

**BEFORE THE  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
WASHINGTON, D.C.**

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**IN THE MATTER OF**

**Notice of Interpretation of the Special Rule for Model Aircraft**

**Docket Number: FAA-2014-0396**

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**COMMENTS OF THE SMALL UAV COALITION**

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**Introduction**

The Small UAV Coalition<sup>1</sup> is pleased to provide comments to the Federal Aviation Administration's (FAA) notice of interpretation of the special rule for "model aircraft" and section 336 of the FAA Modernization and Reform Act of 2012.<sup>2</sup> This notice of interpretation aims to establish requirements for model aircraft.

Members of the Small UAV Coalition share an interest in advancing regulatory and policy changes that will permit the operation of small UAVs in the near term, within and beyond the line of sight, with varying degrees of autonomy, for commercial, consumer, recreational and philanthropic purposes. Coalition members are concerned with the current pace of regulatory and policy developments, particularly in the U.S. but also in other countries, that has impeded and will continue to impede small UAV development, services, and benefits for consumers. We encourage the FAA to establish, as soon as possible, a regulatory environment for small UAVs so that globally important development work and operations can occur here in the U.S.

Although the focus of these comments is the FAA's model aircraft notice of interpretation, the Coalition recognizes that UAV policy in the U.S. may have ramifications worldwide. There are many UAV manufacturers outside of the U.S. who are, or soon will be, ready to market their products and services in the U.S., and many U.S. corporations have expanded their small UAV

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<sup>1</sup> The members of the Small UAV Coalition are 3D Robotics, Airware, Amazon Prime Air, DJI Innovations, Google, GoPro, and Parrot.

<sup>2</sup> "Interpretation of the Special Rule for Model Aircraft," 79 FR 36171 (2014).

development activities overseas. Moreover, other countries may follow or adopt U.S. regulations or policies for their domestic UAV operations. It should be a U.S. policy imperative, therefore, to foster innovative UAV technologies that promise consumer and public benefits, as soon as safely possible. Reasonable regulations, waivers and exemptions, with safety as their foundation, will encourage domestic and international opportunities.

Clarity and clear guidelines are needed from the FAA for development and operation of small UAVs, whether those UAVs are used for hobby and modeling or commercial purposes. Because of their size, weight, speed, and the altitude at which they will typically operate, small UAVs pose considerably less safety risk than larger UAVs. The Small UAV Coalition urges the FAA to adopt an evaluation framework for UAV operations that weighs the relative safety issues and risks of UAVs.

The Coalition encourages the FAA to consider the following as it clarifies its interpretation of rules for model aircraft.

### **Scope**

The FAA should revise its notice in this proceeding to state explicitly that the standards for model aircraft are limited to its interpretation of section 336, as may be further clarified and revised in this proceeding. If there are specific additional rules the FAA intends to apply to model aircraft operators, then the FAA should list those requirements in its clarified interpretation.<sup>3</sup>

### **The FAA's oversight framework should be based on the safety risk posed by particular UAV operations**

We applaud the statement that the "FAA's oversight of model aircraft has been guided by the risk that these operations present."<sup>4</sup> Risk should be the touchstone for all FAA rules governing the operation of UAVs, except where Congress has specified particular standards and requirements, as it did in section 336. While the Federal Aviation Act and FAA policy historically have imposed greater requirements on commercial operators of manned aircraft, that distinction results from a legitimate public concern over passenger safety. Obviously, those concerns do not apply to unmanned aerial vehicles. Thus, the FAA should not promulgate different rules for small UAVs based upon whether they are used for recreational or commercial purposes. Although Congress in section 336 has limited the special rule for model aircraft to aircraft "flown for hobby or recreational purposes," the FAA need not and should not apply a commercial/non-commercial distinction in its small UAV rulemaking under section 332 or when considering petitions for exemption and other requests under section 333. All regulations and policies with respect to small UAVs should be risk-based.

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<sup>3</sup> Neither Advisory Circular 91-57, Model Aircraft Operating Standards (June 9, 1981), or the Notice of Policy, "Unmanned Aircraft Operations in the National Airspace System," 72 FR 6689 (2007), discussed in the notice in this proceeding, was a rule promulgated under the Administrative Procedure Act. Thus, statements in the notice in this proceeding regarding these documents are likewise not rules, legislative or interpretive.

