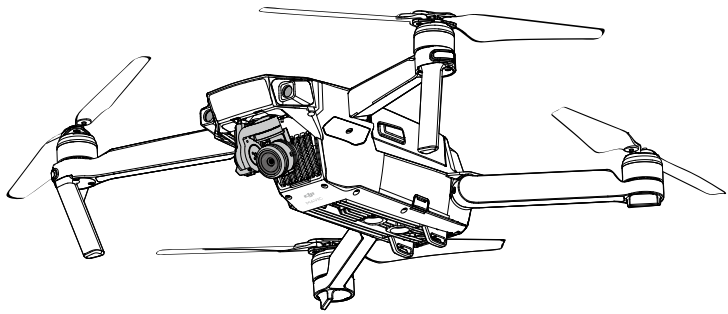
MAVIC PRO

User Manual V1.0

2016.10



Searching for Keywords

Search for keywords such as “battery” and “install” to find a topic. If you are using Adobe Acrobat Reader to read this document, press Ctrl+F on Windows or Command+F on Mac to begin a search.

Navigating to a Topic

View a complete list of topics in the table of contents. Click on a topic to navigate to that section.

Printing this Document

This document supports high resolution printing.

Using this manual

Legends

Warning Important Hints and Tips Reference

Read Before the First Flight

Read the following documents before using the MAVIC™ Pro:

1. In the Box
2. Mavic Pro User Manual
3. Mavic Pro Quick Start Guide
4. Mavic Pro Disclaimer and Safety Guidelines
5. Mavic Pro Intelligent Flight Battery Safety Guidelines

We recommend that you watch all tutorial videos on the official DJI™ website and read the Disclaimer before you fly. Prepare for your first flight by reviewing the Mavic Pro Quick Start Guide and refer to the User Manual for more details.

Video Tutorials

Please watch the tutorial videos at the link below, which demonstrates how to use Mavic Pro safely:

http://www.dji.com/mavic

Download the DJI GO App

Download and install the DJI GO™ app before using the aircraft. Scan the QR code to the right to download the latest version.
The Android version of the DJI GO app is compatible with Android 4.1.2 or later.
The iOS version of the DJI GO app is compatible with iOS 8.0 or later.

Download the DJI Assistant 2

Download the DJI Assistant 2 at http://www.dji.com/mavic/download

Contents

Product Profile

This section introduces the Mavic Pro and lists the components of the aircraft and remote controller.

Product Profile

Introduction

The DJI Mavic Pro is DJI's smallest flying camera, featuring a fully stabilized camera, Intelligent Flight Modes and Obstacle Avoidance inside a revolutionary folding design. It captures 4K videos and 12 megapixel photos, and is capable of both ActiveTrack™ and TapFly™ making complex shots effortless.
Mavic Pro boasts a maximum flight speed of 40 mph (65 kph) and a maximum flight time of 27 minutes*.

* Maximum flight time was tested in 0 wind at a consistent 15.5 mph (25 kph). This value should be taken for reference only.

Features Highlights

The Mavic Pro is a ultra-portable aircraft thanks to its revolutionary folding design.

Camera and Gimbal: With the Mavic Pro, you are shooting 4K video at up to 30 frames per second and capturing 12 megapixel photos that look crisper and cleaner than ever, all powered by the compact onboard gimbal.

Flight Controller: The next-generation flight controller has been updated to provide a safer, more reliable flight experience. The aircraft is able to automatically return to its home point when transmission signal is lost or battery level is low. Apart from being able to hover in door at low altitude, aircraft is also able to sense and avoid obstacles on its route, which brings safety enhancements.

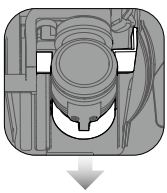
HD Video Downlink: Built into the Remote Controller is DJI's latest long-range transmission technology OCUSYNC™, offering a maximum transmission range of 4.3 mi (7 km) and making it possible to control your aircraft up and stream video to your mobile device at 1080p.

Preparing the Mavic Pro

All arms of the aircraft are folded on delivery. Follow the instruction below to unfold all the arms.

Preparing Aircraft

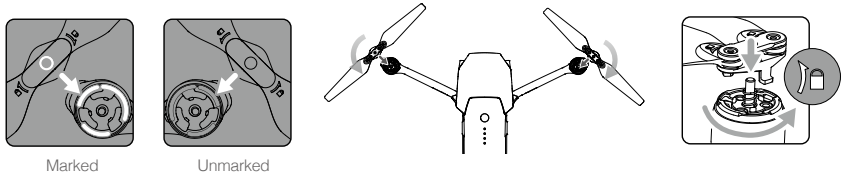
Remove the gimbal cover and gimbal clamp from the camera.



⚠
- The gimbal cover is used to protect the gimbal. Remove it when necessary.
- Using the Gimbal Clamp and Gimbal Cover to protect the gimbal when the Mavic Pro is not in use.

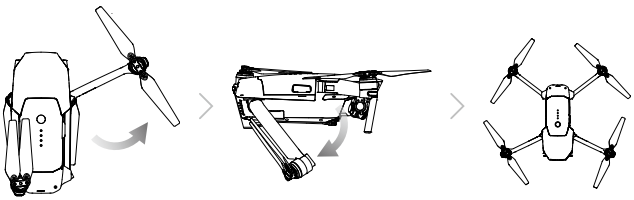
Attaching the Propellers

Attach the white ringed propellers to the mounting base with white marks. Press the propeller down onto the mounting plate and rotate in the lock direction until it is secured in its position. Attach the other pair propellers to the mounting base without marks.



Unfold the Arms

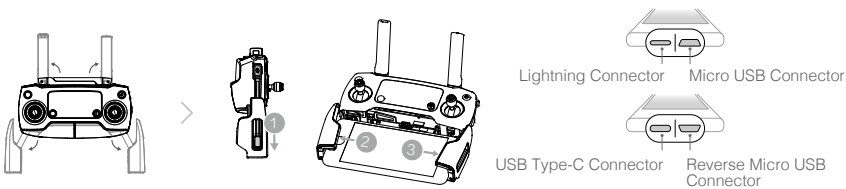
1. Unfold the front arms, follow by the rear arms of the aircraft as the figure shown.
2. Unfold all propeller blades.



⚠ • Unfold the front arms and the propellers before the rear ones. All arms and propellers must be unfolded before takeoff.

Preparing the Remote Controller

1. Unfold the mobile device clamps and the antennas.
2. Choose an appropriate RC cable based on the type of mobile device. The RC cable with Lightning Connector has been connected and the Standard Micro USB connector cable and the USB Type-C connector cable included. Optional Reverse Micro USB connector cable is available. Insert the mobile device into secure position.

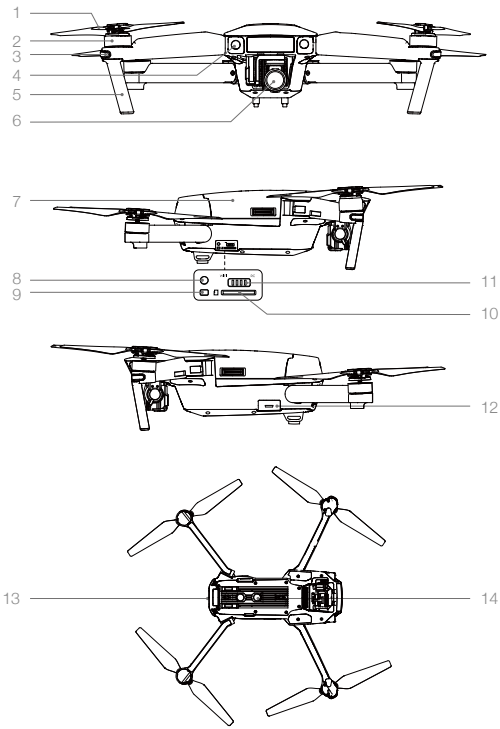


Refer to the figure below for how to replace the RC cable.

The RC cable slider must be replaced if using a USB Type-C RC cable.

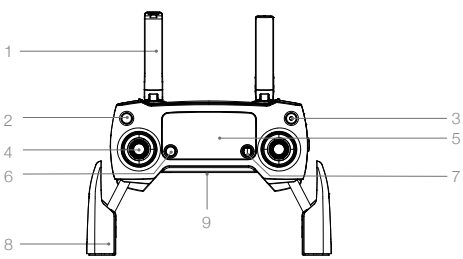
⚠ • Ensure the Control Mode Switch is toggled to "RC" when use the Remote Controller to control the aircraft.
• To connect your mobile device to the remote controller using a USB cable, plug one end of the cable into your mobile device and the other end into the USB port on the back of the remote controller.

Aircraft Diagram



1. Propeller
2. Motor
3. Front LED Indicator
4. Forward Vision System
5. Landing Gear
   (with built-in antennas)
6. Gimbal and Camera
7. Intelligent Flight Battery
8. Link Button
9. Linking Status Indicator
10. Camera Micro SD Card Slot
11. Control Mode Switch
12. Micro USB Port
13. Aircraft Status Indicator
14. Downward Vision System

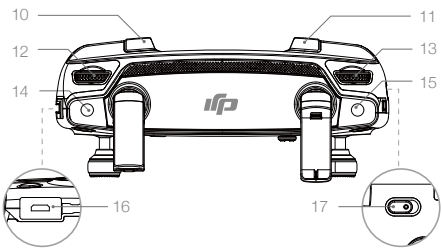
Remote Controller Diagram



1. Antennas
   Relays aircraft control and video signal.
2. Return to Home (RTH) Button
   Press and hold the button to initiate Return to Home (RTH). Press once again to cancel RTH.
3. Power Button
   Used to turn the remote controller on and off.
4. Control Stick
   Controls the orientation and movement of the aircraft.

5. LCD Screen
   Displays the aircraft and Remote Controller's system status.
6. Flight Pause Button
   Press once for emergency breaking.
7. 5D Button
   The default configuration is listed below. Set these values based on your preference in the DJI GO app.
   Left: Zoom In
   Right: Zoom Out
   Up: Camera Forward
   Down: Gimbal Downward
   Press inward: Call out Intelligent Flight menu in DJI GO app.
8. Mobile Device Clamp
   Securely mounts your mobile device onto the remote controller.
9. USB Port
   Connect to mobile device for running the DJI GO app.

10. C1 Button
    The default configuration is listed below. Set these values based on your preference in the DJI GO app.
    Press once to focus on the center or add a waypoint when using Waypoints.
11. C2 Button
    The default configuration is listed below. Set these values based on your preference in the DJI GO app.
    Press once to playback/or delete a waypoint when using Waypoints.
12. Gimbal Dial
    Control the camera's tilt.
13. Camera Settings Dial
    Turn the dial to adjust camera settings. (Only functions when the remote controller is connected to a mobile device running the DJI GO app)
14. Record Button
    Press to start recording video. Press again to stop recording.



15. Shutter Button
    Press to take a photo. If burst mode is selected, the set number of photos will be taken with one press.
16. Power Port
    Connect to the Charger to charge the battery of the remote controller. Connect this port to your mobile device using the RC cable.
17. Flight Mode Switch
    Switch between P-mode, S-mode.

Aircraft

This section introduces the features of the Flight Controller, Forward and Downward Vision System, and the Intelligent Flight Battery.

Aircraft

Aircraft Profile

The Mavic Pro aircraft comprise of a flight controller, video downlink, propulsion system and a Intelligent Flight Battery. This section introduces the features of the flight controller, video downlink and the rest of the component of the aircraft.

Flight Mode

The following flight modes are available for Mavic Pro:

P-mode (Positioning): P-mode works best when the GPS signal is strong. The aircraft utilizes the GPS and Forward and Downward Vision System to automatically stabilize itself, navigate between obstacles or track a moving object. Advanced features such as Tap-Fly and ActiveTrack are enabled in this mode. Note that handling gain values are reduced in P-mode.

