



**Federal
Aviation
Administration**

FAA Proposed Unmanned Aircraft Systems (UAS) Remote Identification Rules

A Proposed Rule by the Federal Aviation
Administration on **12/31/2019**

Terry Hock
Jefco Aeromod'lers Club Meeting
Feb 5, 2020



FEDERAL REGISTER

The Daily Journal of the United States Government



PR Proposed Rule

Remote Identification of Unmanned Aircraft Systems

A Proposed Rule by the Federal Aviation Administration on **12/31/2019**



This document has a comment period that ends in 27 days. (03/02/2020)

SUBMIT A FORMAL COMMENT

Read the **8893 public comments**

Notice of Proposed Rulemaking (NPRM) 319 page Document

PUBLISHED DOCUMENT

Start Printed Page 72438

AGENCY:

Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION:

Notice of proposed rulemaking.

SUMMARY:

This action would require the remote identification of unmanned aircraft

DOCUMENT DETAILS

Printed version:

[PDF](#)

Publication Date:

[12/31/2019](#)

Agencies:

[Federal Aviation Administration](#)

Dates:

Send comments on or before
March 2, 2020.

Comments Close:

03/02/2020



8893



FAA Definitions (49 USC § 44801(11)):

(11) UNMANNED AIRCRAFT.

The term “*unmanned aircraft*” means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.

(12) UNMANNED AIRCRAFT SYSTEM.—The term “*unmanned aircraft system*” means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the operator to operate safely and efficiently in the national airspace system.

Drones, Planes, Gliders, Helicopters

All RC Aircraft Manufactured or Built by User

1	Recreational Flyers and Modeler Community-Based Organization (AMA)	Fly your UAS for fun ! (Not for money)
2	Certificated Remote Pilots Including Commercial Operators	Fly under UAS Part 107 rules (example: photography for money)
3	Public Safety & Government Users	Operate with a Certificate of Waiver or Authorization (COA) to be able to self-certify UAS and operators for flights performing governmental functions.



Full Scale Aircraft Minimum Altitude

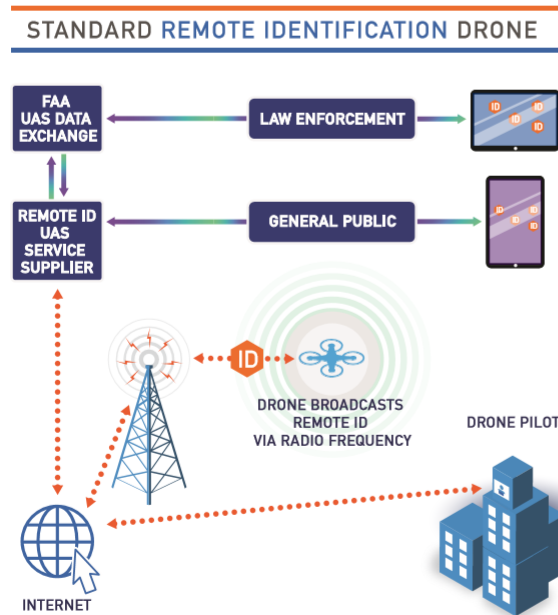
FAA Title 14 of the Code of Federal Regulations, Section 91.119 of the General Operating and Flight Minimum safe altitudes; general Except when necessary for takeoff or landing:

- (a) Anywhere – An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.
- (b) Over congested areas – Over any congested area of a city, town, or settlement, or over any open-air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.
- (c) Over other than congested areas – An altitude of 500 feet above the surface except over open water or sparsely populated areas. In that case, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

