

# FAA Announces Final Rules to Further Integrate Drones Into the National Airspace System

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On 28 December 2020, the Federal Aviation Administration (FAA) announced two final rules that will allow for expanded unmanned aircraft system (UAS or, more commonly, drones) operations and further integrate UAS into the National Airspace System: the Remote Identification of Unmanned Aircraft Rule (Remote ID Rule) and the Operation of Small Unmanned Aircraft Systems Over People and At Night Rule (Operations Rule). The rules are expected to be published in the Federal Register in January 2021, and would become effective 60 days after publication. The two rules and their implications are summarized below.

## Remote ID Rule

The Remote ID Rule<sup>1</sup> establishes a new requirement that drones must broadcast a remote identification signal for the drone either through built-in technology or through a separate device that can be attached to the drone. The FAA describes the remote identification as a “digital license plate” for drones. Under the rule, remote identification messages will include information such as the serial number of the drone or the broadcast module; information about the coordinates, altitude, and velocity of the drone; and information about the drone’s control station or take-off location. The Remote ID Rule applies to drones that must be registered, which includes all drones operated for any purpose that are over 0.55 pounds (lbs.), and all drones operated for commercial purposes regardless of their size.

The purpose of the Remote ID Rule is to assist in the integration of drones into the National Airspace System. The FAA believes that the Remote ID Rule will provide important information to law enforcement and other public safety officials. In addition, the hope is that the Remote ID Rule will lead to a reduction in interference between drones and manned aircraft. Most significantly for drone

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operators, the Remote ID Rule is seen by the FAA as one of the “building blocks in the unmanned traffic management ecosystem,” and a step toward beyond visual line of sight (BVLOS) drone operations. Although the Remote ID Rule will not, alone, permit BVLOS operations, the FAA believes that remote identification information will ultimately lead to the development of technologies that will allow for such operations.

The Remote ID Rule has an exception for drones flown only in FAA-Recognized Identification Areas. These areas can be established by certain community-based organizations or educational institutions that make an application to the FAA. The FAA will begin accepting applications to establish these areas 18 months after the effective date of the rule.

Under the Remote ID Rule, manufacturers generally must produce drones with built-in broadcasting capabilities starting 18 months after the effective date of the rule (reduced from an originally proposed two years in the proposed rulemaking for the Remote ID Rule) and must show that the broadcast module meets certain minimum performance requirements. In addition, within 30 months, all drones being operated must be compliant with the rule (reduced from an originally proposed three years in the proposed rule).

## **Operations Rule**

Part 107 currently prohibits (1) drone operations over people who were not participating in the operation unless the person was in a covered structure or stationary vehicle and (2) drone flights at night. To date, drone operators have been required to obtain waivers in order to fly in either of those circumstances. The Operations Rule will change those rules when it becomes effective.<sup>2</sup> Under the Operations Rule, routine operations of small drones (i.e., drones weighing under 55 lbs.) over uninvolved people and at night will be permitted without a waiver if specific criteria are met.

### **Operating at Night**

The Operations Rule allows drone operators who complete additional training to fly their unmanned aircraft at night. In order to help prevent collisions, these drones must be equipped with anti-collision flashing lights that can be seen for three statute miles. Notably, the FAA has granted a significant number of waivers to operators seeking to operate unmanned aircraft at night—it was by far the most commonly granted waiver by the FAA. The Operations Rule will largely remove the need for these waivers.

### **Operating Over People**

The Operations Rule will permit routine operations of some drones over uninvolved persons without a waiver. Whether these operations will be permitted, and in which situations, will depend on the type of drone being operated—namely the drone’s weight and the amount of damage a drone could potentially cause to people or property on the ground. In summary, operations over uninvolved people will be allowed when these four categories of drones are used:

- Category 1 drones include small drones weighing less than 0.55 lbs. that contain no exposed rotating parts that would lacerate human skin. Category 1 drones must meet the Remote ID Rule requirements but are otherwise free to operate over people. The Operations Rule allows manufacturers to market retrofit propeller guards to install on existing small drones to make them Category 1 eligible.

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- Categories 2 and 3 drones are defined not by their weight, but by the potential severity of any injury that they could cause. In other words, drones may fall into Category 2 or 3 depending on the amount of force that the drone could cause to a person on the ground. Category 2 drones have a lower impact threshold (11-foot-pound (ft.-lbs.) of kinetic energy) than Category 3 drones (25-ft.-lbs. of kinetic energy). As a result, Category 3 drones have more restrictions than Category 2 drones. UAS manufacturers will need to declare that a drone they create is either a Category 2 or 3 drone through an FAA-accepted means of compliance. A voluntary consensus organization or an individual may submit proposed means of compliance for the FAA's review. Before such a means of compliance is approved, it does not appear that any drones will fit into either Category 2 or 3.
    - As with Category 1 drones, Category 2 and 3 drones cannot have rotating parts that could lacerate an individual. Category 2 drones must also meet Remote ID Rule requirements.
    - Category 3 drones may not be operated over open-air assemblies of people. They may only be operated over people at a location that has restricted access, so long as the people there are on notice that the drone may fly over them.
  - Category 4 includes drones that have an airworthiness certificate issued under FAA regulations. These drones must be operated according to the operating limitations specified in the approved Flight Manual, and the operating limitations must not prohibit operation over people.

The Operations Rule also restricts flights over moving vehicles. Category 1, 2, and 3 drones may fly over moving vehicles if they remain over a closed- or restricted-access site and all people inside the moving vehicle must be on notice that a drone may fly over them, or, in the alternative, the drones may simply avoid sustained flight over moving vehicles. Category 4 drones are permitted to fly over moving vehicles if they continue to meet the requirements of Category 4.

## Effects of the New Rules

The Remote ID and Operations Rules form the next steps in the FAA's incremental integration of drones into the national airspace. Although the Remote ID Rule does not itself permit any expanded operations, it will hopefully provide regulators with additional information regarding drones to allow expanded drone operations in the future. The Remote ID Rule should also give more confidence to the drone industry by helping to prevent drone interference with manned aircraft and deterring individuals from violating FAA regulations. The changes of the Operations Rule are more tangible as they will help operators to avoid seeking waivers from the FAA. All told, the FAA's new rules should spur the expansion of current drone uses (now and in the future).

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<sup>1</sup>The text of the Remote ID Rule can be found [here](#). The FAA's executive summary of the rule is available [here](#).

<sup>2</sup>The text of the Operations Rule is available [here](#). The FAA's executive summary of the rule is also available [here](#).

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