101.137 Airworthiness**

A person who operates an Autogyro (Gyroplane/Gyrocopter) must ensure that it is fit for the intended purpose and is maintained in an airworthy condition in accordance with the manufacturer's instruction.

**CAR 101.139 Aircraft and Safety equipment**

No person shall operate an **Autogyro (Gyroplane/Gyrocopter)** in day VFR flight unless it is equipped with the following:

- (a) An altimeter;
- (b) An airspeed indicator;
- (c) A magnetic compass or a magnetic direction indicator; and
- (d) A radio communication system adequate to permit two-way communication on the appropriate ATC frequency when the **Autogyro (Gyroplane/Gyrocopter)** is operated inside controlled airspace.
- (e) Each person carried in an **Autogyro (Gyroplane/Gyrocopter)** shall:
  - (1) when flying over water, or within gliding distance of water, wear a permanent positive buoyancy aid; and
  - (2) when flying over land or water, wear a rigid protective helmet; and
  - (3) be secured to the **Autogyro (Gyroplane/Gyrocopter)** by a seat belt and harness system.

**CAR 101.141 Pre-flight briefing**

Each **Autogyro (Gyroplane/Gyrocopter)** passenger shall receive a pre-flight briefing on the following:

- (a) the nature of the flight; and
- (b) the standard operating procedures; and
- (c) the emergency procedures including:
  - (1) the location and use of emergency equipment;
  - (2) the procedures to be followed in the event of a water landing; and
  - (3) the method for communicating with the Unpowered/Powered Sailplane or parasail operator if an emergency occurs.

**CAR 101.143 Operating procedures**

Each person operating an **Autogyro (Gyroplane/Gyrocopter)** shall do so in accordance with the operating procedures recommended by the manufacturer.

**CAR 101.145 Wind speed**

A person operating an Autogyro (Gyroplane/Gyrocopter) shall:

- (a) Use a method or device to accurately determine and monitor the wind speed at the location where the Autogyro (Gyroplane/Gyrocopter) operation is being conducted; and
- (b) Not conduct an Autogyro (Gyroplane/Gyrocopter) operation in conditions where the sustained wind speed exceeds twenty (20) knots.

## SUBPART G – POWERED PARACHUTE

### CAR 101.147      **Applicability**

This Subpart prescribes rules governing the operation of **Powered Parachute**.

### CAR 101.149      **Aerodromes**

- (a) A person shall not operate a **Powered Parachute** on or within 5.5 km (3nm) of an aerodrome boundary unless:
- (1) At an uncontrolled aerodrome, it is operated:
    - i. in accordance with an agreement with the aerodrome operator; and
    - ii. at a height not exceeding 400 feet AGL; or
  - (2) At a controlled aerodrome, it is operated in accordance with an authorisation from ATC.
- (b) When operating on an aerodrome a Powered Parachute shall not be operated:
- (1) over any aircraft movement area; and
  - (2) over any active runway or runway strip area.

### CAR 101.151      **Airspace**

Each person operating a **Powered Parachute** above 400 feet AGL shall:

- (a) Ensure that the Powered Parachute remains more than 5.5 km (3NM) from any aerodrome boundary; and
- (b) Operate in Class G airspace; and
- (c) When operating from an aerodrome located within Class G airspace, the owner of the aerodrome has granted approval; and
- (d) Provide the following information to the Oman NOTAM office at least twenty-four (24) hours before the operation:
  - (1) the name, address, and telephone number of the operator;
  - (2) the date, time, and duration of the operation
  - (3) a brief description of the Powered Parachute (including size and predominant colour):
  - (4) the height to which the Powered Parachute will be operated.

### CAR 101.153      **Meteorological limitations**

- (a) A person shall not operate a Powered Parachute when the meteorological conditions are:
- (1) when the ceiling is less than 1500 feet (450 m); and
  - (2) not operate closer than 500 feet below cloud; and
  - (3) limit operations to an area where the ground visibility is at least five (5) km.

### CAR 101.155      **Night operations**

No person shall operate a **Powered Parachute** at night.

**CAR 101.157      Airworthiness**

A person who operates a Powered Parachute must ensure that it is fit for the intended purpose and is maintained in an airworthy condition in accordance with the manufacturer's instruction.

**CAR 101.159      Aircraft and Safety equipment**

No person shall operate a **Powered Parachute** in day VFR flight unless it is equipped with the following:

- (a) An altimeter;
- (b) An airspeed indicator;
- (c) A magnetic compass or a magnetic direction indicator; and
- (d) A radio communication system adequate to permit two-way communication on the appropriate ATC frequency when the **Powered Parachute** is operated inside controlled airspace.
- (e) Each person carried in a **Powered Parachute** shall:
  - (1) when flying over water, or within gliding distance of water, wear a permanent positive buoyancy aid; and
  - (2) when flying over land or water, wear a rigid protective helmet; and
  - (3) be secured to the **Powered Parachute** by a quick release harness system.