<sup>4</sup> 79 FR at 36172.

### **The FAA should be explicit about the regulations applicable to model aircraft**

The FAA states that model aircraft that do not meet the section 336 requirements (as interpreted by the FAA in this notice) “are subject to all existing FAA regulations, as well as future rulemaking action, and the FAA intends to apply its regulations to such unmanned aircraft.”<sup>5</sup> This statement is vague and over broad. There are many regulations that were adopted with only manned aircraft in mind and that do not logically apply to unmanned aerial vehicles. Petitions for exemption recently filed with the FAA under section 333 identify several regulations that do not logically apply to UAV operations.<sup>6</sup> The FAA should not apply any regulation to the operation of a UAV where that regulation does not advance safety, and where that regulation has not been specifically identified for the UAV community in advance.

### **The line of sight requirement for model aircraft and small UAVs**

The FAA should reconsider its interpretation of the section 336 requirement that a model aircraft must be operated within the “visual line of sight of the person operating the aircraft.”<sup>7</sup> Its interpretation of “visual line of sight” is unnecessarily narrow. For example, its interpretation would prohibit the use of first-person view (FPV) technologies, which give operators the perspective of a pilot’s view via an onboard camera or video monitor. There are a number of additional vision-enhancing devices that could increase the margin of safety, such as binoculars, night vision goggles, and powered vision magnifying devices, and should be approved for use by the FAA as meeting the Congressional purpose in imposing a “visual line of sight” requirement for “model aircraft.”

For small UAVs that are not model aircraft, there is no general statutory or regulatory requirement for operation within the line of sight.<sup>8</sup> In determining when a line of sight requirement is warranted, as well as determining what constitutes line of sight<sup>9</sup>, the FAA’s rules and policies for all small UAVs should be based on the level of risk and whether application of technology might obviate a line of sight requirement or, alternatively, sufficiently augment human natural vision so that its use may satisfy a “visual line of sight” standard. Many of the companies in the small UAV industry intend to offer philanthropic services above the navigable airspace at 65,000 feet. Any effort by the FAA to restrict such operation in any interpretation would have a chilling effect on activities that will be highly useful to consumers worldwide.

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<sup>5</sup> *Id.* at 36173.

<sup>6</sup> For example, 14 C.F.R. 91.9(b), 91.203(a) and (b) require certain documents to be carried on board the aircraft.

<sup>7</sup> 79 FR at 36172.

<sup>8</sup> In section 333, Congress included operations within visual line of sight as a factor for the FAA to evaluate in determining whether to permit UAV operations in advance of and independent of the small UAV rulemaking. In section 334, Congress provided that public agencies may operate small UAVs under a simplified approval procedure provided the operations are, among other requirements, within the line of sight of the operator.

<sup>9</sup> 79 FR at 36173, Notes 1 and 2.

### **What constitutes an operation strictly for hobby or recreational use**

The Coalition does not believe the FAA should apply its precedents on whether an operation is for “compensation or hire” to the statutory phrase “strictly for hobby or recreational use” in section 336. There are many acrobatic, modeling, and hobby events, such as demonstrations and competitions, at which some form of payment or compensation is made, without these events being considered run of the mill operations for compensation or hire. Rather, FAA should apply, by analogy, certain enumerated exceptions in 14 C.F.R. 91.501(b), such as training flights and demonstration flights, and not disqualify such operations from being “model aircraft” operations. The FAA should also recognize that a competition prize does not make the model aircraft winner ineligible for the model aircraft classification.

### **Obtaining Air Traffic Control clearance**

The Notice states that “FAA would expect modelers operating model aircraft in airspace covered by 91.126 through 91.135 and part 73 to obtain authorization from air traffic control before operating.” With respect to operations in Class G airspace, for example, section 91.126 requires communications with a control tower prior to 4 nautical miles from the airport, but only for operations of an aircraft “to, from, through, or on an airport having an operational control tower[.]” The FAA should clarify that model aircraft operating in Class G airspace operating closer than 4 nautical miles, but not intending to operate “to, from, or through” the airport should not be required to obtain clearance from or even communicate with ATC.

