



VFR CRUISE ALTITUDE OR FLIGHT LEVEL

1. Introduction

When you are a VFR pilot, you must take into account when to choose for a cruise altitude or flight level; there are some minimum rules to respect. This article will help you choose one of the possible solutions.

2. VFR altitude and level restrictions

2.1. Minimal altitude

Except for take-off, landing or by emission from the appropriate authority, VFR flights shall be flown:

- At a height not less than 300m (1 000ft) above the highest obstacle within a radius of 600 m from the aircraft over the congested areas of cities, towns or settlements or over an open-air assembly of persons.
- At a height not less than 150m (500ft) above the ground or water except over the congested areas of cities, towns or settlements.

Some countries adopt a minimum height above 1000ft over natural parks and reserves.
Some countries also require a minimum height of flight between 1000ft to 5000ft over cities.

2.2. Maximum altitude or flight level

VFR civil flights shall not fly above FL200.

For military aircraft, please consult **Special Operation Department** for HQ rules or the Special Operation rules of your division to have the exact limitations.

3. Cruise altitude or flight level selection

3.1. Free altitude?

VFR flights in level cruising flight when operated below 900 m (3 000 ft) from the ground or water are free.

Above this previous altitude, the cruise altitude or flight level is not free. You must choose it according to the semi-circular rules (see next chapter).

A higher level can be specified by the appropriate ATS authority.

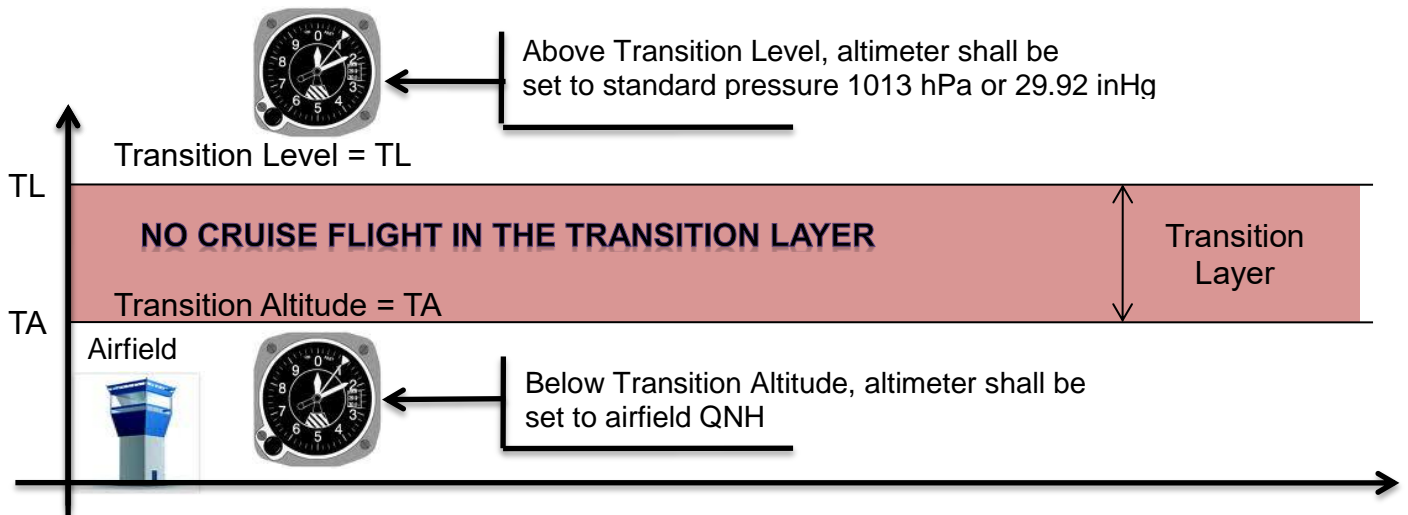
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3.2. Transition layer constraints

The transition layer is the airspace between the transition altitude and the transition level.

Consult our altimetry documentation for pilot or controller in order to have more information about transition layer, transition altitude and transition level.

No cruise flight level or cruise altitude can be chosen in the transition layer.



3.3. Available VFR levels

Except where otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority, VFR flights when operated above 900 m (3 000 ft) from the ground or water shall be conducted at a flight level/altitudes appropriate to the track as specified in the following levels :

- VFR flights use flight levels ending with the number 5: FL 45, FL 55, FL 135, FL 195...
- VFR flights use altitudes ending with the number 500: 4500ft, 5500ft, 13500ft, 19500ft...

The cruise altitude or cruise flight level must be chosen using this assigned rule and must follow the semi-circular rule depending on the heading of the aircraft (see next chapter).