S-mode(Sport): The aircraft is using GPS for positioning. Handling gain values of the aircraft are also adjusted in order to enhance manoeuvrability and increase the maximum flight speed. Since Forward and Downward Vision System is disabled, the aircraft will not be able to sense and avoid obstacle in S-mode. Ground Station and the Intelligent Flight functions are not available in Sport Mode.

The aircraft will switch to P-GPS state when it is using both GPS and Vision System for stabilization. When the Forward Vision System is enabled and lighting conditions are sufficient, the maximum flight attitude angle is 16° with a maximum flight speed of 22 mph (36 kph). When forward obstacle sensing are disabled, the maximum flight attitude angle is 25° and the maximum flight speed is 36 mph (58 kph).

The aircraft will switch to P-OPTI state when it is only using Vision System for stabilization.

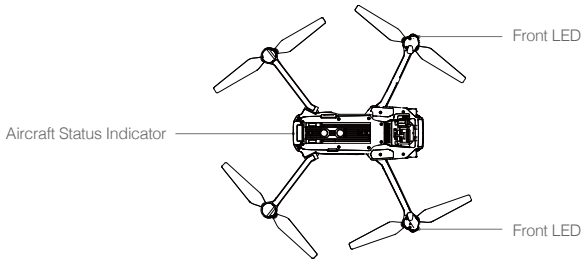
The aircraft will automatically switch to P-ATTI mode when the GPS signal is weak and lighting conditions are too dark for the Forward and Downward Vision System. The aircraft will only use its barometer for positioning to control the altitude.

- **The Forward Vision System is disabled in S-mode (Sport), which means the aircraft will not be able to automatically avoid obstacles on its route.**
- The aircraft's maximum speed and braking distance are significantly increased in S-mode (Sport). A minimum braking distance of 30 meters is required in windless conditions.
- The descending speed is significantly increased in S-mode (Sport). A minimum breaking distance of 30 meters is required in windless conditions.
- The aircraft's responsiveness is significantly increased in S-mode (Sport), which means a small stick movement on the remote controller will translate into a large travel distance of the aircraft. Be vigilant and maintain adequate maneuvering space during flight.

- Use the Flight Mode switch to change the flight mode of the aircraft.

Flight Status Indicator

The Mavic Pro has Front LEDs and Aircraft Status Indicator. The positions of these LEDs are shown in the figure below:



The Front LEDs show the orientation of the aircraft. The Front LEDs glow solid red when the aircraft is turned on to indicate the front (or nose) of the aircraft (the Front LED can be turned off in the DJI GO app). The Aircraft Status Indicator communicates the system status of the flight controller. Refer to the table below for more information about the Aircraft Status Indicator.

Aircraft Status Indicator Description

Normal	
Ⓡ-Ⓖ-Ⓨ ····· Red, Green and Yellow Flash Alternatively	Turning On and Self Diagnostic Testing
Ⓨ-Ⓖ ····· Yellow and Green Flash Alternatively	Warming Up
Ⓖ ····· Green Flashes Slowly	P-mode or S-mode with GPS
Ⓖ X2 ····· Green Flashes Twice	P-mode or S-mode with Forward and Downward Vision System
Ⓨ ····· Yellow Flashes Slowly	No GPS and Forward and Downward Vision System
Ⓖ ····· Fast Green Flashing	Breaking
Warning	
Ⓨ ····· Fast Yellow Flashing	Remote Controller's Signal Lost
Ⓡ ····· Slow Red Flashing	Low Battery Warning
Ⓡ ····· Fast Red Flashing	Critical Battery Warning
Ⓡ ····· Red Flashing Alternatively	IMU Error
Ⓡ —— Solid Red	Critical Error
Ⓡ-Ⓨ ····· Red and Yellow Flash Alternatively	Compass Calibration Required

Return-to-Home (RTH)

The Return-to-Home (RTH) function brings the aircraft back to the last recorded Home Point. There are three types of RTH procedures: Smart RTH, Low Battery RTH, and Failsafe RTH. This section describes these three scenarios in detail.

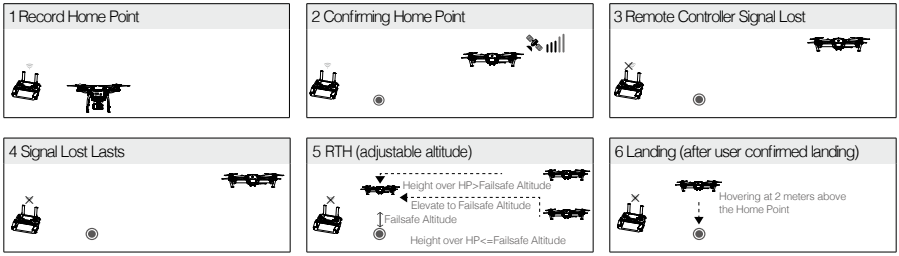
	GPS	Description
Home Point		If a strong GPS signal was acquired before takeoff, the Home Point is the location from which the aircraft was launched. The GPS signal strength is indicated by the GPS icon ( ). The aircraft status indicator will blink rapidly when the home point is recorded.

- Aircraft can sense and avoid obstacles when Forward Vision System is enabled and the lighting conditions is sufficient. The aircraft will automatically climb up to avoid obstacle and fly to the Home Point at the new altitude.
- Forward Vision System can be enabled during flight or RTH only.

Failsafe RTH

If the Home Point was successfully recorded and the compass is functioning normally, Failsafe RTH will be automatically activated if the remote controller signal is lost for more specified time interval (3 seconds when using RC and 20 seconds when using Wi-Fi). The Return-to-Home process may be interrupted and the operator may regain control of the aircraft if the remote controller signal connection is re-established.

Failsafe Illustration



- Aircraft cannot return to the Home Point when GPS signal is weak ([ ] displays grey) or unavailable.
- The aircraft cannot avoid obstruction during the Failsafe RTH when Forward Vision System is disabled. Therefore, it is important to set an suitable Failsafe altitude before each flight. Launch the DJI GO app and enter “Camera” and tap to set the Failsafe Altitude.
- User cannot control the aircraft while the aircraft is ascending to its failsafe altitude. However, user can press RTH button once to exit ascending and regain control.

Smart RTH

Use the RTH button on the remote controller or tap the RTH button in the DJI GO app and follow the on-screen instructions when GPS is available to initiate Smart RTH. The aircraft status indicator blinks to display the current status. The aircraft will sense and avoid obstacles on its flight path during Smarth RTH. The aircraft may chose to navigate or hover in place to avoid collision. User can manually navigate the aircraft to avoid obstacles if the Forward Vision System is disabled when light condition is not ideal. In addition, user can also immediately exit from Smart RTH by using the Flight Pause Button on the remote controller or press the Stop icon on the DJI GO app.

Landing Protection will activate during Smart RTH, Precision Landing and when using Auto Landing in the DJI GO app:

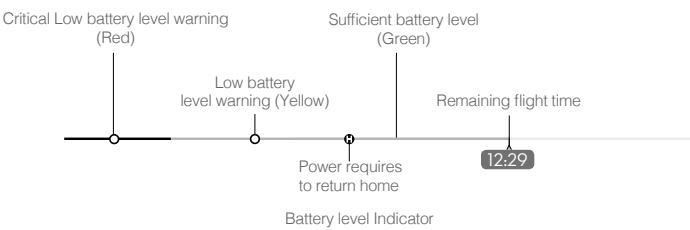
1. When Landing Protection determines that the ground is suitable for landing, the Mavic Pro will land gently.
2. If Landing Protection determines that the ground is not suitable for landing, the Mavic Pro will hover and wait for pilot confirmation.
3. If Landing Protection is not operational, the DJI GO app will display a landing prompt when the Mavic Pro descends below 0.5 meters. Pull down on the throttle or use the auto landing slider to land.

Low Battery RTH

The low battery level failsafe is triggered when the DJI Intelligent Flight Battery is depleted to a point that may affect the safe return of the aircraft. Users are advised to return home or land the aircraft immediately when prompted. The DJI GO app will display a notice when a low battery warning is triggered. The aircraft will automatically return to the Home Point if no action is taken after a ten-second countdown. The user can cancel the RTH procedure by pressing the RTH button on the remote controller. The thresholds for these warnings are automatically determined based on the aircraft's current altitude and distance from the Home Point.

The aircraft will land automatically if the current battery level can only support the aircraft long enough to descend from its current altitude. The user can still use the remote controller to alter the aircraft's orientation during the landing process.

The Battery Level Indicator is displayed in the DJI GO app, and is described below:



Battery level Indicator

Battery Level Warning	Remark	Aircraft Status Indicator	DJI GO App	Flight Instructions
Low battery level warning	The battery power is low. Please land the aircraft.	Aircraft status indicator blinks RED slowly.	Tap “Go-home” to have the aircraft return to the Home point automatically, or “Cancel” to resume normal flight. If no action is taken, the aircraft will automatically go home after 10 seconds. Remote controller will sound an alarm.	Fly the aircraft back and land it as soon as possible, then stop the motors and replace the battery.
Critical Low battery level warning	The aircraft must land immediately.	Aircraft status indicator blinks RED quickly.	The DJI GO app display will flash red and the aircraft will start to descend. The remote controller will sound an alarm.	Allow the aircraft to descend and land automatically.
Estimated remaining flight time	Estimated remaining flight based on current battery level.	N/A	N/A	N/A

- When Critical battery level warning is triggered and the aircraft begins to land automatically, you may push the left stick upward to make the aircraft hover at its current altitude, giving you an opportunity to navigate to a more appropriate landing location.
- The colored zones and markers on the battery level indicator bar reflect the estimated remaining flight time. They are automatically adjusted according to the aircraft’s current location and status.

Precision Landing

The Mavic Pro automatically scans and attempts to match the terrain features underneath during Return to Home. When current terrain matches home point terrain, the Mavic will start landing immediately to achieve precision landing. The DJI GO app will show a terrain feature mismatch prompt if matching fails.

- Precision Landing performance is subject to the following conditions:
  a. Home point is recorded upon take off, and cannot not be refreshed during flight.
  b. Aircraft must take off vertically. Take off altitude must be greater than 10 meters.
  c. Home point terrain features remain largely unchanged.
  d. Home point terrain with no distinctive features will affect the performance.
  e. Lighting condition cannot be too light nor too dark.
- The following actions are available during landing:
  a. Pull throttle down to accelerate landing.
  b. Moving the control sticks in any directions will stop Precision Landing, causing the Mavic Pro to descend vertically. Landing Protection will remain active.

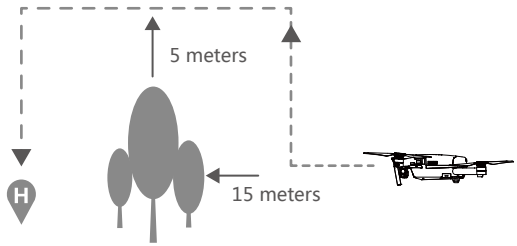
RTH Safety Notices

	The aircraft cannot avoid obstruction during the RTH when the Forward Vision System is disabled. Therefore, it is important to set an suitable Failsafe altitude before each flight. Launch the DJI GO app and enter “Camera” and tap to set the Failsafe altitude.
	If Return to Home (RTH), including Smart RTH and Low Battery RTH, is triggered and the aircraft is further than 20 meters from the home point: 1. It will return to home at the current altitude if flying at or above the RTH altitude. 2. It will ascend to the RTH altitude if flying below it.
	If RTH, including Smart RTH and Low Battery RTH, is triggered between 16 and 66 feet (5 and 20 meters) from the home point, and Forward Vision System is activated: 1. If aircraft's current altitude is greater than 32 feet (10 meters), the aircraft will return to the home point at the current altitude. 2. If aircraft's current altitude is lower than 32 feet (10 meters),, the aircraft will first automatically ascend to 32 feet (10 meters), from the current altitude. The flight speed will be adjusted to 9 mph (14 kph). The aircraft will start landing immediately if the Forward Vision System is deactivated. Note that the Forward Vision System status is determined when Failsafe RTH is triggered.
	Aircraft automatically descends and lands if RTH is triggered when the aircraft flies within a 16 feet (5 meters) radius of the Home Point.
	Aircraft cannot return to the Home Point when GPS signal is weak ([ ] displays grey) or unavailable.
	Press the Flight Pause button once to allow the aircraft to exit from RTH. The aircraft will stop the current ascending process and hovers.