**CAR 101.161      Pre-flight briefing**

Each **Powered Parachute** passenger shall receive a pre-flight briefing on the following:

- (a) The nature of the flight; and
- (b) The standard operating procedures; and
- (c) The emergency procedures including:
  - (1) the location and use of emergency equipment;
  - (2) the procedures to be followed in the event of a water landing; and
  - (3) the method for communicating with the Powered Parachute operator if an emergency occurs.

**CAR 101.163      Operating procedures**

Each person operating a **Powered Parachute** shall do so in accordance with the operating procedures recommended by the manufacturer.

**CAR 101.165      Wind speed**

A person operating a **Powered Parachute** shall:

- (a) use a method or device to accurately determine and monitor the wind speed at the location where the parasailing operation is being conducted; and
- (b) not conduct a hang glider operation in conditions where the sustained wind speed exceeds twenty (20) knots.

## SUBPART H – HANG GLIDERS

### CAR 101.167 Applicability

This Subpart prescribes rules governing the operation of **Hang Gliders**.

### CAR 101.169 Aerodromes

- (a) A person shall not operate a **Hang Glider** on or within 5.5 km (3nm) of an aerodrome boundary unless:
  - (1) At an uncontrolled aerodrome, it is operated:
    - iii. in accordance with an agreement with the aerodrome operator; and
    - iv. at a height not exceeding 400 feet AGL; or
  - (2) At a controlled aerodrome, it is operated in accordance with an authorisation from ATC.
- (b) When operating on an aerodrome a Hang Glider shall not be operated:
  - (1) over any aircraft movement area; and
  - (2) over any active runway or runway strip area.
- (c) Each pilot of a hang glider shall only launch the hang glider from a launch site authorised by a hang gliding organization.

### CAR 101.171 Airspace

Each person operating a **Hang Glider** above 400 feet AGL shall:

- (a) Ensure that the Hang Glider remains more than 5.5 km (3NM) from any aerodrome boundary; and
- (b) Operate in Class G airspace; and
- (c) When operating from an aerodrome located within Class G airspace, the owner of the aerodrome has granted approval; and
- (d) Provide the following information to the Oman NOTAM office at least twenty-four (24) hours before the operation within controlled airspace:
  - (1) the name, address, and telephone number of the operator;
  - (2) the date, time, and duration of the operation
  - (3) a brief description of the Hang Glider (including size and predominant colour);
  - (4) the height to which the Hang Glider will be operated.
- (e) a person may fly a hang glider below a height of 500 feet for ridge soaring, if such flight does not hazard persons or property on the ground.
  - (1) a pilot of a hang glider soaring on a ridge, where the ridge is to the right of the hang glider, is not required to turn right when approaching another hang glider head on.
  - (2) a pilot of a hang glider overtaking another hang glider soaring on a ridge shall pass on the ridge side of the hang glider being overtaken.

### CAR 101.173 Meteorological limitations

- (a) A person shall not operate a **Hang Glider** when the meteorological conditions are:
  - (1) when the ceiling is less than 1500 feet (450 m); and
  - (2) not operate closer than 500 feet below cloud; and

- (3) limit operations to an area where the ground visibility is at least five (5) km.

### **CAR 101.175 Night operations**

No person shall operate a **Hang Glider** at night.

### **CAR 101.177 Airworthiness**

A person who operates a **Hang Glider** must ensure that it is fit for the intended purpose and is maintained in an airworthy condition in accordance with the manufacturer's instruction.

### **CAR 101.179 Aircraft and Safety equipment**

No person shall operate a **Hang Glider** in day VFR flight unless it is equipped with the following:

- (a) An altimeter that shows height above the ground to an accuracy of 100 feet;
- (b) A radio communication system adequate to permit two-way communication on the appropriate ATC frequency when the Hang Glider is operated inside controlled airspace.
- (c) Each person carried in a Hang Glider shall:
  - (1) when flying over water, or within gliding distance of water, wear a permanent positive buoyancy aid; and
  - (2) when flying over land or water, wear a rigid protective helmet; and
  - (3) be secured to the Hang Glider by a quick release harness system.

