



5. BASIC FLIGHT OPERATION

Difficulty Level: Moderate

Completion Period: 1 course hour

Objectives

By the end of the module, students will be able to confidently execute basic flight operations, encompassing takeoff, hovering, controlled movement in various directions, and safe landing. The objectives include understanding flight controls, maintaining stable flight, and responding to common flight challenges. Students will develop the knowledge and abilities necessary to achieve controlled and stable flight while fostering responsible and skilled UAV piloting practices.

Achievements

The skills that our students will gain are:

- Understanding the fundamentals of UAV flight controls and their effects on movement.
- Executing controlled movements in various directions.
- Maintaining stable flight.
- Developing coordination between different control inputs to achieve smooth flight transitions.
- Communicating flight operation observations, challenges, and maneuvers to peers and instructors.

Required material

- Drone Mavic Pro
 - DJI Mavic Pro Remote Controller
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Implementation – Basic flight operation

1. Before commencing flight operation, choose an open, unobstructed environment.



Remember to remove the propellers when practicing indoors!



2. Check the charge level of the battery and remote controller, place the aircraft on a flat surface with the back facing you and turn it on.





3. Set the RC mode to Normal and turn it on



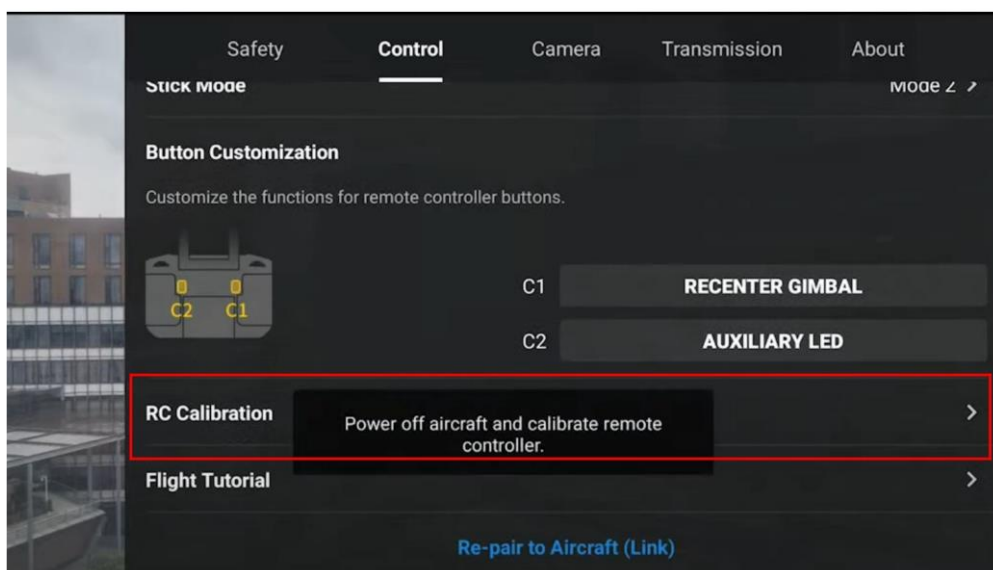


4.

Check if the remote controller stick input is correct



If there are any calibration prompts, perform contrai stick calibration in the app before flying





5.

