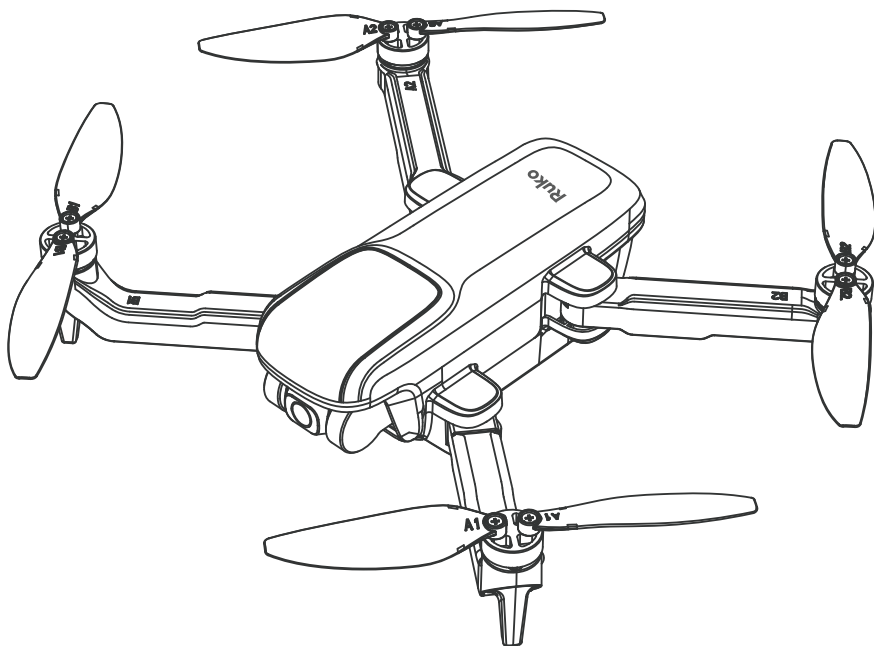


Ruko[®]

14+
for age

User Manual



U11

If you have any questions about this product, please contact Ruko by sending a message to Rukodrone@gmail.com

📞 +86 13760395206 (Available from 9 pm to 6 am)

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FLIGHT SAFETY



+



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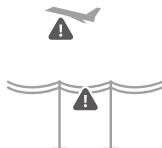


Fly in Open
Areas

Strong GPS
Signal

Maintain Line
of Sight

Fly Below
400 feet (120 m)

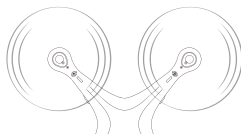


Avoid flying over or near obstacles, crowds, high voltage power lines, trees, airports or bodies of water.

DO NOT fly near strong electromagnetic sources such as power lines and base stations as it may affect the onboard compass.



DO NOT fly the drone in adverse weather conditions such as rain, snow, fog or wind speeds exceeding 7m/s or 15.7 mph.



Stay away from the rotating
propellers and motors.



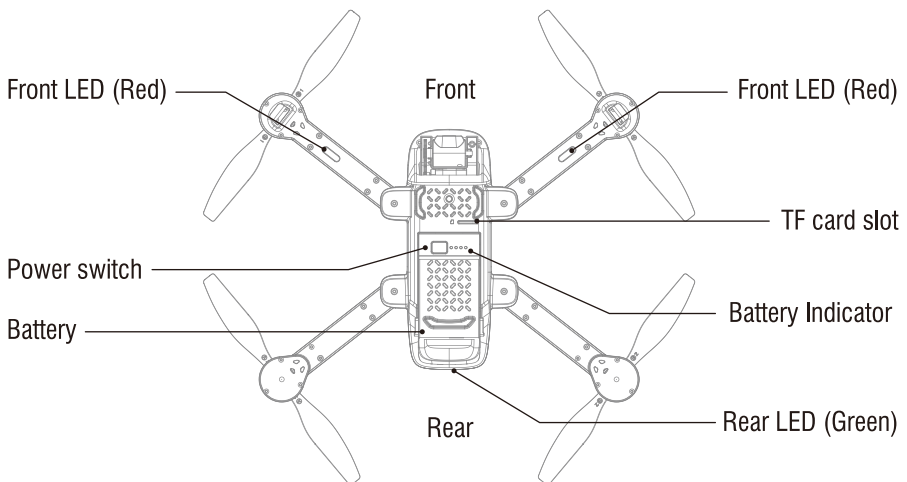
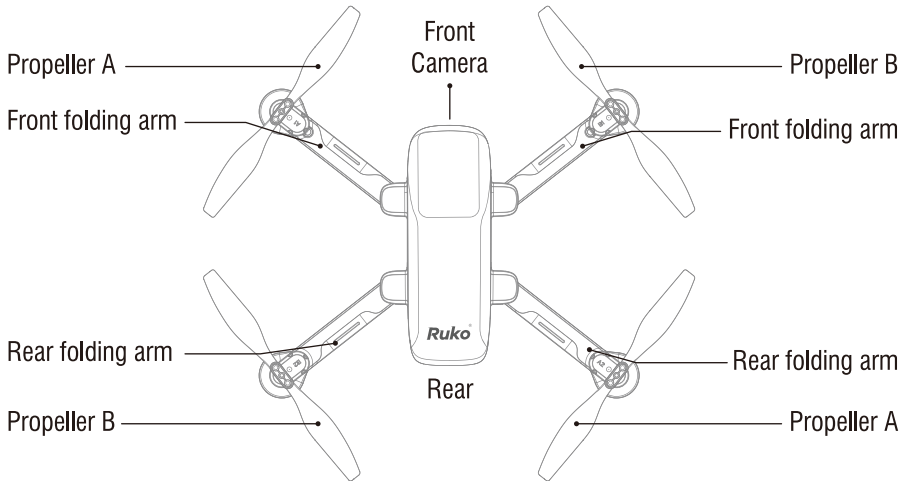
No Fly Zone



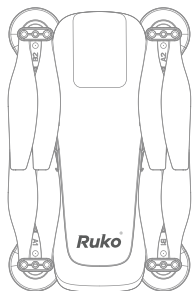
It's important to understand basic flight guidelines, for the safety of both you and those around you. Don't forget to read the Safety Guidelines before flight.

