



**Comments of**  
**DRONE RACING LEAGUE**  
**on the NPRM regarding Remote Identification of Unmanned Aircraft Systems**  
**(Docket No. FAA-2019-1100)**

Drone Racing League (DRL) respectfully submits these comments on the Federal Aviation Administration's (FAA) *Notice of Proposed Rulemaking on Remote Identification of Unmanned Aircraft Systems (Part 89)* (NPRM).

**BACKGROUND**

DRL is the premier, global drone racing league for elite first person view (FPV) UAS pilots. As a technology, sports, event, and media company, DRL combines proprietary technology and robust operational practices that ensure the safety and security of its drone racing events. In 2019, the DRL season generated over 1 billion press impressions, more than 100 million broadcast viewers across 90 global markets, and over 240 million total online video views.

DRL events provide significant public value. They generate substantial economic benefits for our sponsors and the communities that support and host our events. They raise the profile of unmanned aircraft systems (UAS) operations and demonstrate best safety practices, thereby helping to gain public trust and comfort with UAS operations generally. They also capture the imagination of many viewers and spectators and inspire the next generation to consider participating in the aviation sector and related innovation efforts, including by promoting STEM education. DRL technology also helps to drive innovation in the UAS sector, including by enhancing levels of pilot proficiency, competency, qualification and skills for advanced UAS operations.

As an industry leader in the field of UAS safety, DRL understands that a remote identification (Remote ID) framework is necessary in order for the FAA, national security agencies, and law enforcement to have the situational awareness that will enable the safe and



efficient integration of UAS into the National Airspace System (NAS). DRL also acknowledges that the FAA faces significant challenges as it grapples with the differing views of the many stakeholders with a keen interest in Remote ID and further integration of UAS into the NAS.

Against this background, DRL takes this opportunity to explain a few critical flaws with the proposed rule, which – if left unaddressed in the Final Rule – would have grave consequences for the future of UAS flying event organizations like DRL and all of the benefits that such organizations provide.

### **EXECUTIVE SUMMARY**

The laudatory purposes behind the FAA's remote ID proposal – to eliminate anonymity in order to enforce UAS laws and rules, as well as promote safety and security – simply do not apply in the professional drone racing context.

Indeed, DRL is very concerned that the proposed Remote ID rule would significantly curtail future commercial drone racing or other similar UAS aviation events in the United States. The NPRM fails to consider the undue and potentially serious impact of the proposed rule on UAS organizations and events like DRL's. The applicability and scope of the proposed Remote ID rule are much too broad. It sweeps professional drone racing UAS and UAS aviation racing events like DRL's within its restrictions and prohibitions, without any resulting safety or security benefits.

The underlying rationale for the broad requirements of the FAA's proposed rule does not implicate UAS events, which use particular types of UAS in a very controlled environment. There is no anonymity at DRL's professional drone racing events. Indeed, DRL's highly experienced and skilled pilots conduct specific types of highly-controlled operations under very strict safety protocols and in conjunction with input and specific authorization from the FAA. In particular, the proposed restrictions pertaining to (1) design/production standards for all UAS manufactured for use within the United States and (2) operating standards and UAS operations without Remote ID would effectively prevent the production and operation of DRL racing UAS and the racing events themselves.



For these reasons, as detailed below, DRL urges the FAA to provide a narrowly-tailored carve-out in the Final Rule that exempts commercial UAS event organizations, their operations, and their UAS at these events from compliance with certain aspects of the Remote ID rule. In addition, DRL requests that the FAA expressly clarify that nothing in the Final Rule is intended to prevent or otherwise restrict the operation and use of UAS indoors.

