What is a Drone?
Definitions:

Drone is a generic term for a remote-controlled pilotless aircraft or missile.

The personally-owned drones are referred to by the FAA as “Small Unmanned Aircraft Systems”.

The FAA abbreviates this as sUAS.

They are also referred to as Unmanned Aerial Vehicles or “UAV.”

For our discussion we will concentrate on drones that are personally-owned and weigh more than .55lbs, but less than 55lbs.
The FAA REQUIRES that all sUAS weighing more than .55lbs, but less than 55lbs be registered with the FAA. This registration can be done at www.faa.gov/uas or https://registermyuas.faa.gov

There is a minimal registration fee

The registration is good for three years

The sUAS must be plainly labeled with the registration number

ALL persons operating a sUAS must have this FAA registration in their possession while operating the drone.
Drones that DO NOT require registration (examples):
Online UAS Registration

Applies to all small UAS over 0.55 and weighing less than 55 lbs. flown outside

Owner must provide name, address, email

Non-recreational owners (includes Part 107 and Public COA) must provide make, model, and serial number (if available) of each sUAS

Register through FAA DroneZone
FAA DroneZone

Welcome to the FAADroneZone

Fly sUAS under Part 107

Fly Model Aircraft under Section 336

FAA DroneZone

A one-stop-shop for small UAS needs:
- Registration
- Airspace Authorizations & Waivers
- Operational Waivers
- Accident Reporting
How to Label Your UAS

Mark all aircraft with your registration number before you operate them. You can use:

- **Engraving**
- **Permanent Label**
- **Permanent Marker**

Find registration number on the confirmation screen & in your user profile.

Number must be visible (You can mark inside the battery compartment if it doesn’t require a tool to open.)
Types of sUAS operation

All drone operations will fall into one of three categories:

1. Recreational Flyers
2. Civil/Commercial – referred to as “Part 107”
3. Public Use (Law Enforcement and other government operation)

For our purposes we will only address **Hobby** and **Part 107** operations
Limited Recreational Operations Update

FAA Federal Register Notice published

AC 91-57B

Both documents tell recreational flyers where and how they can fly until the FAA finishes implementing all the parts of 44809

Compliance stance: Helping, not hunting
Statutory Provisions

Fly strictly for recreational purposes.

Fly within the programming of a community-based organization’s set of safety guidelines developed with the FAA.

Fly within visual line of sight of the person operating the aircraft or a visual observer co-located and in direct communication with operator.

Do not interfere with and give way to any manned aircraft.

In controlled airspace, obtain prior FAA authorization before operating and comply with all airspace restrictions and prohibitions.

In Class G airspace, do not fly higher than 400 feet above ground level and comply with all airspace restrictions and prohibitions.

Pass an aeronautical knowledge and safety test and maintain proof of test passage for the FAA or law enforcement upon request.

Register and mark the aircraft per part 48. Keep proof of registration for FAA or law enforcement upon request.
### Big Picture: Until Further Notice

<table>
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<tr>
<th>Where</th>
<th>How</th>
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<tr>
<td>• Under 400 feet and in uncontrolled airspace</td>
<td>• Aeromodeling organization safety guidelines (as long as they don’t conflict with 44809) or;</td>
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<tr>
<td>• Charted fixed recreational flying Sites in controlled airspace</td>
<td>• General guidelines the FAA will post on the FAA.gov/UAS website.</td>
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<tr>
<td>• <a href="http://Udds-faa.opendata.arcgis.com">Udds-faa.opendata.arcgis.com</a></td>
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</table>
FAA’s General Safety Guidelines

Fly only for recreational purposes

Keep your unmanned aircraft within your visual line-of-sight or within the visual line of sight of a visual observer who is co-located and in direct communication with you

Do not fly above 400 feet in uncontrolled (Class G) airspace

Do not fly in controlled airspace without an FAA authorization

Follow all FAA airspace restrictions, including special security instructions and temporary flight restrictions

Never fly near other aircraft

Always give way to all other aircraft

Never fly over groups of people, public events, or stadiums full of people

Never fly near emergency response activities

Never fly under the influence of drugs or alcohol
Key Takeaways for You

In any encounter with a recreational flyer they should:
- Have proof of registration on hand
- Be able to say which set of safety guidelines they are following
- Be at or under 400 feet in class G airspace

In controlled airspace, they need to be flying at a fixed recreational flyer site listed at faa.gov/uas or charted at Udds-faa.opendata.arcgis.com

Use compliance philosophy, risk-based decision making, and seek to help first!
Civil/Commercial Operations:

Commonly called “Part 107” or “107” operation

**Pilot Requirements:**

1. Pilot must be at least 16 years of age
2. Pilot must pass an aeronautical knowledge test at an FAA-approved testing center
3. Pilot must pass vetting by the Transportation Safety Administration (TSA)
4. Pilot Certificate must be in the pilot’s possession while flying and presented to Law Enforcement upon demand

**Aircraft Requirements:**

1. Drone must weigh less than 55 pounds
2. Drone must be registered (registration must be in the pilot’s possession)
Civil/Commercial Operations:

Operating Rules:

1. May fly only on Class G airspace*
2. Must keep aircraft in visual line-of-sight*
3. Must fly under 400 feet*
4. Must fly at or below 100 mph*
5. Must yield right-of-way to manned aircraft*
6. Must NOT fly over people*
7. Must NOT fly from a moving vehicle*

* These rules are subject to waiver by the FAA. The pilot must have the waiver in his possession while flying
sUAS Registration Card Sample:

Federal Aviation Administration

Small UAS Certificate of Registration

CERTIFICATE HOLDER: FIRST LAST

UAS CERTIFICATE NUMBER: FA-333-339A

ISSUED: 12/09/2015  EXPIRES: 12/09/2018

For U.S. citizens, permanent residents, and certain non-citizen U.S. corporations, this document constitutes a Certificate of Registration. For all others, this document represents a recognition of ownership.

For all holders, for all operations other than as a model aircraft under sec. 336 of Pub. L. 112-95, additional safety authority from FAA may be required.

Safety guidelines for flying your unmanned aircraft:
- Fly below 400 feet
- Never fly near other aircraft
- Keep your UAS within visual line of sight
- Keep away from emergency responders
- Never fly over stadiums, sports events or groups of people
- Never fly under the influence of drugs or alcohol
- Never fly within 5 miles of an airport without first contacting air traffic control and airport authorities
Remote Pilot Certificate (Part 107):
FAA Waiver (Sample):

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO
Aerial UAV Services LLC, Responsible Person: Ron Knox
Waiver Number: 107W-2016-00630

ADDRESS
634 Glenwood Drive
Lafayette, CO 80026

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED
Night small unmanned aircraft system (sUAS) operations.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE
14 CFR § 107.29 Daylight operation

STANDARD PROVISIONS
1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is not transferable.

NOTE: This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of the State law or local ordinance.

SPECIAL PROVISIONS
Special provisions Nos. 1 to 11, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from January 23, 2017 to January 31, 2021 and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

JOSEPH V FAGAN JR
JRT

Date: 2017.01.23 08:04:16 -07'00'

General Aviation and Commercial Division, AF5-080
UAS Facility Maps

Depict maximum altitudes that FAA may grant controlled airspace access for Part 107 operations without additional safety analysis

Maps do not authorize operations

- Job aid for airspace authorization requests
- Assists the FAA in streamlining authorization process

All maps are available on FAA website
Low Altitude Authorization and Notification Capability (LAANC)

Goals
- Enable efficient notification and authorization services to small UAS operators
- Provide the data exchange framework for UAS traffic management (UTM)
FAA UAS Traffic Management

Suite of Capabilities:
- LAANC
- Remote ID
- Registration
- Dynamic Airspace
Law Enforcement Response:

Basic Law Enforcement Response D.R.O.N.E.

Direct attention outward and upward, attempt to locate and identify individuals operating the drone. (Look at windows/balconies/roof tops).

Report incident to the FAA Regional Operations Center (ROC). Follow-up assistance can be obtained through FAA Law Enforcement Assistance Program special agents.

Observe the UAS and maintain visibility of the device, look for damage or injured individuals. Note: Battery life is typically 20 to 30 minutes.

Notice features: Identify the type of device (fixed-wing/multi-rotor), its size, shape, color, payload (i.e., video equipment), and activity of device.

Execute appropriate police action: Maintain a safe environment for general public and first responders. Conduct a field interview and document ALL details of the event per the guidance provided by the FAA. [www.faa.gov/uas/resources/law_enforcement/](http://www.faa.gov/uas/resources/law_enforcement/)

Always follow agency policies – Take appropriate action based on the facts and circumstances of the incident and site/area-specific laws and rules. The FAA’s enforcement action does NOT impact ANY enforcement action/s taken by law enforcement.

