

AVIATION LAW FOR THE MICROLIGHT PILOT

Introduction

As from April 1 1997 there has been a complete re-issue of rules for the Civil Aviation System.

As a microlight pilot you will be required to use a number of general aviation rules plus specific rules developed for the operation of microlight aircraft.

Important – the rules you see below are just a selection and, in some cases are not the full rule. **It is up to you to read the full rule to gain a full understanding.** These are available free on the Web at **www.caa.govt.nz**.

Required rules

The microlight pilot must have a working knowledge of the following rules:

Part 1 - Definitions and Abbreviations

Part 12 - Accidents, Incidents, and Statistics

Part 39 - Airworthiness directives

Part 47 - Registration and marking of aircraft

Part 91 - General operating rules

Part 103 - Microlight aircraft - certification and operating rules

PART 91 General Operating and Flight Rules

All aviators require knowledge of this Rule as it applies to all civil aircraft and is, in effect, the aviator's equivalent to the 'Road Code'.

Part 91 is broken down into subsections from A to J and then into a single Appendix A.

Subpart A - General

91.1 Applicability - prescribes the applicability of the general operating rules for the operation of civil aircraft. It also requires aircraft operated by the New Zealand Defence Force to abide with certain rules in the part.

This subpart also indicates who is not required to comply with this Part. Therefore persons operating aircraft under Part 101 (Model aircraft etc.) and

persons and equipment to which Part 105 (Parachuting) applies are not required to comply with Part 91.

91.5 Compliance with crew instructions and commands -

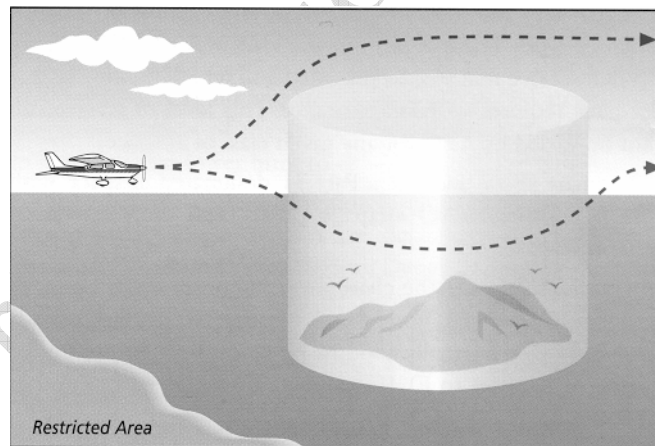
Requires a passenger to comply with commands given to them by the pilot-in-command.

Subpart B - Operating Rules

91.123 Flight Instruction – requires an aircraft used for flight instruction to have fully operating dual controls or pitch, roll, yaw and engine power controls which can be operated at either crew station.

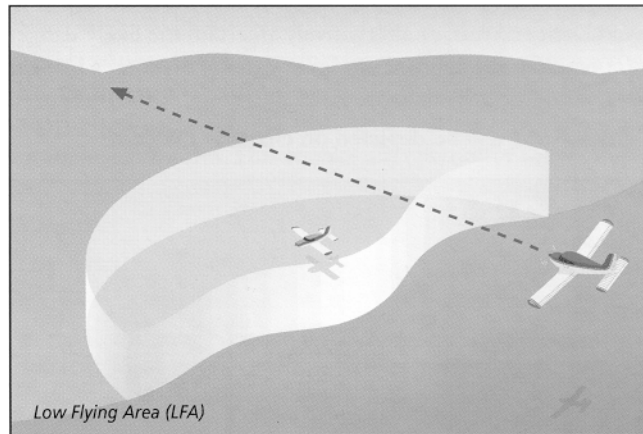
91.127 Use of Aerodromes – you may not take-off or land an aircraft unless the place is suitable for doing this. You may only use an aerodrome if you comply with the operational limitations placed on it by the aerodrome operator.

91.129 Restricted and danger areas – you may not operate an aircraft within a restricted area unless you have approval of the controlling authority for that area. You may not operate in a danger area unless you have determined that operation in that area will not effect the safety of the aircraft.