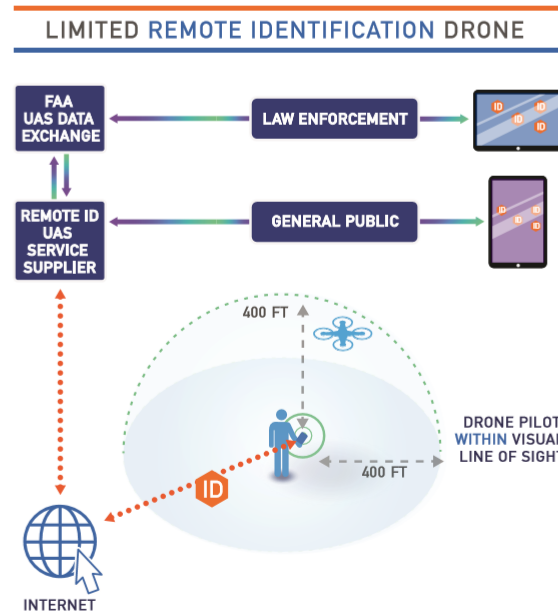


FAA is Proposing 3 Ways to Remotely Identify UAS

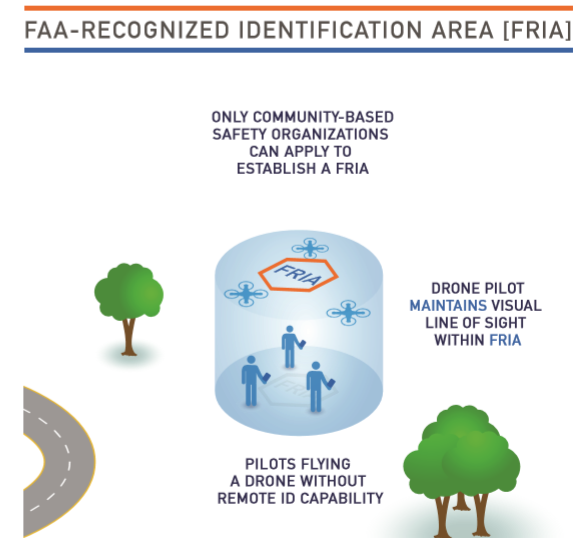
Standard



Limited



FRIA



FAA Motivation

- Safety and Efficiently of the National Air Space
- UAS Traffic Management (UTM)
- Airspace Awareness for FAA and Law Enforcement
- Safety, efficiency and security of Air Commerce.

Standard Remote Identification

Allows flight with no additional restrictions

If the internet is available at takeoff, the UAS would have to do the following from takeoff to landing:

- 1) Connect to the internet and transmit the required remote identification message through that internet connection to a Remote ID USS
- 2) Broadcast the message elements directly from the unmanned aircraft
- 3) Subscribe to a FAA's chosen 'Remote ID UAS Service Suppliers'