DRONE PREPARATION

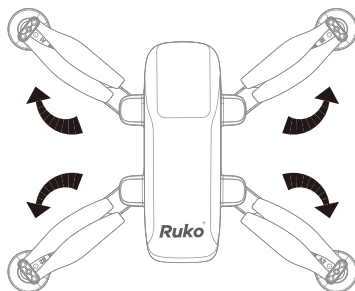
1. Aircraft Diagram



2.Unfolding Instructions

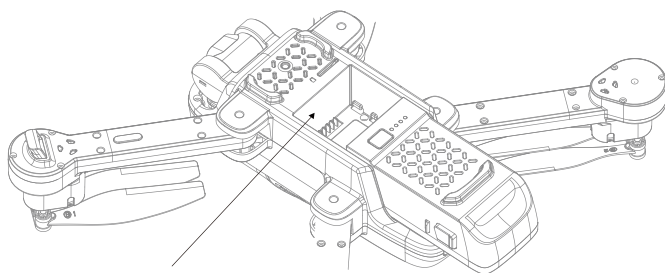


Folded station



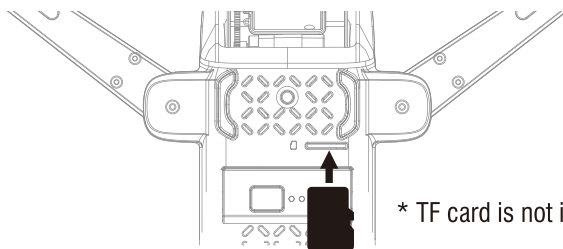
Unfolded station

3.Connect Battery to the Drone



Pull out the Spongesheet
before turning the battery on

4.Installation of TF Card

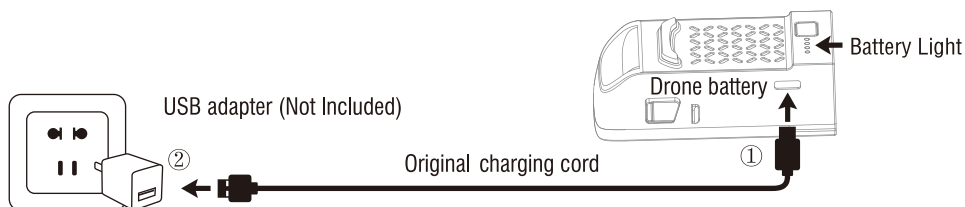


* TF card is not included

Insert the TF card into the slot on the belly of the fuselage, and pay attention to the metal contact surface orientation of the TF card.

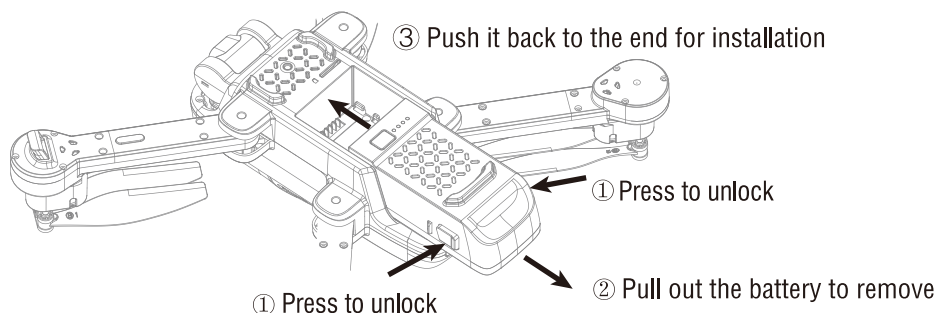
5. Battery Charging

To maximize the battery life, please **fully charge the battery before flying the drone.**
Battery light flashes while charging. When the light becomes solid, the charging is done.



※ Please use the original cord and 5V 2A power adapter

6. Battery Removal and Installation

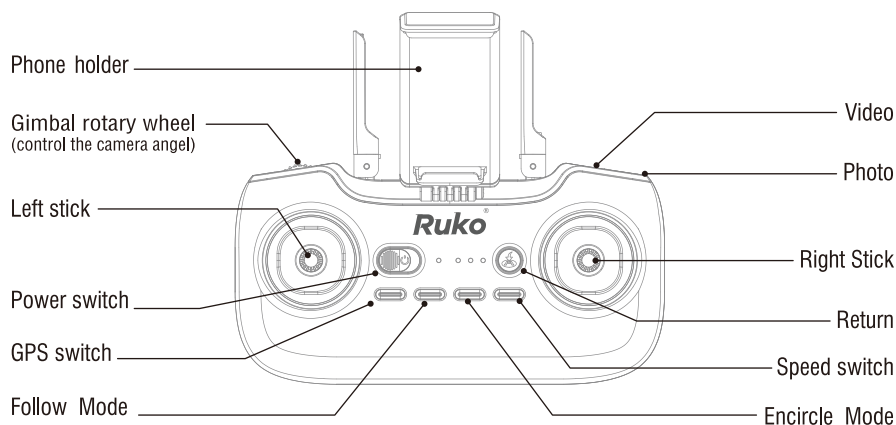


Tip: Please make sure the battery slot and the drone are perfectly clamped, and there is no gap between, otherwise, the battery may fall during the flight.