Note that IFR flight levels end with final number 0 and not 5. This provides enough separation between VFR and IFR flights and adequately avoids possible conflicts during the cruise phase.

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3.4. Odd and even flight levels

For answering to the need of flight level separation between the same types of flight, flight levels have been separated in two categories, the even and the odd flight level:

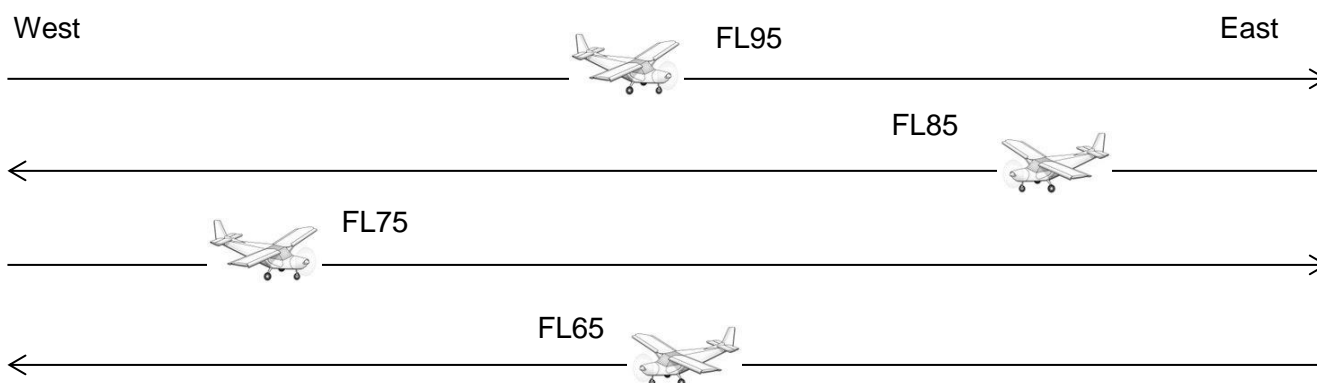
- **Even** flight level: the last number before the final number 5 shall be **even**: FL 45, FL 65, FL 125...
- **Odd** flight level: the last number before the final number 5 shall be **odd**: FL 55, FL 75, FL 135...

4. Semicircular rule

4.1. Default worldwide semicircular rule

The default worldwide semi-circular rule is the East/West orientation of the flight level parity:

- Your aircraft has track between **0°** and **179°**, your flight level or altitude must be **odd**.
- Your aircraft has track between **180°** and **359°**, your flight level or altitude must be **even**



By following the semi-circular rule, a VFR aircraft will limit possible conflicts with another aircraft coming from the opposite direction through providing 1000ft separation between opposite west/east tracks.

4.2. Specific semicircular rule

In some countries due to IFR routes or special regulations set by the local administration, the **semi-circular rule can be the North/South** orientation of the flight level parity:

- Your aircraft has track between 90° and 269°, your flight level or altitude must be **odd**
- Your aircraft has track between 270° and 359° & between 0° and 89°, your flight level or altitude must be **even**.

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5. List of available flight level and altitude

Be aware that no civil VFR flight is allowed above FL195.

Some countries (like Russia) adopt a metric airspace above the transition level.

5.1. In a normal airspace

VFR Flight					
Track from 0° to 179°			Track from 180° to 359°		
FL	Feet	Meter	FL	Feet	Meter
35	3500	1050	45	4500	1350
55	5500	1700	65	6500	2000
75	7500	2300	85	8500	2600
95	9500	2900	105	10500	3200
115	11500	3500	125	12500	3800
135	13500	4100	145	14500	4400
155	15500	4700	165	16500	5050
175	17500	5350	185	18500	5650
195	19500	5950	205	20500	6250
215	21500	6550	225	22500	6850
235	23500	7150	245	24500	7450
255	25500	7750	265	26500	8100
275	27500	8400	285	28500	8700

5.2. In a metric airspace

VFR Flight					
Track from 0° to 179°			Track from 180° to 359°		
Standard Metric	Meter	Feet	Standard Metric	Meter	Feet
105	1050	3500	135	1350	4400
165	1650	5400	195	1950	6400
225	2250	7400	255	2550	8400
285	2850	9400	315	3150	10300
345	3450	11300	435	4350	12300
405	4050	13300	495	4950	14300
465	4650	15300	555	5550	16200
525	5250	17200	615	6150	18200
585	5850	19200	675	6750	20200
645	6450	21200	735	7350	22100
705	7050	23100	795	7950	24100
765	7650	25100	855	8550	26100
825	8250	27100			

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