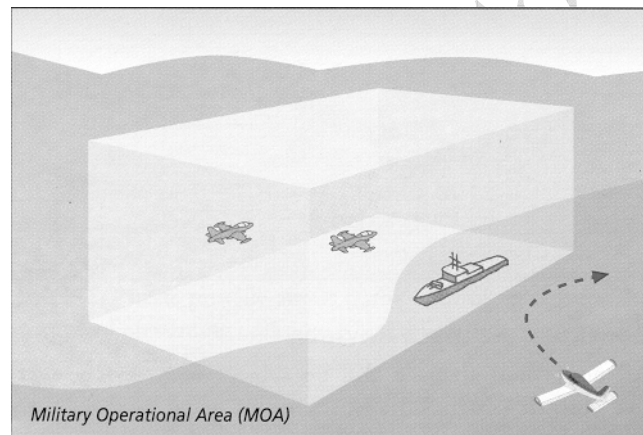
Restricted Area

91.130 Low flying areas – you may not operate in a low flying area unless you are receiving dual instruction or are briefed and authorised by an instructor rated under Part 61. If you are flying solo you must make sure you are the only aircraft in the low flying area.



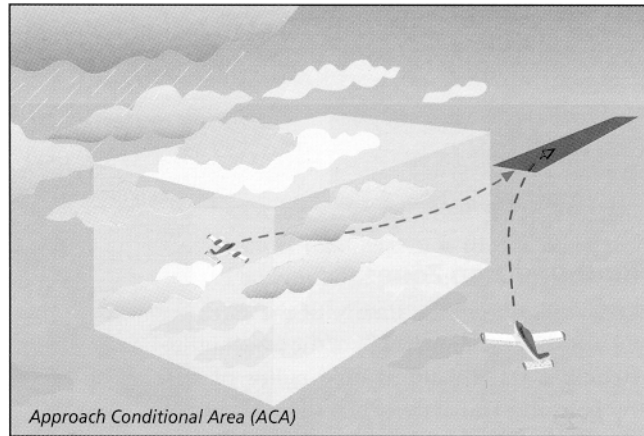
Low Flying Area (LFA)

- 91.133** **Military operational areas** – you may not operate within a military operational area unless you have the approval of the controlling authority.

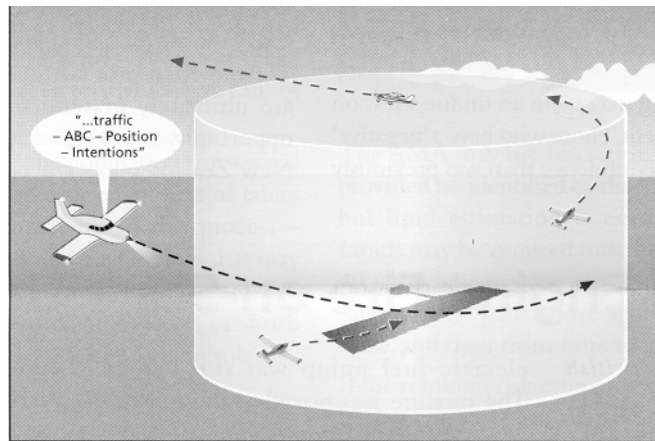


Military Operational Area (MOA)

- 91.134** **Conditional areas** – you may not operate within an approach conditional area unless you maintain 1000ft vertical clearance from cloud and have at least 5km visibility or, if you establish there is no aircraft on an instrument approach by using a two-way radio on the appropriate frequency. You may not operate your aircraft within a mandatory broadcast zone unless you radio your call sign, position, altitude, and intentions at entry and exit. If you remain within the mandatory broadcast zone you must call very 10 minutes giving your position and intentions and also use your landing lights or anti-collision lights if you have them.

