

Attaching the Propellers

- Taking the camera direction as the front, the left front arm and right rear arm must be equipped with propellers marked with A; the right front arm and left rear arm must be equipped with propellers marked with B. Use a screwdriver to install and make sure the screws are tightened.

Detaching the Propellers

- Use the screwdriver to detach the propellers from the motors.



- Please use the propellers provided by Bwine, and do not mix propellers of different types.
- Please check whether the propeller is installed correctly and tightly before each flight.
- Before each flight, please check to make sure that the propellers are in good condition.

3.7 Intelligent Flight Battery

- The F7MINI 4K intelligent flight battery has a capacity of 2200mAh, a rated voltage of 7.6V, and with charge and discharge management functions. This battery uses high-energy and large-capacity batteries to increase the flight time of the aircraft.

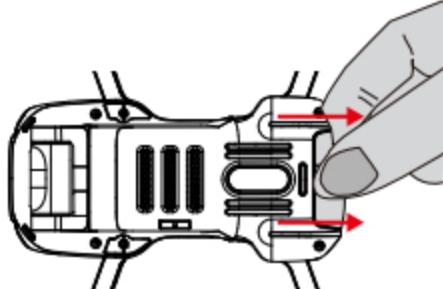
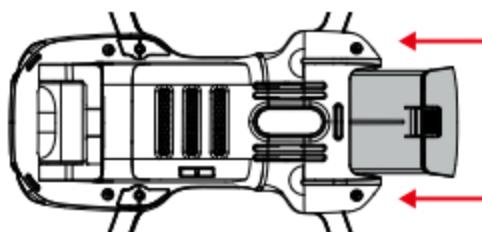
Battery Features

1. Balance Protection: Automatically balance the internal battery cell voltage to protect the battery.
2. Overcharge Protection: Overcharge will seriously damage the battery. When the battery is full, remove the charger device in time.
3. Over-discharge Protection: Over-discharge will seriously damage the battery. When the battery is not used for flight, the battery will automatically discharge to protect the battery life.
4. Short Circuit Protection: When the battery detects a short circuit, the output will be cut off to protect the battery.
5. Easy Charging: Use Android charger and USB head, but for best performance, please use Bwine charger. Please avoid chargers over 12V.



- Please read carefully and strictly abide by Bwine's Requirements in this User Manual, Quick Start Guide. The stickers on the battery surface before using the battery. The user shall bear the consequences caused by failure to use it as required.

Using the Battery



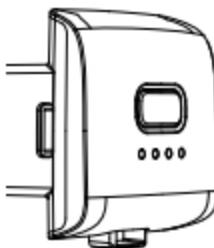
- Install the intelligent flight battery into the battery compartment and push it down until you hear a "click" from the battery buckle, indicating that it has locked into place. Make sure the battery is in place.
- To remove the battery, press the buckles on both sides of the battery and pull it out of the battery compartment.



- Do not install the battery into the aircraft or remove the battery from the aircraft when the battery power is turned on. Otherwise, the poor contact of the battery interface during the operation may cause the battery to short-circuit and burn the aircraft.
- The battery must be installed or removed with the battery power turned off.

Checking Battery Power

- Turn on the power and check the current battery.



Low — Battery Level — High



Powering On

- Press and hold the power button. When the fourth indicator light turns on, release the button to check the current battery power.

Powering Off

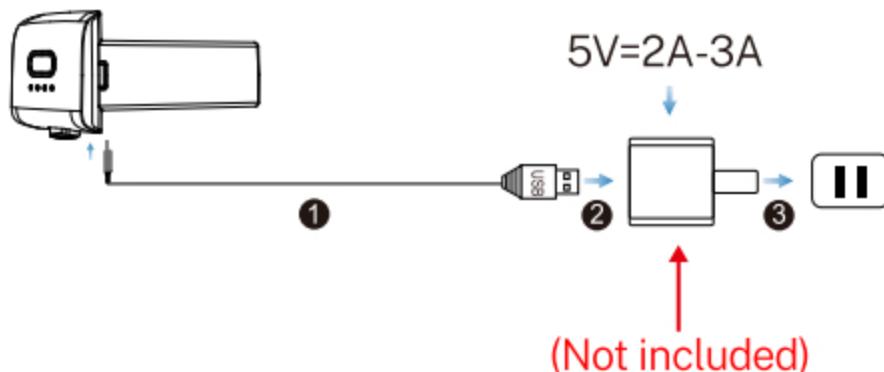
- Press and hold the power button until all lights are off and release the power button. After closing, the indicators are off.



