



Advanced Rating Study Guide

FAR Part 103--Ultralight Vehicles
FAR Part 91
VFR/IFR Cruise Altitude

Windsports Soaring Center
12623 Gridley Street • Sylmar, CA 91342-3334
Tel: (818) 367-2430 • Fax: (818) 367-5363
E-mail: info@windsports.com • www.windsports.com

FAR PART 103—ULTRALIGHT VEHICLES

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Authority: 49 U.S.C. 106(g), 40103-40104, 40113, 44701.

Source: Docket No. 21631, 47 FR 38776, Sept. 2, 1982, unless otherwise noted.

Subpart A—General

Sec. 103.1 Applicability.

This part prescribes rules governing the operation of ultralight vehicles in the United States. For the purposes of this part, an ultralight vehicle is a vehicle that:

- (a) Is used or intended to be used for manned operation in the air by a single occupant;
- (b) Is used or intended to be used for recreation or sport purposes only;
- (c) Does not have any U.S. or foreign airworthiness certificate; and
- (d) If unpowered, weighs less than 155 pounds; or
- (e) If powered:
 - (1) Weighs less than 254 pounds empty weight, excluding floats and safety devices which are intended for deployment in a potentially catastrophic situation;
 - (2) Has a fuel capacity not exceeding 5 U.S. gallons;
 - (3) Is not capable of more than 55 knots calibrated airspeed at full power in level flight; and
 - (4) Has a power-off stall speed which does not exceed 24 knots calibrated airspeed.

Sec. 103.3 Inspection requirements.

- (a) Any person operating an ultralight vehicle under this part shall, upon request, allow the Administrator, or his designee, to inspect the vehicle to determine the applicability of this part.
- (b) The pilot or operator of an ultralight vehicle must, upon request of the Administrator, furnish satisfactory evidence that the vehicle is subject only to the provisions of this part.

Sec. 103.5 Waivers.

No person may conduct operations that require a deviation from this part except under a written waiver issued by the Administrator.

Sec. 103.7 Certification and registration.

(a) Notwithstanding any other section pertaining to certification of aircraft or their parts or equipment, ultralight vehicles and their component parts and equipment are not required to meet the airworthiness certification standards specified for aircraft or to have certificates of airworthiness.

(b) Notwithstanding any other section pertaining to airman certification, operators of ultralight vehicles are not required to meet any aeronautical knowledge, age, or experience requirements to operate those vehicles or to have airman or medical certificates.

(c) Notwithstanding any other section pertaining to registration and marking of aircraft, ultralight vehicles are not required to be registered or to bear markings of any type.

Subpart B--Operating Rules

Sec. 103.9 Hazardous operations.

(a) No person may operate any ultralight vehicle in a manner that creates a hazard to other persons or property.

(b) No person may allow an object to be dropped from an ultralight vehicle if such action creates a hazard to other persons or property.

Sec. 103.11 Daylight operations.

(a) No person may operate an ultralight vehicle except between the hours of sunrise and sunset.

(b) Notwithstanding paragraph (a) of this section, ultralight vehicles may be operated during the twilight periods 30 minutes before official sunrise and 30 minutes after official sunset or, in Alaska, during the period of civil twilight as defined in the Air Almanac, if:

(1) The vehicle is equipped with an operating anticollision light visible for at least 3 statute miles; and

(2) All operations are conducted in uncontrolled airspace.

Sec. 103.13 Operation near aircraft; right-of-way rules.

(a) Each person operating an ultralight vehicle 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 an ultralight vehicle in a manner that creates a collision hazard with respect to any aircraft.

(c) Powered ultralights shall yield the right-of-way to unpowered ultralights.

Sec. 103.15 Operations over congested areas.

No person may operate an ultralight vehicle over any congested area of a city, town, or settlement, or over any open air assembly of persons.

Sec. 103.17 Operations in certain airspace.

No person may operate an ultralight vehicle within Class A, Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport unless that person has prior authorization from the ATC facility having jurisdiction over that airspace.

[Amdt 103-17,56 FR 65662, Dec 17 1991]

Sec. 103.19 Operations in prohibited or restricted areas.

No person may operate an ultralight vehicle in prohibited or restricted areas unless that person has permission from the using or controlling agency, as appropriate.

Sec. 103.20 Flight restrictions in the proximity of certain areas designated by notice to airmen.

No person may operate an ultralight vehicle in areas designated in a Notice to Airmen under §91.137, §91.138, §91.141, §91.143 or §91.145 of this chapter, unless authorized by:

(a) Air Traffic Control (ATC); or

(b) A Flight Standards Certificate of Waiver or Authorization issued for the demonstration or event.

[Doc. No. FAA-2000-8274, 66 FR 47378, Sept. 11, 2001]

Sec. 103.21 Visual reference with the surface.

No person may operate an ultralight vehicle except by visual reference with the surface.

Sec. 103.23 Flight visibility and cloud clearance requirements.

No person may operate an ultralight vehicle when the flight visibility or distance from clouds is less than that in the table found below. All operations in Class A, Class B, Class C, and Class D airspace or Class E airspace designated for an airport must receive prior ATC authorization as required in Sec. 103.17 of this part.