Obstacle Avoidance During RTH

Aircraft can now sense and actively attempt to avoid obstacle during RTH, provided that the light condition is ideal for the Forward Vision System. The details on how the aircraft will behave during obstacle avoid is listed below:

1. Aircraft decelerates when an obstacle is sensed at 49 feet (15 meters) ahead.
2. Aircraft stops and hover then start ascending vertically to avoid the obstacle. Eventually, the aircraft will stop climbing when it is at least 16 feet (5 meters) above the detected obstacle.
3. RTH procedure resume, the aircraft will continue flying to the Home Point at the current altitude.



⚠ • To ensure the aircraft is heading towards the static direction, you cannot rotate the aircraft during RTH while Forward Vision System is enabled.
• The aircraft cannot avoid obstacles above, beside, or behind the aircraft.

TapFly

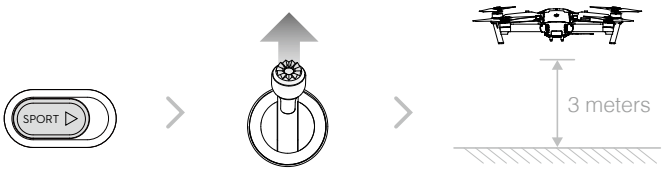
Introduction

With the TapFly feature, user now can tap on the mobile device screen to guide the aircraft to fly toward the designated direction without using the remote controller. Aircraft can automatically avoid obstacle or initiate break and then hover automatically during the flight, provided that the lighting is not too dark (< 300 lux) nor too bright (> 10,000 lux).

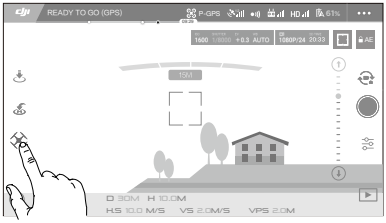
Using TapFly

Ensure the battery level is more than 50 % for the Intelligent Flight Battery, and the aircraft is in P-mode. Then follow the steps below to use TapFly:

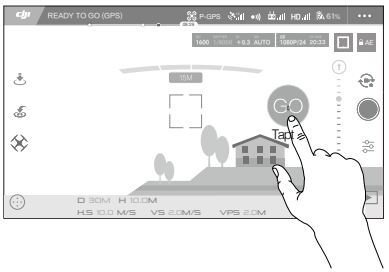
1. Take off and ensure the aircraft is flying at least 9 feet (3 meters) above the ground.

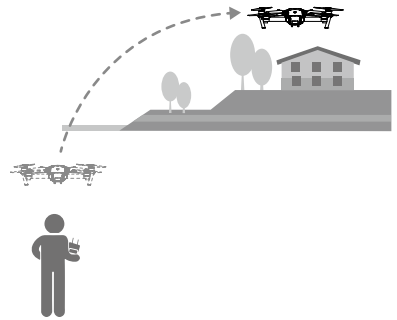


2. Launch DJI GO app and tap , then tap , read and understand the prompt statements.



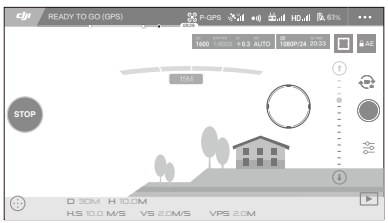
3. Tap once on the target direction and wait for GO icon to appear. Tap again to confirm the selection and the aircraft will automatically fly towards the target direction.

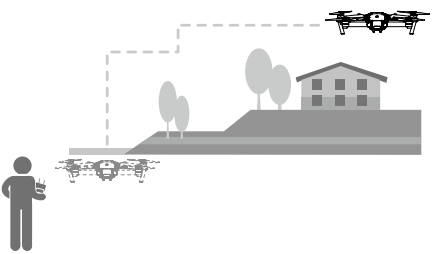




⚠
- DO NOT guide the aircraft to fly towards people, animals, small and fine objects (e.g. tree branches and power lines) or transparent objects (e.g. glass or water surface).
- Watch for the obstacles that is on the flight path and stay clear of them.
- There may be deviations between the expected and the actual flight path of Tapfly selection.
- The selectable range for the target direction is limited. You cannot make TapFly selection that is close to the upper or lower edge of the screen.
- TapFly mode may not work properly when the aircraft is flying over water surface or snow covered area.
- Be extra cautions when flying in extremely dark (< 300 lux) or bright (>10,000 lux) environments.

After confirmed with the TapFly selection, the aircraft will fly automatically towards the area marked by ◯ icon. Note that you can still use the control stick to control the movement of the aircraft during the flight.



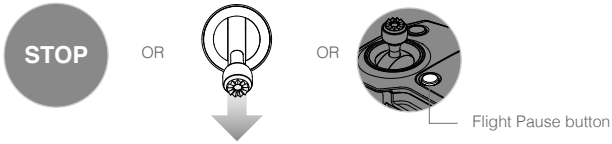


Note that the aircraft will also automatically adjust its speed when it senses there is obstacle at the front of the aircraft or it is flying too close to the ground. However, the user should not rely on this feature to navigate the aircraft between the obstacles. Meanwhile the FailSafe procedure will override the TapFly operation, given that if the GPS signal is weak; the aircraft will exit the autonomous flight from TapFly and fly back to the Home Point automatically.

Exit TapFly

Use the following methods to exit TapFly:

1. Press once on the Flight Pause button on the remote controller or pull back the pitch stick on the remote controller.
2. Tap “STOP” button on the screen.



Aircraft will stop and hover after exit from TapFly. You may either tap a new target direction to proceed to the next flight or bring back the aircraft to the Home Point manually.

ActiveTrack

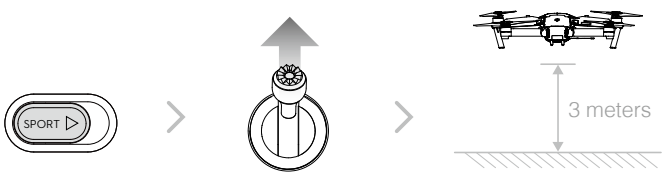
ActiveTrack allows you to mark and track a moving object on your mobile device screen. The aircraft will automatically avoid obstacles in its flight path. No external tracking device is required during the whole tracking process.

The Mavic Pro can automatically identify and trace bikes and other vehicles, people and animals automatically, and use different tracing strategies during tracking.

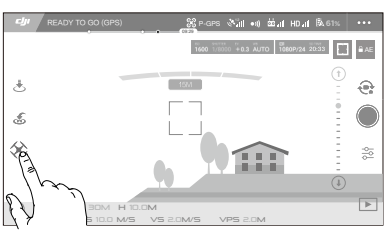
Using ActiveTrack

Ensure the Intelligent Flight Battery has more than 50% power and the aircraft is in either P-mode. Then follow the steps below to use ActiveTrack:

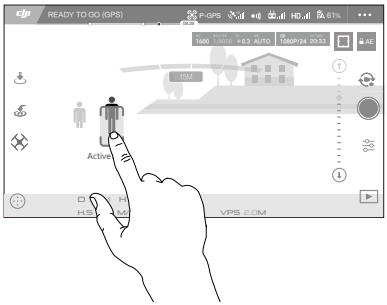
1. Take off and hover at least 9 feet (3 meters) above the ground.

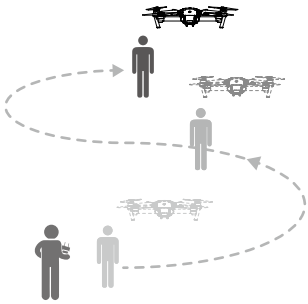


2. In the DJI GO app, tap and tap to bring up the flight modes and then select.

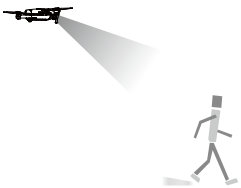
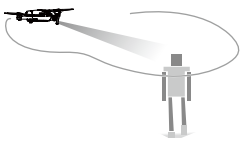
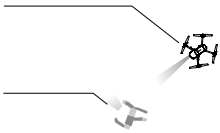


3. Drag a box around the object you want to track and tap it to confirm the selection. The box will turn green when tracking is in progress. If the box turns red, the object was not identified and you should try again.





ActiveTrack includes following functions:

Trace	Spotlight	Profile
		
The aircraft tracks the subject at constant distance. Use the roll stick on the remote controller to circle the subject.	Aircraft will not trace a subject automatically, but it keeps the camera pointing at the subject during flight. The remote controller can be used to maneuver the aircraft, but yaw is disabled. Using the left stick and gimbal dial will adjust subject framing.	The aircraft tracks the subject at constant angle and distance from the side. Use the roll stick on the remote control to circle the subject.

- DO NOT select an area containing people, animals, small, fine objects (e.g. tree branches and power lines) or transparent objects (e.g. glass or water surface).
- Stay clear of obstacles near the flight path, particularly when the aircraft is flying backward.
- Be extra vigilant when using ActiveTrack in any of the following situations:
  a) The tracked subject is not moving on a level plane.
  b) The tracked subject changes shape drastically while moving.
  c) The tracked subject could be blocked or out of sight for a long time.
  d) The tracked subject is moving on a snowy surface.
  e) The lighting is extremely low (< 300 lux) or high (> 10,000 lux).
  f) The tracked subject has a similar color or pattern as its surrounding environment.
- You must follow local privacy laws and regulations when using ActiveTrack.
- Aircraft will not be able to avoid obstacles while in Profile and Spotlight mode. Use these modes in open filed.

- The aircraft will sense and avoid obstacles on its flight path.
- If the aircraft loses track of the subject, because it is moving too fast or obscured, re-select the subject to resume tracking.

Exiting ActiveTrack

There are two ways to exit ActiveTrack:

1. Press the Flight Pause button on the remote controller.
2. Tap “STOP” button on the screen.

After exiting ActiveTrack, the aircraft will hover in place, at which point you may choose to start a new mission or bring the aircraft back to the Home Point.

Gesture Mode

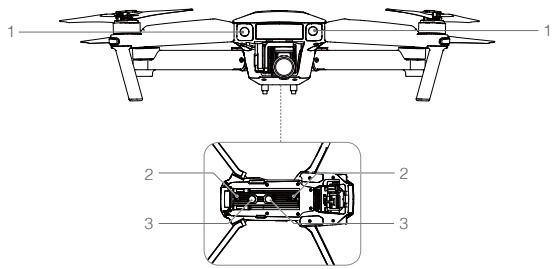
In Gesture Mode, the Mavic’s Vision System can recognizes gestures. It is able to follow and take selfies for you. Follow the steps below to use Gesture Mode:

Modes	Prompts	Front LEDs	Remarks
1. Confirm the subject		Ⓡ…… Slow Red Flashing	Ensure the forward vision system is active and there is enough light. Tap the icon and move in front of the camera for the Mavic to recognize you.
2. Confirm the distance		Ⓡ ×2…… Red Flashes Twice	Raise your arms and wave to the Mavic, the Front LED will blink red twice once it confirm the shooting distance.
3. Selfie Count Down		Ⓡ…… Fast Red Flashing	Put your fingers in front on your face as shown.

- Gesture Mode can only be used within Photo Mode.
- Fly the aircraft 2 meters or higher above the ground then move in front of the camera to be recognized. Front LED Indicators will blink red rapidly if the Mavic Pro fails to recognize a subject.
- Enabling GPS on your phone will allow the Mavic to follow with more accuracy while flying in Gesture Mode.

