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AIR LAW 1 (AUS)

CHAPTER 3 – RULES OF THE AIR

Version 2.2
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RULES OF THE AIR

3.1 Precedence

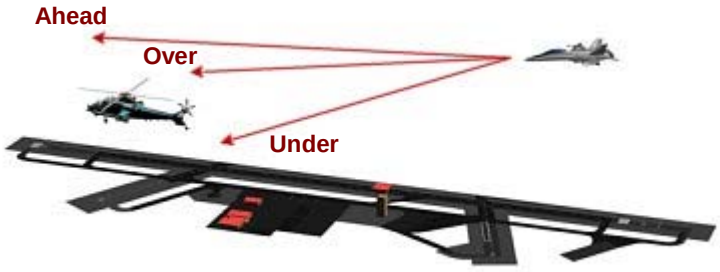
3.1.1 Introduction

Road traffic rules have been established to control the flow of traffic, to maintain order, to prevent accidents and to ensure that movement on our roads are effective and efficient.

As on the road, there are rules when it comes to aviation. In some cases these rules are even more important than general road rules. The pilot of an airliner, carrying hundreds of passengers, has a tremendous responsibility with regards to the safety of his/her passengers and that of other aircraft sharing the same airspace.

This discussion will therefore focus on the “Rules of the Air” and the precedence thereof.

3.1.2 General Rules



The aircraft that has to give way to another may not pass overhead, underneath or cross ahead of the other aircraft unless it passes well clear.

Boeing 747 has to give way

But then again, the same holds true for aircraft taking-off. An aircraft shall not attempt to take-off until there is no risk of a collision with other aircraft flying in the vicinity.

Also, if an aircraft is aware that another aircraft is compelled to land, it shall give way to that aircraft. Such cases may occur at unmanned aerodromes where an aircraft is doing a forced landing at the aerodrome or even if an aircraft is practicing forced landings.

What about formations of aircraft or parachutists?

Would you say that a Boeing 747 has right of way over a formation of aircraft? …….. The answer is “No”.

Formations of aircraft are definitely less manoeuvrable than single aircraft (aircraft not in a formation). In this case the Boeing 747 is a huge aircraft, it carries passengers that need to remain comfortable and it is not necessarily the most manoeuvrable aircraft found, but the formation still has the right of way.

Parachutists will always have the right of way due to the fact that they are not powered and due to their lack of manoeuvrability.

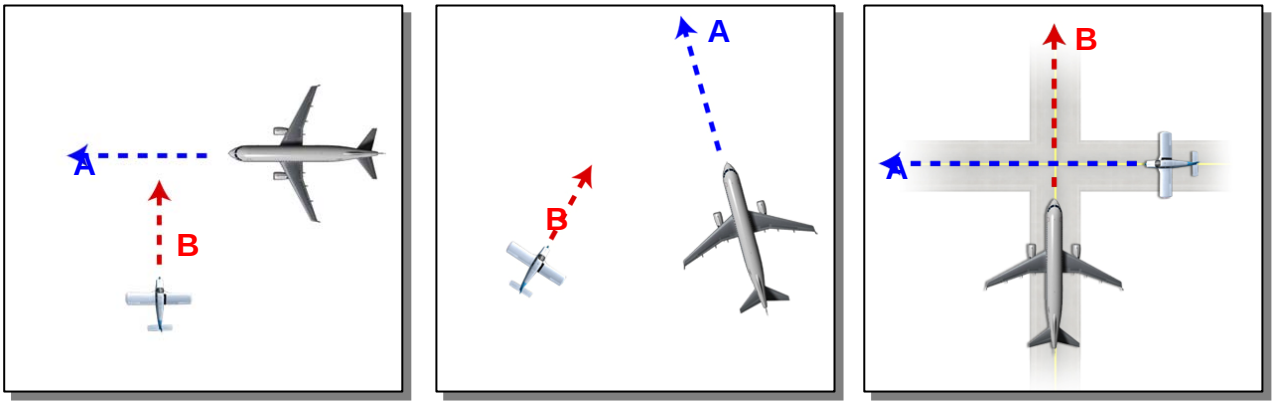
3.2 Right of Way

The aircraft that has the right of way shall maintain its heading and speed. However, nothing in the rules shall relieve the pilot-in-command of an aircraft from the responsibility to take evasive action in case of a possible collision (CAR 161).