TRANSMITTER PREPARATION

1. Transmitter Diagram

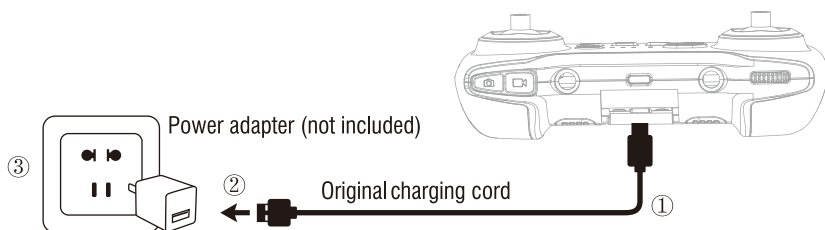
The transmitter needs to be **fully charged before flying the drone.**



2. Transmitter Charging

▲ Please use the original cord and 5V 2A power adapter

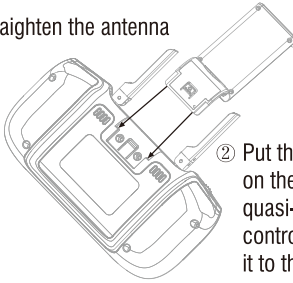
Connect the transmitter to the supplied charging cord, and then the USB charging adapter. While charging, the transmitter indicator light flashes, and when it is completed, the indicator will become steady.



3.The Installation Methods of Mobile Phone Holder

Installation

- ① Straighten the antenna



- ② Put the phone clip on the back of the quasi-remote controller and push it to the end.

Disassemble

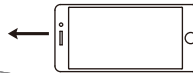
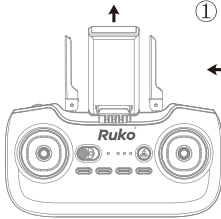
- ② Pull up the clip over the mobile phone

- ① Press to unlock



4.The Methods of Clamping the Phone

- ① Pull the clip up to adjust the width

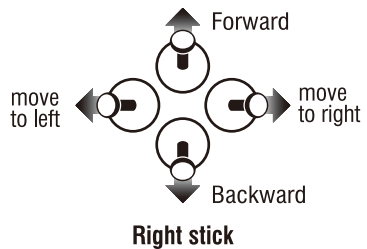
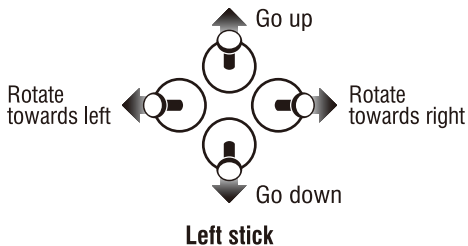


- ② Place the phone inside the holder and let go, it will automatically clamp the mobile phone.



*** Notice: Don't clamp the buttons on the edge of the phone**

5.Control Stick Operation



Scan the QR code and watch the guide video

FLIGHT OPERATION

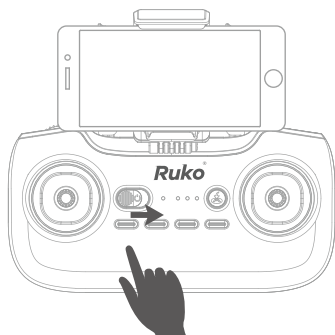
1.Download and install APP: RUKO-GPS

Please choose the corresponding QR code to scan and download.

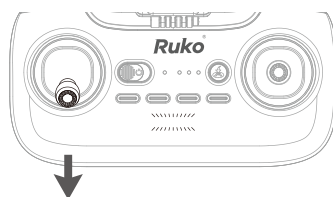


2.Flight

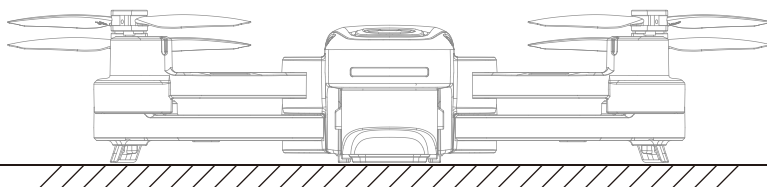
1)Connection between Transmitter and Drone



① Turn on the controller



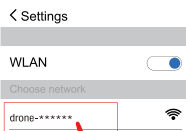
② Push the left stick down to the lowest position and let go, the light goes off slowly



Horizontal ground

③ Turn on the drone Place the drone on horizontal ground, and long press the power button for 2 seconds to start the machine. The front navigation light flashes and the rear navigation light goes out. At the same time, the remote control “beeps”.

④ Connect APP

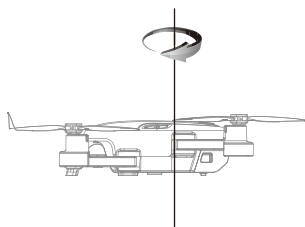


Connect your smart phone to the wifi named "drone-*****".

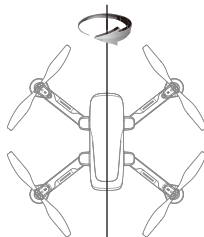
悞崂燻鯁送□燻髻都适鯽□

- ① Rotate the drone horizontally until the transmitter "beeps". Level correction is complete.
- ② Rotate the drone vertically until the transmitter "beeps". Vertical correction is complete.
- ③ When the lights become spinning and flashing, the calibration is done

Please pay attention to the tips on the App



Horizontal rotation



Vertical rotation

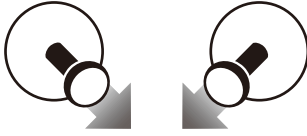
Tips: you need do the right calibration each time you start the drone, or it can't work normally.