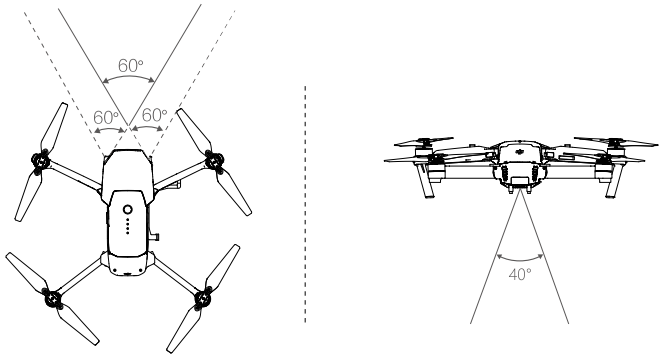
Forward and Downward Vision System

The Mavic Pro is equipped with an Forward and Downward Vision System that constantly scans for obstacles in front of it, allowing it to avoid collisions by going around, over or hovering. Downward Vision System uses ultrasound and image data to help the aircraft maintain its current position. With the help of Downward Vision System, your Mavic Pro can hover in place more precisely and fly indoors or in other environments where a GPS signal is not available. The main components of the Forward and Downward Vision System are located on the nose and the bottom of the aircraft; they include [3] two ultrasonic sensors and [1] [2] four monocular sensors.



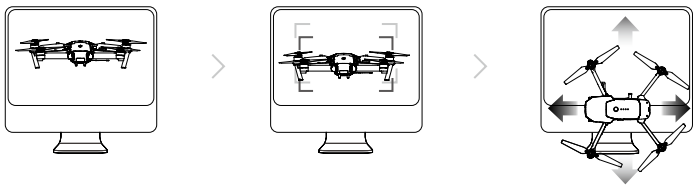
Detection Range

The detection range of the Forward and Downward Vision System is depicted as follow. Note that the aircraft cannot sense or avoid the obstacles that are not within the detection range.



Calibrating Sensors

Forward and Downward Vision Systems cameras that installed on the aircraft are calibrated on delivery. However these cameras are vulnerable to excessive impact, hence it will require calibration via DJI Assistant 2 or DJI GO app from time to time. Follow the steps below to calibrate the camera when the DJI GO app prompt you to do so.



01
Point the aircraft toward the screen

02
Align the boxes

03
Pan and tilt the aircraft

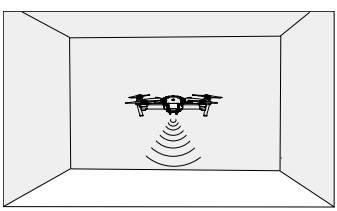
Quick Calibration

Use quick calibration when the DJI GO app notify that calibrates for the vision sensor is required. Tap through “Aircraft Status” -> “Vision Sensors” to carry out quick calibration.

⚠
- Quick calibration is quick fix to the vision sensor issue. It is recommended to connect the aircraft to the computer to carry out full calibration on the DJI Assistant 2 when you are able to do so. Carry out calibrate when the lighting conditions is ideal and on the surface with rich features (grassland).
- Do not calibrate the aircraft on highly reflective surfaces such as Marble or ceramics.

Using Downward Vision System

Downward Vision System is activated automatically when the aircraft is turned on. No further action is required. Downward Vision System is typically used in indoor environments, where GPS is unavailable. Using the sensors that are built into the Downward Vision System, the aircraft can hover precisely even without GPS.

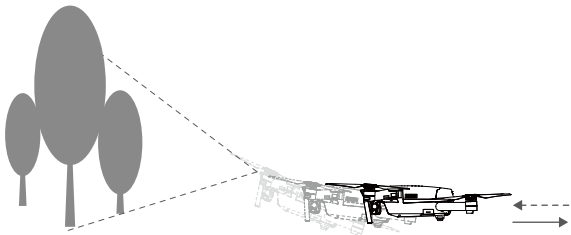


Follow the steps below to use Downward Vision System:

1. Toggle the flight mode switch to P-mode.
2. Place the aircraft on a flat surface. Note that the Downward Vision System cannot work properly on surfaces without clear pattern variations.
3. Turn on the aircraft. The aircraft status indicator will flash green two times, which indicates the Downward Vision System is ready. Gently push the left stick up to lift off and the aircraft will hover in place.

Assisted Braking from Forward Vision System

Powered by the Forward Vision System, the aircraft will now be able to actively initiate breaks when obstacles are detected direct ahead of the aircraft. Note that Forward and Downward Vision System works best when light condition is ideal and the obstacle does not have feature-less pattern. In addition, the aircraft speed cannot exceed over 10 m/s so that the aircraft can break and stop at the safe distance.



⚠ The performance of your Forward and Downward Vision System are affected by the surface over which it is flying. The ultrasonic sensors may not be able to accurately measure distances when operating above sound-absorbing materials. In addition, the camera may not function correctly in suboptimal environments. The aircraft will switch from P-mode to Atti mode automatically if neither GPS nor Forward and Downward Vision System are available. Operate the aircraft with great caution in the following situations:

- Flying over monochrome surfaces (e.g. pure black, pure white, pure red, pure green).
- Flying over a highly reflective surfaces.
- Flying at high speeds(over 10 m/s at 2 meters or over 5 m/s at 1 meter).
- Flying over water or transparent surfaces.
- Flying over moving surfaces or objects.
- Flying in an area where the lighting changes frequently or drastically.
- Flying over extremely dark (lux < 10) or bright (lux > 100,000) surfaces.
- Flying over surfaces that can absorb sound waves (e.g. thick carpet).
- Flying over surfaces without clear patterns or texture.
- Flying over surfaces with identical repeating patterns or textures (e.g. tiles with the same design).
- Flying over inclined surfaces that will deflect sound waves away from the aircraft.

- Keep the sensors clean at all times. Dirt or other debris may adversely affect the effectiveness of the sensors.
- Downward Vision System is only effective when the aircraft is at altitudes of 0.3 to 13 meters.
- The Forward and Downward Vision System may not function properly when the aircraft is flying over water.
- The Forward and Downward Vision System may not be able to recognize pattern on the ground in low light conditions (less than 100 lux).
- Do not use other ultrasonic devices with frequency of 40 KHz when Forward and Downward Vision System is in operation.

⊘ • Keep the animals away from the aircraft when Downward Vision System is activated. The sonar sensor emits high frequency sounds that are only audible to some animals.

Flight Recorder

Flight data is automatically recorded to the internal storage of the aircraft. This includes flight telemetry, aircraft status information, and other parameters. To access these data, connect the aircraft to the PC through the Micro USB port.

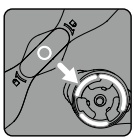
Attaching and Detaching the Propellers

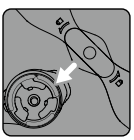
Use only DJI approved propellers with your Mavic Pro. The white and no ring on the propeller indicate where they should be attached and in which direction whey should spin.

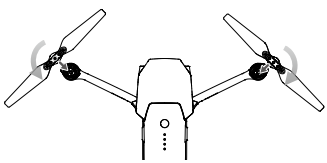
Propellers	White Ring	No Ring
Figure		
Attach On	Motors with white marks	Motors without white marks
Legends	Lock : Turn the propellers in the indicated direction to mount and tighten. Unlock : Turn the propellers in the indicated direction to loosen and remove.	

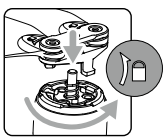
Attaching the Propellers

Attach the white ringed propellers to the mounting base with white marks. Press the propeller down onto the mounting plate and rotate in the lock direction until it is secured in its position. Attach the other pair propellers to the mounting based without marks. Unfold all the propellers blades.


Marked


Unmarked





Detaching the Propellers

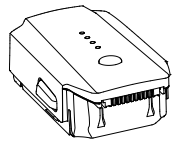
Press down the propellers onto the motor mount, rotate the propeller according to the marked direction to unlock the propeller.

⚠
- Be aware of the sharp edges of the propellers. Handle with care.
- Use only the DJI approved propellers. Do not intermix the propellers types.
- Stand clear of the motors and DO NOT touch the propellers when they are spinning.
- Check that the propellers and motors are installed correctly and firmly before every flight.
- Ensure that all propellers are in good condition before each flight. DO NOT use aged, chipped, or broken propellers.
- To avoid injury, STAND CLEAR of and DO NOT touch propellers or motors when they are spinning.
- ONLY use original DJI propellers for a better and safer flight experience.

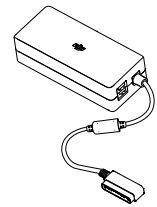
Intelligent Flight Battery

Introduction

The DJI Intelligent Flight Battery has a capacity of 3830 mAh, a voltage of 11.4 V,and a smart charge/discharge functionality. With its power energy compact battery cell, it provides tremendous power source for the aircraft. It should only be charged using an appropriate charger that has been approved by DJI.



Intelligent Flight Battery



Charger

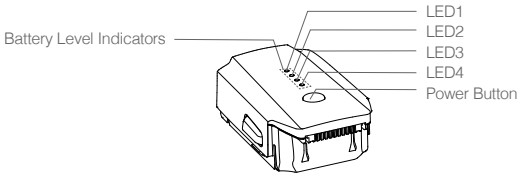
⚠ The Intelligent Flight Battery must be fully charged before using it for the first time.

DJI Intelligent Flight Battery Functions

1. Battery Level Display: The LED indicators display the current battery level.
2. Auto-Discharging Function: To prevent swelling, the battery automatically discharges to below 65% of total power when it is idle for more than ten days. It takes around two days to discharge the battery to 65%. It is normal to feel moderate heat being emitted from the battery during the discharge process. Discharge thresholds can be set in the DJI GO app.
3. Balanced Charging: Automatically balances the voltage of each battery cell when charging.
4. Overcharge Protection: Charging automatically stops when the battery is fully charged.
5. Temperature Detection: The battery will only charge when the temperature is between 5°C (41°F) and 40°C (104°F).
6. Over Current Protection: The battery stops charging when high amperage (more than 8.5 A) is detected.
7. Over Discharge Protection: To prevent over-discharge damage, discharging automatically stops.
8. Short Circuit Protection: Automatically cuts the power supply when a short circuit is detected.
9. Battery Cell Damage Protection: The DJI GO app displays a warning message when a damaged battery cell is detected.
10. Sleep Mode: To save power, the battery will cut off power supply and enters sleep mode after 20 minutes of inactivity.
11. Communication: Information pertaining to the battery's voltage, capacity, current, etc. is transmitted to the aircraft's main controller.

⚠ Refer to *Mavic Pro Intelligent Flight Battery Safety Guidelines* before use. Users take full responsibility for all operations and usage.

Using the Battery



Turning ON/OFF

Turning On: Press the Power Button once, then press again and hold for 2 seconds to turn on. The remote controller system status screen will display the current battery level.

Turning Off: Press the Power Button once, then press again and hold for 2 seconds to turn off.

Low Temperature Notice:

1. Battery capacity is significantly reduced when flying in low temperature (-10°C and 5°C) environments.
2. It is not recommended that the battery be used in extremely low temperature (< -10°C) environments. Battery voltage should reach the appropriate level when operating environment with temperatures between -10°C and 5°C.
3. End the flight as soon as the DJI GO app displays the “Low Battery Level Warning” in low temperature environments.
4. Keep the battery indoors to warm it before flying in low temperature environments.
5. To ensure optimal performance of the battery, keep the battery temperature above 20°C.

⚠ In cold environments, insert the battery into the battery compartment and allow the aircraft for approximately 1-2 minutes to warm up before taking off.

Checking the Battery Level

The Battery Level Indicators display how much power remains. When the battery is turned off, press the Power Button once. The Battery Level Indicators will light up to display the current battery level. See below for details.

The Battery Level Indicators will also show the current battery level during charging and discharging. The indicators are defined below.

● : LED is on. ☼ : LED is flashing.