### **Limited objection authority for airport operators**

Section 336 requires a model aircraft operator who intends to operate a UAV within 5 miles of an airport to provide notice of such operation to the airport operator and the airport air traffic control tower, if there is one present at the airport.<sup>10</sup> The statute does not require the operator to obtain the consent of the airport operator or control tower, but the FAA states that “it *expects* the model aircraft operator will not conduct the proposed flights over the objection of the airport operator or control tower.”<sup>11</sup> There are thousands of non-towered airfields where there are no commercial aircraft operations, and thousands where there is no readily identifiable or reachable “airport operator.” At a minimum, the FAA should construe this statutory language to apply only to airports listed on the National Plan of Integrated Airport Systems (“NPIAS”). More importantly, where the model aircraft operation will not be flown over airport property or departure or arrival paths, the FAA should not require any notice to airport operators or ATC. With respect to whether a model aircraft operator needs to obtain consent, for non-towered airports where commercial aircraft operations are conducted, airport operators should be allowed to object only if the model aircraft operation will traverse airport property or pose a risk to departing or arriving aircraft off airport property. Airport operators should not be given unfettered discretion to object to model aircraft operations.

We note that operating a model aircraft within 5 miles of an airport does not take that operation outside of “model aircraft” operations; rather, it only allows FAA to impose safety regulations on

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<sup>10</sup> P.L. 112-95, p. 199.

<sup>11</sup> 79 FR at 36175 (emphasis added).

that operation. The Coalition recommends that with respect to operations within the 5 mile radius of an airport, the FAA not impose any additional regulations other than contained in Part 91 and discussed above with respect to ATC communication and otherwise where the operation would be conducted on airport property or in the departure or arrival paths.

### **Certain regulations were not intended to apply to small UAVs**

In subsection (b) of section 336, Congress properly did not disturb the FAA's authority to take enforcement action against operators "who endanger the safety of the national airspace system."<sup>12</sup> However, the FAA references 14 CFR 91.119(c)<sup>13</sup>, which prohibits operation of an aircraft "closer than 500 feet to any person, vessel, vehicle, or structure[,]" but only over areas that are not congested. Over a congested area, subsection (b) of 91.119 prohibits operating an aircraft under 1,000 AGL, except when necessary for takeoff or landing. We do not believe either of these subsections, when written, contemplated operation of small UAVs, model aircraft or otherwise, which are routinely operated under these altitudes, over areas both congested and not. It is entirely appropriate for the FAA to take enforcement action against a model aircraft or small UAV operator for careless or reckless operation in violation of 14 C.F.R. 91.13, but operation of a small UAV under the altitudes in section 91.119 should not be presumed to warrant enforcement action. The tension between section 91.119 and small UAV operations illustrate why it is imperative that the FAA promulgate rules governing small UAVs that take into account the different and lesser risks posed by these operations. Moreover, Congress has given authority under section 333 to authorize UAV operations in advance of and distinct from the section 332 rulemaking. The FAA should exercise its discretion under section 333 to authorize small UAV operations for testing and operation domestically, so that this important development work can remain in the United States and set the right tone for international cooperation.

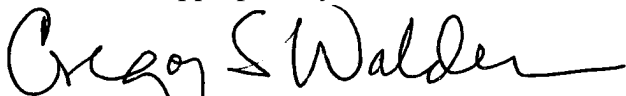
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<sup>12</sup> P.L. 112-95, p. 68.

<sup>13</sup> 79 FR at 36175.

## Conclusion

The Small UAV Coalition thanks the FAA for the opportunity to comment on the FAA's notice of interpretation for its special rule for model aircraft. In general, clarity and clear guidelines are needed from the FAA for operation of small UAVs, whether those UAVs are used for recreational or commercial purposes. In addition, when adopting rules or making other determinations, the FAA should recognize this nascent industry and be explicit about regulations it believes are applicable to small UAVs. The Small UAV Coalition believes that implementing an oversight approach based on safety and risk for all small UAVs will allow the FAA to respond to these, and other, issues appropriately.



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