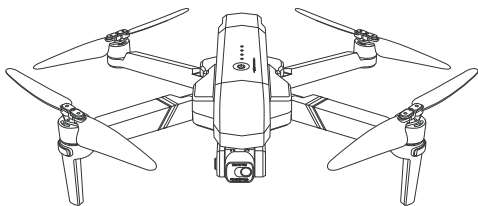




**14+**  
for age

# Quick Start & Safety Disclaimer



## F11GIM2

CONTACT US FOR MORE TECH SUPPORT

 +1 (888)892-0155 | Mon-Fri 7:00AM - 7:00PM (PST)



rukotoy.com



CONTACT US FOR MORE TECH SUPPORT



+1 (888)892-0155

Mon-Fri 7:00AM - 7:00PM (PST)



+86 19129317359



rukobrandstore@gmail.com



# Contents

v1.0

**Must Know Flight Tips** - - - - - 1-10

**Flight Guide** - - - - - 11-24

**Safety Disclaimer** - - - - - 25-38

# 1. Learning to Fly

There are many steps in the operation of the aircraft, and users need to learn the parameters, settings, and operating procedures of the aircraft.

Learning channels:



**manual**



**quick guide**



APP

**APP operation  
animation**



**Youtube operation  
video**



## 2. Flight Environment and Signal interference

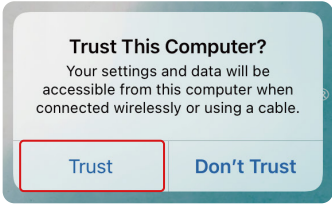
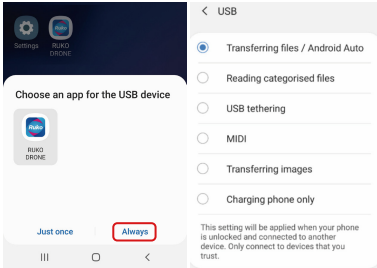
Any radio signal will be affected by obstacle blocking and magnetic interference, the user need to choose an open and unobstructed area without interference.

### Interference:

Steps	Consequences	Solutions
5G signal interference (Including remote controller and image transmission)	1. The remote controller cannot control the aircraft. 2. The auto return home function is triggered 6 seconds after disconnection.	1. Wait for the aircraft to return automatically. 2. Change the flight direction or environment. 3. The remote controller is pointed in the direction of the aircraft during flight.
	1. Cannot reach the advertised image transmission distance. 2. Imaging freezing.	
GPS signal interference	1. Unstable flight. 2. Drift away. 3. Unable to use RTH.	1. Manually control the aircraft to a safe area. 2. Stay away from obstacles and interference. 3. Fly higher than the surrounding obstacles.
Compass interference	1. Spinning around. 2. Losing control. 3. Unable to use RTH.	1. Manually land the aircraft. 2. Manually trigger and complete the Compass Calibration. 3. Stay away from metal objects with magnetic field interference sources.

### 3. Remote Control Connection Settings

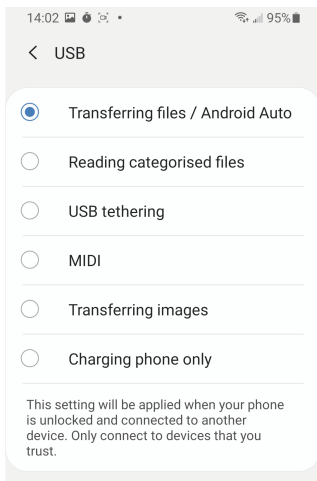
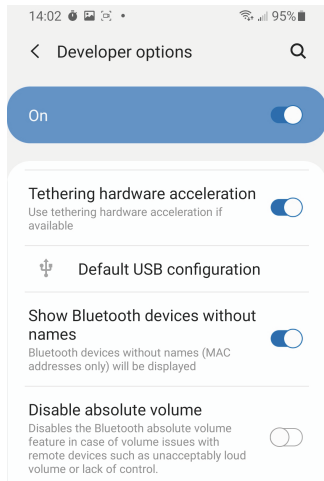
Select an appropriate data cable to connect the remote controller and the mobile phone, when the correct data of the remote controller is connected to the mobile phone, the setting option or prompt will pop up.