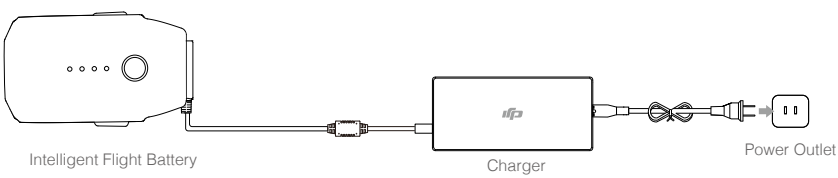
○ : LED is off.

Battery Level Indicators				
LED1	LED2	LED3	LED4	Battery Level
○	○	○	○	87.5%~100%
○	○	○	☼	75%~87.5%
○	○	○	○	62.5%~75%
○	○	☼	○	50%~62.5%
○	○	○	○	37.5%~50%
○	☼	○	○	25%~37.5%
○	○	○	○	12.5%~25%
☼	○	○	○	0%~12.5%
○	○	○	○	=0%

Charging the Intelligent Flight Battery

1. Connect the Battery Charger to a power source (100-240 V 50 / 60 Hz).
2. Connect the Battery to the Charger to start charging.
3. The Battery Level Indicator will display the current battery level as it is charging.
4. The Intelligent Flight Battery is fully charged when the Battery Level Indicators are all off. Detach the battery from the Charger.
5. Allow its temperature to drop to room temperature before storing it for an extended period.
6. The charger will stop charging the battery if the battery cell's temperature is not within the operating range (5°C to 40°C).

⚠ Always turn off the battery before inserting it or removing it from the Mavic Pro. Never insert or remove a battery when it is turned on.



Battery Level Indicators While Charging				
LED1	LED2	LED3	LED4	Battery Level
☼	○	○	○	0%~25%
☼	☼	○	○	25%~50%
☼	☼	☼	○	50%~75%
☼	☼	☼	☼	75%~100%
○	○	○	○	Fully Charged

Battery Protection LED Display

The table below shows battery protection mechanisms and corresponding LED patterns.

Battery Level Indicators while Charging					
LED1	LED2	LED3	LED4	Blinking Pattern	Battery Protection Item
○	☼	○	○	LED2 blinks twice per second	Over current detected
○	☼	○	○	LED2 blinks three times per second	Short circuit detected
○	○	☼	○	LED3 blinks twice per second	Over charge detected
○	○	☼	○	LED3 blinks three times per second	Over-voltage charger detected
○	○	○	☼	LED4 blinks twice per second	Charging temperature is too low
○	○	○	☼	LED4 blinks three times per second	Charging temperature is too high

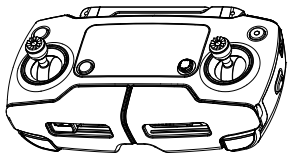
After these issues are resolved, press the Power Button to turn off the Battery Level Indicator. Unplug the Intelligent Flight Battery from the charger and plug it back in to resume charging. Note that you do not need to unplug and plug in the charger in the event of a room temperature error; the charger will resume charging when the temperature is within the allowable range.

⚠ DJI does not take any responsibility for damage caused by third-party chargers.

How to discharge the Intelligent Flight Battery before transport the batteries for long trip:
Fly the Mavic Pro outdoors until there is less than 20% of power left, or until the battery can no longer be turned on.

Remote Controller

This section describes the features of the remote controller and includes instructions for controlling the aircraft and the camera.



Remote Controller

Remote Controller Profile

The Mavic Pro remote controller is a multi-function wireless communication device that integrates the video downlink system and aircraft remote control system. The video downlink and aircraft remote control system operate at 2.4 GHz. The remote controller features a number of camera control functions, such as taking and previewing photos and videos, as well as controlling gimbal motion. The battery level is displayed via LCD Screen of the remote controller.

- **Compliance Version:** The remote controller is compliant with local compliance and regulations.
- **Operating Mode:** Control can be set to Mode 1 or Mode 2, or to a custom mode.
- **Mode 1:** The right stick serves as the throttle.
- **Mode 2:** The left stick serves as the throttle.

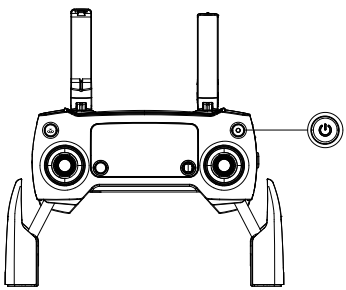
⚠ To prevent transmission interference, do not operate more than three aircrafts in the same area.

Using the Remote Controller

Turning the Remote Controller On and Off

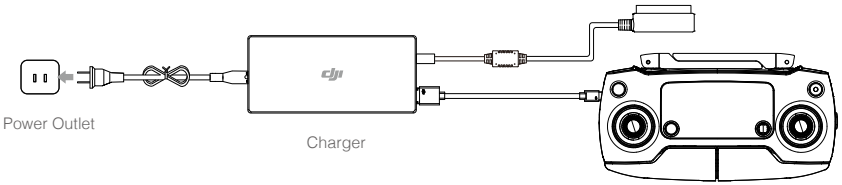
The Mavic Pro remote controller is powered by a 2S rechargeable battery that has a capacity of 2970 mAh. Follow the steps below to turn on your remote controller:

1. When the remote controller is turned off, press the Power Button once. The LCD Screen will display the current battery level.
2. Press and hold the Power Button to turn on the remote controller.
3. The remote controller will beep when it is turned on.
4. Repeat Step 2 to turn off the remote controller.



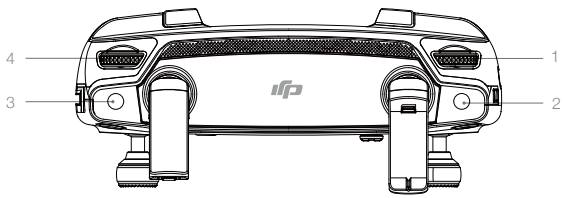
Charging the Remote Controller

Charge the remote controller using the included charger. Refer to the figure below for more details.



Controlling the Camera

Shoot videos/pictures, view recorded images, and adjust camera settings via the Shutter Button, Camera Settings Dial, and Record Button on the remote controller.



1. Camera Settings Dial

   Turn the dial to adjust camera settings such as ISO, shutter speed, without letting go of the remote controller.

2. Shutter Button

   Press to take a photo. If burst mode is activated, multiple photos will be taken with a single press.

3. Record Button

   Press once to start recording video, then press again to stop recording.

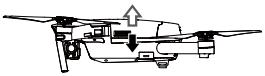
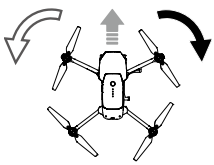
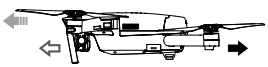
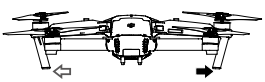
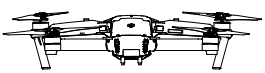
4. Gimbal Dial

   Use this dial to control the tilt of the gimbal.

Controlling Aircraft

This section explains how to control the orientation of the aircraft through the remote controller. The Remote Control is set to Mode 2 by default.

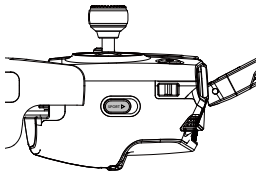
Stick Neutral/Mid-Point: Control sticks are in the center position.
Moving the Control Stick: The control stick is pushed away from the center position.

Remote Controller (Mode 2)	Aircraft (Indicates Nose Direction)	Remarks
		Moving the left stick up and down changes the aircraft's elevation. Push the stick up to ascend and down to descend. When both sticks are centered, the Mavic Pro will hover in place. The more the stick is pushed away from the center position, the faster the Mavic Pro will change elevation. Always push the stick gently to prevent sudden and unexpected elevation changes.
		Moving the left stick to the left or right controls the rudder and rotation of the aircraft. Push the stick left to rotate the aircraft counter-clockwise, push the stick right to rotate the aircraft clockwise. If the stick is centered, the Mavic Pro will maintain its current orientation. The more the stick is pushed away from the center position, the faster the Mavic Pro will rotate.
		Moving the right stick up and down changes the aircraft's forward and backward pitch. Push the stick up to fly forward and down to fly backward. Mavic Pro will hover in place if the stick is centered. Push the stick further away from the center position for a larger pitch angle (maximum 30°) and faster flight.
		Moving the right stick control left and right changes the aircraft's left and right pitch. Push left to fly left and right to fly right. The Mavic Pro will hover in place if the stick is centered.
		Press the Flight Pause button once to exit from the ActiveTrack, TapFly and Intelligent Navigation flight mode. The aircraft will hover at the current position.

Flight Mode Switch

Toggle the switch to select the desired flight mode. You may choose between P-mode and S-mode.

Position	Flight Mode
	P-mode
	S-mode



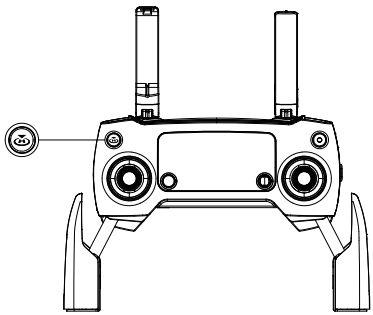
P-mode (Positioning): P-mode works best when the GPS signal is strong. The aircraft utilizes the GPS and Vision System to automatically stabilize itself, navigate between obstacles or track a moving object. Advanced features such as TapFly and ActiveTrack are enabled in this mode.

S-mode (Sport): The handling gain values of the aircraft are adjusted in order to enhance the maneuverability of the aircraft in S-mode. The maximum flight speed of the aircraft is increased to 18 m /s in this mode. Note that Forward Vision System is disabled in this mode.

The Flight Mode is locked in P Mode by default, regardless of switch position. To switch flight modes, go to Camera view in the DJI GO app, tap the icon and enable "Multiple Flight Modes." After enabling multiple flight modes, toggle the switch to P and then to S to fly in Sport Mode.

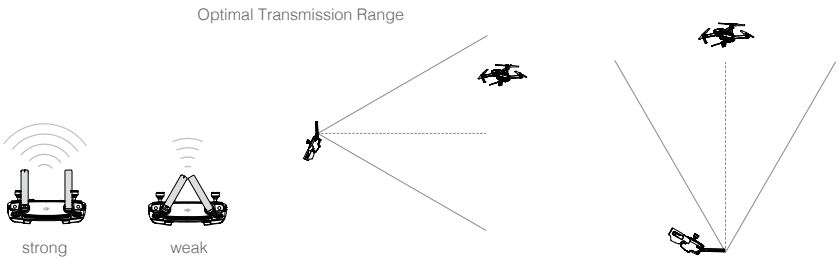
RTH Button

Press and hold the RTH button to start the Return-to-Home (RTH) procedure. The aircraft will then return to the last recorded Home Point. Press this button again to cancel the RTH procedure and regain control of the aircraft.



Optimal Transmission Range

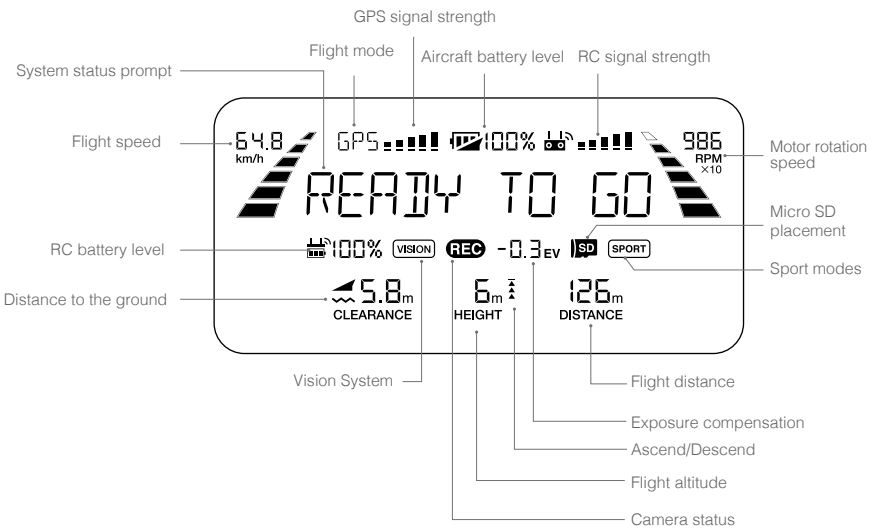
The transmission signal between the aircraft and the remote controller is most reliable within the area that is depicted in the image below:



Ensure that the aircraft is flying within the optimal transmission zone. To achieve the best transmission performance, maintain the appropriate relationship between the operator and the aircraft.

