

# PRACTICAL TIPS FOR CLOUD CLEARANCE

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**U**SPA's Basic Safety Requirements state, "No skydive may be made in violation of the FAA [Federal Aviation Administration] regulations." Not all countries have cloud-clearance regulations, but jumpers in the U.S. must abide by those found in Federal Aviation Regulations 105.17, which places joint responsibility

for adherence on the jumper and the pilot. Though falling through clouds poses no health risks in and of itself, clouds can hide potential dangers—such as aircraft and other jumpers to collide with—that do. (Not to mention that jumping through the rain and hail that often come with clouds can be really unpleasant, anyway.) And under

canopy, air conditions near clouds are often turbulent, which poses particular danger if you're flying in a canopy formation.

Most jumpers have a difficult time remembering the cloud clearance regulations, but understanding the reasons for the different altitude requirements can help you remember the necessary information.

## FEDERAL AVIATION REGULATIONS

SEC. 105.17—FLIGHT VISIBILITY AND CLEARANCE FROM CLOUD REQUIREMENTS

No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft—

(A) INTO OR THROUGH A CLOUD, OR  
(B) WHEN THE FLIGHT VISIBILITY OR THE DISTANCE FROM ANY CLOUD IS LESS THAN THAT PRESCRIBED IN THE FOLLOWING TABLE:

ALTITUDE	FLIGHT VISIBILITY (STATUE MILES)	DISTANCE FROM CLOUDS
1,200 feet or less above the surface regardless of the MSL altitude	3	500 feet below, 1,000 feet above, 2,000 feet horizontal
More than 1,200 feet above the surface but less than 10,000 feet MSL	3	500 feet below, 1,000 feet above, 2,000 feet horizontal
More than 1,200 feet above the surface and at or above 10,000 feet MSL	5	1,000 feet below, 1,000 feet above, 1 mile horizontal

### WHY DO THE RULES CHANGE AT 10,000 FEET MSL?

The distance and visibility requirements change at 10,000 feet has to do with aviation speed limits. Below 10,000 feet, the FAA limits aircraft to a top speed of 250 knots, and they may not exceed this speed unless specific circumstances are present (e.g., an SR-71 Blackbird may not be able to travel that slowly without falling from the sky). Above 10,000 feet, pilots may travel at any speed they wish up to Mach 1 (unless air-traffic control has issued a speed restriction).

Skydivers operate under visual flight rules, which are based on the see-and-avoid principle. The idea is that aircraft flying slowly at lower altitudes (below 10,000 feet) are easier to spot, and therefore others do not need as much distance or time to react.

Because aircraft may fly at greater speeds above 10,000 feet, VFR pilots (including skydivers and jump pilots) need more time and therefore a greater distance from clouds to recognize and avoid traffic that may be flying through those clouds. It's also more likely that there will be aircraft in those clouds, since those flying at that altitude will likely be traveling under instrument flight rules, which allow it.

Some people find it helpful to use a mnemonic device such as the one below to remember the cloud clearance rules:

**Over 10k:** 5-111 (visibility 5 miles: 1,000 feet above, 1,000 feet below, 1 mile horizontal)

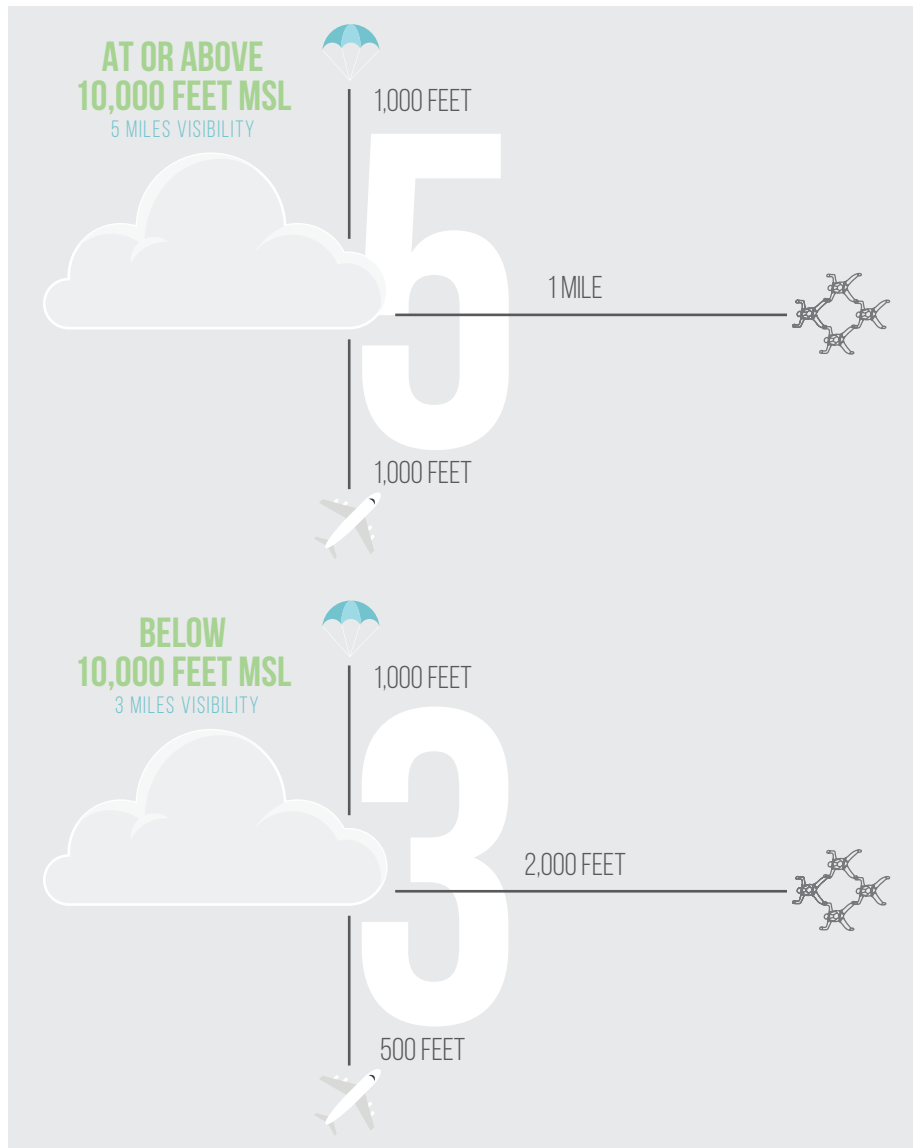
**Under 10k:** 3-152 (visibility 3 miles: 1,000 feet above, 500 feet below, 2,000 feet horizontal)

### WHAT IF I DO BUST A CLOUD?

If you notice clouds on the way to altitude, make note of the altitude of the cloud base, just in case you find yourself in them. If you do find yourself in a cloud in freefall, and you think the base is above your original intended deployment altitude, plan to freefall below the base and deploy at that altitude. However, if you have not cleared the base of the clouds when you arrive at your intended deployment altitude, you should go ahead and deploy in the cloud. In other words, don't go low waiting to clear the base of the cloud. In the worst-case scenario, the cloud base may reach all the way to the ground (i.e., if there's a fog layer). Pull at your intended altitude. If you are tracking or wingsuiting, especially in a group, maintain a straight course.

Control your opening as much as possible as you open so your canopy stays on heading. Once you are under canopy and have performed a controllability check, fly using a gentle turn to the right (but don't spiral!) to avoid flying into another jumper's airspace.

It is your responsibility as a jumper to make sure that you have a clear spot. Never hesitate to ask the pilot for a go-around, but if no opening presents itself, all jumpers on the load should exit below the cloud base (if altitude permits) or land with the aircraft.



Using an aerial map and a sheet of paper to simulate a cloud, instructor Niklas Daniel demonstrates how to get a sense of scale and determine horizontal separation from clouds.



#### ABOUT THE AUTHOR

Niklas Daniel, D-28906, is co-founder of AXIS Flight School located at Skydive Arizona in Eloy. AXIS offers professional coaching in various disciplines for individuals, as well as teams. For more information, visit [www.axisflightschool.com](http://www.axisflightschool.com).