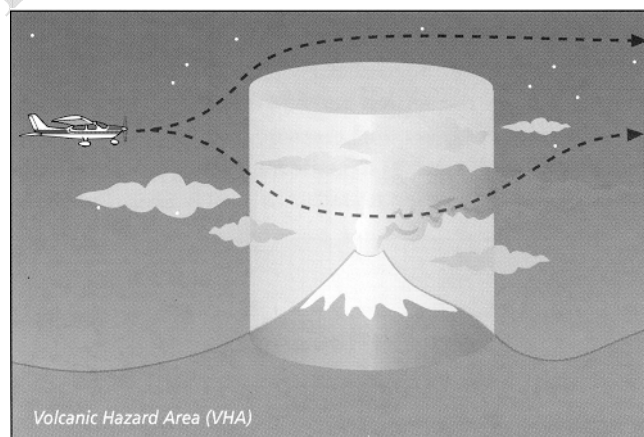


Approach Conditional Area (ACA)



Mandatory Broadcast Zone (MBZ)

91.137 **Volcanic hazard areas** – you may not operate in a volcanic hazard area unless you have first determined it is safe by considering any relevant meteorological information detailed in NOTAMS.



Volcanic Hazard Area (VHA)

91.139 General aviation areas – you may not operate within a general aviation area unless you have received authority from ATC if the area is under their jurisdiction or, where the airspace is made effective upon notification to the ATC, you have notified ATC to activate the area

91.141 Aerodrome traffic zones – normally, you may only take off and land at an aerodrome within that aerodrome traffic zone. You may however operate within that aerodrome traffic zone by avoiding the traffic circuit or conforming with it if you broadcast on the correct frequency your intentions during your operations.

Subpart C - General flight rules

91.201 Safety of Aircraft - This rule requires the pilot-in-command to be satisfied that the aircraft is in a condition for safe flight, that it is a safe operation and the safety of the occupants is ensured. Any defects that are identified by the pilot-in-command are to be entered into a technical log or other document acceptable to the Director.

91.203 Authority of the Pilot-in-command – This rule requires you, the pilot, to give any commands necessary to ensure the safety of the aircraft. This includes the power to disembark any person under the influence of drugs or alcohol or cargo if it could endanger the aircraft.

91.205 Crew members at stations – If you are a crew member you must sit in your correct seat and wear your seat harness at all times.

91.207 Occupation of seats and wearing of restraints – The pilot must ensure the passenger is wearing a seatbelt during take-off and landing, below 1000ft, during aerobatics, when you feel it is necessary for safety, and at all times in an open cockpit aircraft.

91.217 Pre-flight action – you must become familiar with all information concerning the flight before take-off. This includes meteorological conditions, fuel requirements, aerodrome conditions and alternatives to your planned destination.

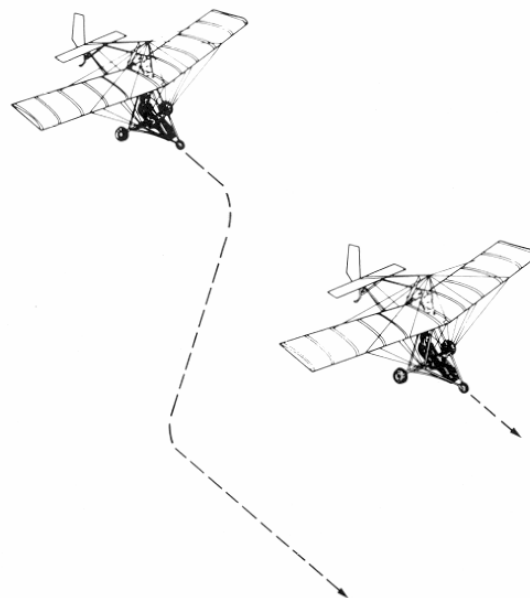
91.219 Familiarity with operating limitations and emergency equipment - This rule requires the pilot-in-command to be familiar with the aircraft operating limitations and emergency equipment before flight.

91.221 Flying equipment and operating information - Requires the pilot-in-command to have current aeronautical charts on board as well as a means of telling the time and a torch for night operations.

91.223 Operating on and in the vicinity of an aerodrome - Requires the pilot-in-command operating in the vicinity of an aerodrome to avoid collision carry out a left-hand circuit, obey ATC instructions or carry out a right-hand circuit if prescribed in Part 93.

