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FAA: Drone Manufacturers Must Self-Regulate

The FAA Doesn't Trust Drone Operators to Act Responsibly, and Manufacturers Are Now on the Hook

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In October of 2018, the Federal Aviation Authority Reauthorization Act ("2018 Act") was signed into law. The new law comes with a set of regulations which for the first time extend the FAA's authority over the manufacturers of drones. For convenience's sake, in this article I will use the term "drone" to describe what the FAA calls a small unmanned aircraft system (sUAS). Before the 2018 Act was signed into law, the only regulations concerning drones were limited to the pilots and their operations of drones. Now, manufacturers are tasked with knowing and understanding the FAA Rules to lawfully make and sell drones in the United States.

Manufacturers might wonder why they are suddenly the target of FAA authority. Recently, the FAA Modernization and Reform Act of 2012 formally integrated drones and other small unmanned aircraft systems into the national airspace system. Drone pilots who wanted to use a drone for commercial purpose were required to learn the regulation and pass a certification exam to earn a drone pilot license. As a licensed pilot, I can confirm that the test is thorough and imparts a meaningful understanding of the safe operation of an aircraft within the national airspace system. However, under those 2012 changes, drone pilots whether professional or hobbyist still bore sole responsibility for safe operation of their aircraft.

Since 2012, drones have quickly become a serious threat to the safe operation of the national airspace system. First, drones have become so simple to use that anyone could buy a drone off the shelf of nearly any major electronics store and fly it within a few minutes and without any training. Second, drones have become so advanced and so powerful that they are capable of flying greater distances from the operator while maintaining complete control. Further, the development and improvements of wireless camera technology—which lets the drone pilot see a real-time feed through a camera mounted on the drone—is a likely culprit for why drones have seen such a recent surge in hobbyist and use. A hobbyist can legally buy and fly a drone without any clue about the complex rules that govern the airspace system, which has created an unjustifiable risk of misuse, accidents, and possibly even death.

The FAA's rule is intended to impose safety standards on manufacturers. The formal mission of the FAA is to provide the safest, most efficient airspace system in the world. Prior regulations were considered insufficient to preserve the safe operation of the national airspace system in light of advances in drone technology. Because of these advances, the FAA is no longer comfortable leaving the responsibility of safe operation solely within the hands of drone pilots. While drone pilots will also fall under increased scrutiny in the 2018 Act, drone manufacturers are now responsible for implementing safety standards that will force compliance by drone pilots.

The obligations on drone manufacturers are set forth in Section 345 of the 2018 Act, and compliance is mandatory. The FAA Administrator will set a process for authorizing manufacturers to self-certify that the drones they produce comply with the relevant safety standards. To introduce a drone into interstate commerce, the drone must be either self-certified by the manufacturer or approved by the FAA Administrator. The self-certification process for a drone requires the manufacturer to issue a statement of compliance to the FAA Administrator which must:

> (1) identify the aircraft make, model, range of serial numbers, and any applicable consensus safety standards used and accepted by the FAA Administrator;
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> (2) state that the aircraft make and model meets the provisions of the consensus safety standards;

(3) state that the aircraft make and model conforms to the manufacturer's design data and is manufactured in a way that ensures consistency across units in the production process in order to meet the applicable consensus safety standards accepted by the Administrator;

(4) state that the manufacturer will make available to the Administrator, operators, or customers

(A) the aircraft's operating instructions, which conform to the consensus safety standards identified in paragraph (1); and

(B) the aircraft's recommended maintenance and inspection procedures, which conform to the consensus safety standards identified in paragraph (1);

(5) state that the manufacturer will monitor safety-of-flight issues and take action to ensure it meets the consensus safety standards identified in paragraph (1) and report these issues and subsequent actions to the Administrator;

(6) state that at the request of the Administrator, the manufacturer will provide reasonable access for the Administrator to its facilities for the purposes of overseeing compliance with this section; and

(7) state that the manufacturer, in accordance with the consensus safety standards accepted by the Federal Aviation Administration, has—

(A) ground and flight tested random samples of the aircraft;

(B) found the sample aircraft performance acceptable; and

(C) determined that the make and model of aircraft is suitable for safe operation.

Manufacturers who make false statements of compliance run the risk of losing their ability to self-certify their drones. Losing the ability to self-certify will thus require a manufacturer to receive FAA Administrator approval of all makes and models of drones they intend to introduce into interstate commerce, which would be a severe barrier to the efficient production and sale of drones.

The problem for manufacturers who want to be first-to-market once the rules are created is that the safety standards do not yet exist. The Administrator of the FAA will, over the next few months, begin creating a list of consensus safety standards related to the design, production, and modification of small unmanned aircraft systems. The process of creating these consensus safety standards is set forth in detail in the 2018 Act.

Without specific knowledge of the rules, manufacturers can nevertheless reasonably predict what the safety standards will be. Mandatory safety provisions have been implemented by several existing drone manufacturers already, though no uniform baseline standard exists.

Examples of safety provisions include:

- Restricting the maximum height above ground level for drone operation
- Restricting the maximum distance from the user for drone operation
- Restricting the time of day that drones can be operated
- Restricting operation in geo-fenced areas using GPS to prevent flight in prohibited areas
- Requiring the pilot pass an exam covering basic safe operation rules before an initial flight
- Requiring proof of a pilot's license to operate a drone under the rules governing commercial operation
- Prohibiting drones from being operated by a user on a moving vehicle

Drone manufacturers who seek to comply with likely safety restrictions should focus on prospective FAA regulations, and also consult with a licensed pilot regarding the existing rules of operation within the national airspace system. Once a manufacturer complies with any rules set forth by the FAA Administrator, it will be able to bring its drones to market and maintain their ability to self-certify their products as compliant with the FAA.

Shumaker, Loop & Kendrick, LLP is pleased to note that Jeremy Halpern is a Shumaker attorney and is licensed under Part 107 as a Remote Pilot for small unmanned aerial systems.