Airspace	Flight Visibility	Distance from clouds
Class A	Not applicable	Not applicable
Class B	3 statute miles	Clear of Clouds.
Class C	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal
Class D	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal
Class E: Less than 10,000 feet MSL	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal
Class E: At or above 10,000 feet MSL	5 statute miles	1,000 feet below. 1,000 feet above. 1 statute mile horizontal.
Class G: 1,200 feet or less above the surface (regardless of MSL altitude)	1 statute mile	Clear of clouds
Class G: More than 1,200 feet above the surface but less than 10,000 feet MSL	1 statute mile	500 feet below. 1,000 feet above. 2,000 feet horizontal
Class G: More than 1,200 feet above the surface and at or above 10,000 feet MSL	5 statute miles	1,000 feet below. 1,000 feet above. 1 statute mile horizontal.

FAR PART 91

FAR 91.111 Operating near other aircraft.

- (a) No person may operate an aircraft so close to another aircraft as to create a collision hazard.
- (b) No person may operate an aircraft in formation flight except by arrangement with the pilot in command of each aircraft in the formation.
- (c) No person may operate an aircraft, carrying passengers for hire, in formation flight.

FAR 91.113 Right-of-way rules: Except water operations.

- (a) Inapplicability. This section does not apply to the operation of an aircraft on water.
- (b) General. When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.
- (c) In distress. An aircraft in distress has the right-of-way over all other air traffic.
- (d) Converging. When aircraft of the same category are converging at approximately the same altitude (except head-on, or nearly so), the aircraft to the other's right has the right-of-way. If the aircraft are of different categories--
 - (1) A balloon has the right-of-way over any other category of aircraft;
 - (2) A glider has the right-of-way over an airship, airplane, or rotorcraft; and
 - (3) An airship has the right-of-way over an airplane or rotorcraft.

However, an aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft.

- (e) Approaching head-on. When aircraft are approaching each other head-on, or nearly so, each pilot of each aircraft shall alter course to the right.
- (f) Overtaking. Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall alter course to the right to pass well clear.
- (g) Landing. Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface, except that they shall not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach. When two or more aircraft are approaching an airport for the purpose of landing, the aircraft at the lower altitude has the right-of-way, but it shall not take advantage of this rule to cut in front of another which is on final approach to land or to overtake that aircraft.

FAR 91.115 Right-of-way rules: Water operations.

- (a) General. Each person operating an aircraft on the water shall, insofar as possible, keep clear of all vessels and avoid impeding their navigation, and shall give way to any vessel or other aircraft that is given the right-of-way by any rule of this section.
- (b) Crossing. When aircraft, or an aircraft and a vessel, are on crossing courses, the aircraft or vessel to the other's right has the right-of-way.
- (c) Approaching head-on. When aircraft, or an aircraft and a vessel, are approaching head-on, or nearly so, each shall alter its course to the right to keep well clear.
- (d) Overtaking. Each aircraft or vessel that is being overtaken has the right-of-way, and the one overtaking shall alter course to keep well clear.
- (e) Special circumstances. When aircraft, or an aircraft and a vessel, approach so as to involve risk of collision, each aircraft or vessel shall proceed with careful regard to existing circumstances, including the limitations of the respective craft.

VFR / IFR CRUISE ALTITUDE

VFR (Visual Flight Rules) VFR for use up to but not including 18,000 MSL
VFR above 3000 AGL unless otherwise authorized by ATC

Eastbound

0-179 deg VFR or VFR On Top fly Odd thousands plus 500 (i.e. 3,500, 5,500, 7,500...)

Westbound

180-359 deg VFR or VFR On Top fly Even thousands plus 500 (i.e. 4,500, 6,500.....)

IFR (Instrument Flight Rules) IFR for use at or above 18,000 MSL
IFR 18,000 MSL to Flight Level 290 (29,000)

Eastbound

0-179 deg IFR Odd 2,000 Intervals begin at FL190 (i.e. 19,000, 21,000, 23,000, 25,000, 27,000 & 29,000)
VFR or VFR On Top Odd 2,000 Intervals begin at FL195 (i.e. 19,500, 21,500, 23,500, 25,500 & 27,500)

Westbound

180-359 deg IFR Even 2,000 Intervals begin at 18,000 MSL (i.e. 18,000, 20,000, 22,000, 24,000, 26,000 & 28,000)

VFR or VFR On Top Even 2,000 Intervals begin at FL 185 (i.e. 18,500, 20,500, 22,500, 24,500, 26,500 & 28,500)

Flight Level 290 and above

IFR 4000 Intervals begin at FL310

Eastbound

0-179 deg IFR 4,000 Intervals begin at FL290 (i.e. 29,000, 33,000, 37,000...)

VFR or VFR On Top 4,000 Intervals begin at FL300 (i.e. 30,000, 34,000, 38,000...)

Westbound

180-359 deg IFR 4,000 Intervals begin at FL310 (i.e. 31,000, 35,00 , 39,000...)

VFR or VFR On Top 4,000 Intervals begin at FL320 (i.e. 32,000, 36,000, 40,000...)

- * IFR Outside Controlled Airspace
- * AGL Above Ground Level
- * MSL Mean Sea Level
- * All courses are magnetic

DO NOT Exceed 250kts @ or Below 10,000ft Altitude.