

Integrating Unmanned Aircraft Systems into U.S. Airspace

Overview: Proposed Small UAS Rule

Presented to: ICAO RPAS Symposium 2015

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Office

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Federal Aviation
Administration



Small UAS Notice of Proposed Rulemaking

Currently in DRAFT

NPRM published to Federal Register February 23, 2015

Provisions in NPRM are PROPOSED

Could be revised after the public comment period
Until final rule is issued, all civil non-recreational/hobby operations must be authorized on a case-by-case basis

Model Aircraft Operations

Proposed Rule would not apply to model aircraft that satisfy all criteria in Public Law 112-95, Section 336
Proposed codification of Section 336 in Part 101

Proposed Aircraft Requirements

Proposed Pilot Requirements

Proposed Operational Requirements

Proposed Operational Limitations

- ❖ UAS must weigh less than 55 lbs. (25 kg)
- ❖ Maximum airspeed of 100 mph (87 knots)
- ❖ Maximum altitude of 500 feet above ground level
- ❖ Daylight-only operations (official sunrise to official sunset, local time)
- ❖ UAS may not operate over any persons not directly involved in the operation
- ❖ No operations in Class A airspace (18,000 feet and above)
- ❖ Operations in Class B, C, D and E airspaces require ATC permission
- ❖ Operations in Class G airspace allowed without ATC permission
- ❖ Must yield right-of-way to other aircraft, manned or unmanned
- ❖ No careless or reckless operations

Micro UAS Proposal

NPRM Preamble includes Micro UAS proposal with constraints:

- Lower weight (max 2kg, 4.4 pounds)
- Frangible construction
- Lower speed (max 30 knots)
- Lower altitude (max 400 feet AGL)
- Manual control over flight path
- Distance of at least 5 nautical miles from airport
- Operations in Class G airspace

Includes flight over people not involved with the operation and ability to obtain special operator certificate through self-certification

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Proposed Aircraft Requirements

- ❖ **FAA airworthiness not required**
 - Operator must maintain UAS in condition for safe operation
 - Operator must inspect UAS to ensure it is in a condition for safe operation prior to flight
- ❖ **Aircraft registration required**
 - Same requirements that apply to all aircraft
- ❖ **Aircraft markings required**
 - If aircraft is too small to display markings in standard size, aircraft needs to display marking in the largest practical manner



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- ❖ **UAS pilots considered “operators”**
- ❖ **Operators must:**
 - Pass an aeronautical knowledge test at an FAA-approved knowledge testing center
 - Be vetted by the Transportation Security Administration
 - Obtain an unmanned aircraft operator certificate with a small UAS rating
 - Pass a recurrent aeronautical knowledge test every 24 months
 - Be at least 17 years old



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Proposed Operational Requirements

- ❖ Visual line of sight (VLOS) only
- ❖ May use visual observer, but not required
- ❖ First-person view camera cannot satisfy “see-and-avoid” requirement but can be used as long as requirement is satisfied in other ways
- ❖ No person may act as an operator or visual observer for more than one unmanned aircraft operation at one time
- ❖ Requires preflight inspection by the operator
- ❖ A person may not operate a UAS if he or she knows or has reason to know of any physical or mental condition that would interfere with the safe operation of a small UAS
- ❖ Each UAS must be registered with the FAA and must visibly display its registration number on the aircraft

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