Mobile phone system	Permission page	
IOS	<div></div> <p>Please select "Trust" to allow permissions.</p>	
Android	<div></div> <p>Please select "Transferring files" to allow permissions.</p>	<p>If you choose other options, the image transmission data of the aircraft cannot be transmitted normally, and the image of the aircraft cannot be seen.</p> <p><b>Please reconnect the data cable for correct settings.</b></p>



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.

(The way to open "Developer options" varies depending on the phone model. You can search Google for details.)



(Example phone: Samsung S9)

## 4. GPS Signal Searching

GPS signal search depends on the environment.

Searching environment	Searching time	Searching condition	Corresponding situation
Indoor		Unsearchable	Cannot fly in GPS mode, must switch to indoor flight mode
Close to buildings, doorsteps, woods, signal tower	About 90 seconds to 5 minutes	1.The search fails. 2. The signal is unstable.	1.Unstable flight 2.Drifting 3.Cannot fly in GPS mode Unable to RTH
Open and undisturbed outdoor area	About 60-90 seconds	Successful search, good signal.	All functions are available.



## 5. Pairing & Calibration

Please pairing the remote controller and complete the compass calibration according to the following operations.

Steps	Operation procedure	Cautious
<b>Remote Controller Pairing</b>	<ol style="list-style-type: none"><li>1. Turn on the aircraft.</li><li>2. Turn on the remote controller.</li><li>3. Automatically pairing.</li></ol>	The automatically pairing time is about 50 seconds.
<b>Compass Calibration (Default Setting)</b>	<ol style="list-style-type: none"><li>1. Successful pairing.</li><li>2. Enter the App for compass calibration.</li><li>3. Horizontal rotation calibration.</li><li>4. Vertical rotation calibration.</li></ol>	Calibration is required at each start.
<b>Compass Calibration (Strong magnetic interference)</b>	<ol style="list-style-type: none"><li>1. Turn the remote controller joysticks to 1 and 11 o'clock.</li><li>2. Horizontal rotation calibration.</li><li>3. Vertical rotation calibration.</li></ol>	The aircraft will automatically enter the calibration procedure if it encounters a strong magnetic interference before takeoff.
<b>Gyroscope Calibration</b>	<ol style="list-style-type: none"><li>1. Turn the remote controller joysticks to 11 and 1 o'clock.</li><li>2. Autocomplete calibration.</li></ol>	Placed the aircraft on a level ground or landing pad.

## 6. Battery storage & use recommendations

Please store the battery according to the following table:

Storage recommendations	Details	Cautious
Battery power	50%-60%	Battery bulges may occur if the battery is fully charged for a long time.
Condition	Cool dry place	High temperature (greater than 40 degrees Celsius) and damp storage can damage batteries.

Please use the battery according to the following table:

Use Recommendations	Details	Cautious
Temperature	0°C-40°C	In cold weather (below 0°), power consumption is fast, which will shorten the flight time.
Charging power	5V=2A/3A or QC 3.0 fast charger	1. DO NOT use high-power chargers. 2. DO NOT overcharge. 3. DO NOT charging immediately after flight. 4. The battery has
Charging time	5V=2A/3A charger: about 4.5 hours  QC 3.0 fast charger: about 3 hours	Auto-Discharging Function, it automatically discharge to approximate 85% of the battery level when it is idle for 2-3days.



Since the battery has Auto-Discharging Function, please remember to charge the battery before each flight.

DO NOT use batteries under the following conditions:

Damp, water damage	Fell, battery impact	Extrusion and deformation	Leakage
--------------------	----------------------	---------------------------	---------



DO NOT use the batteries when it is obviously abnormal to avoid power failure, crash, smoke and fire and other safety events.