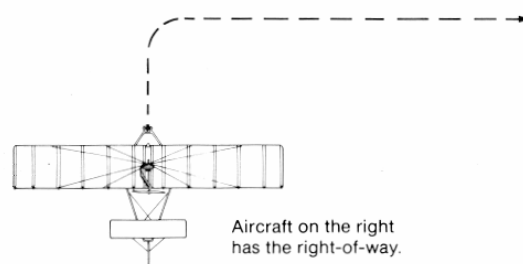
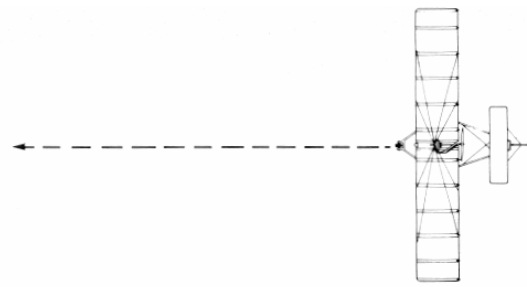
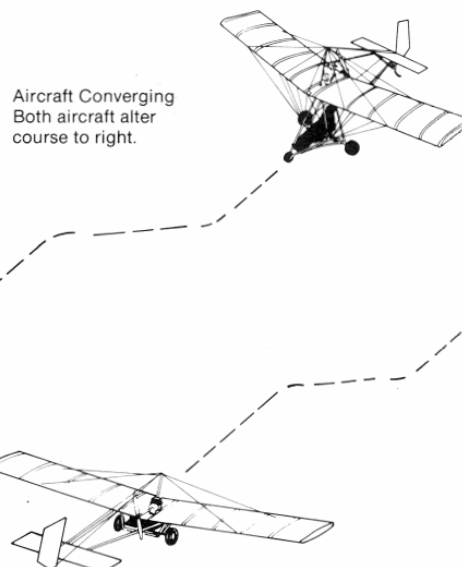
91.225 Operations at aerodromes with air traffic services – This rule details the requirements for operating from or in the vicinity of aerodromes with ATC, flight information service, or if you do not have a radio and wish to operate into or in the vicinity of one of these aerodromes. **91.227 Operating near other aircraft** – You must not operate so close to another aircraft so as to create a collision hazard. You may carry out a formation flight providing you have made prior arrangements with the pilots of the other aircraft in the formation.

91.229 Right-of-way rules – This rule requires you to keep a lookout at all times to avoid collision with other aircraft. It also gives the right-of-way rules for aircraft passing, approaching head on, overtaking and crossing.



Overtaking aircraft—
Passes well clear to right.

Fig. 7.1.1 Overtaking

Fig. 7.1.2 *Crossing*Fig. 7.1.3 *Passing*

91.235 Dropping of objects - Makes the pilot-in-command responsible for any item dropped from the aircraft.

91.241 Compliance with ATC clearances and instructions – You must comply with ATC instructions except where a deviation is required for the safety of your aircraft. If you deviate you must inform ATC as soon as possible. If ATC instruct you to do something that you know is not lawful, you may refuse to do it.

91.243 ATC light signals – This rule has a Table indicating all the light signals and how they are to be interpreted.

Light Signal	Aircraft in Flight	Aircraft on the Ground
Steady green	Cleared to land	Cleared for take-off
Steady red	Give way to other aircraft and continue circling	Stop
Series of green flashes	Return for landing (clearance to land and to taxi will be given in due course)	Cleared to taxi
Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
Flashing white	Land at this aerodrome and proceed to apron	Return to starting point on aerodrome
Alternating red and green flashes	Danger, be on the alert	Danger, be on the alert

91.245 Operations in classified and designated airspace – This rule requires each pilot operating in Class A, C or D airspace to obtain an ATC clearance before entry.

91.249 Aircraft callsigns – This rule requires each pilot-in-command to use the last three letters of the aircraft registration when using the aircraft radio.

