Integrating Unmanned Aircraft Systems into U.S. Airspace

Overview:
Proposed Small UAS Rule

Presented to: ICAO RPAS Symposium 2015

By: Jim Williams, Manager, FAA UAS Integration Office

Date: March 24, 2015
Small UAS Notice of Proposed Rulemaking

**Proposed Aircraft Requirements**
Currently in DRAFT
NPRM published to Federal Register February 23, 2015

**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

**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

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Federal Aviation Administration
www.faa.gov/uas

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- **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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- 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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