Overview

Remote Pilot:

- Obtain Part 107 or TRUST certificate
- Choose CBO guidelines (AMA)
- Check for airspace restrictions and weather conditions
- If required, request authorization to fly (LAANC)
- Complete checklist and submit notify-and-fly
- Check the area for air traffic, wildlife, or other hazards
- If required, obtain permission to launch (Private property)

Drone:

- Registration and Remote ID
- Charge batteries and check equipment for possible issues
- Check software updates
- Ensure RID is broadcasting
- Check for proper labeling

Safe Operation:

- Locate the best area to operate from with as few obstacles as possible (best line of sight)
- Attach anti-collision lights and/or RID module as necessary
- Designate a safe area for launch and landing
- Ensure proper connection between drone and controller
- Establish what actions will be taken if an emergency were to occur
- Designate visual observers (required with all FPV drones)
- Check SD card before takeoff
- Limit distractions when possible – wait until after the flight is completed

Flight Guidelines:

- Fly under 400 ft AGL and within line of sight
- Set return to home altitude and safety options accordingly
- Do not interfere with surrounding people or wildlife
- Give way to ALL manned aircraft
- Monitor both drone and surrounding area the entire duration of the flight
- Be cautious of obstacles, wildlife, weather changes, and equipment issues

Safety notes:

- Do not operate a drone over people or vehicles.
- Do not operate a drone from a moving motor vehicle.
- Do not harm or interfere with wildlife.
- Do not operate a drone near active emergency response or law enforcement.
- Do not fly beyond Visual-Line-of-Sight (VLOS).
- Do not exceed 400 Ft Above Ground Level (AGL).
- Do not operate in wildlife management areas.

If you are interrupted or approached by bystanders during a flight, please remember that you are the remote pilot in command. Ask for a moment to land the aircraft safely before taking your eyes off the controls or the aircraft to prevent accidental loss of control.

Websites and Apps to know:

Websites:

dronezone.faa.gov – Register your drone and Remote ID modules

https://trust.pilotinstitute.com – Trust certificate (recreational flyers)

https://www.modelaircraft.org/operating-within-cbo - AMA CBO safety handbook

Apps:

Aloft AirAware – Pilot checklist, Notify and fly

Aloft AirControl – Airspace, Weather, LAANC authorization

Flight Radar 24 – Monitor commercial air traffic

Drone Scanner – Check RID is working properly and monitor nearby airspace for active drones

B4UFLY – FAA recommended app

Introduction

Hello, thank you for coming today. My name is Steven Epperson. I am a certified commercial remote pilot, and the owner of Fly High Photography. Today we will talk about what remote pilots need to know before flying a drone for recreation. We are here to have some fun and fly some drones today, so I'll try to keep the talking part as short and sweet as possible. Please feel free to let me know if you have any questions and if I can't answer them in a simple response, I'll be glad to talk more for a bit after we get through. There are three things we are going to cover the pilot, the drone, and how to fly safely. Once we have briefly covered the basics, I will be giving some pointers on how to fly so you can capture more cinematic footage with your drone. When we are done here you will know everything you need to fly a drone recreationally. Anyone who is interested in commercial flying will need to obtain a part 107 certificate. Commercial flying is anything outside of strictly recreational flying.

The pilot

Fist we are going to get certified to fly. Every remote pilot needs to have their TRUST certificate to fly recreationally. Obtaining your certificate is free and shouldn't take more than 15 minutes. It's simply going over what the rules are for recreational flyers. The TRUST certification is required for recreational flying only, for anything that is not recreational then you will need to have your part 107. A TRUST certificate is still required to fly recreationally even if you already have your Part 107.

In the handout I provided, you can find a link to the Pilot Institute to obtain your TRUST certification. You do not have to use these resources if you decide not to, these are the ones I chose to use.

Please take a moment to complete that now. Be sure to print/save your certificate when completed.

The drone

Next thing we are going to cover is the drone registration and Remote ID. These guidelines apply to any drone over .55lbs or 250 grams, so most drones need to follow this requirement. Drones must be registered with the FAA, and all must broadcast Remote ID now as well. If you have an older drone that does not have remote ID already then you will have to pick up a remote ID module to attach to the drone. Both the drone and RID module will have to be registered with the FAA. Once you have registered the drone, you will be given a number that you must print on the drone. You will find the link to the FAA website on the handout, it's $5 per registered drone/module. The pilot institute also offers free license plate stickers for your drone, just apply, type in your registration numbers and they will mail it to you.

