

**ULTIMATE GUIDE
— FOR —**

DRONES

REGULATIONS & POLICIES



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Ultimate Guide for Drones Regulations & Policies

By editors of MyDroneLab.com

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FOREWORD

Drones are among the most favorite devices for all flying enthusiasts. They are ideal for enjoying an experience as close to flying as possible as they give users a sneak peek into what it looks like from hundreds of feet up in the air.

Their popularity is skyrocketing right now and lots of people are taking up to flying drones as a hobby. But there is one important thing to be borne in mind here: ever since drones were released for the open market, a series rules and regulations have been set up for flying these devices. For instance, flying drones near public places or places of high-security like airports and governmental buildings is an absolute No-No!

In the USA, the organization behind drone flying regulations is the FAA or the Federal Aviation Administration. However, the FAA doesn't concern itself with just drones; it is the primary agency responsible for everything revolving around the aerospace industry today.

The main purpose of this agency is to ensure that anything that flies (produced by humans) does it following safety and precautions. This way no one gets hurt and no devices and machines get damaged. So, even if the rules you are going to read about in this book might seem a bit out of the ordinary, it's important to understand that their final purpose is to keep you, your device, and the people around safe.

CHAPTER I: DO I HAVE TO REGISTER?

If you think about purchasing a drone, you'll find out that the offer is beyond vast. Each model comes with its own set of features, advantages, and disadvantages. However, before you go on and purchase one, you need to know if it is on the list of drones under the registration scheme created by the FAA.

The registration scheme

If you haven't heard about the registration scheme, then it's time to learn that, starting with December 21st 2015, UAV (or UAS) owners must make sure their drones don't require to be registered with the FAA. In order to be registered a drone must weigh over 250g (0.55 lbs.) and less than 25kg. According to the FAA, these drones are not considered models, but aircraft and their owners are aviators and not drone pilots.

So, anything that is not a toy drone should be registered with the FAA. Below we listed the most popular models that should be registered (keep in mind that there are others on the market, these are just some of the most popular examples).

- Parrot Bebop – this amazing device is quite advanced as a model and is equipped with a superior camera for facilitating aerial photography. Without the camera it weighs about 0.91 lbs. – this only includes the basic frame. So, buying this drone, even without a camera or other sensors, would make the registration with the FAA mandatory.
- 3D Robotics (3DR) Solo - this is a popular quadcopter and even though it is being used by a number of people now, it still requires registrations to fly. It weighs 3 lbs. and comes with the slot for an optional camera.
- DJI Phantom 3 Standard - this is one of the most common names when it comes to drones with cameras. It is also one of the heaviest drones weighing 2.6 lbs. and that is without including an external camera. As you can imagine, such a heavy drone does require registrations with the FAA for flying.

As you can see, we only discussed hobbyist drones and we didn't even consider including commercial drones which are definitely a lot heavier. This happens because FAA didn't bother to create a registration for commercial drones. This made drone owners quite furious and now, FAA announced that starting June or July 2016, commercial drone registration will be possible.

The world of drones is developing and it's time authorities kept the pace.

Getting your drone registered

Not many new flyers are happy about to this rule, as you can't wait to get your new toy out and play with it. However, if your drone is heavier than the mentioned weight, you need to get it registered with the FAA before you can actually use it.

The registration process is quite simple and includes submitting details like name, email id, phone number, and home address in order to get the proof of ownership. The FAA will issue a unique identification number that must be printed out and glued on the drone's body. This way, if your drone gets lost or is involved in an accident, authorities will be able to identify your drone.

How to get your drone registered?

As a rule, the drone registration is kept free for the first 30 days upon its purchase in order to encourage the users to apply for that unique identification number. It is best if you get the job done in the first 30 days since after that, you will be required to pay \$5 for the registration.

Also, each registration is valid for a total of 3 years in which you can modify the details or cancel your registration if need be. The cancellation happens in the case the drone gets destroyed or you sell it in order to get a better one. Anyways, by cancelling the FAA registration is your way of saying that you no longer own that drone and you are no longer responsible for what happens with it.

The whole process of the drone registration is done entirely online (unless your drone is heavier than 55 lbs. or 25 Kg). You will need 3 sets of information in order to get your device registered.

Firstly you will be asked to fill in your email address which is required for facilitating communication. Next, you will also have to provide details about your home address. Lastly, your debit or credit card details will be necessary for facilitating payment for the registration process.

These are the steps you need to follow in order to go about the process of registration:

1. Go to the FAA official website.
2. On the website, you will come across a column that goes by the name of UAS Registration. This is where you will find all the necessary forms and information.
3. To complete the registration process, fill in all the required details. Once this step is done and you get the number, your work is done and your drone is ready to fly!

Who should get their drone registered?

There might be some confusion as to who needs to register their drones. The rules are quite clear but many drone users who just use them as toys don't seem to find this operation necessary.

To clarify things and make sure everyone understand when a drone must be registered, here are the main situations:

1. Every unmanned aircraft that weighs more than 0.55 lbs and less than 55 lbs. requires registration. That means if your drone is in the range of 250 grams to 25 Kg, you have to visit the FAA website and get a proof of ownership.
2. If your aircraft weighs more than 55 lbs. or 25 Kg, you cannot get it registered with the FAA online. Instead, you will have to get it done under the Aircraft Registry Process and you have to find a territorial office and ask for instructions.
3. Your drone can only be registered with the FAA if you are 13 years of age or more. As a drone owner under 13 years of age, the registration would require a guardian above 13 years to register the drone in his/her name.
4. Another important aspect that a lot of people tend to ignore is the drone used as a hobby. If you are using the drone just as a recreational purpose, you would still need a registration for the device. Each registration is valid for a term of 3 years. If you choose to sell it or give it to someone else, you can cancel your ownership in that period of three years.

What happens if you so not register your drone?

Not registering your drone under the FAA is a matter of a criminal offence. In order to get a clear and secure aerospace, you need to get the ownership of the device. As a result of using an unregistered drone, you could be penalized for a certain amount of money under the civil and criminal offence. This fine may go up to as high as \$27,500.

Not just that, in the case of criminal penalties, you could be fined an amount leading to \$250,000 along with imprisonment up to 3 years. If you want to avoid the stiff penalization of the FAA, it is best you get your drone registered as soon as possible.

CHAPTER II: WHAT DOES THE REGISTRATION ACTUALLY MEAN?

For starters, you will get a unique identification number online that marks your ownership of the drone. This number is absolutely necessary for flying your drone.

So, before you take your drone out for a spin, you need to mark it on the drone to establish the ownership, either by engraving it or using simple means like a permanent marker or glue and a printed piece of paper. This means your device is now ready to fly.

Some points to keep in mind for flying a drone

To obtain a secure aerospace, a number of rules have been designed that drone pilots must follow. Thus, to make sure you understand these rules, let's ask you a few questions.

How high can you fly your drone?

According to the FAA Advisory Circular established in 1981, flying in the United States means you cannot fly your device more than 400 feet off the ground. This is important in order to keep sufficient control over the unmanned aircraft.

Added to that, the device should always be kept within your line of sight so that it does not to interfere with other activities. Thirdly, no matter how high you fly your drone, you cannot fly it anywhere within 5 miles of an airport without informing the authorities beforehand. Therefore, visual contact with your drone is an absolute necessity.

Where should I fly the drone?

For starters, you should refrain from taking your drone through residential areas or places that are highly populated. This increases the chances of interfering with residential activities. It is also a known fact that drones tend to invade private activities. That is why this should always be kept in sparsely populated areas or rural regions.

The restriction of the airport has already been mentioned before. Moreover, any other places of national interest like the White House or certain museums can't be reached by drones. New models are specially designed to recognize a forbidden area and either go around it or simply hover in place until directed differently. For instance, if you would want to start your Phantom 3 advanced near a governmental building that has been marked as a no-fly zone, your drone won't fly.

Know which days are bad for flying your drone

Some days are not good for flying your drone. For instance, if the weather isn't the best on one particular day and you try to take your device out for a spin, since these copters are lightweight structures, you run the risk of losing control and thus losing your drone. Here, even the restriction about keeping your drone within sight is not followed.