Subpart D - Visual flight rules

91.301 VFR meteorological minima – This rule defines the minimum VFR limits and contains a Table explaining the VFR meteorological minima in different classes of airspace.

Class of Airspace		Distance from cloud	Flight visibility
B		Clear of cloud	
C, D		2 km horizontally 1000 feet vertically outside a control zone	8 km at or above 10 000 feet AMSL
G	Above 3000 feet AMSL or 1000 Feet above terrain Whichever is the Higher	2 km horizontally 1000 feet vertically	5 km below 10 000 feet AMSL
	At or below 3000 Feet or 1000 feet Above the terrain Whichever is the Higher	Clear of cloud and in sight of the surface	5 km

91.307 VFR flight plan – This rule requires a flight under VFR more than 50nm from shore or if the pilot requires an alerting system to file a VFR flight plan with ATC. The rule shows what is required in a flight plan.

91.309 Position reports – Requires the pilot on a VFR flight within controlled airspace to report their position to ATC at the times or reporting points as required by ATC.

91.311 Minimum heights for VFR flights - Requires a pilot-in-command to fly at such a height that a successful forced landing may be

carried out in the event of an engine failure, or over any other area at a height not less than 500 feet above the surface. There are exceptions.

91.313 VFR cruising altitude and flight level – This rule requires you to fly at certain heights if you are operating above 3000ft and below 11000ft on a VFR flight.

91.315 Operating in snow and ice conditions – This rule says that no pilot under VFR shall take-off in an aircraft that has snow, frost, ice, adhering to the wings, stabilisers or control surfaces.

Subpart F - Instrument and Instrument requirements

91.525 Flights over water - Shows that a single or multiengine aircraft properly equipped may carry out transoceanic flight

91.541 SSR Transponder and altitude reporting equipment - Requires an aircraft operating in transponder mandatory airspace to be equipped with a SSR transponder.

Subpart G - Operator maintenance requirements

91.601 Applicability. This rule prescribes rules specifying the requirements to maintain New Zealand aircraft operating within or outside New Zealand.

More importantly for microlight operators, this rule also exempts microlights from full compliance with this rule. As follows:

(b) For microlight aircraft maintained under Part 103, there is no requirement to comply with;

91.603, General maintenance requirements;

91.607, Annual and 100 hour inspections;

91.619, Annual review of airworthiness;

91.621, Maintenance programmes;

91.623, Approval of maintenance programmes;

91.625, Changes to maintenance programmes;

91.629, Technical log;

of this Subpart.

For operators of microlights there are equivalent maintenance requirements in their particular rule tailored for the particular aircraft type and operation. Part 103 for microlights refers.

91.605 Required inspections - Introduces inspections that are in addition to routine inspections and consist of an Annual/100hr inspection plus other equipment inspections.

91.627 Maintenance records - Requires certain maintenance records to be compiled and details the information to be recorded.

91.631 Retention of records – Requires the operator to keep records of work performed for two years after it has been done and six months after the aircraft or component is withdrawn from service.

91.633 Transfer of maintenance records – Requires the holder of the certificate of registration for an aircraft to transfer all maintenance records to the new owner when the certificate of registration is changed.

PART 103 Microlight Aircraft - Certification and Operating Rules

Subpart A - General

103.1 Applicability - Prescribes the applicability of this rule with regard to Part 91, the airworthiness and maintenance requirements for microlight aircraft, and rules governing the operation of microlight organisations certificated under this Part.

103.5 Pilot requirements - Requires each pilot of a microlight aircraft to be qualified and, where necessary, supervised. A pilot licensed under Part 61 may act as pilot-in-command of a microlight providing he/she is rated.

103.7 Flight instruction - Requires each person instructing in a microlight aircraft to be qualified.

103.9 Flight radiotelephone operator requirements - Requires a person to hold a FRTTO rating before using an aeronautical transceiver.

Subpart B - Operating rules

103.101 Registration - Requires each microlight aircraft to be registered under Part 47 and to conform/continue to conform with the requirements for a microlight aircraft.