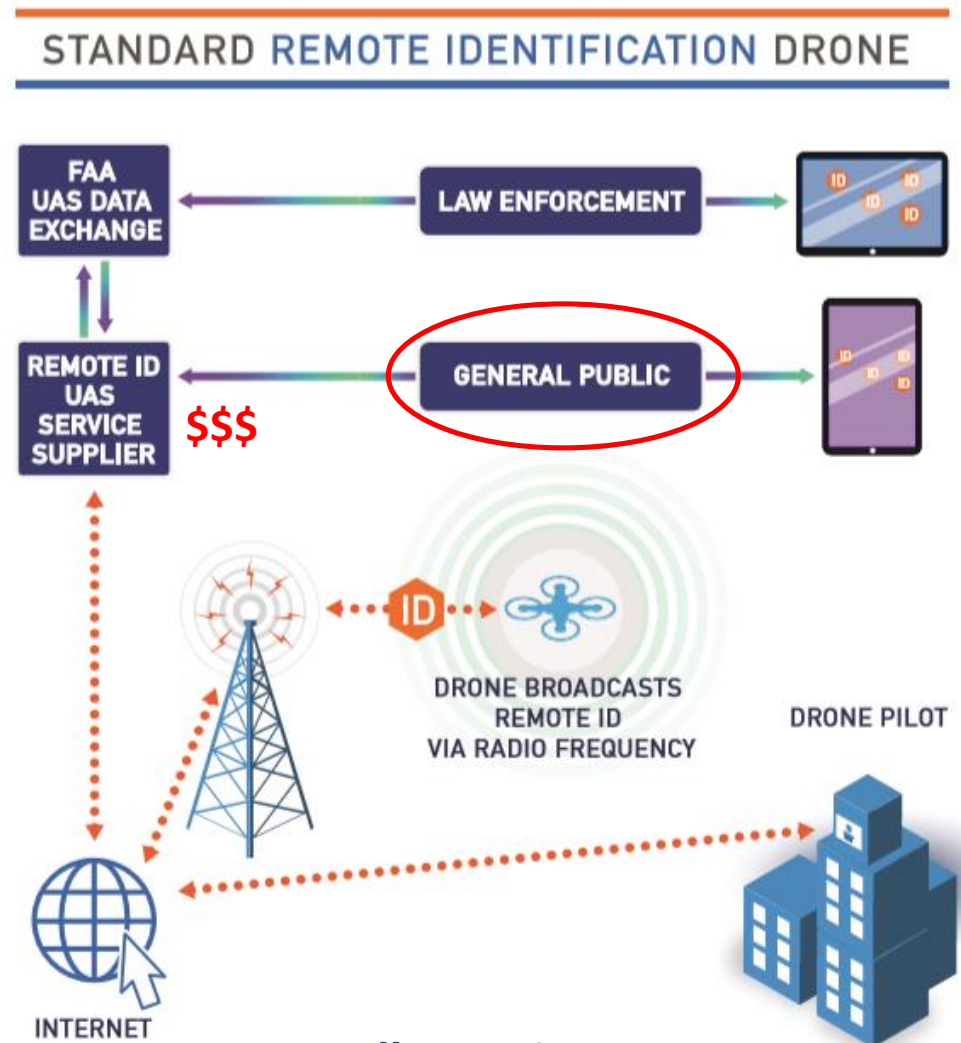
In-flight loss of broadcast capability:

Can still fly if broadcasting ID message

Can Fly Beyond Line of Sight

Message Broadcast & **Publicly Available**:

- 1) UAS ID (Serial number or ID session)
- 2) Altitude (pressure sensor), Latitude & Longitude (LOCATION) of vehicle and **operator**
- 3) Time
- 4) Emergency message when applicable



FAA Illustration



Limited Remote Identification

The UAS would have to do the following from takeoff to landing:

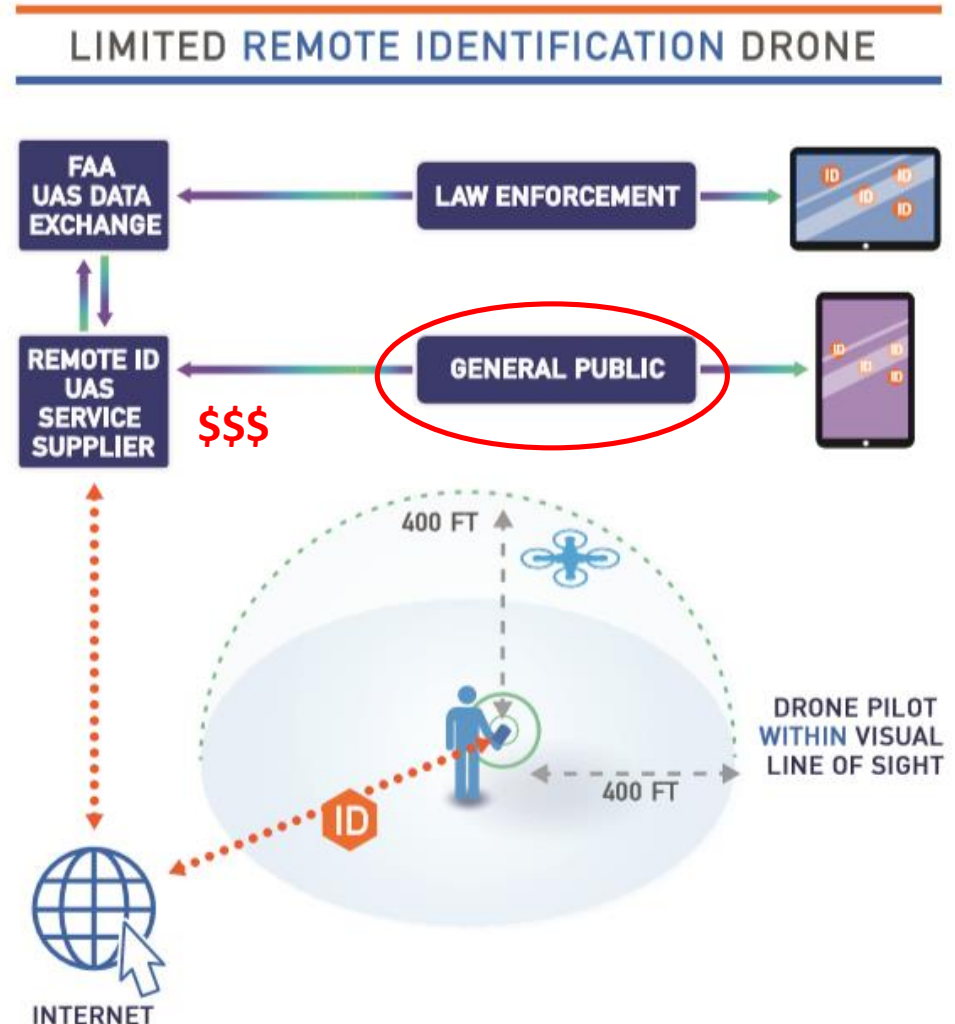
- 1) Connect to the internet and transmit the required remote identification message elements through that internet connection to a Remote ID UAS Service Suppliers (USS)
- 2) **Operated within visual line of sight.**
- 3) **Subscribe** to a FAA's chosen 'Remote ID UAS Service Suppliers

In-flight loss of remote identification:

A person manipulating the flight controls of a limited remote identification UAS would have to land as soon as practicable when it cannot transmit the message elements through an internet connection to a Remote ID USS.

Message Broadcast & **Publically Available**:

- 1) UAS ID (Serial number or ID session)
- 2) Altitude (pressure sensor), Latitude & Longitude (LOCATION) of **operator**
- 3) Time
- 4) Emergency message when applicable