Local ordinances that may apply include, but are not limited to: Reckless endangerment, criminal mischief, voyeurism, inciting violence.
Reporting the incident to the FAA:

**FAA Drone Incident Reporting**

Document and provide the following information to FAA:

- Identity of operators and witnesses (name, contact information)
- Type of operation (hobby, commercial, public/governmental)
- Type of device(s) and registration information (number/certificate)
- Event location and incident details (date, time, place)
- Evidence collection (photos, video, device confiscation)

Contact your FAA LEAP agent or an FAA Operations Center for assistance.

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<tbody>
<tr>
<td>Western ROC</td>
<td>AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA and WY</td>
<td>425-227-1999</td>
<td><a href="mailto:9-WSA-OPSCTR@faa.gov">9-WSA-OPSCTR@faa.gov</a></td>
</tr>
<tr>
<td>Central ROC</td>
<td>AR, IA, IL, IN, KS, LA, MI, MN, MO, ND, NE, NM, OH, OK, SD, TX and WI</td>
<td>817-222-5006</td>
<td><a href="mailto:9-CSA-ROC@faa.gov">9-CSA-ROC@faa.gov</a></td>
</tr>
<tr>
<td>East ROC</td>
<td>AL, CT, FL, GA, KY, MA, ME, MS, NC, NH, PR, RI, SC, TN, VI and VT</td>
<td>404-305-5180</td>
<td><a href="mailto:9-ESA-ROC@faa.gov">9-ESA-ROC@faa.gov</a></td>
</tr>
<tr>
<td>East ROC</td>
<td>DC, DE, MD, NJ, NY, PA, VA and WV</td>
<td>404-305-5150</td>
<td><a href="mailto:9-ESA-ROC@faa.gov">9-ESA-ROC@faa.gov</a></td>
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</table>
1. Collect information on pilot – Name, DOB, Address, SSN, etc.
2. Collect information on drone – Make, model, registration number, etc.
3. Note any FAA documentation in the pilot’s possession and if it is valid
4. Write a report on the incident, it will be forwarded to the FAA
5. If there are local charges, or if the FAA LEAP office requests, you may seize the drone as evidence (be sure to issue a property receipt).
6. Applicable State Law:
   1. §61.11.1 Operation of Aircraft in a Careless Manner
   2. §61-11-3 Operation of Aircraft without federal certificate
   3. §61-11-5 Certification not in Possession
§61-11-1 - Operation of aircraft in careless manner, while under influence of intoxicating liquor, etc.; hunting or spotting game for purpose of hunting from aircraft

(1) It shall be unlawful for any person to operate an aircraft in the air or on the ground or water, while under the influence of intoxicating liquor, narcotics or other habit-forming drug, OR to operate an aircraft in the air or on the ground or water, in a careless or reckless manner so as to endanger the life or property of another.

(2) It shall be unlawful for any person or persons to pursue, chase, hunt, take or kill any wild game or waterfowl from an aircraft, or to spot and communicate the location of any wild game from an aircraft to another for the purpose of hunting, killing or taking such wild game.

*READ THE ENTIRE STATUE FOR OTHER PROVISIONS*
§61-11-3 (2015)

§61-11-3 – Operation of aircraft without federal certificate, permit, etc.

It shall be unlawful for any person to operate OR cause OR authorize to be operated any civil aircraft within this state unless such aircraft has an appropriate effective certificate, permit or license issued by the United States, if such certificate, permit or license is required by the United States. It shall be unlawful for any person to engage in aeronautics as an airman in the state unless he has an appropriate effective airman certificate, permit, rating or license issued by the United States authorizing him to engage in the particular class of aeronautics in which he is engaged, if such certificate, permit, rating or license is required by the United States.

*READ THE ENTIRE STATUE FOR OTHER PROVISIONS*

§61-11-5 – Possession, display, etc., of federal certificate, permit, etc.

When a certificate, permit, rating or license is required for an airman by the United States, it shall be kept in his personal possession when he is operating within the state and shall be presented for inspection upon the demand of any peace officer, or any other officer of the state or of a municipality...

*READ THE ENTIRE STATUE FOR OTHER PROVISIONS*
Soooo... as a cop, what do I do???

- Part 107 pilots are proud of that fact and will usually provide all documentation even BEFORE you request it. They are usually professionals and know what is required. However, they can try to push limits and look for loopholes to fly over people or at night without the proper waivers.

- At the very least, write a report so that it can be forwarded to the FAA. An FAA investigator will, at the very least, call the pilot to offer instruction and guidance.

- Use arrest as only a last resort. Most pilots just don’t know the rules and will gladly comply when informed of the FAA requirements.

- If you have questions you can contact the FAA LEAP at 404-305-5180.
QUESTIONS???