## **DISCUSSION**

### **1. Design/Production and Operating Requirements**

Under the proposed rule, the FAA recognizes that certain categories of UAS do not require compliance with Remote ID. Indeed, the proposal carves out several categories of UAS, including amateur-built UAS, U.S. Government UAS, UAS where the unmanned aircraft (UA) weighs less than 0.55 pounds, and UAS designed or produced exclusively for the purpose of aeronautical research or to show compliance with regulations. All other UAS manufactured for operation within the United States must be produced in compliance with the requirements for either standard or limited Remote ID UAS. [Sections 89.501 and 89.510]

DRL UAS do not fall into one of the proposed "exception" categories referenced above, and thus the design and production standards of proposed Subpart F would apply to DRL UAS if the Final Rule is not changed. But, as with the other categories of exempt UAS described above, the design and production standards provide no discernible safety and security enhancements for DRL UAS. Although DRL UAS do not have remote ID technology, they are only operated by highly experienced UAS pilots under strict safety protocols in very specific types of highly-controlled environments and in conjunction with input and specific authorization from the FAA. If the Final Rule compels remote ID capabilities for the UAS of DRL and other similar UAS event organizations, it would greatly curtail drone racing as we know it. The required addition of such technology would affect the delicate weight, balance, communications links, and aerodynamics of these racing UAS and, as explained below, the operating environment for these UAS races is such that Remote ID functionality cannot be assured. Accordingly, DRL urges the FAA to add UAS produced by UAS event organizations like DRL solely for use by highly experienced pilots under strict safety protocols in very specific types of highly-controlled UAS event environments, pursuant to specific authorization from the FAA, as



another category of UAS that do not need to comply with the Final Rule's design/production standards.

In addition, the proposed rule states that a UA cannot take off if the required self-test of the UAS reveals that the required Remote ID equipment is not functioning. [Sections 89.310 and 89.320] Outdoor DRL UAS events take place in complex environments where Remote ID equipment may not function reliably. Global positioning systems experience signal attenuation and scattering by walls, scaffolding, signage, and other large objects surrounding a DRL course line. Similarly, broadcast functions are inhibited by the electromagnetic and radio frequency interference or "noise" of DRL venues in which large numbers of electrical circuits, radio systems, and spectator cell phones are operating simultaneously. Accordingly, even if manufactured to meet the rule's design/production requirements (which, as DRL explains above, its UAS should not be subject to), DRL UAS would still fail to consistently operate with Remote ID and therefore would be precluded from taking off in any given race or related operation. Therefore, DRL requests that the FAA exempt commercial aviation event organization UAS, like DRL's, that are performing highly-controlled operations with highly experienced UAS pilots under very strict safety protocols and with FAA's input and specific authorization from the operating requirements for standard and limited Remote ID.

## **2. Operation Without Remote ID**

The NPRM identifies only two circumstances under which a UAS without Remote ID, such as DRL UAS, would be permitted to fly: **(A)** within visual line of sight within the boundaries of a fixed-site FAA-recognized identification area (FRIA) and **(B)** for the purpose of FAA-authorized aeronautical research or FAA authorized demonstrations of compliance with the regulations. [Section 89.120] These circumstances fail to account for the particular characteristics of UAS events, such as the FPV and roving nature of DRL races.

**(A).** DRL provides an annual season of FPV UAS events that take place at changing, iconic locations throughout the United States such as the Hard Rock Stadium in Miami, Florida, and Allianz Field in Minneapolis, Minnesota. DRL course lines are highly customized to each of these locations and designed exclusively for FPV racing, which occurs beyond visual line of sight. DRL combines proprietary technology and best-in-class operational practices to mitigate



all safety and security risks associated with these UAS events. Indeed, DRL must provide evidence of these mitigations to the FAA when obtaining a certificate of waiver or authorization (COA) under 14 C.F.R. Part 107 to conduct such operations outdoors in the NAS. As currently written (i.e., limited to CBOs), DRL would not even be eligible to apply for a FRIA designation, nor could new racing locations seek FRIA designations given the limited 12-month period in which an applicant can seek FRIA designation. But, even if the Final Rule changes those two parts of the FRIA rule so that DRL and other UAS event organizations could apply for FRIA designations beyond 12 months, DRL would still be unable to provide FPV racing events within the United States if it were required to hold its racing events and operations within visual line of sight and/or inside the boundaries of a geographically-confined FRIA.