3) GPS Signal Search

After finishing the aboved steps, the drone will automatically search for GPS signals. When the blue indicator light of the remote control changes from flashing to solid, and it "beeps" at the same time, indicating that the GPS connection is successful. Please make sure the drone has searched a strong GPS signal before flying outdoors, or the return home function will be invalid. (When the GPS signal is weak flying indoors, the flight height is defaulted under 4 meters.)

Please pay attention to the tips of the App, it shows "GPS mode" but not " weak GPS ".

4) Unlocking / Locking the Motor

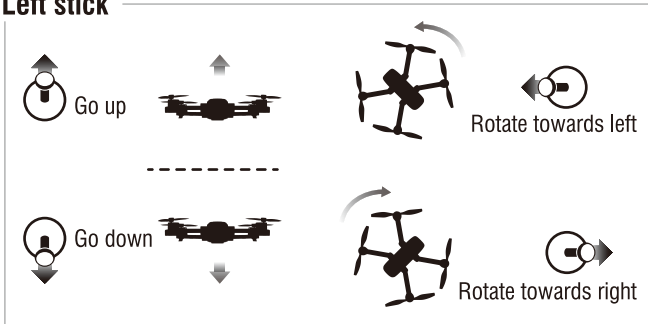


- ① Simultaneously push the left and right joysticks inward at 45 degrees to unlock the motor before the drone takes off.
- ② Simultaneously push the left and right joysticks inward at 45 degrees again, motors stop working.

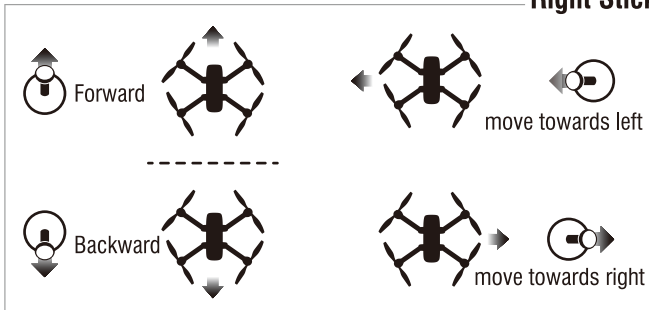
The drone can only take off when the motors are unlocked.

5) Control Stick Operation

Left stick



Right Stick



解锁步骤

After unlocking the motor, push the left joystick upward slowly to make the drone fly.

降落步骤

During flight, slowly pull down the left joystick to control the drone's landing.

TRANSMITTER FUNCTION PROFILE

1. GPS ON/OFF

GPS is on by default.

GPS OFF: Press the "GPS" button, the transmitter "beeps" and the blue indicator of the transmitter will go off, indicating the GPS is off.

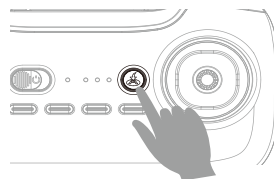
GPS ON: Press the "GPS" button and the blue indicator of the transmitter will stay bright. It means GPS is restarted.

Note: Don't turn off GPS during flight



2. Return

During the flight, press the "return" button, the transmitter continuously "beeps", and the drone will automatically return to the take-off point.



① When using this function, if the distance between the controller and drone is within 30m, the drone will return at the current altitude. Therefore, you need to notice whether the drone will hit an obstacle when returning at this flying height. While the distance is more than 30m, the drone will firstly fly to the return altitude which you set on the APP and then fly back.

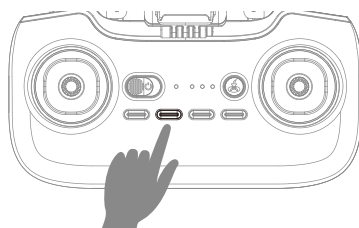
② The return function will be triggered automatically when the battery is low, and the drone will return to the position about 30m away from the take-off point. Thus, you can only control the the drone within this distance.

Notice: While returning, you can do nothing to control over the drone unless you press the Return button again to stop its return. And please do not fly in windy weather, or the wind will influence the drone's return.

3. Follow Function

While flying, press down the Follow Function button, the transmitter "beeps", and the drone enters the follow mode. Press the button again to cancel this function.

In this mode, the drone will automatically follow the phone, so please make sure the controller and drone have connected successfully and you have turned on the mobile location function. Or the follow function will not work.

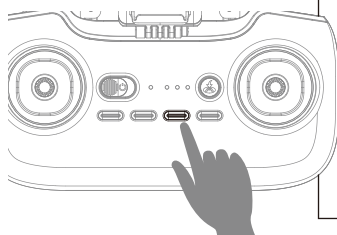


Note: The maximum follow distance between the drone and phone is less than 30 meters.

4. Encircling flight

During flight, press the "Encircle" button, the transmitter "beeps" and the encircling flight mode is activated. The drone will fly around a default minimum radius (about 3 meters). In this mode, the left stick can only control the drone's flying height and by manipulating the right stick, you can adjust the flying radius.

In the state of encircling flying, the left stick can only control the drone's altitude, the angle of the camera is fixed.



Push forward to narrow the radius



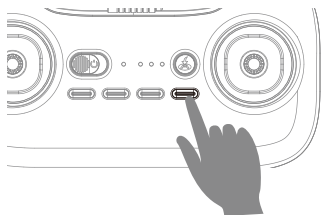
Push backward to expand the radius

5. Speed mode switch

Press "H/L" button and the controller "beeps" three times, it enters the high speed mode .

Press down the button again, and the controller "beeps" twice, it enters the middle speed mode .