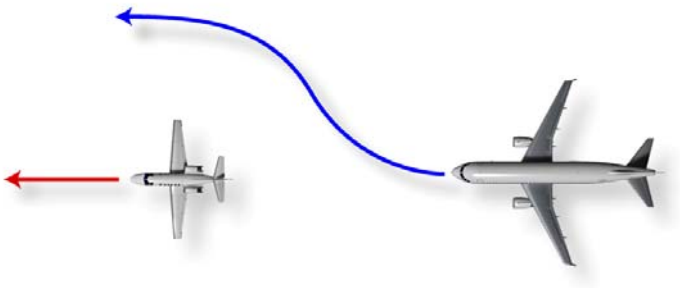
3.2.1 Crossing Aircraft

When two aircraft are on converging headings at approximately the same height, the aircraft which is on the right has ‘right of way’ and the aircraft which is on the left must ‘give way’.

When taxiing, aircraft also give way to the aircraft on the right, unless instructed otherwise by ATC. In the three diagrams below, aircraft ‘A’ has right of way and aircraft ‘B’ must give way.

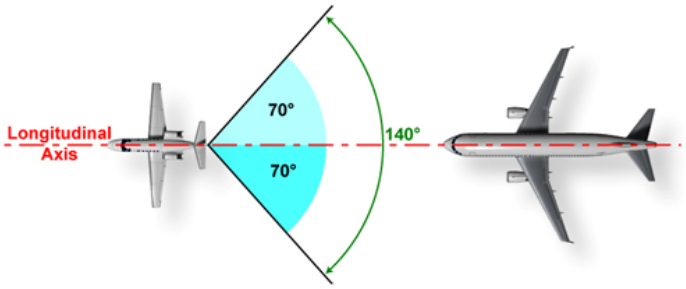


3.2.2 Overtaking Aircraft



The aircraft that is being overtaken has the right of way and has to maintain heading and speed. The overtaking aircraft (whether climbing, descending or in horizontal flight) has to pass to the right of the aircraft being overtaken and remain well clear until there is no more risk of collision (CAR 162-3).

For the purpose of this regulation, an aircraft is deemed to be overtaking another aircraft if it is approaching from the rear at an angle of 70° or less, as measured either side of the longitudinal axis of the aircraft being overtaken (CAR 160).



Once again the pilot in command of the aircraft overtaking has a full view of the aircraft being overtaken.

The pilot in command of the aircraft being overtaken may not be aware that he/she is being overtaken. For this reason the overtaking aircraft has to have him in sight at all times in case the aircraft alters heading unexpectedly.

Converging Aircraft

Aircraft in the air and on the ground have to give way to each other when on converging tracks. Thus, the order of priority for aircraft is as follows (from highest to lowest priority):

1	Balloons	
2	Gliders	 
3	Airships	
4	Aircraft in flight towing any object	 
5	Powered heavier than air aircraft	 

3.2.3 Interpretation of the "Right of Way" Rule

i. Powered aircraft must give way to airships, gliders and balloons.

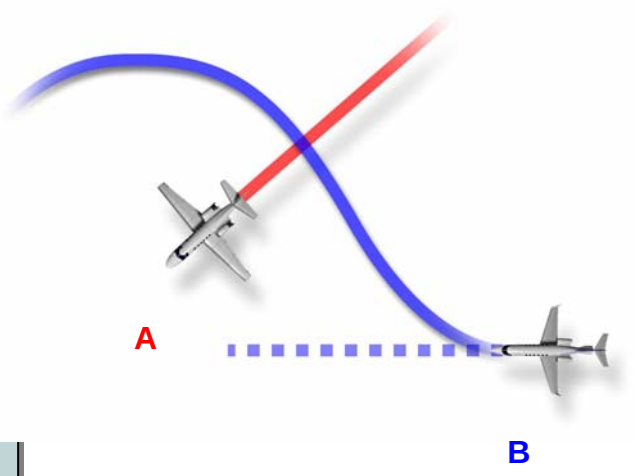
ii. Airships must give way to gliders and balloons.

iii. Gliders must give way to balloons.

iv. Powered aircraft must give way to any aircraft that is towing another aircraft or object. (CAR 162 (1).)