LCD Screen

LCD Screen displays various system statuses such as flight telemetries, battery level in real time. Refer to the figure below for the meaning of each icons in the LCD Screen.



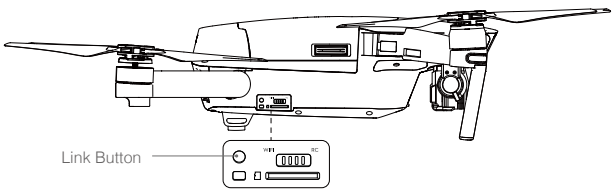
Linking the Remote Controller

The remote controller is linked to your aircraft before delivery. Linking is only required when using a new remote controller for the first time. Follow these steps to link a new remote controller:

1. Turn on the remote controller and connect to the mobile device, and turn on the aircraft. Launch the DJI GO app.
2. Enter “Camera” and tap on and then tap “Linking RC” button.

⚠ • Toggle the Control Mode switch to RC mode before linking.

3. The remote controller is ready to link. The Remote Controller Status Indicator blinks blue and a beep is emitted.
4. Locate the linking button on the side of the aircraft, as shown in the figure below. Press the link button to start linking. The Remote Controller Status Indicator LED will display a solid green once the remote controller is successfully linked to the aircraft.



⚠ • The remote controller will un-link itself from an aircraft if a new remote controller is linked to the same aircraft.

Camera and Gimbal

This section provides the technical specifications of the camera and explains the gimbal's operation modes.

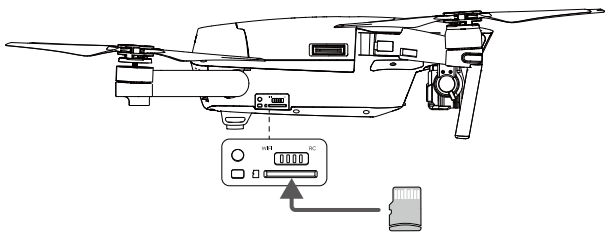
Camera and Gimbal

Camera Profile

The on-board camera uses the 1/2.3 inch CMOS sensor to capture video up to 4K at 30 fps with the Mavic Pro and 12 megapixel stills. You may choose to record the video in either MOV or MP4 format. Available picture shooting modes include burst, continuous, and interval mode. A live preview of what the camera sees can be monitored on the connected mobile device via the DJI GO app.

Camera Micro SD Card Slot

To store your photos and videos, insert the Micro SD card into the slot, as shown below, before turning on the Mavic Pro. The Mavic Pro comes with a 16 GB Micro SD card and supports Micro SD cards up to 64 GB. A UHS-1 Micro SD card is recommended due to their fast read and write speeds allowing you to save high-resolution video data.

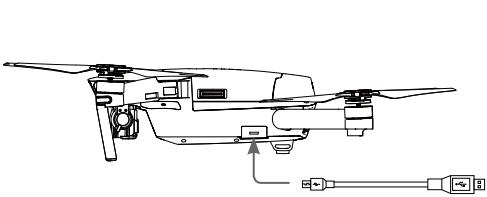


Do not remove the Micro SD card from the Mavic Pro when it is turned on.

To ensure the stability of the camera system, single video recordings are capped at 30 minutes.

Camera Data Port

Turn on the Mavic Pro and connect a USB cable to the Micro USB Port to download photos and videos to your computer.

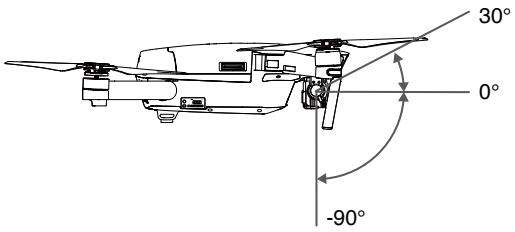


The aircraft must be turned on before attempting to access the files on the Micro SD card.

Gimbal

Gimbal Profile

The 3-axis gimbal provides a steady platform for the attached camera, allowing you to capture clear, stable images and video. The gimbal can tilt the camera within a 120˚ range.



Use the gimbal dial on the remote controller to control camera tilt, or go to Camera View in the DJI GO app, tap and hold on the screen until a blue circle appears, then drag the circle to control the camera's tilt.

Gimbal Operation Modes

Two gimbal operation modes are available. Switch between the different operation modes on the camera settings page of the DJI GO app. Note that your mobile device must be connected to the remote controller for changes to take effect. Refer to the table below for details:

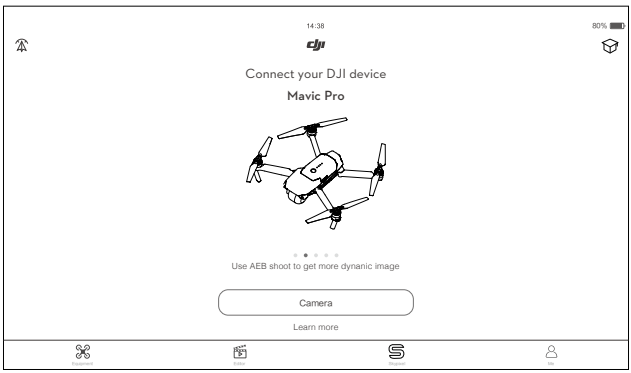
📖	Follow Mode	The angle between gimbal's orientation and aircraft's nose remains constant at all times.
	FPV Mode	The gimbal will synchronize with the movement of the aircraft to provide a first-person perspective flying experience.
⚠	• Remove the Gimbal Clamp before power on the aircraft. • A gimbal motor error may occur in these situations: (1) the aircraft is placed on uneven ground or the gimbal's motion is obstructed. (2) the gimbal has been subjected to an excessive external force, such as a collision. Please take off from flat, open ground and protect the gimbal at all times. • Flying in heavy fog or clouds may make the gimbal wet, leading to temporary failure. The gimbal will recover full functionality after it dries. • It is normal for the gimbal to produce short pulse of beeping tone upon initialization.	

DJI GO App

This section introduces the main functions of the DJI GO app.

DJI GO App

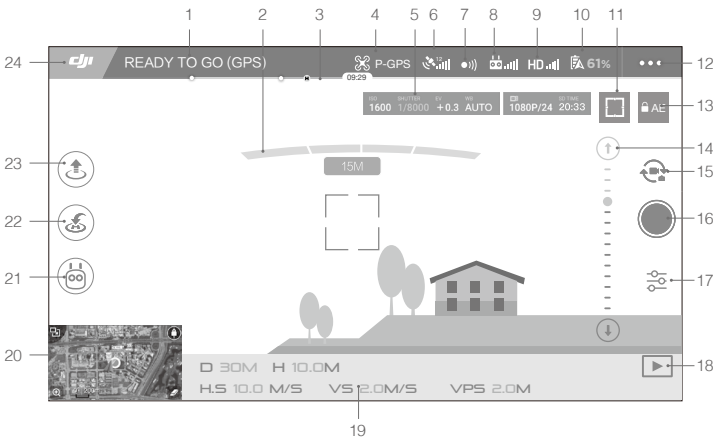
The DJI GO app is a mobile application designed specifically for DJI equipment. Use this app to control the gimbal, camera, and other aircraft functions. The app features Equipment, Editor, Skypixel and Me sections, which are used for configuring your aircraft , editing and sharing your photos and videos with others.



Equipment

Enter Camera view by tapping on the Equipment icon from the main GUI.

Camera View



1. System Status

READY TO GO (GPS) : This icon indicates aircraft flight status and various warning messages.

2. Obstacles Detection Status

: Red bars are displayed when approaching obstacles. Orange bars are displayed when obstacles are away from the aircraft.

3. Battery Level Indicator

: The battery level indicator provides a dynamic display of the battery level. The colored zones on the battery level indicator represent the power levels needed to carry out different functions.

4. Flight Mode

: The text next to this icon indicates the current flight mode.
Tap to configure the MC (Main Controller) Settings. These settings allow you to modify flight limits and set the gain values.

5. Camera Parameters

Displaying camera settings parameters and capacity of the Micro SD card.

6. GPS Signal Strength

: Shows the current GPS signal strength. White bars indicate adequate GPS strength.

7. Forward Vision System Status

: Tap into this button to enable or disable features provided by the Forward Vision System.

8. Remote Controller Signal

: This icon shows the strength of remote controller's signal.

9. HD Video Link Signal Strength

HD : This icon shows the strength of the HD video downlink connection between the aircraft and the remote controller.

10. Battery Level

61% : This icon shows the current battery level.
Tap to view the battery information menu, set the various battery warning thresholds, and view the battery warning history.

11. Focus/Metering Button

/ : Tap to switch between focus and metering mode. Tap to select object for focusing or metering.

12. General Settings

••• : Tap to enter general setting menu for setting metrics, enabling live stream and display flight routes and so on.

13. Auto Exposure Lock

AE : Tap to lock the exposure value.

14. Gimbal Slider

: Displays the pitch of the gimbal camera.

15. Photo/Video Button

: Tap to switch between photo and video recording mode.

16. Shoot / Record Button

/ : Tap to start shooting photos or recording video clips.

17. Camera Settings

: Tap to set ISO, shutter and auto exposure values of the camera.

18. Playback

: Tap to enter the playback page. You can preview photos and videos as soon as they are captured.

19. Flight Telemetry

D 30M : Distance between the aircraft and the Home Point.
H 10.0M : Height from the ground.
HS 10.0M/S : Aircraft horizontal speed.
VS 2.0M/S : Aircraft vertical speed.

20. Map

Tap to view the map.

21. Intelligent Flight Mode

: Icon is solid when Intelligent Flight Mode is in use.

22. Smart RTH

: Initiate RTH home procedure. Tap to have the aircraft return to the last recorded home point.

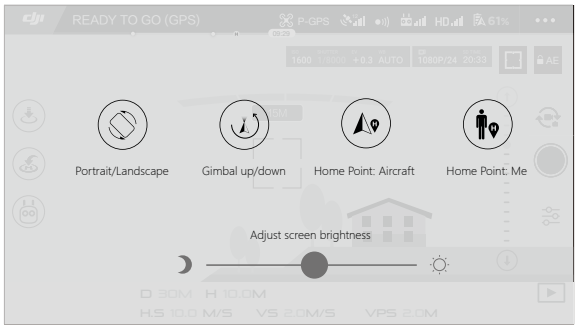
23. Auto Takeoff/Landing

/ : Tap to initiate auto takeoff or landing.

24. Back

: Tap this icon to return to the main menu.

Slide left in the Camera view to enter the menu shown below.



Portrait/Landscape

Switch to Portrait mode by tapping the icon.

Gimbal up/down

Tap the icon to point the camera downward or forward.

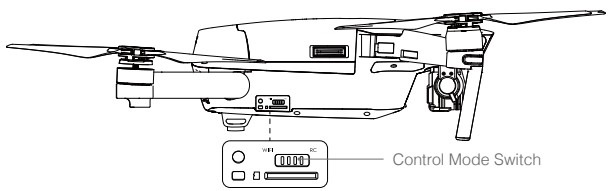
Home Point

Use aircraft location or remote controller location as the home point.

Using Mobile Device to Control Aircraft

Apart from using the included remote controller, you may use the Wi-Fi connection on the mobile device to control the aircraft. Follow the instructions below to learn how to control the aircraft via Wi-Fi connection.