Press down the button the third time, and the controller "beeps" once, it enters the low speed mode .



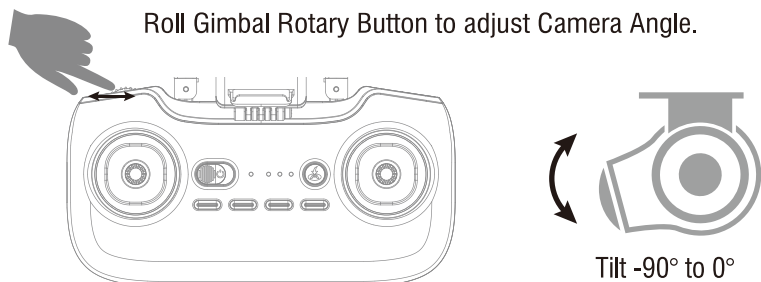
Low speed: suitable for beginners to practice without wind.

Medium speed: suitable for experienced operator to fly in breeze.

High speed: suitable for professional operator to fly against wind.

If the remote controller cannot control the drone, please check whether the wind speed is too high or the remote controller loses signal. You can adjust the speed to a higher one and wait until the drone flies back to a certain close distance before trying to control it again.

6. Gimbal Adjustment

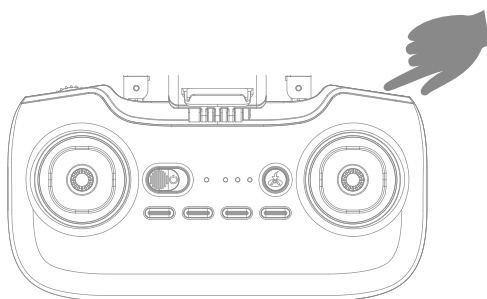


Tips: If the camera's angle can not be adjusted by controlling the button, please use your hand to manually adjust after turning off the drone. And start the drone to try again.

7. Photo

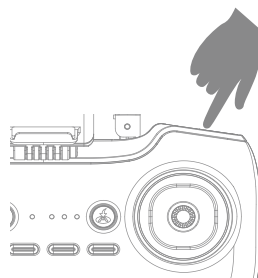
Press the "photo" button once to take a picture' it will be automatically saved in your phone.

When taking a photo, the transmitter will beep once.



8. Video

Press the "video" button once to activate recording mode. Press it again to stop recording and the video will be saved in the phone (and TF/SD card).



Notes for Recording

- ① The APP needs to be authorized to read the phone gallery to view the photos.
- ② Please turn off the drone before taking out the TF/SD card.

APP FUNCTION PROFILE

1. Pairing Your Device With The Drone



(1) Insert the battery and power on drone



(2) Place drone on a flat, horizontal surface



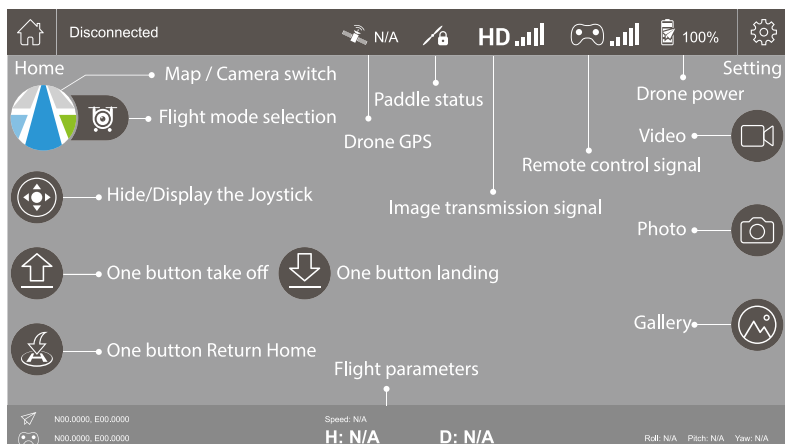
(3) Turn on "WiFi (WLAN)" of the mobile phone, and choose connection "drone-GPS-*****"

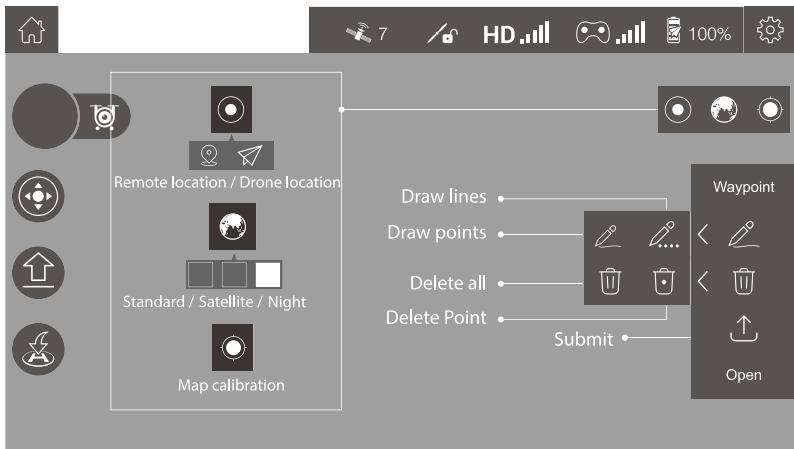
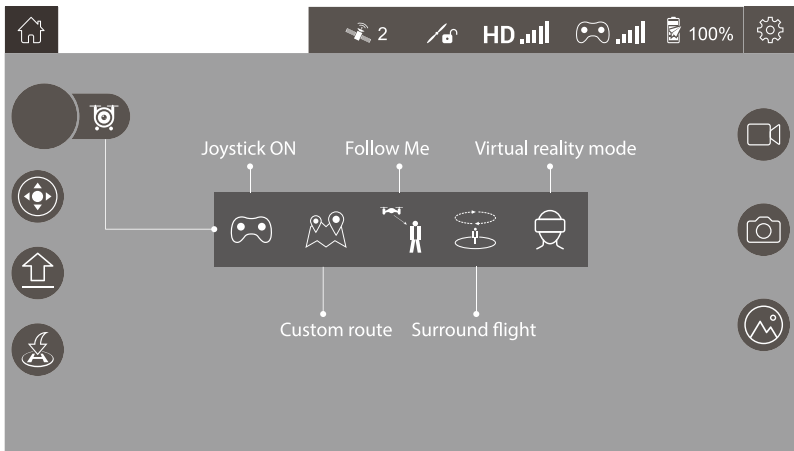