## 7. App does not show what the drone's camera is taking

Types	Consequences	Solutions
No transmission image	The remote control and drone do not pair successfully, and the matching time is about 50 seconds	Automatically complete the matching before entering the APP operation interface
	USB permissions are not set	Please reinsert the cable correctly set the USB Settings option that pops up. Select "Transferring files" for Android phones, and "Trust" for iPhones.
	USB cable not inserted or loose	Insert the RC cable and ensure it is securely installed
Imaging freezing. (during flight)	Signal interference causes the image transmission signals unstable or interrupted	Choose an open area and pay attention to flying skills

## 8. Photography Tips

**Be sure to choose an open area without interference.**

- ✓ For your first flight, use Beginner mode and fly in a short distance, paying attention to the flight height must be higher than the obstacles.
- ✓ Turn off Beginner mode and set maximum altitude and distance to start long-distance flight, please fly the aircraft upwind, so that it have enough power to trigger the RTH automatically and ensure that the aircraft safely returns to the home point.
- ✓ When flying long distances, the remote controller and mobile phone should be point at the aircraft to maintain the best communication effect.
- ✓ An SD card is recommended for storing higher resolution video files.

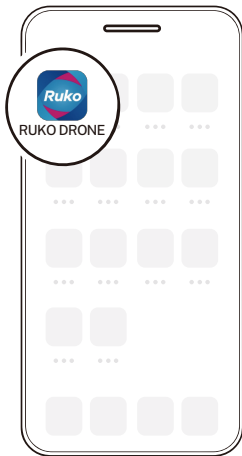
The following is some skills for taking good photos and videos:

<b>Weather</b>	Sunny and well-lighted	clear and realistic, good color reproduction, high saturation, clear imaging
<b>Shooting Angle</b>	Front-lighting	
<b>Video shooting</b>	1.Windless weather 2.Hover shooting, steady and uniform control of the aircraft	

# 1 Flight Guide

## Download App

Q RUKO DRONE

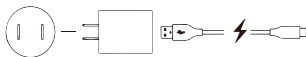


RUKO DRONE App

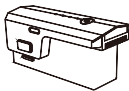
---

## Charge the Batteries

Charger not included



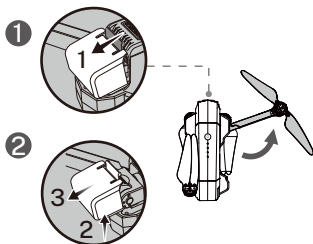
≤18W



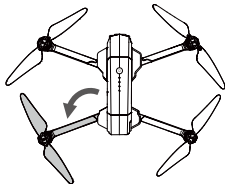
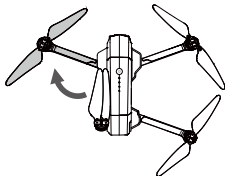
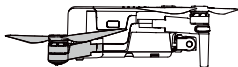
≤15W



