

6 Flight

- After installing and preparing the product, please first complete flight training or practice (we recommend doing this in beginner mode). Choose an appropriate flying environment. The aircraft has a maximum flight altitude of 120 meters. Always adhere to local laws and regulations during flight. Be sure to read the 'Flight Guide and Safety Disclaimer' before flying to understand safety precautions.

6.1 Flight Environment Requirements

- Do not fly in severe weather conditions such as strong winds, snow, rain, or fog.
- Choose an open area free of obstacles for your flight location. Buildings, mountains, and trees can interfere with the aircraft's compass and GPS signals. It is recommended to fly in an open space with at least a 33ft (10m) radius free of obstructions. Flying at an altitude greater than 49ft (15m) is suggested to avoid ground obstacles and signal interference.
- Keep the aircraft within line of sight during flight, and stay clear of obstacles and crowds. When flying over water, maintain a distance of at least 9.8ft (3 meters) from the surface.
- Control signals can be disrupted by high-voltage power lines, communication towers, or transmission towers. Avoid flying near these areas.
- Fly at altitudes below 9842ft (3000 meters) to ensure the aircraft's barometric altitude hold function operates correctly.
- When GPS is active, the aircraft can achieve stable hovering, smart return-to-home, and smart flight functions. Without GPS, these functions will not work, and the aircraft may drift with the wind and fail to hover.

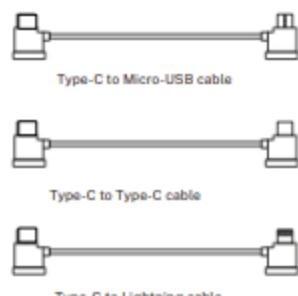
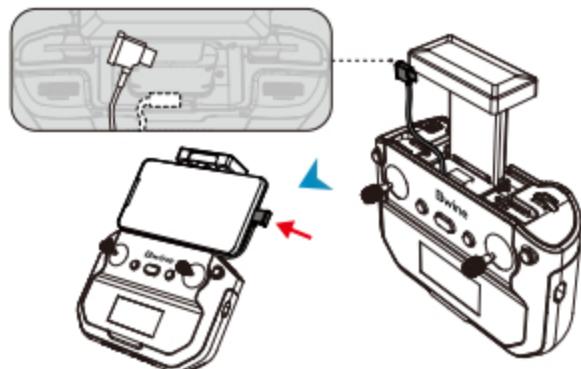
6.2 Pre-Flight Checklist

- Ensure that the remote controller, smart flight battery, and mobile device have sufficient power.
- Make sure the aircraft's arms are fully extended.
- Ensure the battery compartment cover is securely fastened and the smart flight battery is properly installed.
- Check that the propellers are not damaged, worn, or deformed, and that there are no foreign objects tangled in them. Ensure they are securely installed.
- Make sure GPS is enabled to avoid losing signal, and fly outdoors in an open area.
- Ensure your phone is properly connected to the controller. Pull out the phone holder, then insert the cable into the Type-C port at the top of the controller for data connection. Do not use the charging port on the side for data connecting, as this will prevent image transmission.
- After powering on, verify that all four motors start normally and that their speeds are consistent.
- Ensure the camera is clean.
- If replacing parts, always use original manufacturer components. Using non-original parts can pose a risk to the safe operation of the aircraft. For details on supported accessories, refer to the accessories support page in the appendix of the user manual.

6.3 Pairing Remote Controller with Aircraft

- Please refer to section 4.4.4.

6.4 Connect the Data Cable



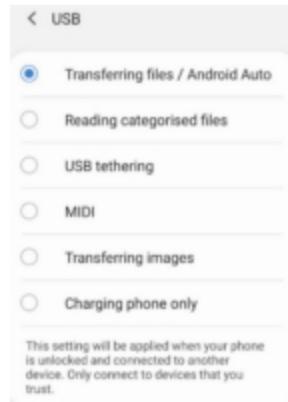
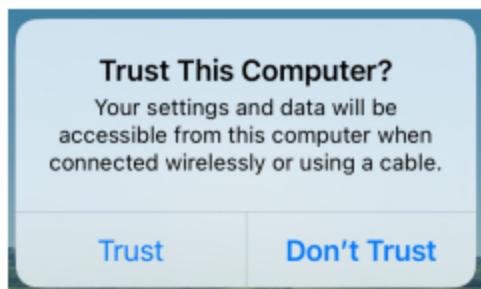
- Select the appropriate data cable.
- Pull open the phone holder to locate the data cable port.
- Use the data cable to connect the remote controller to the mobile device.
- Open the Bwine Mini App and allow popup permission requests.
- Enter the operating interface. If you see the aircraft's live video feed, the connection is successful.



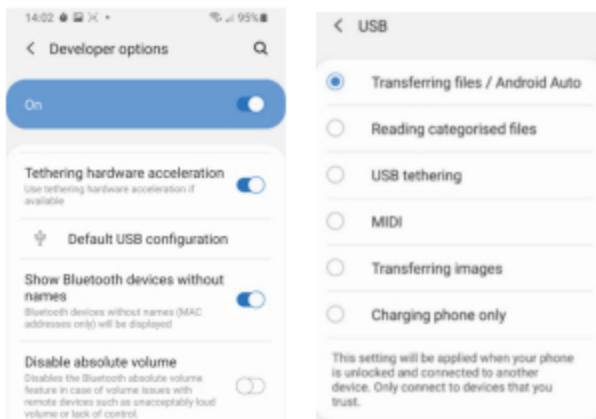
- When connecting the data cable to the mobile device, make sure the cable plug is securely installed. On some phones, the phone case may prevent the cable plug from seating properly, which can cause poor contact and result in failed data transfer, preventing you from seeing the live video feed.
- If the connection fails and there is no image transmission, check to see if the cable is mistakenly connected to the Type-C port on the side of the remote controller. The side Type-C port is for charging only and cannot be used for data connection. The correct data port is located at the top of the remote controller (you'll need to pull open the phone holder to access it).



- Please set the USB options correctly when prompted: On Android devices, select 'Transferring Files /Android Auto'; on iPhones, select 'Trust'.



- On some Android devices, USB settings are hidden in the Developer Options. You need to enable Developer Mode and then change 'Default USB Configuration' to 'File Transfer' (the method to enable Developer Mode varies by phone model; you can find specific instructions by searching Google).



- The remote controller does not support fast charging for mobile devices. Please check the battery level of your mobile device before use.

6.5 Compass Calibration

- If the aircraft is flying in an environment with significant interference or if you experience unusual behavior indicating possible loss of control, you can check the compass interference level using the app. Perform a compass calibration to address this issue. The main purpose is to prevent sensor interference from causing abnormalities, which could lead to loss of control and potential crashes.

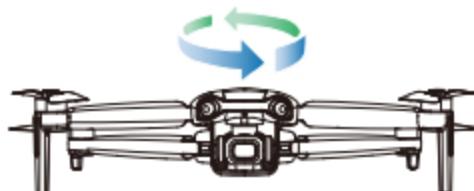
Calibration Steps:

- (1) Extend the aircraft's four arms and place it on a flat, open surface.
- (2) Turn on the aircraft and the remote controller, and ensure they are paired successfully.
- (3) Short press the compass calibration button on the remote controller; the aircraft's lights will start flashing quickly.
- (4) Open the app to see the calibration guide animation.



Short press to enter
compass calibration

Horizontal Calibration



- Follow the app's instructions: Hold the aircraft at a height of 1 meter above the ground, rotate it horizontally 2-3 times until you hear a beep and the app indicates that it's time to begin vertical calibration.

Vertical Calibration



- Hold the aircraft to a height of 1 meter above the ground with the camera facing up. Rotate the aircraft vertically 2-3 times until you hear a beep and the animation on the app interface stops. This indicates that the compass calibration is complete. The aircraft's lights will return to their original state.



- Before flying, monitor the compass interference level in the app. If the interference level approaches 120, it indicates excessive interference, you can manually calibrate the compass or choose a different location to fly. If the interference level exceeds 180, the aircraft will automatically enter compass calibration.
- If the aircraft exhibits uncontrolled behavior, such as spinning or erratic flight, in a complex environment, it may indicate that the compass calibration is incorrect or affected by interference. In this case, promptly land the aircraft manually and perform a manual calibration (refer to the compass calibration steps for guidance).
- When calibrating the aircraft, extend the arms and ensure the aircraft is at a height of 3.3ft (1m) above the ground to avoid magnetic interference.

6.6 Gyroscope Calibration

Gyroscope Calibration Steps:

- Ensure the aircraft is placed on a level surface with enough space below the camera.
- Push both the left and right control sticks to the '5 o'clockt position simultaneously.



- Aircraft's lights will flash quickly, indicating that automatic horizontal calibration is in progress.
- When the app calibration prompt disappears and the lights return to their original state, calibration is complete.



- If the aircraft shows tilt or instability during flight, land the aircraft on a level surface to perform gyroscope calibration.
- When resetting the gyroscope calibration, make sure the aircraft is placed on a flat, level surface.

6.7 Starting/Stopping the Motor

6.7.1 Starting the Motors

Method 1:

Push the joysticks to the 5 o'clock and 7 o'clock positions simultaneously. Once the motors start, immediately release the joysticks.



Method 2:

When the motors are not running, press and hold the takeoff/landing button on the remote controller to start them.



6.7.2 Stopping the Motors

- Push the throttle stick to the lowest position and do not release it until the motor stops.



6.8 One-key Takeoff / Landing

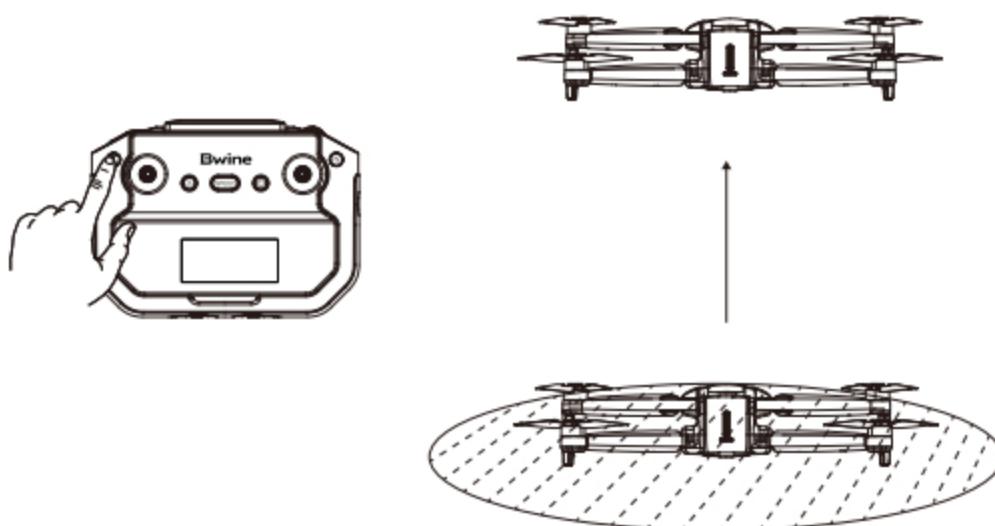
6.8.1 One-key Takeoff

Method 1:

After starting the motors, press and hold the takeoff/landing button  on the remote controller. The aircraft will take off automatically and hover at a distance of 4.9ft (1.5m) from the ground.

Method 2:

Tap one-key takeoff icon  in App, then swipe right in the pop-up window. The aircraft will take off automatically and hover at a distance of 4.9ft (1.5m) from the ground.



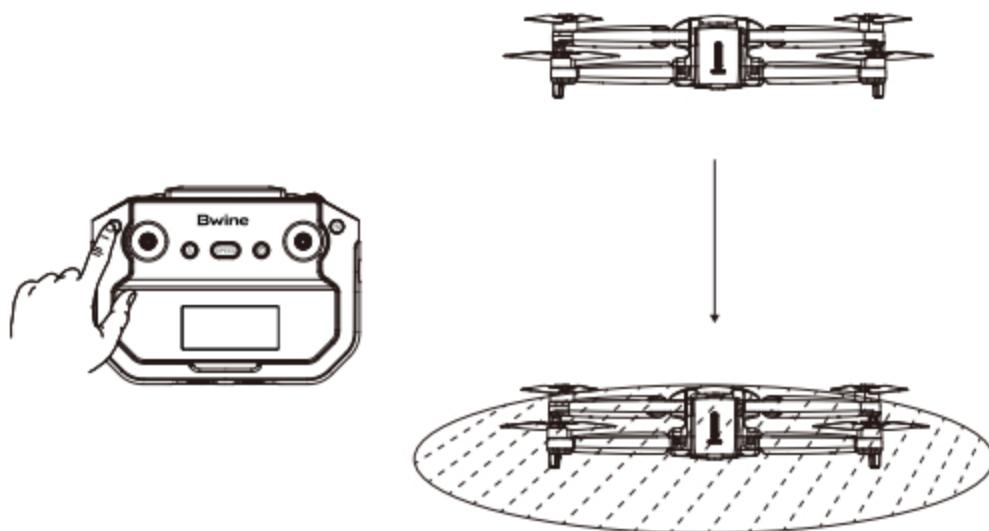
6.8.2 One-key Landing

Method 1:

After takeoff, press and hold the takeoff/landing button  on the remote controller. The aircraft will land to the ground and stop the motors.

Method 2:

Tap one-key landing icon  in App, then swipe right in the pop-up window. The aircraft will land to the ground and stop the motors.



- During the aircraft's descent, pushing the throttle stick up on the remote controller will cancel the automatic landing.

6.9 Return to Home (RTH)

- The F7GIM aircraft features a Return to Home (RTH) function in GPS mode when it has a strong GPS signal. This function returns the aircraft to the last recorded home point and lands it automatically. There are three types of RTH: Smart RTH, Low Battery RTH, and Lost Signal RTH.

6.9.1 Home Point Definition

	GPS	Description
Home Point		<p>During outdoor flights, when the GPS signal icon first shows three bars or more, the takeoff location will be recorded as the return-to-home point.</p> <p>During the flight, if you land at a new location, the new takeoff point will become the latest return-to-home point, and the return-to-home function will direct the aircraft to this latest point.</p>

6.9.2 Smart RTH

- When you need the aircraft to return home automatically, you can press the Smart Return-to-Home button  on the remote controller or tap the return-to-home icon  on the app interface to initiate automatic return.
- During the return-to-home process, pressing the button or tapping icon again will cancel the return. After canceling Smart RTH, you can regain control of the aircraft.
- During the Smart RTH process, you can maneuver the aircraft to ascend or descend to avoid obstacles. You can also press the RTH button again to cancel the return.



1. After clicking the return button, the aircraft will return to the destination in different ways depending on the flight distance, flight altitude, and whether the return altitude is set in the App. After pressing the RTH button on the remote controller or tapping the return icon on the App:

(1) If the flight distance is within 16.4ft (5m): The aircraft will land directly.

(2) If the flight distance is within 98.43ft (30m):

① When the aircraft's flight altitude is below 65ft (20m): It will automatically rise to the default return altitude of 65ft (20m) and then return to the Home Point.

② When the aircraft's flight altitude is above 65ft (20m): It will return to the Home Point from the current altitude.

(3) If the flight distance is greater than 98.43ft (30m):

① If the return altitude is NOT set in the App: It will automatically rise to the default return altitude of 65ft (20m) and then return to the Home Point.

② If the return altitude has been set in the App, and the flight altitude < set altitude: The aircraft will rise to the set return altitude and then return to the Home Point.

③ If the return altitude has been set in the App, and the flight altitude \geq set altitude: The aircraft will return to the Home Point from the current altitude.

2. The aircraft is not equipped with obstacle avoidance function, please make reasonable judgments of the flight conditions during the flight, avoid obstacles in time, and set the appropriate flight and return altitude according to the flight environment.