(4) Select Go Flying

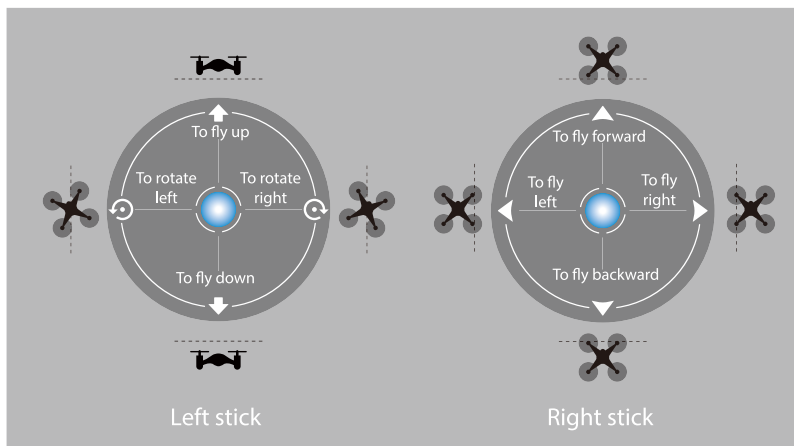
(5) When you can see the live video on the APP, it means the pairing is successful.

2. Know The Remote Control Interface



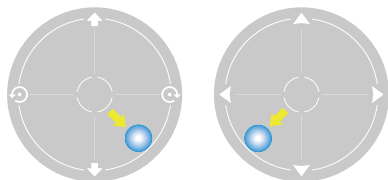


The role of virtual joystick



3.Control Drone Via APP

Unlock/Lock the motor



When flying the drone indoor, to unlock and lock the motor: push the left and right balls inward to 45 degree angle. When the motor is on standby, it will unlock the motor; when the motor is running, the motor will be locked.

Take Off Click  icon to take off, the drone will fly up automatically and keep flying at an altitude of approximately 1.2m.
Note: This function can be activated indoor and outdoor.

Landing Click  icon to land, and the drone will land automatically.
Note: (1) This function can be activated indoor and outdoor.
(2) Do not operate the left lever during landing, otherwise the current command will auto fail.

Return Home Click  icon to return home, the drone auto returns to the takeoff point. During the automatic return flight, the remote lever is locked. When the drone returns to the takeoff point, press the Return Home Button again to unlock.

Warning: Do not operate the left lever during landing or returning, otherwise the current command will auto fail. During the automatic return flight, the remote lever is locked. When the drone returns to the takeoff point and points in the takeoff direction, the joystick is automatically unlocked.

First tap the  icon and then user can choose the desired function:



Select the  icon for the waypoint function:



Set the flight route by tapping points



Set the flight route by drawing line



Delete the route point one by one



Delete all the route



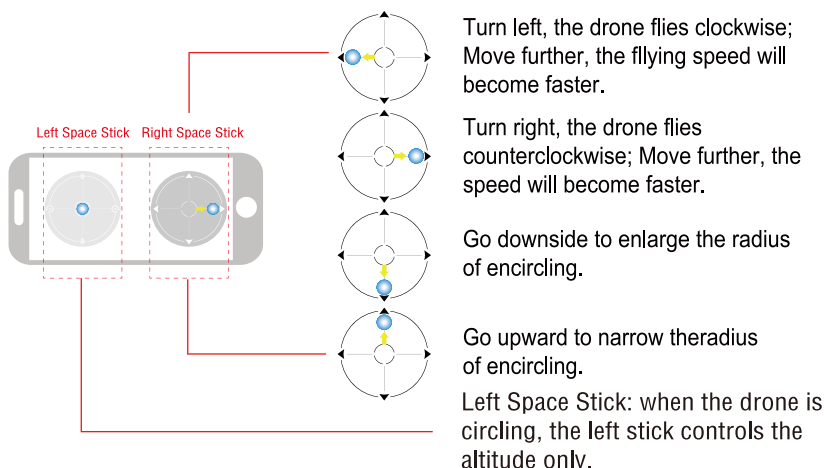
The drone will rise to the set altitude and start waypoint flight



Select the  icon for “following me” Function, the drone will follow the user. The function is based on the APP signal of mobile phone, make sure the App has connected to the Wifi of the drone.



When the drone comes to the function of surround, it will fly to the default position to wait for the next instruction. Thus you can operate the right control stick to adjust the speed and direction you want. The default radius is the minimum, so the drone can only circling outside the minimum range.



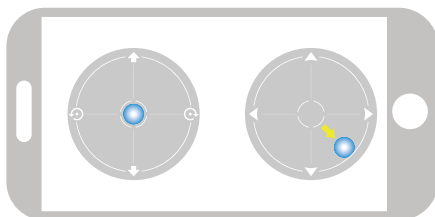
(Above operations are the same as remote control)

4. Calibration

Calibration instructions when the flight is abnormal

After successful frequency pairing, push the Right Stick outward 45° (see below photo) and then release for calibrating horizontal level. The drone body lights flash, this indicates that the drone is calibrating. When the drone body lights become solid, this indicates successful calibration.