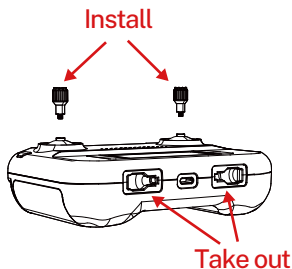
## 2 Unfold the Drone



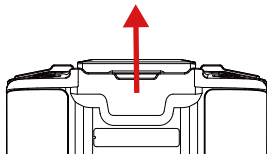
Lift and then pull ✓



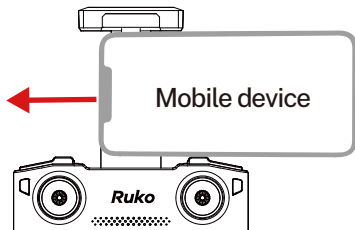
### 3 Prepare the Remote control



Pull out the holder

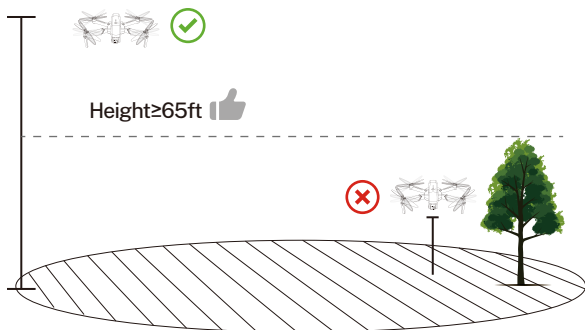


Back of remote controller



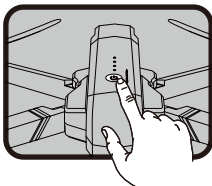


## 4 Select an Open Flight Area



## 5 Power on

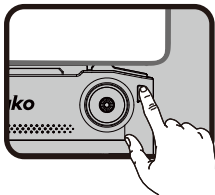
1



- Press and hold the button until the aircraft plays startup sound.



2

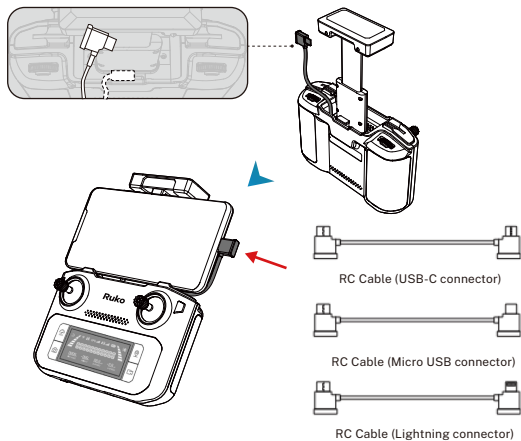


- Press once and long press for 3 seconds to turn on the remote.



**Note: The drone and remote controller linking takes around 50 seconds.**

## 6 Data Cable Connection and Setup

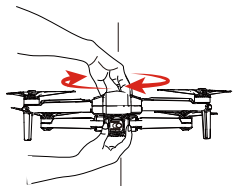


- 
- When entering the APP interface please remember to ALLOW all pop-up permissions.

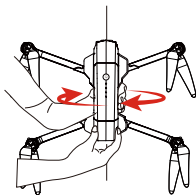


# 7 Calibration

## Calibrate the Compass



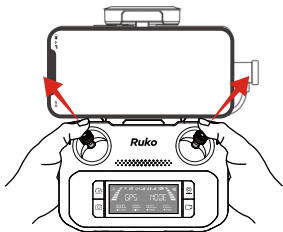
- Rotate the aircraft horizontally  $360^{\circ}$ .  
(About 1-2 turns)



- Rotate the aircraft vertically  $360^{\circ}$ .  
(About 1-2 turns)

## Calibrate the Gyroscope

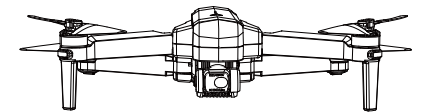
- Push joysticks to 11 & 1 o'clock position.  
(About 2 seconds)



A level ground

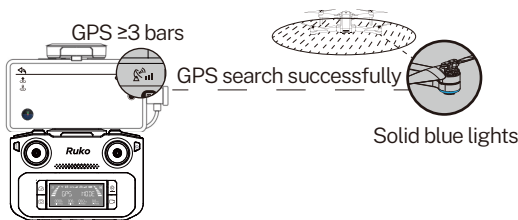
## Gimbal Self-inspection

- Put on a level surface.  
( About 20 seconds )



---

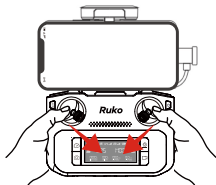
## Search for GPS Automatically



- ⚠ Tips: 1. The searching time depends on the flight environment.  
2. If unsuccessful, the motors can't be started.

## Start the Motors

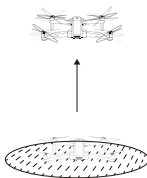
- Push joysticks to 5 & 7 o'clock position.  
( About 2 seconds )



---

## Take off

- Push up the left stick.





NEW TO FLYING DRONES?



Check the Flight Guide in the App



Search “**Ruko F11 GIM 2 Quick Start**” on YouTube for First Flight



Scan QR Code for More Tech and Video Support

CONTACT US FOR MORE TECH SUPPORT

Printed in China.