103.105 Documents to be carried - Requires a person to carry the flight permit for a Class 2 microlight aircraft in the aircraft during flight.

103.107 Placards - Requires placards to be installed in a Class 2 microlight aircraft showing the certificated or gross design weight whichever is the lesser, the maximum and minimum payload of the aircraft and a passenger warning stating that the aircraft does not require an airworthiness certificate.

Subpart F - Flight rules

103.153 Minimum heights - Allows a microlight aircraft to be operated below 500 feet AGL for the purpose of gyroplane circuit training (no lower than 200 feet AGL), and practice and participation in microlight aircraft competitions, not below 200 feet AGL.

103.155 Flight criteria - Describes the limiting flight criteria by which a microlight aircraft shall be flown. Requires the pilot to become qualified, or be supervised, to operate in controlled airspace or within 3 nautical miles of an aerodrome certificated under Part 139.

103.157 Towing hang gliders - Requires a pilot towing hang gliders to be qualified and the aircraft to be compatible with the task.

103.159 Carriage of passengers - Requires a pilot-in-command to be authorised by a microlight organisation to carry passengers, and use a Class 2 microlight aircraft which has a passenger warning affixed to it.

Subpart G - Airworthiness and maintenance

103.201 Definitions - Defines a Class 2 microlight aircraft and includes a Class 1 microlight helicopter in this definition.

103.203 Requirement for a flight permit – Requires a class 2 microlight to have a valid flight permit or temporary flight permit in force.

103.207 Issue of a flight permit - Lays down the requirements for qualifying a Class 2 microlight for the issue of a flight permit. Shows acceptable airworthiness standards and a new rule allowing 'one-off' Class 2 microlight aircraft to be accepted.

103.209 Modification - Requires a Class 2 microlight aircraft which has been modified in such a way as to affect airworthiness to be reassessed for compliance with 103.207.

103.211 Endurance testing - Requires all microlight aircraft constructed to undergo endurance testing to prove airworthiness. A schedule of test times is included. (Note: Does not apply to aircraft constructed under Part 148 approval)

103.213 Statement of airworthiness - Requires a statement of airworthiness to be entered into the applicable maintenance record on completion of endurance testing.

103.215 Airworthiness directives - Requires the owner to comply with any airworthiness directives issued by the Director.

103.217 Maintenance and inspection requirements - Requires the operator to maintain a microlight aircraft in an airworthy condition and have the aircraft undergo an annual condition inspection, by a person authorised by a microlight organisation, or a rated LAME, every 12 months. This rule also

requires the operator of a microlight aircraft meeting a design standard to maintain the aircraft in accordance with the kitset manufacturers, or designers' maintenance requirements.

103.219 Construction - Exempts a person from compliance with Part 148 if they are constructing a microlight aircraft.

103.221 Instrument and equipment requirements - Requires an operator to equip a microlight aircraft with instruments and equipment required by the aircraft type design, designer or kit manufacturer, which must include a method of indicating airspeed, altitude, and direction. Powered parachutes do not require a means of indicating airspeed.

103.223 Hang glider towing aircraft - Requires a microlight aircraft towing hang gliders to be correctly equipped for that role.

Exemptions from Part 91

103.103 Aircraft Flight Manual - Exempts persons operating a microlight aircraft from 91.109.

103.105 Documents to be carried - Exempts persons operating a microlight aircraft from 91.111.

103.151 Fuel Requirements - Exempts a pilot of a microlight aircraft from 91.305.

103.153 Minimum heights - Exempts a pilot of a microlight aircraft from certain rules in 91.311.

103.203 Requirement for flight permit - Exempts a person operating a microlight aircraft from having a current airworthiness certificate as required by 91.101(a)(1).

103.219 Construction - Exempts a person constructing a microlight from being required to have Part 148 approval.

103.221 Instrument and instrument requirements - Exempts the operator of a microlight aircraft from the requirements of Part 91 Subpart F as follows:

91.501(1) in respect of minimum instruments and equipment required by 91.509.

91.501(2)(l) in respect of the seating standards specified in Appendix A, A.3

Notes: