

«Drone»: French Legislation

DRONE? The legislation does not use this term but uses the term AERONEF TELEPILOTE (Unmanned Air System).

An unmanned air system is a flying craft to able to travel in the air without somebody on board.


Different name in English: UAV (Unmanned Air Vehicle) or UAS (Unmanned Air System) or RPAS (Remotely Piloted Aircraft System).

2 Aircraft sort (categories):


Aerostat

→ Use areostatic lift


Hot air balloon



Advertising balloon




Dirigible




Aerodyne

→ Use aerodynamic lift


Hélicoptère




Glider



Airplane



Multicopter





French legislation:

The framework :

The legislation is regulated by civil aviation regulations and is elaborate by the DGAC (Directorate General of Civil Aviation). It responds to two orders of 17 December 2015.

The legislation of unmanned aircraft does not apply to:

- Aircraft over 150kg
- Captive balloons <1kg, maximum flight heights 50m
- The free balloons
- Rockets
- Kites
- Flights in an enclosed and covered space

3 different using

Aeromodelling Modeling aircraft

DGAC's book : Aéromodélisme :
(22/12/2015)

Uses aeromodels (toys, drones)

Activities: Leisure, competition and experimentation, development, training, commercial demonstration for leisure or competition.

Professionals-Experiments

Experimentation and development activities are the subject of specific requests.

The rules depend the purpose of the use, leisure or professional use.

Professionals-Specific activities

DGAC's book : Aéronefs circulant
sans personne à bord : Activités
particulières
(09/08/2016)

All that does not concern model aircraft.

Aeromodelling

Why ? Leisure or Competition

What model airplane ? 2 class

Class A :

- 25kg max
- Combustion engine $\leq 250\text{cm}^3$
- Electric motor or turbo propeller $\leq 15\text{kW}$
- Reactor thrust $\leq 30\text{daN}$
- Hot air balloon (weight gaz $< 5\text{kg}$)
- All captive Airplane

Class B :

- All others with DGAC authorization

Who ?

Class A :

- Everybody

Class B :

- Everybody with DGAC authorization

Where ?

Allowed :

- Private place
- Authorized public place
- Modeling aircraft place (Fly zone)
- Flight height $\leq 150\text{m}$

Forbidden :

- In urban areas
- Public space
- Aerodrome, military zone, sensitive areas (nuclear power plants, etc.). Identification of the zones on <https://www.geoportail.gouv.fr/carte>
- Above people

When ?

Allowed :

- By day with climatic conditions allowing the flight.

Forbidden :

- By night except prefectoral derogation.

How ?

Respected :

- Maximum flight heights: 150m maximum
- Flight in direct view by the remote pilot or a 2nd to able to ensure safety.
- The safety for everybody
- Shooting for private use with respecting people privacy.
- Rules of use: Priority to the right, to the lowest and the most difficult to move, to control.
- Use of standard equipment (ex: free radio frequency at 2.4 Ghz)
- Adequacy with its contract of civil liability insurance.

Forbidden :

- Above people
- Shooting for commercial or professional use
- Professional or commercial missions.

Professionnels-Specific Activities

Why ? To do missions

What conditions ? 4 scenario

S1 : Scenario 1	S2 : Scenario 2	S3 : Scenario 3	S4 : Scenario 4
<ul style="list-style-type: none"> - Outside urban area (50 m mini from urban area) - Without flying above people, with a safety aera - Flight in direct view (200m max from remote pilot) 	<ul style="list-style-type: none"> - Outside urban area (50 m mini from urban area) - Without flying above people - 1km max from remote pilot 	<ul style="list-style-type: none"> - Urban aera - Without flying above people - Flight in direct view (100m max from remote pilot) 	<ul style="list-style-type: none"> - Outside urban area (50 m mini from urban area) - Out of specifications S1 et S2
Flight elevation $\leq 150m$			

What UAS ?

S1 : Scenario 1	S2 : Scenario 2	S3 : Scenario 3	S4 : Scenario 4
<ul style="list-style-type: none"> - Aircraft: Design attestation if $M > 25kg$, contact DSAC (Directorate of Civil Aviation Safety) 	<ul style="list-style-type: none"> - Aircraft: Design attestation, contact DSAC - $M \leq 2kg$: H flight $\leq 150m$ max et - $M > 2kg$: H flight $\leq 50m$ max 	<ul style="list-style-type: none"> - Captive aerostat: Design attestation if $M > 25kg$, contact DSAC - Captive Aerodyne: Design attestation if $M > 2kg$, contact DSAC - Other aircraft: Design attestation if $M > 2kg$, contact DSAC and prohibits if $M > 8kg$ 	<ul style="list-style-type: none"> - Aircraft: Design attestation, contact DSAC, prohibited if $M > 2kg$
Aircraft Operating and Maintenance Manual + Aircraft Identification Plate			

When ?

S1 : Scenario 1	S2 : Scenario 2	S3 : Scenario 3	S4 : Scenario 4
Flight on day, prohibited at night except prefectural derogation under cover DSAC and except for the captive balloons (ex: light balloons)			

Who ?

S1 : Scenario 1	S2 : Scenario 2	S3 : Scenario 3	S4 : Scenario 4
Remote pilot with minimum certificate of theoretical capability of pilot of a manned aircraft (exemple ULM driver's licence)			Remote pilot with airplane driver's licence, glider, helicopter + flight experience (100 hours of flight) + recent experience unmanned aircraft

Where and how ?

S1 : Scenario 1	S2 : Scenario 2	S3 : Scenario 3	S4 : Scenario 4
Outside urban area with a minimum area without people (use annexe 5 to define this area)	Outside urban area	Urban area with a minimum area without people (use annexe 5 to define this area)	Outside urban area
Close to airport: Characteristics of the flight area (annexe 4) or sur https://www.geoportail.gouv.fr/carte			
+ Authorization of Air Traffic Organizations			
MAP in french (Book of specific activities)			
Reporting to DSAC (Every 24 months and each modification)			
Annual report to DSAC			
Reporting some events to DSAC			
		Statement of flight mission on urban area to the prefecture	
insurance in line with activities et missions			



General information: Safety

Harmonization of Rules: To have a similarly rules in EU, EASA (European Aviation Safety Agency) give the main framework, (as for the airplane).

Responsibilities: The remote pilot and the aircraft's operator, are responsible for flight safety. They are required to implement and maintain it throughout the use of the unmanned aircraft. The conditions under which the activities are carried out should be checked.

Violations of safety rules and overflight bans: The penalties incurred range from 6 months imprisonment and 15,000 € fine to 1 year imprisonment and 75,000 € fine.

Violation of people privacy: 1 year imprisonment and 45000 € fine.

Radio links: Frequencies and powers of use are subject to authorization. Generic frequency allowed: 2.4GHz with a power of 100mW.

Transport of batteries by airplane: These are subject to special restrictions. Lithium batteries are classified as dangerous goods. It is advisable to learn about the legislation.