## Common Problems and Solutions

Question	Reason	Solutions
The motors cannot be started	Weak GPS signal	Turn on the aircraft in an open area with strong GPS signal
	The red light stays on	The aircraft has low battery. Please charge the battery in time
	The pink light stays on	The compass is not calibrated. Please refer to the "Calibration Before Flight" section of the user manual
	The left and right joystick are not in place	Push the left and right joysticks simultaneously to 5 o'clock and 7 o'clock for 2 seconds
Unstable flight	Flying too low, affected by aircraft airflow	Please fly the aircraft above 9.84ft(3 meters)
	The gyroscope is not calibrated	Place the aircraft on a horizontal surface and conduct gyroscope/horizontal calibration. Please refer to the "Calibration Before Flight" section of the user manual
	The propellers become deformed and incomplete	Replace the propellers with new ones
	GPS signal is unstable. Flying near buildings and in obstructed places	Please fly the aircraft in an open area free of obstacles within the circle of radius 32.81 ft(10 meters)



Question	Reason	Solutions
Out of control, spinning around on its own, abnormal sound	The remote controller signal is interfered or the Aircraft exceeds the range of remote control	Please fly the aircraft outdoors without interference, and ensure that it is within a controllable range
	Compass interference	Please manually land the drone in time and calibrate the compass. Please make sure to fly away from the buildings, trees, power lines, and signal towers
	The propellers become deformed and incomplete	Replace the propellers with new ones
The camera is tilted/Gimbal is not working/ Can't adjust the camera angle	The drone was placed on an unlevel surface such as grass and sand and so on	Place the drone on landing pad or cardboard horizontally, and ensure a gap between the camera and the surface
	The drone was placed on the surface which transfer small vibration, such as hollow wooden floor, desk and so on	Place the drone on a solid level ground
	Keep touching the camera and gimbal or holding the drone before all set	Never touch the camera when the power is on, place the drone on a level ground until the gimbal complete self-check
	The compass is in calibrating	After complete the compass calibration, place the drone on a level ground

Question	Reason	Solutions
Video freezes, image transmission distance is short	The remote controller and the mobile phone are not pointed at the direction of the drone	Point the remote controller and the mobile device at the flying direction of the aircraft to maintain the strongest signal connection
	Phone performance freezes	Close unused apps running in the background to maintain the best performance of the phone
Video is not clear	If use APP storage, the pixels are 1920×720P	Insert the memory card and storage the video on the memory card
App does not show what the drone's camera is taking	The phone operating system version is too low	The required device operating system to work with the app is Android 6.0 and above, IOS 10.02 and above
APP crashes or functions abnormally	Wrong app downloaded	Download the correct App
	A few mobile phone versions are old and incompatible with APP	Provide mobile phone version and model, we will adapt and solve it
GPS signal is weak	Turning on the drone indoors	GPS signals cannot be found indoors. Please search for GPS signals in an open place outdoors
	Under the tree, next to the building, in an obstructed place	Please stay away from obstacles for more than 32.81 feet(10 meters), and search for GPS signals in an open area

Question	Reason	Solutions
Unable to return home, drifting and flying away	GPS signal was turned off during the flight	Please don't turn off GPS suddenly during outdoor flight. Switch back to GPS mode in time
Cannot charge battery/Cannot fully charge battery	Using inferior charger or charging on the computer with unstable voltage output	Use a mobile USB charger that ensures constant stable voltage output(5V) and amperage output(2-3A)
	Using inferior charging cables	Please use the original factory charging cable to charge
Short battery life	Flying in windy weather	Flying in windy weather will accelerate power loss
	Flying in cold weather	In low temperatures, the chemical reaction of the lithium battery is slowed down and the energy cannot be fully released
	The battery is not fully charged	Fully charged with the correct USB charger before flying
The product has slight marks	We tested all aircraft before shipping	In order to give you the best experience, we tested functions of all aircraft before shipping. Therefore, it is inevitable that there will be slight traces. However, it can be guaranteed that all aircraft are 100% brand new

# Safety at a Glance



The Ruko F11 GIM2 is NOT a toy and is NOT suitable for people under the age of 14.