- Note: The drone has an automatic shutdown function. If there is no operation (not being taken off), the drone will automatically shut down after 10 minutes of being turned on.

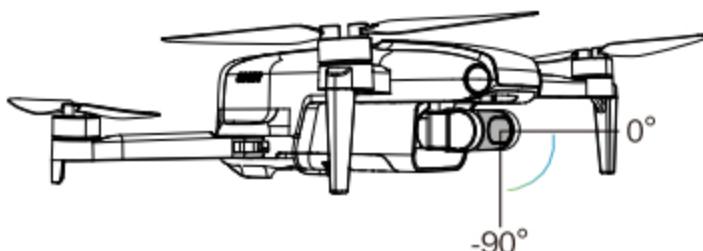
Charging the Battery

- Before using the intelligent flight battery, be sure to fully charge it.
- 1. Please use a 5V/2A or 5V/3A USB charging plug.
- 2. In the charging state, the battery power indicator will flash and indicate the current charge level; when the fourth indicator light is always on, it indicates that the charging is complete.
- 3. After charging is complete, please remove the charger in time.

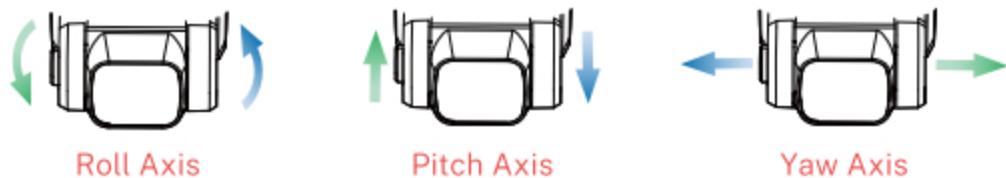


3.8 Camera Overview

- The camera features an upgraded 5GHz Wi-Fi FPV real-time transmission function, equipped with an 85° FOV lens, a 90° adjustable camera, and a three-axis brushless gimbal for stabilization. This setup allows for stable shooting of 4K HD video and 8K ultra-clear images, providing you with a wide field of view to fully enjoy unforgettable moments.



- The gimbal features a three-axis mechanical stabilization system, EIS electronic stabilization, and axes for roll and pitch. The yaw axis uses a brushless motor combined with EIS technology.



- The gimbal will not operate and will remain tilted when it is powered off or during compass calibration, which is normal. Once powered on and calibration is complete, the gimbal will automatically perform a self-check and enter working mode, taking approximately 20 seconds to stabilize in a level position. Be careful not to touch the drone during calibration.



- The drone's gimbal is a movable mechanical structure, and it is normal for the gimbal to appear tilted when powered off.
- If the drone takes off from grass, the gimbal may fail the self-check if it comes into contact with the grass. To avoid this, use a landing pad or cardboard to prevent the gimbal from hitting foreign objects.
- Taking off from a floor, roadside, or table may cause vibrations that lead to gimbal self-check failures. Avoid using the drone in areas that will produce significant vibrations.
- External force interference or lifting the drone during the calibration process can cause the gimbal to fail the self-check. The self-check takes about 20 seconds, so avoid touching the drone during calibration.
- The gimbal will not work during compass calibration. Once the calibration is complete, place the drone on a level surface, and it will automatically enter working mode.

Storing Photos and Videos

- F7MINI 4K is equipped with a micro SD card slot for storage space expansion.
 - 1.Card speed: $\geq 10\text{M/S}$.
 - 2.File format: support FAT32 format.
 - 3.Memory capacity: a memory card with a memory capacity of 256G or less.
- The mobile phone and the memory card store photos and videos at the same time. If you want clearer videos, please download the video file on the memory card.



1. Check whether the capacity of the memory card is sufficient. If the capacity of the memory card is insufficient, videos and pictures cannot be stored.
2. If you cannot save pictures or videos, try formatting the memory card.
3. After the memory card is installed, the photo and video files will be stored in the memory card, and the photos and videos will not be stored on the mobile phone.
4. You must turn on the aircraft and connect App to copy or download the photos or videos stored in the aircraft memory card to the phone.
5. Please turn off the aircraft correctly, otherwise the camera parameters will not be saved and the video being recorded will be damaged. Bwine is not responsible for any damage caused by the inability to read videos and photos.

4 Remote Controller

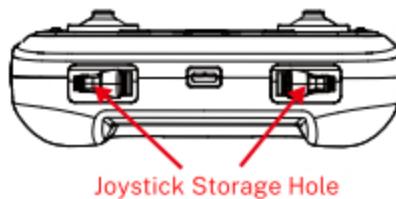
4.1 Remote Controller Profile

- F7MINI 4K remote controller uses the 5 GHz frequency band. The folding handle can stably place the mobile phone, and the maximum adjustable width is 3.15 inches.
- Remote controller built-in 1500mAh capacity battery, charging time is 80 minutes.

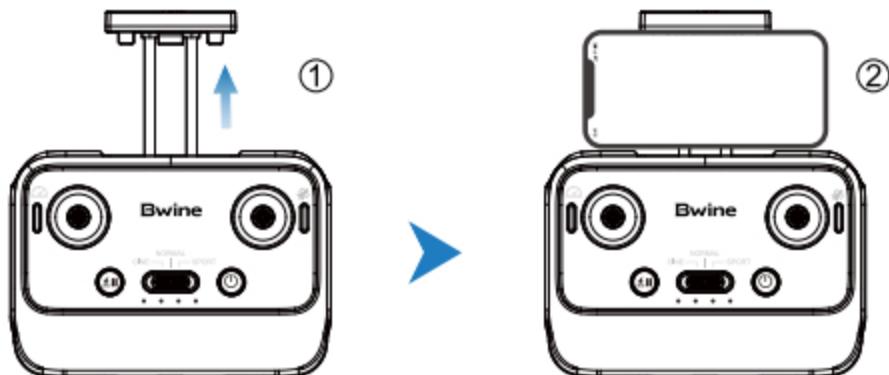
4.2 Using the Remote Controller

Install Joystick

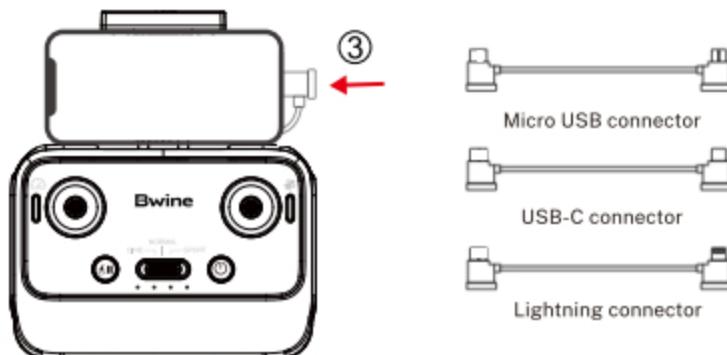
- When leaving the factory, the joystick is placed in the packaging bag of the product. When using, the joystick should be installed on the remote control as shown below.



- Unfold the phone clip and install the phone.



- Connect the phone with remote control via data cable.





- Note: Equipped with 3 different types of data cable, please choose the data cable suitable for your phone to connect. (The USB-C data cable is in the remote control, and the other two are in the packaging box)

Please correctly set the USB Settings option that pops up. Select "Transferring files" for Android phones, and "Trust" for iPhones. Some USB Settings of Android phones are hidden in the "Developer options", you need to change the "Default USB configuration" to "Transferring files" after opening the developer mode.

Powering On/Off

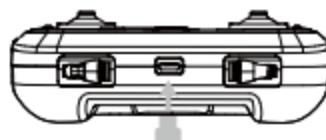
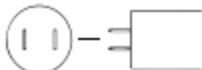
- Turn on the remote control: Press the power button for 3 seconds to turn it on.
- Turn off the remote control: Press the power button for another 3 seconds to turn it off.

Charging the Controller Battery

- Connect the remote controller Micro USB interface to the charger for charging. Do not use a fast charger that exceeds the rated power. A 5V/2A or 5V/3A charger is recommended.

1. Charging: The four lights flash in turn.
2. Charging is completed: 4 indicators are on.

5V/2A-3A Adapter
(Not Including)



Controlling the Camera

1. Photo/Record Button:

Tap once to take a picture.

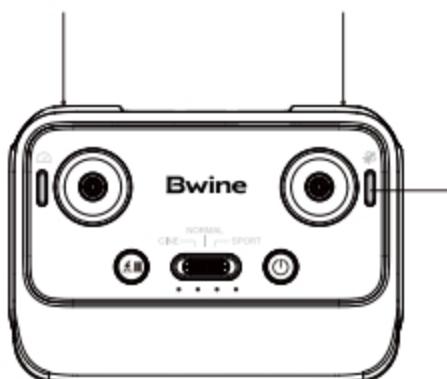
Press and hold 3 seconds to start/stop recording.

2. Gimbal Adjustment:

Turn the gimbal dial to adjust the Angle.

Quick down or up with one press.

Gimbal Adjustment Photo/Record Button



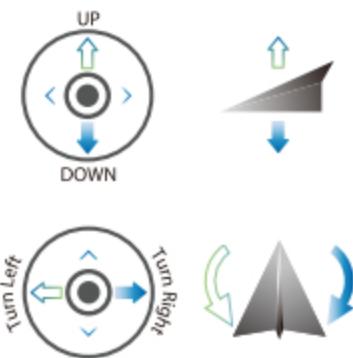
 Short press the button to adjust the camera.

Joystick Control Aircraft

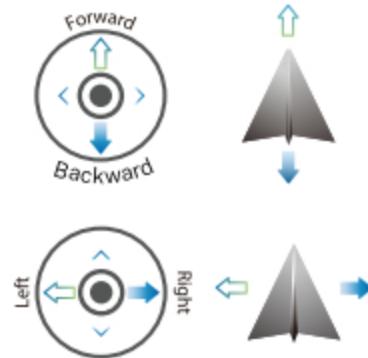
- The control method of the remote controller joystick is as follows:
American hand's control (Mode 1)

American hand's control (Mode 1)

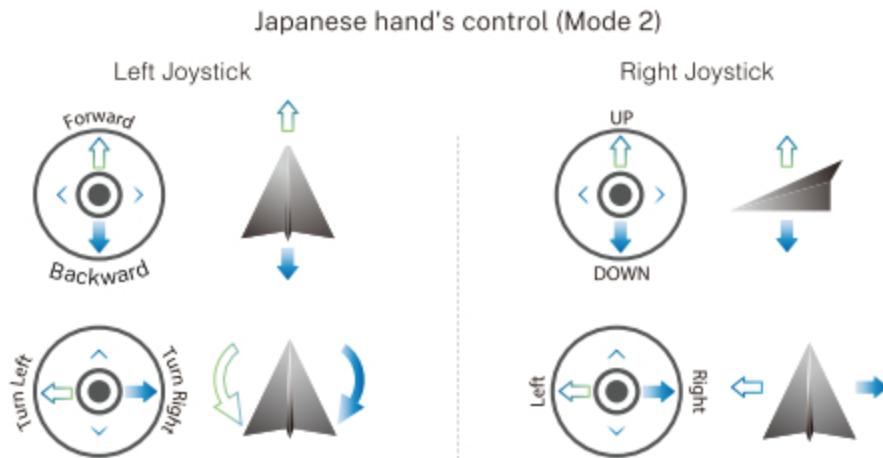
Left Joystick



Right Joystick



- Switching to Japanese Hand's Control Stick:
 - 1.Turn on the aircraft.
 - 2.Press and hold the record button to turn on the power of the remote controller.

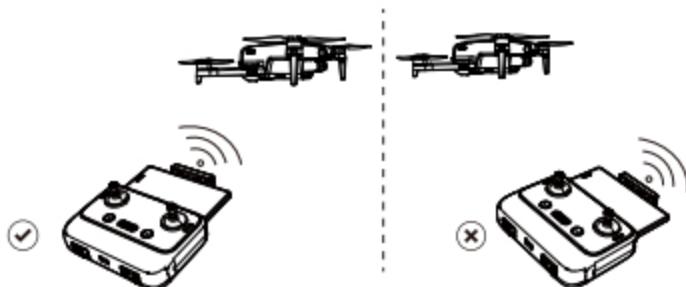


Smart RTH Button

- Tap the smart RTH button on the remote controller, and the aircraft will activate the automatic return function. Tap it again to exit the smart return. The aircraft is hovering in the mid-air of the return. At this time, you can operate the joystick to control the aircraft.

4.3 Communication Range of Remote Controller

- When controlling the aircraft, the position and distance between the remote controller and the aircraft should be adjusted in time, and the antenna position should be adjusted to ensure that the aircraft is always within the best communication range.

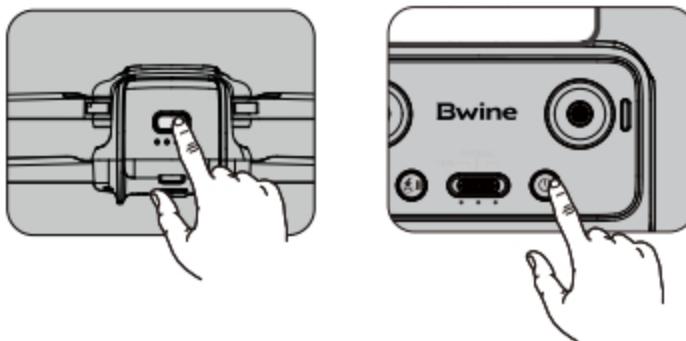


- Install the mobile phone into the remote controller bracket, refer to the aircraft flight direction of the Attitude Indicator in the App, and the attitude Indicator points straight ahead (perpendicular to the coordinates), indicating that the remote controller is facing the aircraft.



4.4 Matching the Remote Controller

- Each time drone flights, it needs to be matched with the remote control. The flight of the drone can be controlled only after the frequency pairing is successful. The steps for the pairing are as follows:
 1. Turn on aircraft.
 2. Turn on remote controller.



3. The drone and remote control will automatically complete the frequency pair, and the frequency alignment time is about 30 seconds.
4. Connect the mobile phone with the remote control to enter the App control interface; The phone displays information such as the power signal of the remote control and the camera screen indicates that the frequency is successfully matched.



- The remote controller pairs with aircraft successfully:
 1. The drone lights will change from red to green.
 2. The green light of the remote control changes from blinking to steady on.