FAA Illustration

FAA Recognized Identification Area

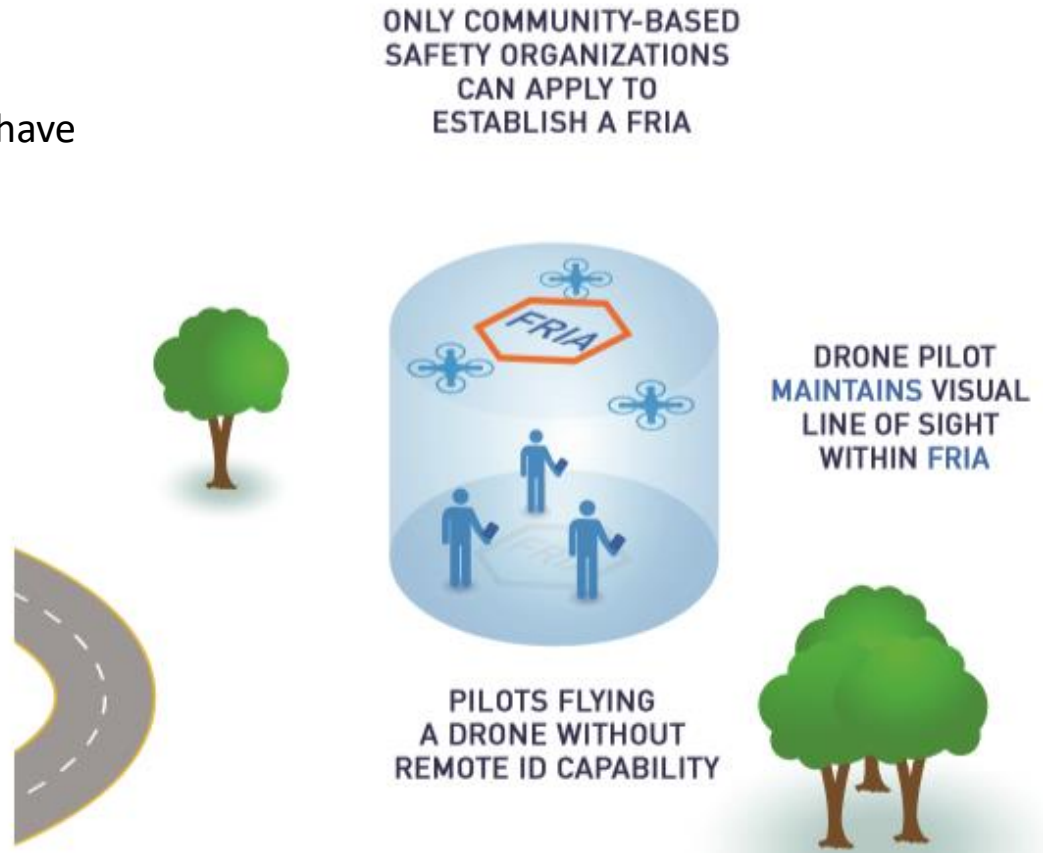
FAA-RECOGNIZED IDENTIFICATION AREA [FRIA]

UAS Without Remote Identification

The **limited number** of UAS that do not have remote identification:

- 1) Fly only within an FAA-recognized identification area (FRIA)
 - a) Registered Community Based organization AMA Flying sites.
- 2) Operate within visual line of sight
- 3) Stay in boundaries of site
- 4) 400 ft altitude limit

5) All Current Park Flyers, Drones, Quad-copters, helicopters can only fly LEGALLY at a FRIA !!!



FAA Illustration



FAA-Recognized Identification Areas (FRIA) Eligibility

Only a community based organization (CBO), i.e. AMA flying fields recognized by the Administrator would be allowed to apply for the establishment of an FAA-recognized identification area.

Request for Application:

- A CBO requesting an FAA-recognized identification area would have to submit an application within 12 calendar months from the effective date of the final rule.
- **The FAA will not consider any applications submitted after this date.**

Summary of Required Documentation for Application:

- Name of the CBO making the request.
- Contact information.
- Physical address of the flight area.
- Latitude and longitude coordinates delineating the geographic boundaries of the proposed Flight area.

Approval Criteria of an FAA-recognized identification area:

- Consider the effects on existing or contemplated airspace capacity
- Critical infrastructure
- Existing or proposed manmade objects
- Natural objects
- Existing use of the land
- Within or close to the proposed FAA-recognized identification area
 - Safe and efficient use of airspace by other aircraft
 - Safety and security of persons or property on the ground



Directly from the FAA UAS ID NPRM

1. UAS OWNERS

The FAA proposes to revise the registration requirements to require all owners of unmanned aircraft to **register each unmanned aircraft individually** when registering under part 48. Furthermore, the owners of standard or limited remote identification unmanned aircraft would have to provide the serial number of all unmanned aircraft registered under part 47 or part 48, on or before the 36th month after the effective date of the final rule. The serial number would establish the unique identity of the unmanned aircraft.

2. UAS OPERATORS

C. UAS WITHOUT REMOTE IDENTIFICATION EQUIPMENT

Under the proposed rule, the vast majority of UAS would be required to have remote identification capability, however as discussed in section X. A. 3, a limited number of UAS would continue to not have remote identification.

The **FAA envisions that upon full implementation of this rule, no unmanned aircraft weighing more than 0.55 pounds will be commercially available** that is not either a standard remote identification UAS or a limited remote identification UAS.