**(B).** The “aeronautical research” and “compliance with regulations” exemption does not provide DRL with a safe harbor either. DRL’s racing events are commercial sporting events. Therefore, although not expressly defined in the proposed regulations themselves, our operations cannot reasonably be considered “aeronautical research” or “demonstrations of compliance with the regulations”.

Without an exemption from the Final Rule’s operational standards and requirement for Remote ID, DRL and other UAS event organizations would be unable to deliver FPV and similar events along with the substantial benefits thereof to the American public, communities, and businesses. In order to avoid such a result, the Final Rule should provide that UAS being flown as part of commercial UAS events, like DRL’s, in highly-controlled operations with highly experienced UAS pilots under very strict safety protocols, with input and specific authorization from the FAA, are not required to have Remote ID.

To this point, DRL firmly believes that UAS events, which are limited in time and space and operated under strict safety protocols, should be administered by the FAA in the same manner as other aviation events (e.g., air shows): through an application-based FAA COA process that provides temporary access to protected air space through risk mitigation. The FAA’s introduction of 14 C.F.R. Part 107 in June 2016 was a significant step towards achieving this alignment. Since the introduction of Part 107, DRL has successfully integrated its operations with the NAS under this regulation to safely and securely deliver outdoor race events in the United States without any incidents.



In light of this successful track record and the impractical application of the proposed rule to DRL and similar UAS event organizations and operations, DRL recommends that an additional narrowly-tailored category be added to those in Section 89.120 where Remote ID is not required for operations. This proposed carve-out should be limited to operations by UAS being flown as part of event organizations, like DRL, in highly-controlled operations with highly experienced UAS pilots under very strict safety protocols, with input and specific authorization from the FAA, via the Part 107 application-based COA process (or eventual UAS aviation event policy).

### **3. Indoor Operations**

Although intended to establish requirements for the Remote ID of UAS operated in the airspace of the United States, the NPRM outlines design/production and operating standards that will indirectly prevent the flight of UAS during indoor DRL events. This indirect regulation of indoor operations, which are not in the NAS, is beyond the FAA's jurisdiction, and thus the FAA must correct this in the Final Rule.

Under the proposed rule, a person would be prohibited from producing a UAS for operation in the United States unless the UAS is "designed and produced to meet the minimum performance requirements" for Standard or Limited Remote ID UAS. In effect, "all UAS with remote identification would be designed and produced such that the remote identification functionality is always enabled and cannot be disabled except as otherwise authorized by the Administrator."<sup>1</sup> The minimum Standard and Limited Remote ID UAS performance requirements require the UAS to be designed and produced to: (1) automatically test remote ID functionality when the UAS is powered on; and (2) prohibit the UA from taking off if remote ID equipment is not functional. This could effectively preclude indoor UAS operations without Remote ID. But, the FAA should not indirectly regulate indoor operations which are not within its airspace jurisdiction. The Final Rule should be modified to make clear that nothing in the rule is meant to prevent indoor operations of UAS without Remote ID and that the design, production, and operating requirements of the rule do not apply to UAS operated indoors. Absent such clarification, UAS event organizations like DRL would effectively be unable to have indoor UAS

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<sup>1</sup> 84 Fed. Reg. at 72465.



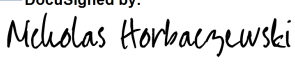
racing events, a particularly troubling result given that indoor operations are not within the airspace and add absolutely no safety or security risk to the airspace.

### **CONCLUSION**

Although a momentous step in the evolution of United States UAS safety policy, the NPRM cannot be reasonably applied to the design/production or operation of DRL racing UAS. If required to comply with the strictest interpretation of the NPRM, DRL would be unable to consistently operate UAS with Remote ID capability and be limited to visual line of sight flight within the confines of a FRIA, which is impractical in the professional UAS racing environment.

By exempting a narrowly defined set of UAS events and UAS from the Final Rule, and continuing to administer them in the same manner as air shows, the FAA will support the ongoing success of drone racing, whilst ensuring the safety and security of the general public, event participants and surrounding property.

DRL values its collaborative relationship with the United States Government and looks forward to working with the FAA to successfully implement a modified version of remote identification that continues to enable and advance DRL in the United States.

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