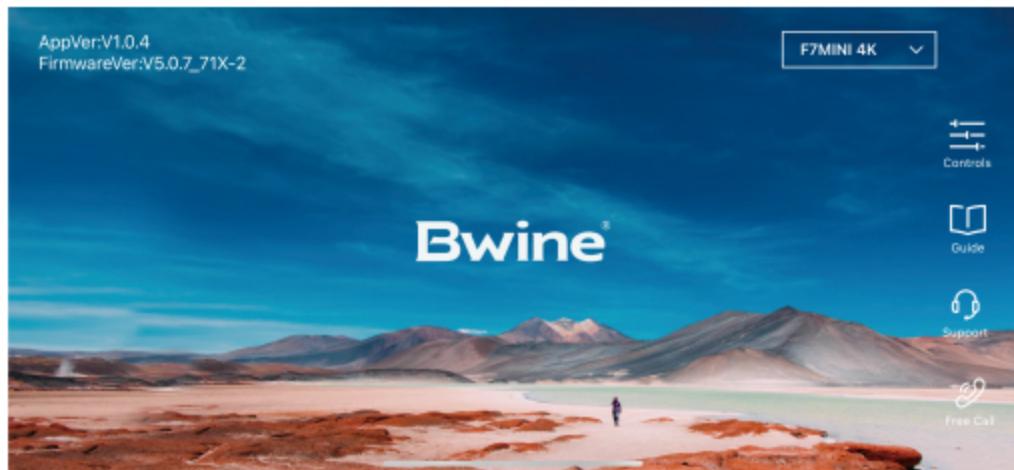


- The drone and the remote control will automatically connect, the connection time is about 30 seconds. Please check the remote control power before each flight. The remote control will sound a tone when the battery is low.
- The remote control will automatically shut down after being idle for 10 minutes, and the remote control can be restored to normal working state by flipping the joystick or pressing any key.
- When using the remote control handle to grip the mobile device, be sure to press tightly to avoid the mobile device slipping.
- Keep the battery at around 7.8-7.9V, and recharge it every month or so to keep the battery active.

5 Bwine GPS App

5.1 Home

- After running Bwine GPS App, enter the homepage.



Controls

- Operate the aircraft through the App page buttons to realize the functions of the aircraft.

Guide

- Tap to view the Help manual, Instructions videos and Quick start.

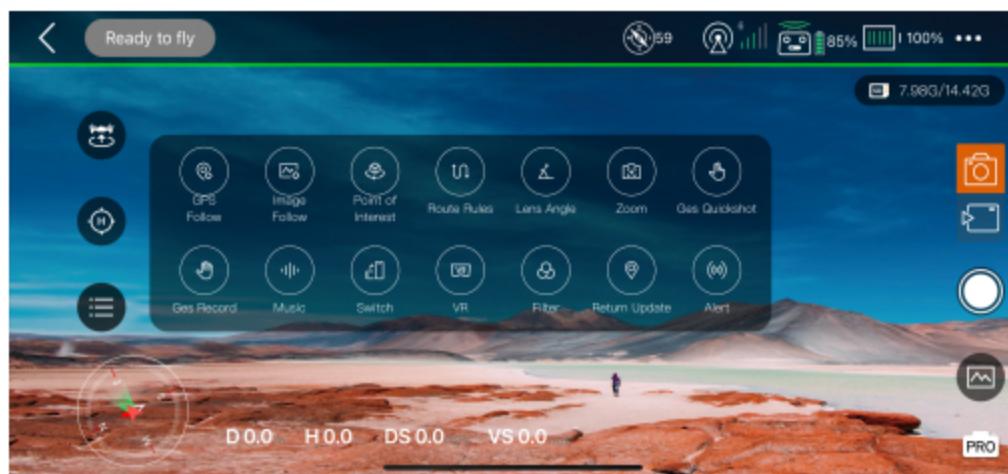
Support

- Tap to access technical support, after-sales service.

Free Call

- Tap to call customer support.

5.2 Control interface



Back	GPS Status
Controller Battery Level	Aircraft Battery Level
Auto Takeoff/Landing	Return to home
Shutter	Photo/video
Photo Album	Image Parameter Adjustment: White Balance Sharpening Contrast Brightness Saturation
1. SD card capacity display 2. Format : Tap to format when the memory card is loaded and cannot be recognized or save files	PRO
Compass Interference Value	A higher value indicates greater ambient interference. Reaching 200 will prompt compass calibration, and reaching 400 will force entry into compass calibration
D 0.0m H 0.0m DS 0.0m/s VS 0.0m/s	D : Distance H : Height DS : flight speed VS : ascent and descent speed