### **CAR 101.181 Pre-flight briefing**

Each **Hang Glider** passenger shall receive a pre-flight briefing on the following:

- (a) The nature of the flight; and
- (b) The standard operating procedures; and
- (c) The emergency procedures including:
  - (1) the carriage and use of emergency equipment;
  - (2) the procedures to be followed in the event of a water landing; and
  - (3) the method for communicating with the Hang Glider operator if an emergency occurs.

### **CAR 101.183 Operating procedures**

Each person operating a **Hang Glider** shall do so in accordance with the operating procedures recommended by the manufacturer.

### **CAR 101.185 Wind speed**

A person operating a **Hang Glider** shall:

- (a) use a method or device to accurately determine and monitor the wind speed at the location where the hang-gliding operation is being conducted; and
- (b) not conduct a hang glider operation in conditions where the sustained wind speed exceeds twenty (20) knots.

## SUBPART I – WEIGHT-SHIFT-CONTROL AIRCRAFT

### CAR 101.187      **Applicability**

This Subpart prescribes rules governing the operation of **Weight-shift-control aircraft**.

### CAR 101.189      **Aerodromes**

- (a) A person shall not operate a **Weight-shift-control aircraft** on or within 5.5 km (3nm) of an aerodrome boundary unless:
  - (1) at an uncontrolled aerodrome, it is operated—
    - i. in accordance with an agreement with the aerodrome operator; and
    - ii. at a height not exceeding 400 feet AGL; or
  - (2) at a controlled aerodrome, it is operated in accordance with an authorisation from ATC.
- (b) When operating on an aerodrome a **Weight-shift-control aircraft** shall not be operated—
  - (1) over any aircraft movement area; and
  - (2) over any active runway or runway strip area.

### CAR 101.191      **Airspace**

Each person operating a **Weight-shift-control aircraft** above 400 feet AGL shall—

- (a) ensure that the **Weight-shift-control aircraft** remains more than 5.5 km (3nm) from any aerodrome boundary; and
- (b) operate in Class G airspace; and
- (c) When operating from an aerodrome located within Class G airspace, the owner of the aerodrome has granted approval; and
- (d) provide the following information to the Oman NOTAM office at least twenty-four (24) hours before the operation:
  - (1) the name, address, and telephone number of the operator;
  - (2) the date, time, and duration of the operation
  - (3) a brief description of the **Weight-shift-control aircraft** (including size and predominant colour);
  - (4) the height to which the **Weight-shift-control aircraft** will be operated.

### CAR 101.193      **Meteorological limitations**

- (a) Except as provided in paragraph (b), each person operating a **Weight-shift-control aircraft** shall—
  - (1) when the ceiling is less than 1500 feet (450 m); and
  - (2) not operate closer than 500 feet below cloud; and
  - (3) limit operations to an area where the ground visibility is at least five (5) km.

### CAR 101.195      **Night operations**

No person shall operate a **Weight-shift-control aircraft** at night.



**CAR 101.197      Airworthiness**

A person who operates a **Weight-shift-control aircraft** must ensure that it is fit for the intended purpose and is maintained in an airworthy condition in accordance with the manufacturer's instruction.

**CAR 101.199      Aircraft and Safety equipment**

No person shall operate **Weight-shift-control aircraft** in day VFR flight unless it is equipped with the following:

- (a) an altimeter;
- (b) an airspeed indicator;
- (c) a magnetic compass or a magnetic direction indicator; and
- (d) a radio communication system adequate to permit two-way communication on the appropriate ATC frequency when the **Weight-shift-control aircraft** is operated inside controlled airspace.
- (e) Each person carried in a **Weight-shift-control aircraft** shall:
  - (1) when flying over water, or within gliding distance of water, wear a permanent positive buoyancy aid; and
  - (2) when flying over land or water, wear a rigid protective helmet; and
  - (3) be secured to the **Weight-shift-control aircraft** by a quick release harness.

**CAR 101.201      Pre-flight briefing**

Each **Weight-shift-control aircraft** passenger shall receive a pre-flight briefing on the following:

- (a) the nature of the flight; and
- (b) the standard operating procedures; and
- (c) the emergency procedures including:
  - (1) the location and use of emergency equipment;
  - (2) the procedures to be followed in the event of a water landing; and
  - (3) the method for communicating with the **Weight-shift-control aircraft** operator if an emergency occurs.

**CAR 101.203      Operating procedures**

Each person operating a **Weight-shift-control aircraft** shall do so in accordance with the operating procedures recommended by the manufacturer.

**CAR 101.205      Wind speed**

A person operating a **Weight-shift-control aircraft** shall:

- (a) use a method or device to accurately determine and monitor the wind speed at the location where the parasailing operation is being conducted; and
- (b) not conduct a parasailing operation in conditions where the sustained wind speed exceeds twenty (20) knots.

