



Questions and Answers about Recreational/Hobby Drone Operation

Q: Is a drone considered an aircraft?

A: Yes. According to the FAA a drone is an unmanned aircraft. Of note, anytime you fly your drone in the National Airspace (NAS) you are considered by the FAA to be a pilot. This means the operator must comply with any temporary flight restrictions (TFR) and Public Law 112-95 Section 336, which requires adhering to a set of community-based safety guidelines such as those of the Academy of Model Aeronautics (AMA). An excellent resource to use in determining any TFRs, hospital helipad and airport locations and their contact information is the B4UFLY Smartphone App. <https://www.faa.gov/uas/b4ufly/>

Q: Is a hospital helipad considered an airport?

A: Yes.

Q: If a drone is being flown within 5 miles of a hospital helipad/airport, is the recreational drone operator required to notify the hospital/airport? And how high can they be flown within those 5 miles?

A. The hospital/airport must be notified if the drone is being operated within 5 miles of the hospital helipad/airport and it is required to be flown at or below 400' for recreational operators. This is according to PL 112-95 (a) (5) Section 336. The higher someone flies, the more difficult it is to comply with AMA guideline A.2.
(a) "Yield the right of way to all human-carrying aircraft" and the more likely to violate the regulations in Title 14 Code of Federal Regulations – Aeronautics and Space.
Commercial drone operators with a Section 333 Exemption must notify the airport/public heliport prior to operation of a drone between 2-5 nautical miles of the airport depending upon the type of airport. They are only allowed to fly at or below 400'.

Q. What is the average distance a drone can fly from the pilot/operator?

A. Public Law 112-95 requires hobbyists to maintain visual line of sight. That means being able to see which way your drone is headed, and the airspace around it. This will depend entirely on the size of the drone but a good rule of thumb is ¼ mile.

Q. Do you have to have a pilot's license or special training to fly a drone for recreational use?

A. Not at this time. The operator must comply with Public Law 112-95 Section 336, which requires complying with community-based safety guidelines (read AMA safety guidelines). Commercial drone operators who have a Section 333 exemption must have a sport/recreational pilot or airworthiness certificate.

Q. Do you have to register your recreational drone?

A. As of December 21, 2015 all recreational drones must be registered with the FAA. <https://www.faa.gov/uas/registration>

Q: Are drones allowed to fly at night? And are they lit?

A. Only recreational or hobby drones can be flown at night but they have to remain within visual line of site of the operator. This is hard to do in the dark depending upon where you are. They do have lighting but it is very small and hard to see depending upon the environment. Currently commercial drones are only allowed to be flown during daylight hours.

Q. Can drones be picked up on radar?

A. Due to their size this is not likely. They are also not picked up by HTAWS or TIS.

Q. Do drones emit any sort of squawk or discreet code?

A. Not at this time but will most likely in the future as that equipment becomes smaller.



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Q. Why is the operation of a drone at a scene of an accident or close to a hospital helipad a potential danger to the air medical helicopter, its crew and patient?

A. There are many reasons: Potential mid-air collision, failure of the drone resulting in a crash, delay in landing/lift off and access to the patient due to interference by the drone, and distraction of the flight and ground crew from their duties due to the presence of the drone. Of note, drones have a much higher crash rate than do manned aircraft. At police scenes, drones can also put law enforcement in unsafe situations by exposing their locations, tactical movements, and disturbing evidence.

Q. Can injury be caused to those on the ground by a failure of the drone during flight, lift off or landing?

A. Yes. People have been injured, sent to ER, and even killed.

Q. What kind of liability does a drone operator incur when operating a drone?

A. The drone operator can be held liable for any damages to property, animals, and/or persons caused by their drone. The AMA does provide its members with liability coverage. Check with your homeowner's insurance agent for your specific coverage.

Q. How long do the batteries last when flying a drone before it must return to the operator or land?

A. Battery technology is continually advancing, but at this time 10-18 minutes on average, maybe a little longer.

Q. What is the field of view of the average drone camera?

A. About 150 degrees.

Q. How fast does a recreational drone fly?

A. It depends upon the drone – 40 mph is the average top speed – but larger, more expensive drones can fly in excess of 100 mph. For a drone, it is not about speed, it is about capturing video footage.

Q. Can recreational drones be flown in a U.S. National Park?

A. Drones are prohibited in all national park service controlled land and water in the U.S for safety and noise reasons. They can disrupt, traumatize, and potentially injure wildlife and ruin the outdoor experience for other visitors. Should they fail in flight, they can also create a safety risk to anything and anyone in their path.