1. Power off the aircraft, then toggle the Control Mode Switch to the “Wi-Fi” position.

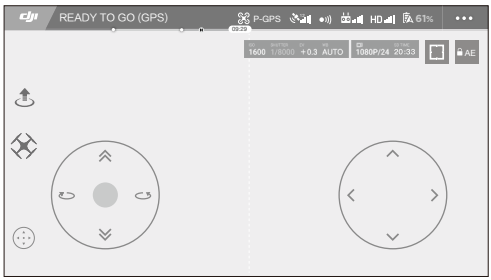


2. Power on the aircraft.
3. Turn on your mobile device's Wi-Fi and enter the Wi-Fi password shown on the front arm to connect to the Mavic network.
4. Tap icon to take off the aircraft automatically.Tap on the screen and use the Virtual Joysticks to navigate the aircraft.

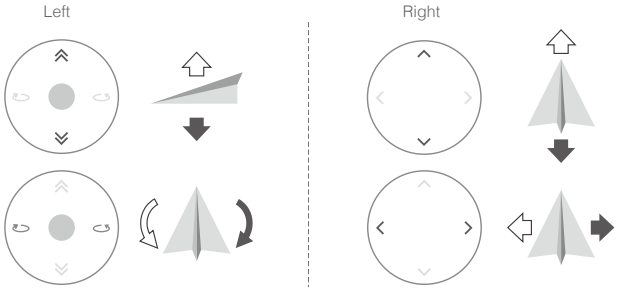
- Launch the DJI GO app and tap the icon on the top right of your screen, then scan the Wi-Fi QR Code on the front arm to start connection. Note that this feature is available to Android device only.
- When using Wi-Fi in a wide open area with no Electromagnetic Interference, transmission distance is approximately 262 ft (80 m) at an altitude of 164 ft (50 m). The maximum flight speed is 9 mph (14 kph), maximum ascent speed is 2 m/s and maximum descent speed is 1 m/s.
- The Wi-Fi frequency of your mobile device can be set to 2.4 GHz (set by default) or 5 GHz. Set your Wi-Fi to 5 GHz for less interference. Check with your mobile device to learn whether 5 GHz connection is available.
- Press and hold the linking button for more than 5 seconds to set Wi-Fi password and SSID. Press and release to rest the transmission frequency to 2.4 GHz.

Using Virtual Joysticks

Ensure the mobile device has been connected to the aircraft before using the Virtual Joysticks. The illustrations below is based on Mode 2 (left stick as throttle).



Virtual Joysticks GUI



Move the aircraft upwards, downwards or rotate to the left or right by press on the controlling area on the left plane.

Move the aircraft forwards, backwards or rotate to the left or right by press on the controlling area on the right plane.

Tap on the " " button to enable or disable Virtual Joystick.

The area beyond the white cycle is also responsive to the handling commands.

Editor

An intelligent video editor is built into the DJI GO app. After recording several video clips and downloading them to your mobile device, go to Editor on the home screen. You can then select a template and a specified number of clips which are automatically combined to create a short film that can be shared immediately.

SkyPixel

View and share the photos and videos in the SkyPixel page.

Me

If you already have a DJI account, you will be able to participate in forum discussions, and share your artwork with the community.

Flight

This section describes safe flight practices and flight restrictions.

Flight

Once pre-flight preparation is complete, it is recommended that you use the flight simulator in the DJI GO app to hone your flight skills and practice flying safely. Ensure that all flights are carried out in an open area.

Flight Environment Requirements

1. Do not use the aircraft in severe weather conditions. These include wind speeds exceeding 10 m/s , snow, rain and fog.
2. Fly in open areas. Tall structures and large metal structures may affect the accuracy of the on-board compass and GPS system.
3. Avoid obstacles, crowds, high voltage power lines, trees, and bodies of water.
4. Minimize interference by avoiding areas with high levels of electromagnetism, including base stations and radio transmission towers.
5. Aircraft and battery performance is subject to environmental factors such as air density and temperature. Be very careful when flying at altitudes greater than 16404 feet (5000 meters) above sea level, as the performance of the battery and aircraft may be affected.
6. The Mavic Pro cannot use P-mode within the polar areas.

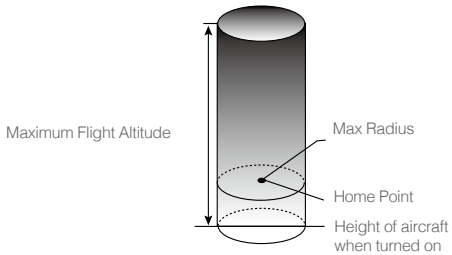
Flight Limits and No-Fly Zones

All unmanned aerial vehicle (UAV) operators should abide by all regulations set forth by government and regulatory agencies including the ICAO and the FAA. For safety reasons, flights are limited by default, which helps users operate this product safely and legally. Flight limitations include height limits, distance limits, and No-Fly Zones.

When operating in P-mode, height limits, distance limits, and No-Fly Zones function concurrently to manage flight safety.

Maximum flight altitude & Radius Limits

Maximum flight altitude and radius limits may be changed in the DJI GO app. Be aware that the maximum flight altitude cannot exceed 1640 feet (500 meters). In accordance with these settings, your Mavic Pro will fly in a restricted cylinder, as shown below:



GPS Signal Strong ⓖ ····· Blinking Green			
	Flight Limits	DJI GO App	Aircraft Status Indicator
Maximum Flight Altitude	Aircraft's altitude cannot exceed the specified value.	Warning: Height limit reached.	None.
Max Radius	Flight distance must be within the max radius.	Warning: Distance limit reached.	Rapid red flashing ⓡ ····· when close to the max radius limit.

GPS Signal Weak Ⓨ ····· Blinking Yellow			
	Flight Limits	DJI GO App	Aircraft Status Indicator
Maximum Flight Altitude	Height is restricted to 16 feet (5 meters) when the GPS signal is weak and Downward Vision System is activated. Height is restricted to 164 feet (50 meters) when the GPS signal is weak and Downward Vision System is inactivated.	Warning: Height limit reached.	None.
Max Radius	No limits		

⚠
- If the aircraft flies out of the limit, you can still control the aircraft, but you cannot fly it any farther.
- If the aircraft flies out of the max radius, it will fly back within range automatically when GPS signal is strong.
- For safety reasons, please do not fly close to airports, highways, railway stations, railway lines, city centers, or other sensitive areas. Fly the aircraft only within your line of sight.

No-Fly Zones

All No-Fly Zones are listed on the DJI official website at http://www.dji.com/flysafe/no-fly. No-Fly Zones are divided into Airports and Restricted Areas. Airports include major airports and flying fields where manned aircraft operate at low altitudes. Restricted Areas include border lines between countries or sensitive institute.

Preflight Checklist

1. Remote controller, Intelligent Flight Battery, and mobile device are fully charged.
2. Propellers are mounted correctly and firmly.
3. Micro SD card has been inserted, if necessary.
4. Gimbal is functioning normally.
5. Motors can start and are functioning normally.
6. The DJI GO app is successfully connected to the aircraft.
7. Ensure that the sensors for the Forward and Downward Vision System are clean.

Calibrating the Compass

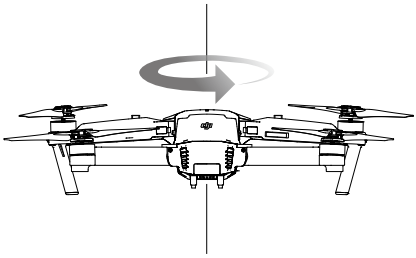
Only calibrate the compass when the DJI GO app or the status indicator prompt you to do so. Observe the following rules when calibrating your compass:

- DO NOT calibrate your compass where there is a chance of strong magnetic interference, such as magnetite, parking structures, and steel reinforcements underground.
- DO NOT carry ferromagnetic materials with you during calibration such as cellular phones.
- The DJI GO app will prompt you to resolve the compass issue if the compass is affected by strong interference after calibration is complete. Follow the prompted instructions to resolve the compass issue.

Calibration Procedures

Choose an open area to carry out the following procedures.

1. Tap the Aircraft Status Bar in the app and select “Calibrate”, then follow the on-screen instructions.
2. Hold the aircraft horizontally and rotate 360 degrees. The Aircraft Status Indicators will display a solid green light.



3. Hold the aircraft vertically, with nose pointing downward, and rotate it 360 degrees around the center axis. Recalibrate the compass if the Aircraft Status Indicator glows solid red.

4. Re-calibrate the aircraft if the aircraft status indicators blink red.

⚠ • If the Aircraft Status Indicator blinks red and yellow after the calibration procedure, move your aircraft to a different location and try again.

• DO NOT calibrate the compass near metal objects such as a metal bridge, cars, scaffolding.
• If the aircraft status indicators is blinking red and yellow alternately after placing the aircraft on the ground, the compass has detected magnetic interference. Change your location.

When to Recalibrate

1. When compass data is abnormal and the Aircraft Status Indicator is blinking green and yellow.
2. When flying in a new location or in a location that is different from the most recent flight.
3. When the mechanical or physical structure of the Mavic Pro has been changed.
4. When severe drifting occurs in flight, i.e. Mavic Pro does not fly in straight line.

Auto Takeoff and Auto Landing

Auto Takeoff

Use auto takeoff only if the Aircraft Status Indicators are blinking green. Follow the steps below to use the auto takeoff feature:

1. Launch the DJI GO app, and enter “Camera” page.
2. Complete all steps on the pre-flight checklist.
3. Tap“ ”, and confirm that conditions are safe for flight. Slide the icon to confirm and takeoff.
4. Aircraft takes off and hovers at 1.2 meters above ground.

⚠ Aircraft Status Indicator blinks rapidly when it is using the Downward Vision System for stabilization. The aircraft will automatically hover below 13 meters. It is recommended to wait until there is sufficient GPS before using the Auto Take-off feature.

Auto-Landing

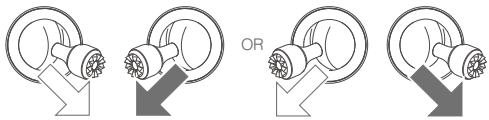
Use auto-landing only if the Aircraft Status Indicator is blinking green. Follow the steps below to use the auto-landing feature:

1. Tap on , to ensure the landing condition is ideal. Slide to confirm.
2. Abort landing process immediately by using the ⓧ button on the screen.
3. a. When Landing Protection determines that the ground is suitable for landing, the Mavic Pro will land gently.
   b. If Landing Protection determines that the ground is not suitable for landing, the Mavic Pro will hover and wait for pilot confirmation.
   c. If Landing Protection is not operational, the DJI GO app will display a landing prompt when the Mavic Pro descends below 0.5 meters. Pull down on the throttle or use the auto landing slider to land.
4. Aircraft will land and turn off automatically.

Starting/Stopping the Motors

Starting the Motors

A Combination Stick Command (CSC) is used to start the motors. Push both sticks to the bottom inner or outer corners to start the motors. Once the motors have started spinning, release both sticks simultaneously.

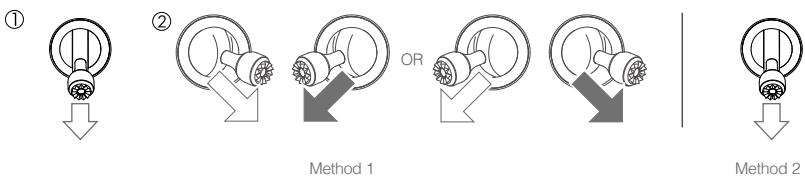


Stopping the Motors

There are two methods to stop the motors.

Method 1: When Mavic Pro has landed, push the left stick down ①, then conduct the same CSC that was used to start the motors, as described above ②. Motors will stop immediately. Release both sticks once motors stop.

Method 2: When the aircraft has landed, push and hold the left stick down. The motors will stop after three seconds.