Using your drone for profit

Drones can be used for commercial activities and this is a niche that grows quite rapidly. Commercial activities include the shooting of a movie or a commercial, site surveying or mapping purposes.

Since these are profit-making activities, you will need to obtain a special commercial exemption from the FAA. Once you have the approval of the agency in the form of a permit, you are then free to use your copter for commercial profit-making purposes. However, the process is quite tedious.

CHAPTER III: ARE THESE RULES OVERSTEPPING BOUNDARIES?

This is quite a debatable topic and many people are not very appreciative of the US government's inclusion in a recreational activity of the citizens. However, this has been a necessary interference. Even though it is a hobby for most people, there is something we need to understand: flying drones is quite a difficult activity.

Many drone owners are not well-versed with the technicalities and use the device as a toy. But this can have rather adverse effects. When a copter is moving through the sky at 70mph, it is indeed a tough job to control its movements. There have been reports of various unpleasant events with such drones that simply got out of control.

One of the most popular examples we can mention is when drones crashed into the White House which caused complete chaos in their security system. Another example would be the case when drones proved to be an obstruction in forest fire rescue operations.

Of course, there are other situations when drones crashed in populated areas and, even though they didn't cause any serious damage, the scare and a few scratches and bruises should be enough.

That's why the US government and the FAA got involved. Their motivation and purpose are to educate drone owners based on tight security measures. For now, there is no particular constitutional argument that supports the formulation of registration rules for drones, like in the case of gun registration. However, the FAA introduced them for a more secure US airspace.

CHAPTER IV: PEOPLE'S REACTIONS & VARIOUS QUESTIONS

There have been mixed reactions regarding the mandatory registration of unmanned aerial vehicles. While this feels like some sort of a drone tax for some, most users have complied.

According to FAA's numbers, many users have already registered their name in the FAA database. Almost 300,000 users have gone through with the registration process in the first 30 days since the online process started.

According to a press release by the FAA Administrator Michael Huerta, 'The registration numbers we're seeing so far are very encouraging.' He went on to add, "We're working hard to build on this early momentum and ensure everyone understands the registration requirement."

However, according to reports, there has been a purchase of as many as 700,000 drones in 2015 alone. So, there are yet more drones to be registered with the FAA.

A non US citizen is also bound by the registration schematic?

As per the rules, every drone is required to be registered in order to be flown outdoors in the United States. This rule applies even if you are a foreign national on vacation. You can go ahead and use the online website registration system in order to complete the process.

Non-US citizens will obtain a certification that is similar to that owned by US citizens. However, the only difference is that in this case, the certification will be considered only as recognition of ownership and not a registration certificate.

Besides, this particular document of ownership will be required to be produced to the Department of Transportation in order to fly your drones legally in the United States.

Is a registration required if you use your drone only indoors?

This is a rather pertinent question. A lot of mini and small drones are purchased with the intention of using indoors.

In this situation, the FAA wouldn't have any interest in knowing who the owner of the drone that crashed in the West wall is. Even more, many small drones destined for indoor use don't even make the cut weight wise.

Do I have to register a DIY model?

It is often seen that some enthusiasts prefer purchasing the drone kit and then assembling the components together in order to make it more convenient.

But even in these situations, you would be required to carry out the registration process if the device you built falls in the weight specifications.

What happens if I lend my drone?

The rule states that anyone who is in possession of a drone at any time and plans to use it outdoors will have to possess the registration certificate.

So, if you lend your drone to a friend, make sure the number is visible on the drone's body and that he or she has the registration certificate.

FINAL ADVICES

Even though the FAA's meddling in drone hobbyists' affairs was not seen with good eyes, it's time to admit that these rules are useful. As long as they will solve the commercial drones registration issue, the rules for flying drones as a hobby are quite useful. For instance, no one would like to be spied in his own house by a drone peeking at the window or have a drone hit him in the head when the user loses control. Drones may be small in size but they are powerful and they carry advanced technologies that can be used for evil activities.

So, the next time when you complain about having to spend 5 minutes on the FAA website in order to get a number for your drone, think of what could happen if people didn't have these rules.