3.2.4 Converging Aircraft of the Same Class

When two aircraft of the same class are on flight paths that cross, the aircraft that has the other aircraft on its right is to give way by turning to the right and passing behind the other aircraft i.e. the aircraft on the right has the "right of way".



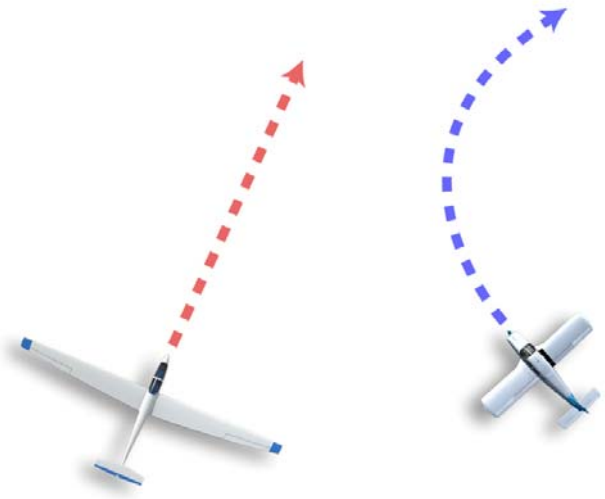
Same Class: In this case same clas means either two fixed wing aircraft or two helicopters or two balloons etc.

Different classes would mean, for example, a balloon and a helicopter, but in such cases the general right of way rule applies in which case the helicopter has to give way to the balloon.

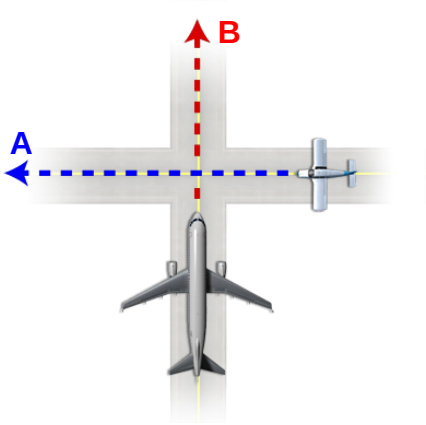
It must be remembered that Aircraft "**A**" has the right of way (thus maintaining its heading and speed). Aircraft "**B**" may not pass overhead, underneath or in front of Aircraft "**A**" unless it passes well clear of Aircraft "**A**".

3.2.5 Converging Aircraft from Different Classes (Powered Aircraft and Gliders)

A powered aircraft MUST always give way to a glider. The glider has 'right of way'.



3.2.6 Taxiing Aircraft



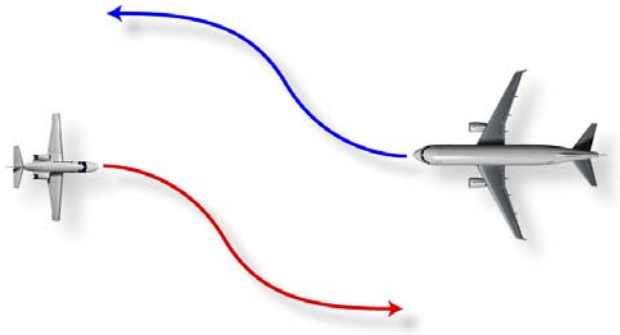
When taxiing, aircraft on converging headings are expected to give way to the right.

Aircraft "**A**" has right of way, aircraft "**B**" must stop.

3.3 Aircraft Approaching Head-On

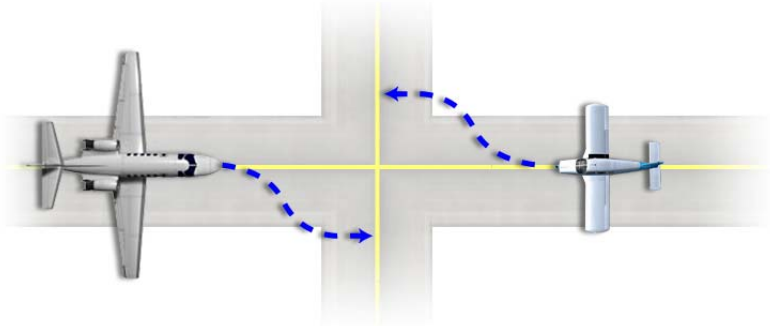
3.3.1 Aircraft in the air

When two aircraft are approaching head-on, or approximately so, and there is danger of collision, each of the aircraft is to alter heading to the right (CAR 162-2).