## SUBPART J – MODEL AIRCRAFT

### CAR 101.207      **Applicability**

This Subpart prescribes rules governing the operation of model aircraft.

### CAR 101.209      **Control line model aircraft**

No person shall operate a control line model aircraft with a single or multiple wire system longer than thirty (30) m.

### CAR 101.211      **Aerodromes**

(a) With the exception of a control line model aircraft, a person must not operate a model aircraft on or within 5.5 km (3nm) of:

- (1) an uncontrolled aerodrome, unless:
  - i. the operation is undertaken in accordance with an agreement with the aerodrome operator; and
  - ii. in the case of a free flight model aircraft, the aircraft is launched downwind of an active runway; and
  - iii. in the case of a radio-controlled model aircraft, the aircraft is not operated at a height of more than 400 feet AGL, unless the Authority has approved the operator to operate above 400 feet AGL, and each pilot has an observer in attendance while the model aircraft is active in the air; and
- (2) a controlled aerodrome, unless it is operated in accordance with an authorisation from the relevant ATC unit; and
- (3) any aerodrome, unless:
  - i. the person is the holder of, or is under the direct supervision of the holder of, a pilot qualification issued by a model aircraft association approved by the Authority; or
  - ii. the person is under the direct supervision of a person appointed to give instruction in the operation of radio-controlled model aircraft by a model aircraft association approved by the Authority.

(b) A person must not operate a model aircraft—

- (1) on or over any active movement area of an aerodrome; or
- (2) on or over any active runway strip area.

### CAR 101.213      **Airspace**

A person operating a radio-controlled model aircraft more than 5.5 km (3nm) from an aerodrome boundary and above 400 feet AGL must ensure that the operation remains clear of Class C, D, or E airspace and shall:

- (a) operate in a danger area designated for that purpose under CAR-180; or
- (b) When operating from an aerodrome located within Class G airspace, the owner of the aerodrome has granted approval; and
- (c) ensure that, at least twenty-four (24) hours before the operation, a person authorised by a model aircraft association approved by the Authority gives to the Oman NOTAM Office the following information:
  - (1) the name, address, and telephone number of the model aircraft operator:

- (2) the location of the proposed operation:
- (3) the date and time and duration of the proposed operation:
- (4) the maximum height AGL proposed for model aircraft operation.

### **CAR 101.215 Meteorological limitations**

Except for control line model aircraft, a person shall not operate a model aircraft:

- (a) in any area where the ground visibility is less than 5.5 km (3 nm); or
- (b) in any area where the cloud base is at a level where a model aircraft is unable to be operated:
  - (1) in sight of the operator; and
  - (2) Operate not less than 500ft beneath the cloud base at all times.

### **CAR 101.217 Night operations**

With the exception of control line model aircraft, a person shall not operate a model aircraft at night unless the operation is:

- (a) indoors; or
- (b) a shielded operation.

### **CAR 101.219 Right of way**

- (a) A person who is operating a remotely piloted aircraft or a control line model aircraft must ensure the operating aircraft gives way to, and remains clear of, all manned aircraft on the ground and in flight.
- (b) A person who is operating a free flight model aircraft must before launching the aircraft, ensure that during the operation of the model aircraft, it shall remain clear of all manned aircraft on the ground and in flight.

### **CAR 101.221 Radio controlled model aircraft**

A person shall not operate a radio-controlled model aircraft with a gross mass of between 15 kg and 25 kg unless the aircraft is constructed and operated under the authority of a model aircraft association approved by the Authority.

### **CAR 101.223 Visual line of sight operation**

- (a) This rule applies to the following types of aircraft:
  - (1) a remotely piloted aircraft:
  - (2) a free flight model aircraft.
- (b) A person shall not operate an aircraft to which this rule applies in:
  - (1) any area in which the person's view of the surrounding airspace in which the aircraft will operate is obstructed; or
  - (2) meteorological conditions that obstruct the person's ability to maintain visual line of sight of the aircraft.

- (c) A person who operates an aircraft to which this rule applies shall at all times:
- (1) maintain visual line of sight with the aircraft; and
  - (2) be able to see the surrounding airspace in which the aircraft is operating; and
  - (3) operate the aircraft not less than 500ft below the cloud base and not above 400ft AGL.
- (d) For the purposes of this rule visual line of sight means a straight line along which an observer has a clear view and which may be achieved with the use of the following:
- (1) spectacles, contact lenses, or a similar device used to correct subnormal vision of the user to no better than normal vision but not the use of an electronic, mechanical, electromagnetic, optical, or electro-optical instrument; or
  - (2) a first-person view system and a trained and competent observer who maintains:
    - i. a visual line of sight to the aircraft; and
    - ii. an unobstructed sight of the surrounding airspace in which the aircraft is operating; and
    - iii. direct communication with the person who is operating the aircraft.