Stop Motors Mid-flight

Stop motors mid-flight will cause the aircraft crash. The motors can only be stopped mid-flight when the flight controller detects critical error. (This setting could be changed in the DJI GO app)

Flight Test

Takeoff/Landing Procedures

1. Place the aircraft in an open, flat area with the battery level indicators facing towards you.
2. Turn on the remote controller and your mobile device, then turn on the Intelligent Flight Battery.
3. Launch the DJI GO app and enter the Camera page.
4. Wait until the Aircraft Indicator blinks green. This means the Home Point is recorded and it is now safe to fly. If they flash yellow, the Home Point has not been recorded.
5. Push the left stick up slowly to take off or use Auto Takeoff.
6. Shoot photos and videos using the DJI GO app.
7. To land, hover over a level surface and gently pull down on the left stick to descend.
8. After landing, execute the CSC command or hold the left stick at its lowest position until the motors stop.
9. Turn off the Intelligent Flight Battery first, then the Remote Controller.

⚠
- When the Aircraft Status Indicator blinks yellow rapidly during flight, the aircraft has entered Failsafe mode.
- A low battery level warning is indicated by the Aircraft Status Indicators blinking red slowly or rapidly during flight.
- Watch our video tutorials for more flight information.

Video Suggestions and Tips

1. Go through the full pre-flight checklist before each flight.
2. Select the desired gimbal operation mode in the DJI GO app.
3. Only shoot video when flying in P-mode.
4. Always fly in good weather and avoid flying in rain or heavy wind.
5. Choose the camera settings that suit your needs. Settings include photo format and exposure compensation.
6. Perform flight tests to establish flight routes and preview scenes.
7. Push the control sticks gently to keep the aircraft's movement smooth and stable.

Appendix

Appendix

Specifications

Aircraft	
Weight	1.62 lbs (734 g)
Weight (including gimbal cover)	1.64 lbs (743 g)
Dimensions	83 × 83 × 198 mm (folded)
Diagonal Length (propellers excluded)	335 mm
Max Ascent Speed	16.4 ft/s (5 m/s) in Sport Mode
Max Descent Speed	9.8 ft/s (3 m/s)
Max Speed	40.4 mph (65 kph) in Sport Mode without wind
Max Service Ceiling Above Sea Level	16404 feet (5000 m)
Max Flight Time	27 minutes (0 wind at a consistent 15.5 mph (25 kph))
Max Hovering Time	24 minutes (0 wind)
Avg. Flight Time	21 minutes (general flight, 15% battery left)
Max Flight Distance	8 mi (13 km, 0 wind)
Operating Temperature	32° to 104° F (0° to 40° C)
Satellite Positioning Systems	GPS/GLONASS
Gimbal	
Controllable Range	Pitch: -90° to +30°, Roll: 0°or 90° (Horizontally and vertically)
Forward Vision System	
Sensing Range	Precision measurement range: 2 ft (0.7 m) to 49 ft (15 m) Detectable range: 49 ft (15 m) to 98 ft (30 m)
Operating Environment	Surfaces with clear patterns and adequate lighting (lux > 15)
Downward Vision System	
Velocity Range	≤ 22.4 mph (36 kph) at 6.6 ft (2 m) above ground
Altitude Range	1 - 43 feet (0.3 - 13 m)
Operating Range	1 - 43 feet (0.3 - 13 m)
Operating Environment	Surfaces with a clear patterns and adequate lighting (lux > 15)
Camera	
Sensor	1/2.3” CMOS Effective pixels:12.35 Megapixels (Total pixels: 12.71 M)
Lens	78.8° FOV, 28 mm (35 mm format equivalent) f/2.2 Distortion <1.5% Focus from 0.5 m to ∞
ISO Range	100 - 3200 (video), 100 - 1600 (photo)
Electronic Shutter Speed	8 s to 1/8000 s
Max Image Size	4000×3000
Still Photography Modes	Single shot Burst shooting: 3/5/7 frames Auto Exposure Bracketing (AEB): 3/5 bracketed frames at 0.7EV Bias Interval HDR

Video Recording Modes	C4K: 4096×2160 24p, 4K: 3840×2160 24/25/30p 2.7K: 2720×1530 24/25/30p FHD: 1920×1080 24/25/30/48/50/60/96p HD: 1280×720 24/25/30/48/50/60/120p
Video Storage Bitrate	60 Mbps
Supported File Systems	FAT32 (≤ 32 GB), exFAT (> 32GB)
Photo	JPEG, DNG
Video	MP4, MOV (MPEG-4 AVC/H.264)
Supported SD Cards	microSD™. Max capacity: 64GB Class 10 or UHS-1 rating required.

Remote Controller	
Operating Frequency	2.400 GHz to 2.4835 GHz
Max Transmission Distance	FCC Compliant: 4.3 mi (7 km); CE Compliant: 2.5 mi (4 km) Unobstructed and free of interference.
Operating Temperature	32° to 104° F (0° to 40° C)
Battery	2970 mAh
Transmitter Power (EIRP)	FCC: ≤ 26 dBm; CE: ≤ 20 dBm
Operating Voltage	950 mA @ 3.7 V
Supported Mobile Device Size	Thickness supported: 6.5 - 8.5 mm, Max length: 160 mm Supported USB port types: Lightning, Micro USB (Type-B), USB Type-C™
Charger	
Voltage	13.05 V
Rated Power	50 W
Intelligent Flight Battery	
Capacity	3830 mAh
Voltage	11.4 V
Battery Type	LiPo 3S
Energy	43.6 Wh
Net Weight	Approx. 0.5 lbs (240 g)
Operating Temperature	41° to 104° F (5° to 40° C)
Max. Charging Power	100 W

Firmwares Update

Use DJI Assistant 2 or DJI GO app to update aircraft and remote controller.

Using the DJI GO App

Connect the remote controller and the DJI GO app, You will be reminded if a new firmware upgrade is available. To start upgrading, connect your mobile device to the Internet and follow the on-screen instructions.

Using DJI Assistant 2

Follow the instructions below to update the firmware through DJI Assistant 2:

1. Connect the aircraft to a computer with a USB cable.
2. Launch DJI Assistant 2 and login with your DJI account.
3. Select “Mavic Pro” and click on the “Firmware Updates” on the left panel.
4. Select the firmware version that you wish to update.
5. Wait for the firmware to be downloaded and firmware update will start automatically.
6. Reboot the aircraft after the firmware update is complete.

The remote controller can be connected to a computer for upgrades. Turn off the remote controller and connect the charging port to the computer, then turn on the remote controller. The remote controller and the aircraft can be upgraded simultaneously.

- The firmware update will take around 15 minutes. It is normal that the gimbal go limp, aircraft status indicator blinks abnormally and the aircraft reboots. Please wait patiently until the update is complete.
- There will be no sound prompts during the update.
- Ensure the computer has access to the Internet.
- Ensure the battery level is adequate for the Intelligent Flight Battery.
- Do not disconnect the aircraft from the computer during firmware update.

Intelligent Flight Mode

Intelligent Flight mode includes Course Lock, Home Lock, Point of Interest (POI), Follow Me and Waypoints features to assist users to create professional shoots during the flight. Course Lock and Home Point lock helps to lock the orientation of aircraft so that the user can focus more on other operations. Point of Interest, Follow Me and Waypoints mode enable aircraft to fly automatically according to the pre-set flight maneuvers.

Course Lock	Lock the current nose direction as the aircraft’s forward direction. The aircraft will move in the locked directions regardless of its orientation (yaw angle).
Home Lock	Pull the pitch stick backward to move the aircraft toward its recorded Home Point.
Point of Interest	The aircraft will orbit around the subject automatically to allow the operator can be more focus on framing their shoot on the subject in Point of Interest.
Follow Me	A virtual tether is created between the aircraft and the mobile device so that the aircraft can track your movement as you move. Note that Follow Me performance is subject to the GPS accuracy on the mobile device.
Waypoints	Record a flight path, then the aircraft will fly along the same path repeatedly while you control the camera and orientation. The flight path can be saved and re-apply in the future.

Enable Multiple Flight Mode by launching the DJI GO app > Camera View > > Multiple Flight Mode before using the Intelligent Flight Mode for the first time.

Remote Controller LCD Screen Menu Information

Remote Controller Status	
BAT xx PCT	Remote Controller battery level.
SHUTDOWN_	Remote controller is powering off.
CHARGING_	Remote controller is charging.
USB PLUGGED	Mavic Pro has been connected to a computer.
FC U-DISK	Flight Controller is reading data.
UPGRADING	Upgrading.
BINDING	Aircraft is binding with the remote controller.
Before Flight	
CONNECTING_	The remote controller is connecting to the aircraft.
SYS INITING	System is initiating.
READY TO GO	Ready to take off.
Flight Mode	
BEGINNER	In Beginner Mode.
GPS MODE	In P-GPS Mode
OPTI MODE	In P-OPTI Mode
ATTI MODE	In P-ATTI Mode
SPORT MODE	In Sport Mode
Flight Status	
TAKING OFF	Taking off
LANDING	Landing
GOING HOME	Returning to Home
NAV GOHOME	Returning to home.
NAV LANDING	Landing
MAX ALT.	Aircraft has reached maximum altitude.
MAX RADIUS	Aircraft has reached maximum radius.
OBSTACLE	Obstacle detected.
NO FLY ZONE	Aircraft is in a No Fly zone.
Intelligent Flight Mode Status	
TRIPOD	In Tripod Mode.
ACTIVETRACK	Using ActiveTrack.
TAP FLY	Using TapFly.
COURSE LOCK	In Course Lock Mode
HOME LOCK	In Home Lock Mode
POI MODE	In Point of Interest Mode
WAY POINT	In Waypoints Mode.
FOLLOW ME	In Follow Me Mode
TERRAIN	In Terrain Follow Mode
System Waning and Error Information	
SYS WARNING+CHECK APP	System Warning. See DJI GO app for more information.
UNACTIVATED+CHECK APP	Aircraft not Activated. See DJI GO app for more information.
COMPASS ERR+ CHECK APP	Compass Error. See DJI GO app for more information.
BATTERY ERR+CHECK APP	Battery Error. See DJI GO app for more information.
SD ERR+CHECK APP	Micro SD Card Error. See DJI GO app for more information.
CALIBRATING	IMU Calibrating/Did not restart aircraft after calibration is complete.

STICK ERR+RE-CTR STCK	Control stick is not centered. Re-center it.
WHEEL ERR+RE-CTR WHEL	Left Dial on the remote controller is not centered. Re-center it.
MECH ERR	Remote Controller Error. Contact DJI support.
STICK EMI+PLS RETURN	Control Stick are experiencing severe electromagnetic interference. Return to home as soon as possible.
SD FULL SD	Micro SD Card is full.
NO PROP	No propellers attached.
BAT TEMP HI	Intelligent Flight Battery is too hot.
BATTERY ERR	Intelligent Flight Battery error
BAT TEMP LO	Intelligent Flight Battery is too cold
LOW BATTERY	Intelligent Flight Battery low battery.
RC LOW BAT	Remote Controller low battery.
NO RC SIGNL	Remote Controller signal lost.
RC TEMP HI	Remote Controller too hot.
STICK EMI	Control stick is suffering electromagnetic interference.
STICK ERR	Control Stick Error
NO RTH	Aircraft cannot Return to Home

After-Sales Information

Visit the following pages to learn more about After-sales policy and warranty information:

1. After-sales Policy: http://www.dji.com/service
2. Refund Policy: http://www.dji.com/service/refund-return
3. Paid Repair Service: http://www.dji.com/service/repair-service
4. Warranty Service: http://www.dji.com/service/warranty-service

Compliance Information

FCC Warning Message

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

IC RSS warning

This device complies with Industry Canada licence-exempt RSS standard (s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent areil est conforme aux CNR d'Industrie Canada licables aux areils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:
(1) l'areil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'areil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC Radiation Exposure Statement:

This equipment complies with IC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

KCC Warning Message

"해당무선설비는 운용 중 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다 ."
"해당 무선설비는 운용 중 전파혼신 가능성이 있음"

NCC Warning Message

低功率電波輻射性電機管理辦法
第十二條經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

DJI Support
http://www.dji.com/support

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