3.3.2 Taxiing aircraft

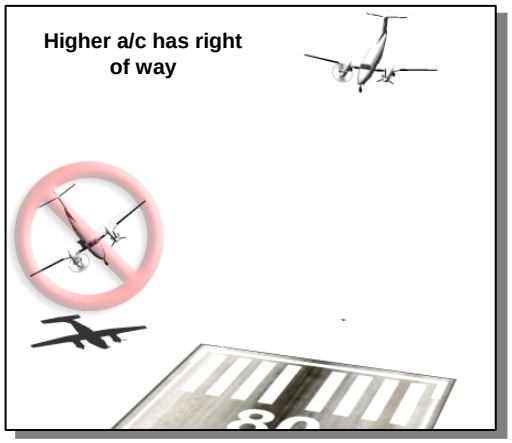
Taxiing aircraft approaching head-on, both will move to the right. A convenient place to pass would be at a taxiway intersection.

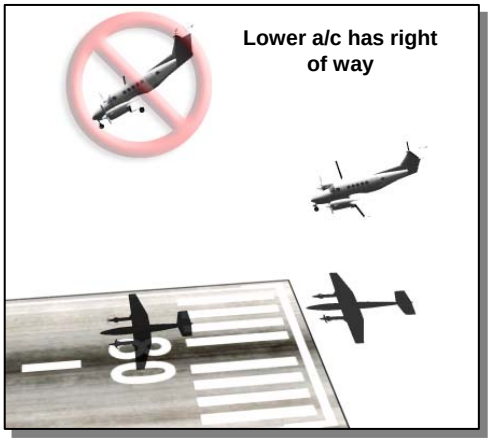


3.4 Aircraft Approaching for a Landing

When two aircraft, at different levels, are approaching the same aerodrome for landing the aircraft at the higher level shall give way to the aircraft at the lower level (CAR 162(6)).

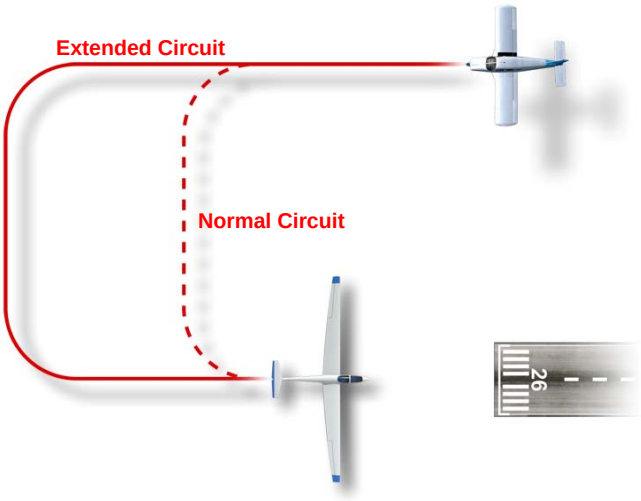
The aircraft at the higher level may not take advantage of this regulation and cut in front of another aircraft (at a lower level) by increase it rate of decent to end up lower than the other aircraft, and an aircraft at the lower level may not take advantage of this regulation and cut in front of another aircraft (at a higher level), which is established on final approach by turning in front of the aircraft already on the approach.





This regulation was established for safety reasons and also, Air Traffic Control generally vectors the lower aircraft onto the final approach first or descends the aircraft ahead in the sequence to land first.

A powered aircraft must always give way to gliders, especially on the final approach to land.



