



421 Aviation Way
Frederick, Maryland 21701

T. 301-695-2000
F. 301-695-2375

www.aopa.org

April 22, 2015

Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue, SE
West Building Ground Floor, Room W12-140
Washington, DC 20590-0001

Re: Docket Number FAA 2015-0150 Notice of Proposed Rulemaking; Operation and Certification of Small Unmanned Aircraft Systems

The Aircraft Owners and Pilots Association (AOPA) submits these comments to the Federal Aviation Administration's (FAA) proposed rules for operation and certification of small unmanned aircraft systems (UAS) for commercial use in the national airspace system. AOPA has been a long-time advocate for implementation of small commercial UAS rules that ensure the safety of manned aircraft and we are encouraged that the FAA has taken this important step towards safe integration. Additionally, small commercial UAS must be integrated into the national airspace system without decreasing or restricting access for current users and without imposing any additional costs or equipage requirements for existing users.

The proposed rules are a good first step toward safe integration and generally provide protection for general aviation aircraft. However, AOPA is concerned that there are 'gaps' in the proposed rule that must be addressed to ensure that small commercial UAS are integrated safely and do not conflict with manned operations.

Specifically, AOPA requests that the FAA lower the maximum altitude from 500 feet to 400 feet to de-conflict small commercial UAS with manned aircraft. Additionally, the FAA should prohibit small commercial UAS operations near airports and landing facilities in Class G airspace. We also recommend that the FAA consider additional aircraft registration and operator requirements, as well as operational limitations to ensure that small commercial UAS operations are safe.

Proposed Operational Limitations

AOPA supports the weight limit of less than 55 pounds, visual line-of-sight, daylight only operations. We also support the requirement for the small commercial UAS to yield the right-of-way to other aircraft and the VFR weather minimums as outlined in the proposed rule.

While AOPA supports the requirement for ATC approval for operations in Class B, C, D and E airspace, we believe that an additional limitation should be added to protect general aviation airports in Class G airspace. As currently written, the proposed rule allows small commercial UAS to operate near airports in Class G airspace. This creates a potential safety hazard for manned aircraft and AOPA recommends that the FAA add an operational limitation that prohibits small commercial UAS operations near airports in Class G airspace. The rationale for a prohibition, rather than requiring ATC approval is that airports in Class G airspace are typically smaller, do not have associated air traffic control facilities and are less likely to have staff on-sight to coordinate

approvals for small commercial UAS operations. The best way to protect these airports is to prohibit small commercial UAS operations near airports in Class G airspace.

AOPA also contends that the proposed 500 feet above the ground altitude limitation creates a potential safety hazard for manned aircraft. The FAA should instead limit small commercial UAS to 400 feet above the ground or less. Presently, model aircraft are restricted to 400 feet above the ground and this should also be the ceiling for all small commercial UAS operations. If the FAA allows operations at 500 feet above the ground, which is the same altitude limitation that is applied to most GA aircraft operations; it would completely eliminate the buffer for manned operations and increase the potential for a mid-air collision. Maintaining the ceiling at 400 feet above the ground gives manned aircraft and small commercial UAS a small buffer.

In addition to the proposed operational limitations, the FAA should consider requiring small commercial UAS to use geo-fencing technology to ensure the safety and reliability of their operations. Geo-fencing is a feature in a software program, widely used on small commercial UAS, that uses the global positioning system (GPS) or radio frequency identification to define geographical boundaries. A geo-fence is a virtual barrier that can prevent UAS from entering airspace that is off limits.

Finally, the FAA does not address how small commercial UAS operators will comply with the altitude limits in the proposed rules. Unless the small commercial UAS is equipped with an altimeter, it can be assumed that the FAA is relying on the operator to visually determine the altitude which could be problematic and imprecise. The FAA must clarify how an operator can ensure that their small commercial UAS aircraft remains in compliance with the airspace regulations.

Proposed Operator Certification and Responsibilities

It is important that operators of small commercial UAS have an appropriate level of aeronautical knowledge and AOPA believes that the proposed rules adequately address this issue. AOPA supports the establishment of an unmanned aircraft operator certificate with a small commercial UAS rating and the requirement to pass an aeronautical knowledge test administered by an FAA approved testing center. AOPA also supports the requirement to pass a recurrent knowledge test every 24 months; however, we believe that the FAA should consider allowing this recurrent training to be 'web-based'. This is a service that industry could provide and would result in a lower cost of compliance and more widespread access to recurrent training.

AOPA also supports the requirement for a preflight inspection to ensure the small commercial UAS is airworthy. This is an important requirement, if we are to maintain safety for all users of the national airspace system.

Proposed Aircraft Requirements

AOPA is in favor of the Aircraft Registration requirement for small commercial UAS and required aircraft markings. However, because small commercial UAS will be operating VFR and because the actual marking on the aircraft would be too small to read, AOPA believes the FAA should implement additional requirements to ensure that an aircraft can be identified in the event of an accident, incident or violation.

April 22, 2015

In addition to the registration, the FAA should require the establishment of a publically accessible small commercial UAS database to provide the public with information on UAS operations for the purpose of situational awareness and potential enforcement action.

The vast majority of small commercial UAS have the ability to transmit registration and position information and this database, along with geo-fencing, would provide effective safety and enforcement oversight of small commercial UAS operations.

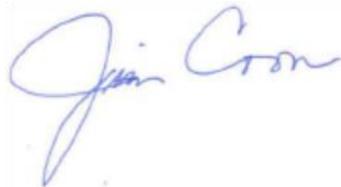
The FAA should also consider a minimum equipment requirement for small commercial UAS operations under this rule. Instrumentation should include altimeter and altitude instruments and potentially autopilot for operations in controlled airspace. Autopilot in controlled airspace would provide a layer of safety for operations in airspace that contains a concentration of manned aircraft.

Recreational Small UAS Operations

While the proposed rule does not address recreational small UAS operations, AOPA would ask that the FAA take additional steps to issue clear and definitive guidance for recreational operators and encourage manufacturers to include information on FAA guidance in their packaging materials. The FAA should also work with AOPA and remote control aircraft groups to conduct education outreach, and publish guidance to help pilots file timely report of reckless UAS operations.

Thank you for the opportunity to comment on this important issue.

Sincerely,



Jim Coon
Senior Vice President
Government Affairs

The Aircraft Owners and Pilots Association (AOPA) is a not-for-profit individual membership organization of General Aviation Pilots and Aircraft Owners. AOPA's mission is to effectively serve the interests of its members and establish, maintain and articulate positions of leadership to promote the economy, safety, utility and popularity of flight in general aviation aircraft. Representing two thirds of all pilots in the United States, AOPA is the largest civil aviation organization the world.