## 1. Glossary

- The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:



Recommend



Warning



Hints & Tips



Reference

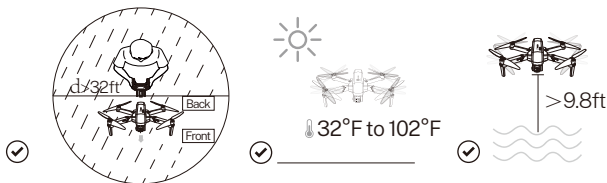
## 2. Disclaimer and Warning

- This product is **NOT a toy and is NOT suitable for people under the age of 14**. Keep the aircraft out of the reach of children and exercise caution when operating this aircraft in the presence of children.
- This product is a flying camera that offers easy flight when in good working order as set forth below. Read the materials associated with the product before using for the first time. These documents are included in the product package.
- Inappropriate use of the product could result in personal injury or property damage.
- The information in this document affects your safety and your legal rights and responsibilities. Read this entire document carefully to ensure proper configuration before use. Failure to read and follow the instructions and warnings in this document may result in product loss, serious injury to you, or damage to your aircraft.

- By using this product, you hereby signify that you have read this disclaimer carefully and that you understand and agree to abide by the terms and conditions herein. Please be sure to strictly abide by the specification requirements and safety guidelines stated in this document.
- You agree to use this product only for purposes that are proper and in accordance with local regulations, terms and all applicable policies and guidelines Ruko may make available.
- Any personal injury property damage, legal disputes and all other adverse events caused by the violation of the safety instructions or due to any other factor, WILL NOT be Ruko's responsibility.

### 3. Flight Environment Requirements

- It is suggested to fly in areas below 9000 feet above sea level, choose an open field of 32 feet in diameter outdoor, far away from densely populated areas, residential surroundings and electromagnetic interference sources. Fly in an environment with temperature between 32°F to 102°F and in good weather with clear vision.



- DO NOT use the aircraft in severe weather conditions including strong wind, snow, rain, and fog.
- Only fly in open areas.** Tall structures and large metal structures may affect the aircraft compass and GPS system. It is recommended to keep the aircraft at least 16ft away from structures.
- Avoid obstacles crowds trees bodies of water and high voltage power lines.
- Avoid areas with high levels of electromagnetism such as areas near base stations, electrical substations, power lines and broadcasting towers.

- Fly with caution when taking off from moving surfaces such as a moving boat or vehicle.
- Keep the aircraft at least 9.8 feet above the water surface when flying over water.
- It is forbidden to fly indoors. Only fly in authorized areas.



⚠ • To learn more about aircraft requirements, please visit the Federal Aviation Administration's aircraft page <https://www.caa.co.uk/home/>

## 4. Precautions and Maintenance for the Intelligent Battery

- Please fully charge the battery for the first time before using it.
- It is recommended to charge and discharge it once a month, do not store it fully charged, keep 50%-60% of the electricity, the storage temperature is 10-40°C, and the best storage temperature is 19-21°C.
- Water enters the battery and the battery protection board fails, which will cause the battery to not be used normally. Do not use the battery in rain or in a humid environment, as this may cause the battery to self-ignite or even explode.
- If the battery is squeezed, deformed, and dropped from a high altitude, it is forbidden to use it again.
- Prohibition of prolonged high-temperature exposure. The high temperature of the battery will cause the internal pressure of the battery to be too high and cause an explosion.
- If the aircraft has not been used for a month, the battery must be removed to prevent the battery from being in a long-term low-power discharge state.



- Use 5V/3A charging plugs. Fast charging plugs exceeding 5V/3A are prohibited.

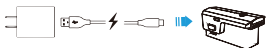


USB Adapter  
(5V/3.0A)

(Not included)



- ⚠ • It is prohibited to use computer USB, simple USB, and non-original charging cables for charging.