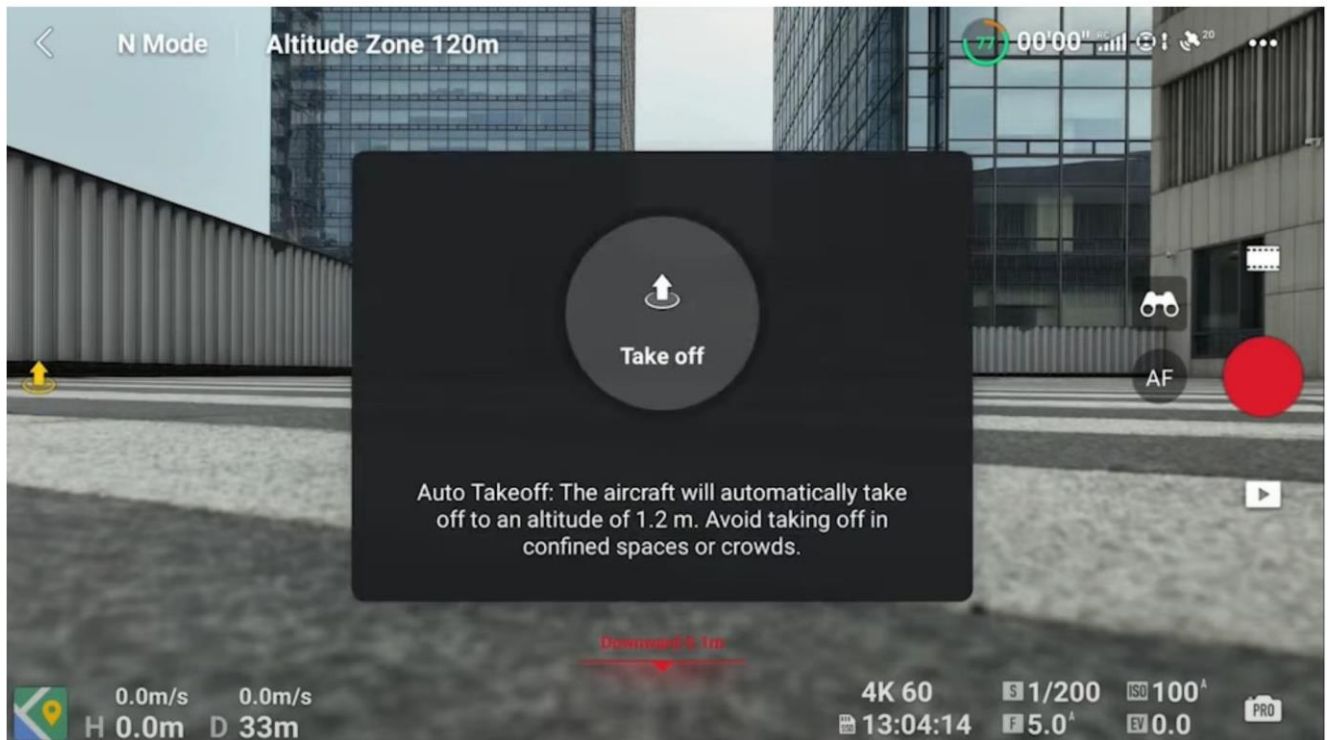
Check the app flight interface to make sure that there are no abnormality prompts and that the GPS signal is good





6.

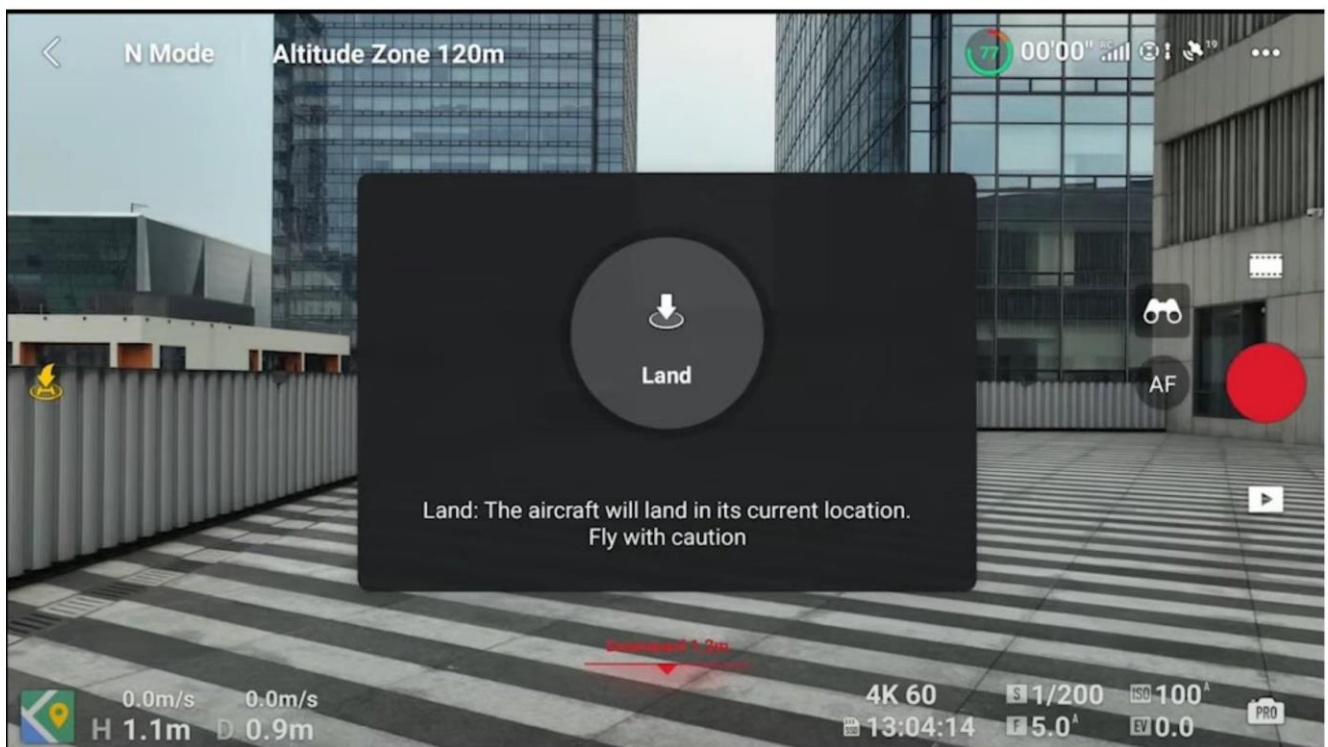
Tap the Take off icon on the left, and press and hold the prompt icon to automatically take off





7.