(Do not move the Left Stick before successful calibration.)



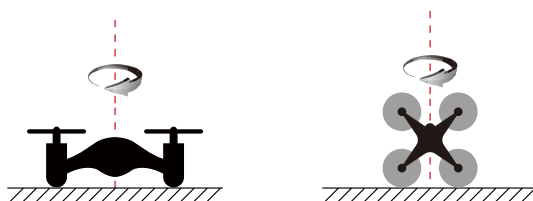
Notice:

When the drone crashes, it may cause the gyro to not recover and cause difficult control, if so, then you need to power off and power on again to calibrate.

Compass calibration

Before flying, you must have the compass calibrated. Since while flying the drone will be in different position, especially in the places with different altitude; or it may influence the accuracy of GPS position. After power on the drone and frequency pairing successfully, then start the calibration after the green light is off as below:

Rotate 360° horizontally and vertically



5. Gallery

The aerial photos and videos are stored in the smart phone, view the photos and videos from  . Or check the aerial photography data in your mobile phone gallery.

Tip:

Authorize the app to read your mobile phone media data, or you may be unable to view the aerial photography. Click on the video icon to save a video when ending recording, or the video won't be saved. Please play the video or photo after copying all aerial photography data to computer and make sure the software supports AVI format.

6. Note

- (1) You mustn't operate the drone before finishing connecting it to GPS signal.
- (2) If you can not find the WiFi signal to connect, turn off WiFi and turn on again to search and connect.
- (3) The drone must be kept within the effective control distance of the WIFI.
- (4) When alternating control from mobile phone to transmitter, the transmitter left stick must be in the center position, or exit from the APP. If not then can't change control devices.
- (5) Once the phone is connected to the drone, it can no longer be connected to other smart devices.

Do not fly in the following circumstances, some weather and geographical factors, may cause the drone to fly abnormally, and even crash.



No-fly zone



High-rise



Crowd



Water surface



Forest



Polar region



Gale



Snow



Near
transmitters



High-tension
lines



Thunder



Rain

COMMON SITUATIONS REMINDER

1. Intelligent Hover

Intelligent flight control can calculate the altitude, the visual system finds the ground position, GPS coordinates allow the vehicle to stay in your desired position. The drone is like a camera fixed in the air.

Aerial photography and control are very convenient.

Notice: Drone must be connected to GPS properly in order to give full effectiveness to fixed-point hovering function. Atmospheric pressure or wind force affects hovering stability.

2. Low Battery Alarm

When the battery power of the remote control is almost exhausted, it will make the sound of “di”“di”“di” constantly to alert you. Now you should land the drone as soon as possible to charge the battery.

3. Automatic Return

While flying, in case that the battery of the drone is almost exhausted, it will make the sound of “di”. “di” to alert you, the drone's indicator will flash. After alerting you, the drone will automatically return to the launch point.

Notice: After low-battery alarm, the drone will return home. Meanwhile, its controllable range will be reduced to 20 meters

4. Out of Range Alarm

When the drone flies beyond the max remote control distance, the transmitter will beep “didi...didi...didi...” to alert the user to fly back the drone within range immediately. The max distance of flying is 300 meters.

5. Stuck Protection

1. When the propeller is stuck and does not rotate, the drone will start the automatic protection function to stop the motor.
2. In order to pair the frequency and then release the propellers, return the left stick to the lowest position and then to the middle position, the LED light keeps bright to indicate deactivation of the protection function automatically, then the drone can take off normally.

6.Out of Control Protection

The reasons activate the Out of Control Protection mode:

- *The remote control is off.
- *Flight distance exceeds the effective distance of remote control signal transmission.
- *There is an obstacle between the transmitter and the drone.
- *Transmitter signal is disturbed.

Out of Control Protection causes the drone flying back to the takeoff position. In case of the drone receives the signal of remote control during flying back, it will standby for user further order.

7.Flight Trimmer

In case of the drone flies abnormally indoor, calibrate with remote control according to following steps:



Forward / Backward Trimmer

When flying, if the drone leans forward, push the left stick down and pull the right stick back. Otherwise push it forward.

Press down



Left / Right Tilt Trimmer

When flying, if the drone tilts to the left, push the left stick down, while pushing the right stick to the right. Otherwise push it to the left.

Press down



Left / Right Rotation Trimmer

When flying, if the drone head rotates to the left, push the right stick down, meantime push left stick to right. Otherwise push it to the left.

8.Gyroscope Calibration

Note: When the drone doesn't appear to use the trim correction flight status, or being hit hard, or falling abnormally, need to adjust the frequency again.

After the calibrating of the compass, pull the right control lever to the lower right corner at 45°, and the remote control will make a "di", and the aircraft light flashes briefly releases, indicating that the gyroscope has been calibrated.

(Drone should be placed on horizontal ground)



9.Attention

- ① Switching sequence. At first, turn on the power of the transmitter, then turn on the drone. When finished, turn off the drone first, and then turn off the transmitter.
- ② Improper operation can cause a crash. Check and confirm the connection of the motor, blade or electric pool of the aircraft and the damage level, so that the aircraft can fly again. If it is damaged, please replace it with new accessories, otherwise it will easily cause flight accidents.
- ③ Battery must be removed when the drone is not in use.

	Drone Battery Li-Po Battery Disposal & Recycling	
Worn out Lithium-Polymer batteries must not be placed with household trash. Please contact local environmental or waste agency or the supplier of your model or your nearest Li-Po battery recycling center.		