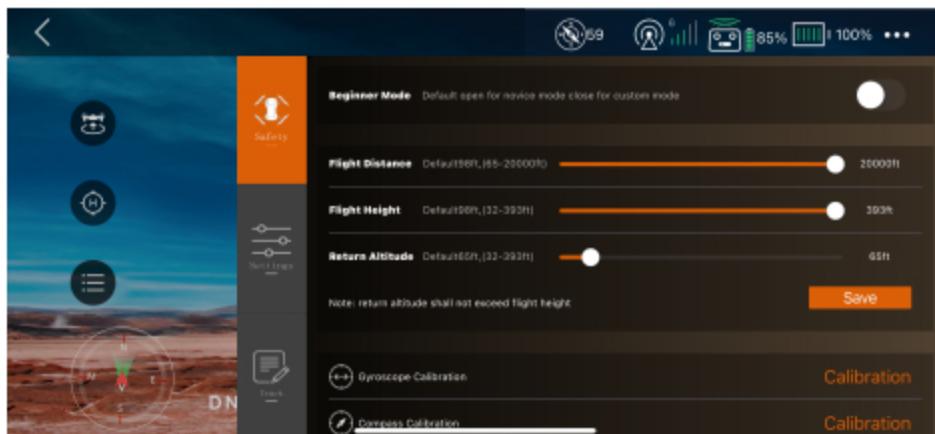
	GPS Follow	Aircraft will lock onto the user and can track the user's movement as he moves
	Image Follow	The aircraft camera will slowly rotate to follow the target
	Point of Interest	The aircraft fly around in circle with the current position as the center.
	Route Rules	Aircraft flies along the path marked on the App.
	Lens Angle	Adjust the shooting angle of the aircraft camera
	Zoom	Optional 5x zoom
	Ges Quickshot	Recognize your gestures and automatically take photos
	Ges Record	Tap to recognize your gesture automatically record
	Music	Select music for the video
	Switch	Switches three vertical screen functions
	VR	VR split screen interface , used with VR glasses
	Filter	Select a filter for your photo or video
	Return Update	Select a new return point location on the map
	Alert	When the drone is not unlocked, tap "Alert" on the App will turn on the drone's buzzer.

Attitude Indicator

- Display information of the orientation of the aircraft, and position of the remote controller.

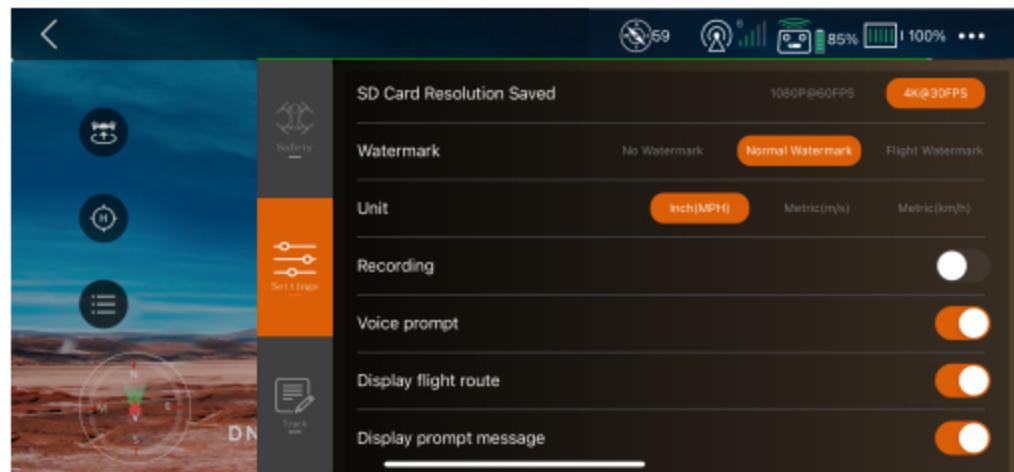


Safety



- Beginner Mode:** In this mode, the aircraft's farthest flight distance and altitude is 98ft so that the aircraft can fly more safely within sight.
- Flight Distance:** Set the longest distance to fly.
- Flight Height:** Set the maximum flight height.
- Gyroscope Calibration:** When the drone is unstable, it can be placed horizontally to re-calibrate.
- Compass Calibration:** Calibrate the compass first when flying in a new location or complex environment.

Settings



1. SD Card Resolution Saved: Set the smooth mode or default mode.
2. Watermark: Choose from 2 kinds of watermarks.
3. Unit: Switch between metric and imperial units of measurement.
4. Recording: When recording a video, you can record the sound into the video.
5. Voice prompt: Voice prompts the status of the drone when the App is opened or closed.
6. Display prompt message: Switch on or off the prompt bar.