After takeoff, the icon will change to Auto Landing. Tap and hold the pop-up window to automatically land the aircraft





8.

Manual takeoff: Pull both sticks all the way to the bottom of the controller, and then push them inwards or outwards





9.

Once the propellers are spinning, use your left hand to gently push the throttle upwards to take off





10.

The left contrai stick is for adjusting the aircraft 's altitude and orientation





11.

The right contrai stick allows the aircraft to move forward, backward, and to the left and right





12.

After you start the motors, if the aircraft has not taken off, push down the left stick to stop the motors





13.

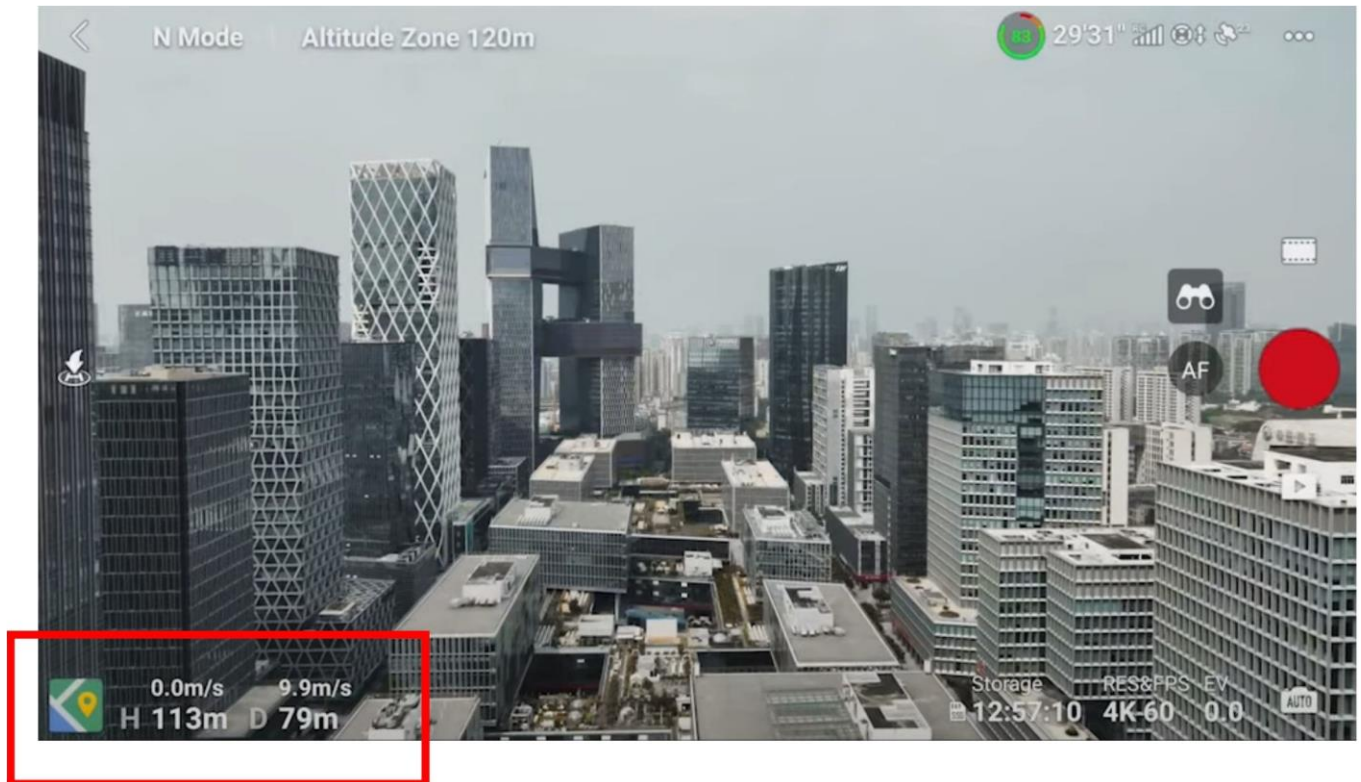
Press the **Flight Pause** and **RTH Button** on the remote controller to make the aircraft brake





14.

The flight distance, flight altitude, speed and other information is on the lower left side of the app's interface





15.

Keeping the remote controller antenna aligned with the aircraft will allow for better communication and transmission during your flight





16.

When the aircraft enters ATTI mode, land in a safe place as soon as possible to avoid accidents



The aircraft may enter ATTI mode in situations with poor GPS signal, compass interference, or insufficient lighting.