Q. What advice do we have for those new to drone operation?

1. Join a local drone club or an organization like the Academy of Model Aeronautics (AMA) to learn how to maintain and safely fly your drone from those who are experienced.
2. Take the time to educate yourself on the rules and guidelines
3. When an aircraft is present, land your drone till the aircraft has departed the area.
4. Keep your drone away from law enforcement, EMS and fire operations. It may be tempting to take photos and video footage, but by doing you so can endanger those on the ground and delay putting the fire out, getting the patient to the care they need or jeopardize a criminal investigation.
5. Finally, remember to respect the privacy and safety of those around you.

For questions please contact [Jayce Commo](#) or [Tammy Chatman](#).

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Public Law 112-95

SEC. 336. SPECIAL RULE FOR MODEL AIRCRAFT.

- (a) IN GENERAL.—Notwithstanding any other provision of law relating to the incorporation of unmanned aircraft systems into Federal Aviation Administration plans and policies, including this subtitle, the Administrator of the Federal Aviation Administration may not promulgate any rule or regulation regarding a model aircraft, or an aircraft being developed as a model aircraft, if—
- (1) the aircraft is flown strictly for hobby or recreational use;
 - (2) the aircraft is operated in accordance with a community based set of safety guidelines (see the AMA safety guidelines below) and within the programming of a nationwide community-based organization;
 - (3) the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
 - (4) the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
 - (5) when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport)).
- (b) STATUTORY CONSTRUCTION.—Nothing in this section shall be construed to limit the authority of the Administrator to pursue enforcement action against persons operating model aircraft who endanger the safety of the national airspace system.
- (c) MODEL AIRCRAFT DEFINED.—In this section, the term “model aircraft” means an unmanned aircraft that is—
- (1) capable of sustained flight in the atmosphere;
 - (2) flown within visual line of sight of the person operating the aircraft; and
 - (3) flown for hobby or recreational purposes.

Academy of Model Aeronautics National Model Aircraft Safety Code Effective January 1, 2014

- A. GENERAL: A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation, education and/or competition. All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.
1. Model aircraft will not be flown:
 - (a) In a careless or reckless manner.
 - (b) At a location where model aircraft activities are prohibited.
 2. Model aircraft pilots will:
 - (a) Yield the right of way to all human-carrying aircraft.
 - (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D.)
 - (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport without notifying the airport operator.
 - (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
 - (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Airplane program. (AMA Document 520-A.)
 - (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors.)
 - (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
 - (h) Not operate model aircraft while under the influence of alcohol or while using any drug that could adversely affect the pilot's ability to safely control the model.



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- (i) Not operate model aircraft carrying pyrotechnic devices that explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.

Exceptions:

- Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
 - Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
 - Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document. (AMA Document #718.)
- (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A.)
3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
- (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
 - (b) An inexperienced pilot is assisted by an experienced pilot.
4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. RADIO CONTROL (RC)

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. At all flying sites a safety line(s) must be established in front of which all flying takes place. (AMA Document #706.)
 - (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
 - (b) At air shows or demonstrations, a straight safety line must be established.
 - (c) An area away from the safety line must be maintained for spectators.
 - (d) Intentional flying behind the safety line is prohibited.
4. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
5. RC model aircraft will not knowingly operate within three (3) miles of any pre-existing flying site without a frequency-management agreement. (AMA Documents #922 and #923.)
6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flightline.
7. Under no circumstances may a pilot or other person touch an outdoor model aircraft in flight while it is still under power, except to divert it from striking an individual.
8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times. Hand-held illumination systems are inadequate for night flying operations.
9. The pilot of an RC model aircraft shall:
 - (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
 - (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.
 - (c) Fly using the assistance of autopilot or stabilization system only in accordance with the procedures outlined in AMA Document #560.



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C. FREE FLIGHT

1. Must be at least 100 feet downwind of spectators and automobile parking when the model aircraft is launched.
2. Launch area must be clear of all individuals except mechanics, officials, and other fliers.
3. An effective device will be used to extinguish any fuse on the model aircraft after the fuse has completed its function.

D. CONTROL LINE

1. The complete control system (including the safety thong where applicable) must have an inspection and pull test prior to flying.
2. The pull test will be in accordance with the current Competition Regulations for the applicable model aircraft category.
3. Model aircraft not fitting a specific category shall use those pull-test requirements as indicated for Control Line Precision Aerobatics.
4. The flying area must be clear of all utility wires or poles and a model aircraft will not be flown closer than 50 feet to any above-ground electric utility lines.
5. The flying area must be clear of all nonessential participants and spectators before the engine is started.