OPERATING LIMITATIONS: HEIGHT, SPEED, MINIMUM VISIBILITY AND CLOUD CLEARANCE

In this lecture, we'll be going over four operating limitations of your small unmanned aerial system under the Part 107 regulations:

- It may not be flown faster than a groundspeed of 87 knots, which is equivalent to 100 miles per hour;
- Minimum visibility, as observed from where you're operating the sUAS from / where your transmitter is, may not be less than 3 statute miles (sm); and
- If there are clouds, the UA must be at least 500 feet below the clouds and at least 2,000 feet horizontally from the clouds.

And just a quick note on that last point, because I get this question from students quite a bit. The cloud clearance language is a bit confusing.

What the FAA is saying is that if you're flying directly below clouds or a cloud base, you need to make sure that you're at least 500 feet below the clouds. You can fly directly below clouds, you just need to maintain that distance. If you see clouds, but they are not directly above your UAV, then you do not need to maintain the 500 foot part of the rule.

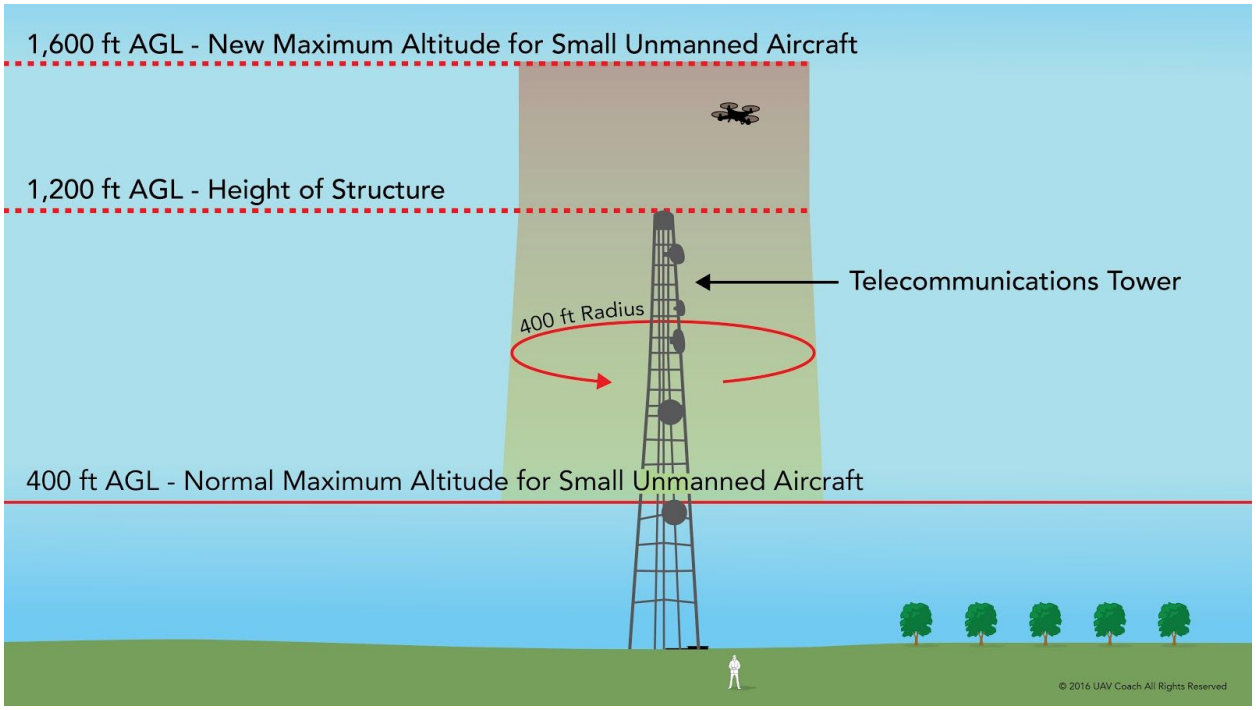
But what about 2,000 feet?

If you're flying at the same altitude as clouds, like if you were in a mountainous environment, you need to distance yourself horizontally from those clouds at

least 2,000 feet. The 2,000 feet part of this rule only applies horizontally, meaning if you're operating at the same altitude as the clouds.

Maximum Altitude Limit

Under Part 107, a Remote Pilot-in-Command cannot fly an unmanned aircraft higher than 400 feet above ground level (AGL), unless it's flown within a 400-foot radius of a structure and does not fly higher than 400 feet above the structure's immediate uppermost limit.



So if there's a 1,200 ft. telecommunications tower, you can inspect it with your UAS, as long as you're flying within 400 ft. of the tower both horizontally and above its highest point at all times. If flying above a structure means you will be

entering controlled airspace, be aware of that fact and follow air traffic control (ATC) procedures, which we cover in other lectures.