✓ **Original charging cable**

✗ **Computer USB**



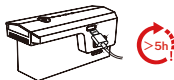
✗ **Non-original charging cables**



- 
- ⚠ • Please remove the battery in time after the aircraft has landed on low power to avoid battery damage caused by battery over-discharge.
- It is forbidden to overcharge the battery, please remove charging cable in time after fully charged to avoid damage due to overcharge.



✓ **Charging Time=5 hours**



✗ **Overcharge>5 hours**

- 
- ⚠ • Please remove the battery in time after the aircraft has landed on low power to avoid battery damage caused by battery over-discharge.



👉 **Overheating warning**

It is forbidden to overcharge the battery, please remove charging cable in time after fully charged to avoid damage due to overcharge.

## 5. Pre-Flight Checklist

- Make sure to read the manual and watch the guide video before the first flight.
- Make sure that you go outdoor to an open area to operate the aircraft.
- Make sure that the aircraft battery, remote control, and mobile device are fully charged.
- Make sure that the arms of the aircraft are fully extended.
- Make sure the intelligent flight battery is installed firmly.
- Make sure that the propeller is free from damage, aging, deformation, no foreign matter entanglement, and firm installation.
- Make sure that the camera cover was moved before turning on the aircraft.
- Make sure that nothing obstructs the motors.
- Make sure the camera lens and sensor are clean and without stains.

## 6. Problems You May Encounter

### • Flight preparation

#### ① The aircraft direction

Please pay attention to the direction of the aircraft when flying.

The camera direction is the forward of the aircraft.



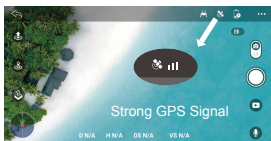
Stay away from People



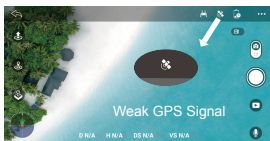
Unfold arms



#### ② Make sure to fly outdoors in an environment with strong GPS signals.




GPS  $\geq$  3 bars



GPS < 3 bars

## • To Prevent Flying Lost

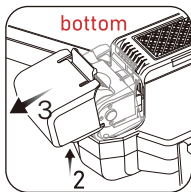
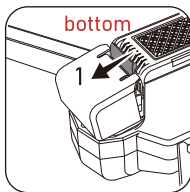
- ① Keep the aircraft visible for beginner. It is better for beginners to fly the aircraft within a real-time image transmission range on your phone's App for safety.
- ② Keep the drone GPS mode on. During the flight, **DO NOT turn off GPS signal** (Do not long-press  button, otherwise GPS will be turned off), the Aircraft would fly unsteadily, or lose the direction, or will be lost completely.



- ③ Return the aircraft timely. During the flight, if the picture freezes, please RETURN the aircraft first, change to another new environment or check if there is interference around, then connect again.
- ④ Reserve enough power for the drone to return home. When doing long distance flight test, please make sure to reserve enough power for the drone to return, especially in the windy weather, as the battery will be consumed more quickly.
- ⑤ Be careful when using emergency. **STOP** button on the remote controller is only for emergency stop. You can short press and then hold the button to stop the drone when it is at the altitude within 42ft(13m) Once activated, the drone motors will stop working immediately and fell to the ground.

## • Gimbal Camera Guidelines

① Please take off the gimbal camera cover before flight.



② Please take off from solid and level surface, don't take off from grass or sand ground.

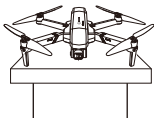


⊗ On the grass



⊗ On the sand

③ Do not turn on the aircraft when it is on desk or hollow wooden floor. They will amplify the small vibrations into high-frequency vibrations, which will cause the gimbal cannot work.

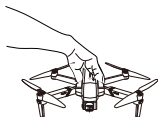


⊗ On the desk



⊗ On the hollow wooden floor

④ Do not interfere with the gimbal by external forces or pick up the aircraft during self-inspection (After compass and Gyroscope calibration, the gimbal will enter self-inspection for 20 seconds).