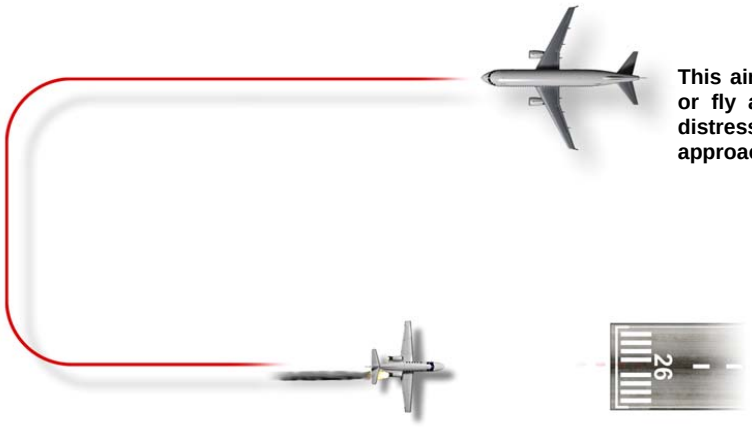
The powered aircraft may extend his circuit (fly further) downwind to allow the glider sufficient time to approach and land first or make another circuit

Boeing 747 has to give way

An aircraft operating on the ground or water must give way to aircraft landing or on final approach to land (CAR 162-5).

3.5 Aircraft with Emergencies

Any aircraft in an emergency has the 'right of way' to land. All other aircraft must give way. (CAR 162-9)



This aircraft must adjust his circuit or fly another circuit to allow the distressed aircraft sufficient time to approach and land safely.

3.6 Aircraft Operating Near Other Aircraft

An aircraft must not be operated so close to another aircraft in the air or on the ground in such a way that it may create a collision hazard. The actual distance depends on the judgment of the pilot.

3.6.1 Operating in the vicinity of aerodromes

A pilot in command must observe the following rules when operating on or in the vicinity of an aerodrome:

a. Sight and monitor the positions of other circuit traffic at all times.

b. Conform to the normal circuit pattern.

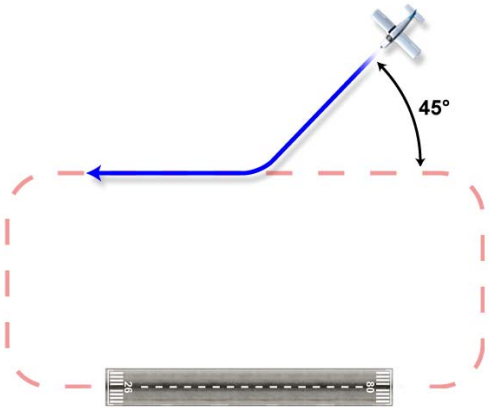
- Size
- Shape
- Direction

c. All circuit patterns are left-hand except:

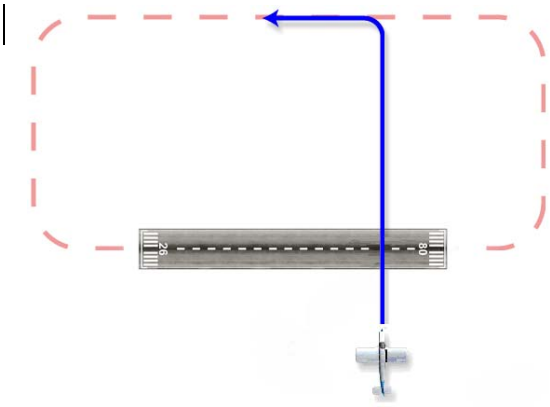
- When ATC (Air Traffic Control) authorises a right-hand circuit.
- When a right circuit is indicated in Jeppesen or in ERSA.

d. The pilot is expected to take off and land into the wind, using the most into-wind runway.

e. An aircraft when approaching a non-towered aerodrome for a landing, should join the circuit as follows:

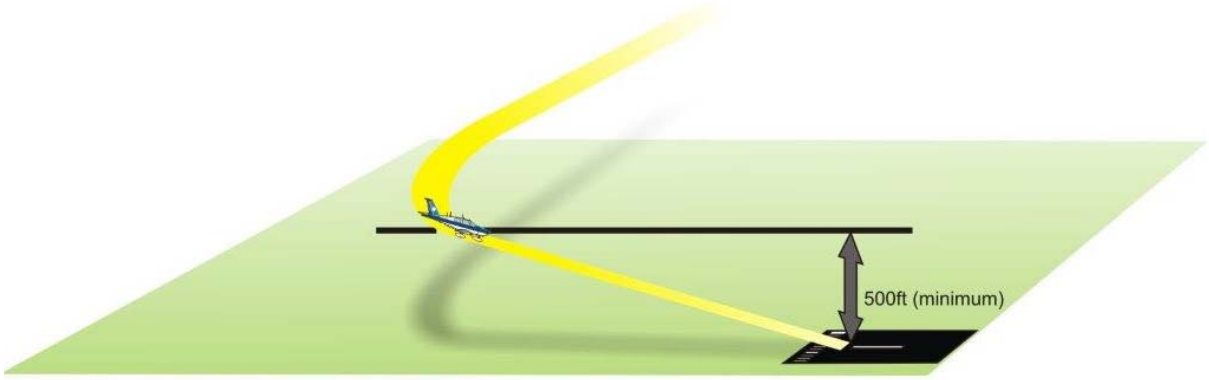


i. From the live side, approach the circuit on a course 45 degrees to the downwind leg and join abeam the middle of the runway; or

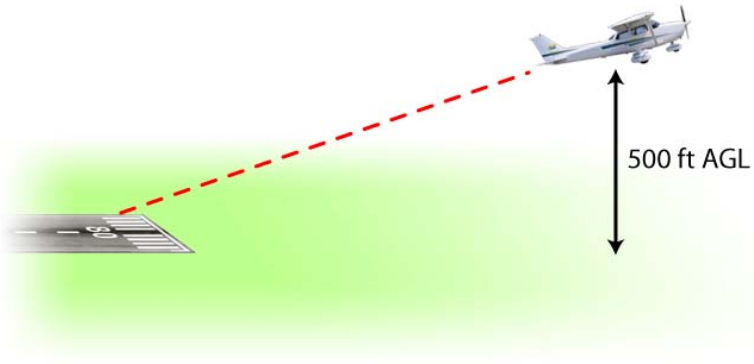


ii. From the dead side, turn crosswind between the departure end of the runway and the middle of the runway.

f. When landing, a pilot must ensure, the turn onto the final leg should be completed by, not less than 500 feet above the aerodrome elevation.



g. A turn after take-off is not permitted below a height of 500 feet above ground level except in an emergency.



h. If departing from a non-towered aerodrome contrary (opposite) to the circuit direction, pilots should wait until they are well outside the circuit area and no other conflicting traffic exists. This would normally be at least 3 NM from the departure end of the runway.

3.7 Separation Minima (Jepp Vol 1 ATC)

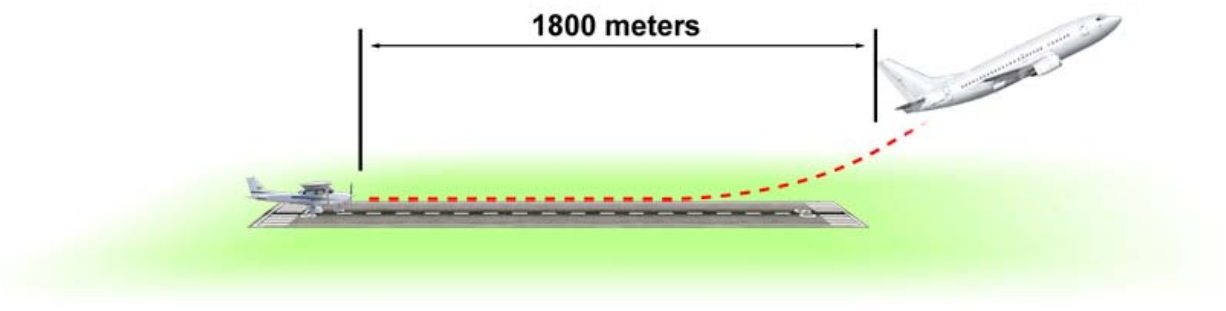
3.7.1 Take-off (If either aircraft weighs more than 2000 kilograms)

a. An aircraft must not commence take-off until a preceding aircraft using the same runway has:

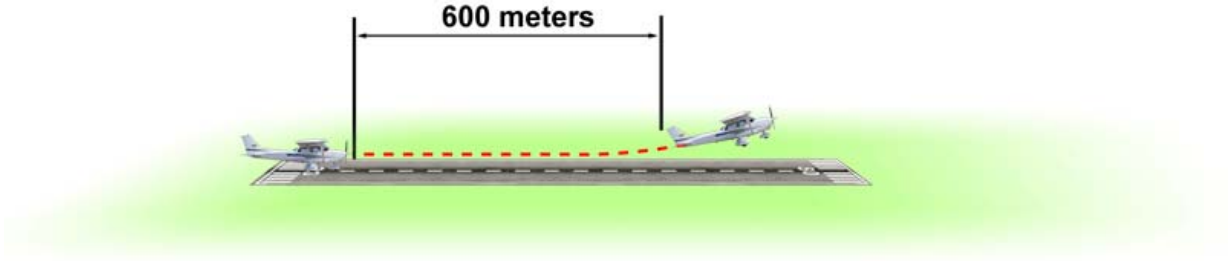
i. Crossed the upwind end of the runway or

ii. Commenced a turn or

iii. If the runway is longer than 1,800 metres, become airborne and is at least 1,800 metres ahead.



b. Take-off (If BOTH aircraft weigh less than 2000 kilograms) An aircraft must not commence take-off until a preceding aircraft using the same runway is airborne and is at least 600 metres ahead.



c. An aircraft must not commence take-off until a preceding aircraft using another runway has crossed or stopped short of the take-off aircraft's runway

3.7.2 Separation Minima – Landing (Jepp Vol 1 ATC)

An aircraft must not continue its approach to land beyond the runway threshold until:

a. A preceding departing aircraft using the same runway has become airborne and has :

   i. Commenced a turn or

   ii. Is beyond a point on the runway at which the landing aircraft could be expected to complete its landing roll and there is sufficient distance to manoeuvre safely in the event of a missed approach.

b. A preceding landing aircraft using the same runway has vacated the runway and is taxiing away.

c. A preceding aircraft using another runway has crossed or stopped short of the runway being used by the landing aircraft.

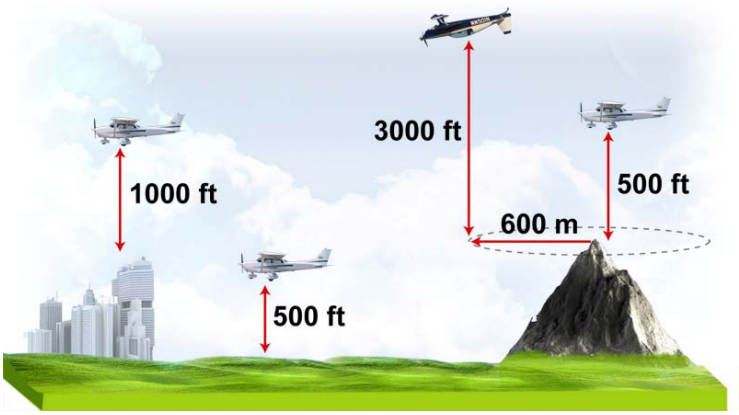
3.7.3 Minimum Heights While Flying

An aircraft must not fly over:

a. Any city, town or populated area at a height lower than 1000 feet.

b. Any other area at a height lower than 500 feet.

The height referred to is the highest terrain or object within the radius of 600 metres. However, an aircraft may fly at a lower height than specified above in an emergency situation.



3.7.4 Minimum Height for Aerobatics

Aerobatics may only be carried out during day time, in VMC and not below a height of 3000 feet above the highest obstruction within a radius of 600 metres.

3.7.5 Flight over Public Gatherings

No aircraft shall fly over any public gathering, public meeting, regatta or race meeting, unless the authority (CASA) has given special permission to do so.

In an emergency an aircraft is permitted to fly at lower heights than those specified above e.g. due to stress of weather.

3.8 Smoking in Aircraft

Smoking is not permitted in an aircraft:

a. During take-off and landing.

b. During fuelling operations.

c. In an aircraft toilet.

d. Whenever the no smoking light is on.

e. Whenever there is a no smoking sign permanently displayed.

3.9 Drugs and Alcohol

a. A person shall not enter an aircraft in a state of intoxication.

b. A person who is a member of the flight operating crew, should not have consumed any alcoholic liquor, drugs or medicinal preparation that would impair his or her capacity to act.

c. A flight crew member shall not consume any alcoholic liquor during a period 8 hours preceding the departure of the aircraft.

A flight crew member shall not consume any alcoholic liquor during a flight.