Please register your drone now, I will provide a label today so you can attach your registration number to your drone.

Flying Safely

Now that you all have your Trust Certificate, and your drone is registered you are almost ready to fly. Next, we will talk about Community Based Organizations, or CBO's. The FAA requires that all remote pilots follow a set of approved safety guidelines set by a CBO. You may choose which CBO guidelines to follow, I use Academy of Model Aeronautics or AMA. To learn more, you can find a link to the AMA website in your handout and download the safety handbook. You do not have to become a member to follow their guidelines, although the benefits of becoming a member are worth it for me. Again, you do not have to use the resources I provide, there are several approved CBO's to choose from, this is just the one that I use.

Next, we will talk about checking to make sure your drone software is up to date and to make sure that the RID is broadcasting. Depending on the drone you have the steps may vary slightly, download the recommended application for your drone controls and if you haven't already, download the Drone Scanner app.

I recommend turning on the controller and the drone prior to heading out to the field, check for available updates, restart and perform a short control flight test by simply hovering over the ground and testing the controls to check for software glitches.

Once you have completed the control test flight and safely landed, it is recommended to check and confirm your RID is broadcasting correctly. Open the Drone Scanner app and search for your Remote ID. Note: Remote ID can be broadcasted via Bluetooth or wi-fi, in my experience android phones sometimes have difficulty detecting an RID that is broadcasting in wi-fi.

Note: it is recommended to check and make sure both the controller and drone batteries are fully charged. It is also a good time to check SD memory cards if applicable and check to make sure the accessories are fully charged (lights/RID modules/etc.) Anti-collision strobe lights are only required for night operations. I recommend using a strobe light on each flight to give better visibility of the drones' position to manned aircraft.

Next, we will go over a few of the applications necessary to check airspace and weather. If you haven't already, please download the applications Aloft AirAware and AirControl. You may choose to use another application if you wish, these are the ones I typically use. These applications will help you see any flight restrictions, the current weather conditions, and to request instant airspace authorization if available.

Open AirControl, select the location you are planning to fly to see what authorization (if any) will be needed. The attention indicator will let you know if there are any restrictions or areas nearby that may require authorization. Click the weather tab to check weather conditions, visibility and wind direction/speed.

Operations near airports may require the Low Altitude Authorization and Notification Capability (LAANC). If available, Click the LAANC tab and follow the prompt to request authorization to fly in the airspace. **Note:** Benton airport is not in the LAANC system. When I have operations near that airport, I will physically call the tower at Redding regional to inform them of the drone operation. (safety first)

Final Recommendations:

Recreational or Commercial: This overview is for **Recreational Users Only.** All remote pilots must obtain the part 107 certificate prior to any commercial use.

Check Your Surroundings: Once you're at the location where you are going to fly, I recommend visually looking around the area for nearby aircraft, wildlife or other hazards that may interfere with the operation. I also recommend using the Flight Radar app to help see any commercial aircraft that may be nearby. Note: not all aircraft broadcast tags visible on flight radar, this just helps to see ones that do.

Notify Nearby Remote Pilots: I recommend using Aloft's AirAware App to complete the flight checklist and submit a notify & fly to allow other remote pilots in the area to know that there is an active operation in progress. Click checklist and follow the prompts.

Set Return-to-Home Altitude: Once the drone is in the air, I recommend taking the drone up the same height as the tallest obstacle in the area to set your return to home altitude. Note: do not exceed the maximum altitude of 400 ft above ground level (AGL).

Reasonable expectation of privacy: I recommend following the reasonable expectation of privacy rule. If there is a reasonable expectation of privacy in an area, for example a fenced backyard, then prevent unnecessary flyovers or photos.

Consider CBO membership: It may be worth it to consider joining your CBO as a member, especially if you frequently fly. Not all CBO's will have the same benefits so it would be worthwhile to explore a few options. The member benefits for AMA include a liability drone insurance policy.

Privacy - Drones that fly or hover over private property may be considered a nuisance. To prevent this, I recommend that all remote pilots follow the rule of "reasonable expectation of privacy." If there is reasonable expectation of privacy, then the remote pilot should respect that privacy. If possible, prevent from flying over or capturing images of these areas, especially in areas where private property is fenced.

Attachments (lights, RID module, etc.,) – Remote pilots should be aware how the drone will perform with the additional weight of any attachments. I recommend performing a short test flight with all attachments to be used during the operation fixed to the drone, so that the remote pilot can better understand the handling capabilities with the additional weight.