

EUROCONTROL guidance notes for pilots

1. Rules for VFR Flight



AIRSPACE INFRINGEMENT

Infringement of controlled airspace, danger and restricted areas etc. is a serious aviation hazard and occurs when an aircraft enters the airspace without permission. This happens several times a day in the busiest areas of European airspace. Careful planning, and accurately flying the plan, are the best means of avoiding such infringements. However, it is important that pilots understand the rules they are expected to follow.

This is one of a series of Guidance Notes (GN) intended to help you keep out of trouble. The others are listed at the foot of the next page.

FLIGHT RULES

Flight Rules are laid down internationally (as "Standards and Recommended Practices" in Annex 2 to the Chicago Convention) to prevent collisions with other aircraft and the ground. However, different countries have slightly different needs, so they sometimes have their own extra rules, and may interpret the international rules differently. Any 'Differences' from ICAO Standards must be written in the State's AIP (see GN 3), so when flying internationally pilots must ensure they are aware of the differences in all the countries over which they intend to fly, including their own.

GENERAL RULES

The "General Rules" are those dictating who has right of way in given situations, and which aircraft types have priority

when aircraft are on converging courses. If there is a risk of collision, both pilots must act in accordance with these General Rules. A pilot who is required to give way should alter course to the right, and one who has the right of way should maintain course and speed, but should also be prepared to take avoiding action if the other does not give way.



In order for a pilot to follow the General Rules, he or she must know where the other aircraft (and the ground) are, in order to avoid them. If they are relying on their eyes to avoid collisions, they need to also follow specified "Visual Flight Rules" (VFR). Otherwise, the pilot must rely on instruments to provide separation from other aircraft and the ground; he or she must follow the "Instrument Flight Rules" (IFR). However, a pilot following IFR in Visual Meteorological Conditions (VMC) should look out of window to avoid collision with other aircraft. Although the basic rules remain the same, some

detailed requirements for both VFR and IFR vary depending on the class of airspace in which the aircraft is flying.

VISUAL FLIGHT RULES

Internationally, a pilot is required to stay more than 1000 feet above any obstacles in a "congested area" or above any large collection of people. Over uncongested areas, he or she must stay more than 500 feet above the ground. Also, loss of engine power needs to be considered when operating a single engine aircraft. The UK is unique. In that country, pilots following VFR may fly below 500 feet, but they must stay more than 500 feet away from any people or anywhere people might be expected (vehicles, vessels or structures). According to the German AIP in addition to the mentioned obstacle clearance, pilots have to be 2000 ft above ground or water when on a cross-country flight.

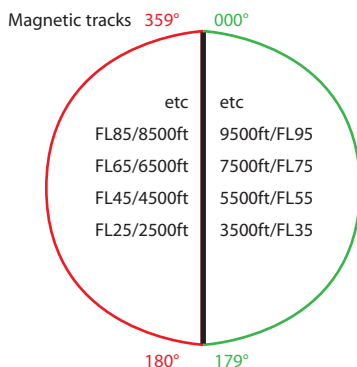
To follow VFR, it is internationally agreed that a pilot must be able to see a certain distance ahead of him. Generally, there must be no cloud within 1500 metres horizontally or 1000 feet vertically from the aircraft, and the "flight visibility" (the distance forward the pilot could see from the cockpit in flight) must be at least 8 km. The VFR therefore require the pilot to fly his or her aircraft to stay at least that distance from cloud and in conditions of at least that visibility.

Below 10,000 feet, a flight visibility of 5km is considered enough for pilots to see

each other. At very low altitudes (usually below 3000 feet) outside controlled airspace (in classes F & G), individual countries may allow flight closer to cloud and in even lower visibility, provided the aircraft is flying slowly (below 140 knots), and the pilot can see the ground. Ensure you check the relevant AIP (see GN 3).

In addition to avoiding the ground and staying away from cloud and in conditions of good visibility, if a pilot is cruising (staying on a constant track at a constant altitude, usually at or above 3000 feet MSL), he or she is required to keep to one of an allocated series of altitudes (or Flight Levels if above the Transition Altitude - see the AIP for each country). If the aircraft's track is between 000° magnetic and 179° magnetic, it should maintain an altitude of an odd number of thousands of feet plus 500 feet (for example 3,500 feet) or, if above Transition Altitude, odd Flight Levels + 5 (for example FL 95). If the aircraft's track is between 180° magnetic and 359° magnetic, it should maintain an altitude of an even number of thousands of feet plus 500 feet (for example 2,500 feet) or, if above Transition Altitude, even Flight Levels + 5 (for example FL 65). Aircraft following the Instrument Flight Rules in the same direction will be flying at similar altitudes or Flight Levels but 500 feet lower.

Again the UK has different rules. Pilots following VFR in UK airspace are not required to maintain given altitudes or Flight Levels.



Pilots flying under VFR should also be aware that the semi circular system may not always ensure vertical separation to other flights. This is the case when two flights are at the same level on slowly converging courses. If you see an aircraft a few miles away from you and you hardly see its position changing, then there is a big chance that you are on collision course. Furthermore, as the other aircraft hardly changes its relative position to your aircraft it is hard to detect it visually.

If you are following VFR above a layer of cloud, provided this is authorised by the local regulations, it is important to always know your position and that of any controlled airspace ahead of you. GNs 7 and 8 give guidance on navigation using radio aids and GPS, but if you can obtain radar assistance (such as that suggested in GN 9) or at least stay in radio contact with an Air Traffic Service Unit with your transponder switched to ALT, as advised in GN 11, you will be less likely to cause a problem by infringing Controlled or Restricted Airspace.

CONTROLLED AIRSPACE

GN 10 gives guidance for pilots wishing to enter or cross Controlled Airspace. However, it is important to remember that you ALWAYS need a clearance to enter controlled airspace (except for class E airspace), and when inside you must obey the controller's instructions. However, if you are following a VFR clearance inside Controlled Airspace, you are still responsible for obeying not only the VFR Rules, but also the General Rules. If your clearance would prevent you doing this, you must tell the controller and ask for a different clearance.

HAVE A SAFE FLIGHT

We hope you have found this useful. If you have any suggestions for improvement, please let us know.

OTHER GUIDANCE NOTES

1. Rules for VFR Flight
2. Flight preparation
3. Getting Aeronautical Information Before Flight
4. Getting Meteorological Information Before Flight
5. Using Meteorological Information for Planning
6. Visual Navigation
7. VOR / DME / ADF Navigation
8. GPS Navigation
9. Getting Aeronautical & Met Information In Flight
10. Entering Controlled Airspace
11. Getting the Most out of your Transponder

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Published by:

EUROCONTROL Headquarters

General Secretariat Directorate

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