✗ Picking up the aircraft  
(during self-inspection)

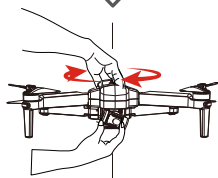


✗ Touching the camera

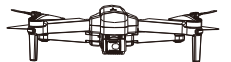
⑤ The Gimbal cannot work during the compass and Gyro calibration. Put the aircraft on a level surface after calibration, then the gimbal will start to work after 20 seconds.



Before Start

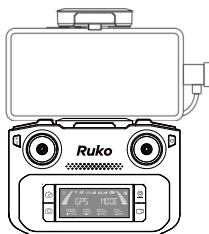


During Compass and Gyro calibration



Put on a level surface and wait for 20 seconds

## 7. Remote Controller Cable Settings



RC Cable (USB-C connector)



RC Cable (Micro USB connector)



RC Cable (Lightning connector)

- ① Select the appropriate RC cable. Connect one end of the RC cable to the remote controller and the other end to the mobile phone.
- ② ALLOW ALL pop-up permissions. When you enter the APP CONTROL page and see the image transmission of the aircraft, the connection is successful.
- ③ The remote controller cannot fast charge the mobile phone. Please check the battery level of the mobile device before use.

## 8 Cautions of Return To Home (RTH) feature

### 8.1 When flight distance within 98 ft

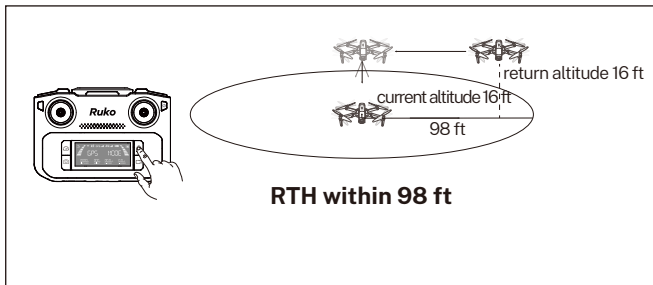
- Please mind your drone's flight altitude, make sure it flies higher than any other objects surrounding.
- There are two common but must pay attention conditions that can be listed as follows:

- **RTH with Sufficient Battery:**

If you enable the drone RTH feature by pressing the RTH button, the drone will keep the current altitude and return directly to the take-off point, the set return-altitude won't take effect. You can control the drone with joystick, or cancel RTH by pressing the RTH button again.

- **RTH in Low Battery:**

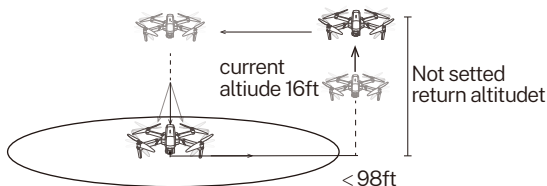
If the RTH feature has been enabled because of extreme low battery, the drone will keep the current altitude and return directly to the take-off point, the set return altitude won't take effect. The RTH can't be cancelled, but you can adjust the landing position by moving the joysticks.



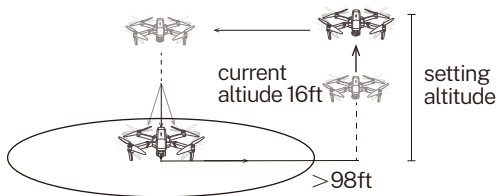


## When flight distance further than 98 ft

① If the aircraft is more than 98ft (30m) from the Home Point when RTH begins, and is flying below 65ft (20m) without setting a return altitude, it will automatically rise to the default return altitude of 65ft (20m) then fly to the Home Point.



② If the aircraft is more than 98ft (30m) from the Home Point when RTH begins, and set a return altitude, if the aircraft is flying below the set altitude, it will rise to the set return altitude and then fly to the Home Point, if the aircraft is flying exceed the set return altitude, it will fly to the Home Point at its current altitude.







# ***Ruko***<sup>®</sup>

rukotoy.com

CONTACT US FOR MORE TECH SUPPORT



+1 (888)892-0155

| Mon-Fri 7:00AM - 7:00PM (PST)



+86 19129317359



rukobrandstore@gmail.com