FAA Time Line

- Dec 26, 2019 FAA Releases UAS ID NPRM
- Dec 31, 2019 FAA Publishes UAS ID NPRM for comment
- **March 2, 2020 Comments due to FAA**
- UAS **Operators**: NPRM proposes a 36-month transition period from the date of the rule
- UAS **Manufactures** :NPRM proposes a 24-month transition period from the date of the rule, after all UAS would be required to have an FAA-accepted compliance.

FAA Reasons for UAS Remote ID

Safety – Safety - Safety

Commercial Services (Delivery Service: Amazon, UPS, Walgreens,. . .)




Summary of Proposed FAA Rules

- 1) FAA limits approved flying sites and prohibits the establishment of new sites. (Grandfather?)
 - a) The rule appears designed to phase out these sites over time, rather than treat them as a viable long-term option for complying with remote ID.
- 2) Proposes to register each aircraft (Unique Serial Number for each aircraft)
 - a) This will impose a cost and compliance burden on the model aviation community. Individual registration may make sense for beyond line of sight operations
 - b) It is an unnecessary requirement for aircraft designed to be flown within line of sight
 - c) Aircraft that are built by hand do not have serial numbers, which makes individual registration more difficult.
- 3) Requires ALL manufactures of future UAS (over 0.55 lbs) to have remote ID capability.
 - a) Standard - Broadcast Remote ID
 - b) Remote - Network Remote ID
 - c) Requirement to use UAS Traffic Management (UTM) System (Remote ID UAS Service Supplier) at cost to user \$\$
- 4) The rule requires internet connectivity to support Remote ID.
 - a) Rural areas with little or no internet connectivity would eliminate flying.
- 5) Park Flying would only be allowed with Remote or Limited ID System
- 6) FAA makes no distinguishment between an autonomous UAS with GPS/autopilot beyond line of sight and line of sight with pilot directly controlling flight controls.



More Information AMA & FAA





[Club Info](#) [Weather](#) [Classifieds](#) [Events](#) [Resources](#) [Gallery](#)

[FAA Info](#)
[Resource Links](#)

The FAA Drone Registration Site & Information

- > [FAA Drone Registration Form](#)
- > [FAA Recreational Flyers FAQ](#)
- > [FAA Know Before You Fly FAQ](#)

FAA Proposed Remote Identification of Unmanned Aircraft Systems

- > [FAA Link to Document](#)
- > [AMA IN ACTION ADVOCATING FOR MEMBERS](#)
- > [AMA Template letter to FAA](#)

Google "FAA Remote ID NPRM" for endless information

FAA/USA Presentation by District IX AVP – Rick McCaskill – February 3, 2016

General

Q. What is the definition of a UAS? Is it different from a drone?

A. A UAS is an unmanned aircraft system. A drone and a UAS are the same for registration purposes.

Q: Does the FAA have the authority to require registration of UAS used by modelers and hobbyists?

A: Yes. By statute all aircraft are required to register. Congress has defined "aircraft" to include UAS, regardless of whether they are operated by modelers and hobbyists.

What is the penalty for failing to register?

ffcoeromodlers.com/resources/faa-registration/



FAA example from NPRM

G. Example Operating Scenarios

The FAA is providing these notional scenarios to provide examples of how the FAA envisions the proposed rule would apply to certain common situations.

1. SUBSCRIBING TO A USS

Kim decides to give her daughter Emily a UAS for her birthday. Emily, excited to finally have her own UAS, eagerly unwraps the package so she can begin taking aerial selfies. Under FAA rules, Emily's drone must be registered and therefore comes with remote identification. The UAS will not take off unless it is connected to a Remote ID USS. In order to comply with the remote identification requirement, Kim researches FAA-qualified Remote ID USS on the FAA's website and decides to subscribe to Alpha USS, Inc. Emily's UAS was designed to pair with her smartphone and connect to the Remote ID USS through her smartphone's internet connection. After Emily's UAS connects to Alpha USS, she is able to start using her drone to take selfies.