## SUBPART K – MODEL ROCKETS

### CAR 101.225      **Applicability**

This Subpart prescribes rules governing the operation of rockets.

### CAR 101.227      **Large model rockets**

A person shall not operate a large model rocket except in accordance with the Model Rocketry Safety Code established by National Association of Rocketry see Appendix B.

### CAR 101.229      **Aerodromes**

- (a) Except as provided in paragraph (b), a person shall not operate a rocket on or within 5.5 km (3 NM) of an aerodrome boundary.
- (b) A person may operate a rocket within 5.5 km (3 nm) of an aerodrome boundary, when:
  - (1) the rocket does not fly above 400 feet AGL; and
  - (2) at uncontrolled aerodromes, it is operated in accordance with an agreement with the aerodrome operator; and
  - (3) at controlled aerodromes, it is operated in accordance with an authorisation from ATC; and
  - (4) it is not operated on or over any active aircraft movement area of an aerodrome; and
  - (5) it is not operated on or over any active runway strip area.
- (c) A person shall not operate a rocket between 5.5 and 10 km (3 to 8 nm) of an aerodrome boundary above 400 feet AGL.

### CAR 101.231      **Meteorological limitations**

- (a) A person shall not operate a rocket at any altitude where:
  - (1) there are clouds or obscuring phenomena of more than four eighths coverage; and
  - (2) the horizontal visibility is less than eight (8) km.
- (b) A person shall not operate a rocket into cloud.

### CAR 101.233      **Night operations**

Except for a large model rocket, a person shall not operate a rocket at night.

### CAR 101.235      **Pre-launch notice**

Except for a large model rocket, a person shall not launch a rocket unless they provide the following information to the 0921CAA) NOTAM office at least twenty-four (24) hours prior to launch:

- (a) their name, address, and telephone number or, where there are multiple participants at a single event, the name, address, and telephone number of the person whose duties include coordination of the launch data estimates required by paragraphs (b), (c), and (d) of this rule and coordinating the launch event:
- (b) the estimated number of rockets to be operated:
- (c) the estimated size and the estimated weight of each rocket:

- (d) the estimated highest altitude or flight level to which each rocket will be operated:
- (e) the location of the operation:
- (f) the date, time, and duration of the operation:
- (g) any other relevant information requested by the person to whom notification is given.

**APPENDIX A**

Illustration images

**Unpowered Hang Gliding**  
*V-shaped wing*



**Unpowered (Glider/Sailplane)**  
*Called: Motor glider if engine fitted*



**Unpowered Paraglider**  
*elliptical shape*



**Parachuting**



**Model aircraft**



**Kite**



**Powered Parachute**  
*Trike paramotor - PPG*



**Powered Parachute Foot launch**  
*Paramotor-PPG*



**Weight-shift-control**  
*Delta wing*



**Rotorcraft**  
*Autogyro/ Gyrocopter/plane*



**Parasail**



**FIB - Flying Inflatable Boat**



**Airship**



**Captive Balloon**



**Model rocket**



**Unmanned Fee Balloon**



## APPENDIX B

### Model Rocket Safety Code

1. **Materials.** I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.
2. **Motors.** I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.
3. **Ignition System.** I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the “off” position when released.
4. **Misfires.** If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher’s safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.
5. **Launch Safety.** I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance. When conducting a simultaneous launch of more than ten rockets I will observe a safe distance of 1.5 times the maximum expected altitude of any launched rocket.
6. **Launcher.** I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor’s exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.
7. **Size.** My model rocket will not weigh more than 1,500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse.
8. **Flight Safety.** I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.
9. **Launch Site.** I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.
10. **Recovery System.** I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.
11. **Recovery Safety.** I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.



**LAUNCH SITE DIMENSIONS**

<b>Installed Total Impulse (N-sec)</b>	<b>Equivalent Motor Type</b>	<b>Minimum Site Dimensions (ft.)</b>
0.00–1.25	1/4A, 1/2A	50
1.26–2.50	A	100
2.51–5.00	B	200
5.01–10.00	C	400
10.01–20.00	D	500
20.01–40.00	E	1,000
40.01–80.00	F	1,000
80.01–160.00	G	1,000
160.01–320.00	Two Gs	1,500

*Note: The above information is published by the National Association of Rocketry, USA.*