Important Notice

Our company's products are being improved all the time, design and specifications are subject to change without notice.

All the information in this manual has been carefully checked to ensure accuracy, if any printing errors, our company reserves the final interpretation right.

SPECIFICATIONS

1.Drone

Weight: 270 g (Including battery)

Size: Folded: 150*96*60 mm

Diagonal: 295*295*60 mm

Propeller diameter: 155 mm

Maximum ascent rate: 1.7 m/s

Maximum descent rate: 1.7 m/s

Maximum speed: About 20 km/h

Flight altitude limit: 250 m

Maximum flight time: 20 minutes(calm)

Maximum wind speed: level 3

Maximum tilt angle: 35°

Operating Temperature Range: 0 °C to 40 °C

GNSS: GPS/GLONASS

Operating frequency: 2.4 Ghz/5G wifi

2.Camera

Image resolution: 3840x2160P

Static Photography Mode: Single shot

Video Resolution: 2048x1152P

Image mode: RGB Mode

Frame Rate: 25

File System Support: FAT 32

Image format: JPEG format

Video format: MP4 Compressed
format H.264

TF Card: Supports Class 10 Micro
TF card, Supreme supports 32 G.
≥10 level Micro TF Card.

Operation Temperature: 0 °C to 40 °C

3.Gimbal

Stable: Single axis (tilt)

Controllable range: Tilting: -90° to 0°

Tips: the above data are the test data of Ruko toy lab, for reference only.



4.Drone Battery

Capacity: 1200 mAh

Type of battery: LiPo

Net Weight: about 82 g

Voltage: 7.4 V

Energy: 8.88 Wh

Charging temperature range: 5 °C to 40 °C

5.Transmitter

Operation Frequency: 2.4 Ghz

Operating Temperature: 0 °C to 40 °C

Mobile device bracket: Suitable for smartphones

Maximum transmission distance: 300 m

Battery: 3.7 V , 1200 mAh

6.APP

App Name: RUKO-GPS

Image transmission system: 5G wifi

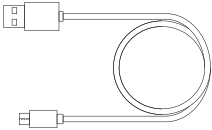
Real time image transmission: 720P@20 fps

Operation System: This software is suitable for mobile phones in the IOS 9.0 or later and Android 4.4 or later system.

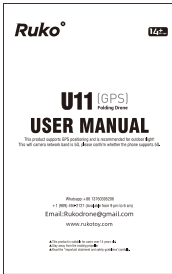
7. Accessories



Blade X4



USB cable X2
Only for charging



Screw driver X1



Screw X12

COMMON PROBLEMS & SOLUTIONS

Problem	Problem Cause	Solution
Wifi can't be found or connected successfully	Your phone doesn't support dual-band wifi	Change another phone to try
	Your phone has a high-security system and treat it as unsafe WIFI, refuse to connect	Set it as a trusted wifi
	The signal is delayed	Redownload the APP, delete the drone WiFi on the phone, restart the phone and connect again
	VPN is turned on	Turn off the VPN
	The bluetooth and cellular data signal influence the wifi connection	Turn off the bluetooth and cellular data
	Wifi transmitter is broken	Change another camera (the transmitter is in the camera)
The camera can not adjust its angle	Camera is stuck	Turn the drone off and use hands to adjust it lightly several times
The controller shows low battery on the APP	Wifi is not connected successfully	Connect wifi
	The controller does not pair with the drone successfully	Push the left joystick downward
GPS signal can not be searched	The drone flies indoors (not recommended)	Fly the drone outdoors
	There is GPS signal interference around, such as tall building and trees	Change to another open-air place to fly the drone
The drone can not fly	The battery is dead	Fully charge the battery
	The battery is malfunctioned or broken	Change another battery
	Can not start the motor	The pushing angle is not correct, adjust the angle and try more times
	The motor is malfunctioned	Replace a new arm
The drone doesn't respond to the controller's command	Fly the drone in a windy weather	Try to fly the drone in a calm and pleasant weather
	GPS is not searched successfully	Wait until the drone searches a strong GPS signal automatically before flying
The drone drops during flight	The battery is suddenly dead	Do not fly the drone in a windy weather
	The battery is malfunctioned or broken	Change another battery
Pictures and videos can not be saved in SD or TF card	The card memory is full	Delete the contents of the SD card
	The card is not applicable	Choose to use the card below 32G, whose rate is Class 10, and format the card while select FAT32 as the file system
The drone flies unstably	Fly the drone in a windy weather	Try to fly the drone in a calm and pleasant weather
	The drone does not do a right calibration	Put the drone horizontally on the ground first then turn it on and follow the steps to do the calibration

Ruko has 3-month warranty, any questions please contact our after-sales email: rukodrone@gmail.com

FCC 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.

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

FCC Notice:

The equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. Modifications not authorized by the manufacturer may void user's authority to operate this device.

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.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement

The device has been evaluated to meet general RF exposure requirements.
The device can be used in portable exposure condition without restriction.



Manufacturer company: SHANTOU CITY CHENGHAI UDIRC TOYS CO., LTD

MANUFACTURER ADDRESS: Dengfeng Industrial Zone, Chenghai District, Shantou Guangdong, China

Model: U11

Manufacture date:

Whatsapp: +86 13760395206

+1(949) 394-4635(Available from 5:00pm-2:30am PST)

WARNING:

- Please read the instructions carefully before use and keep the card properly for reference at any time.
- Should be charged by the original USB cable.
- Only batteries of the same or equivalent type that recommended can be used.
- Do not mix the new and old batteries.
- Please dispose of discarded batteries correctly as required by the environmental protection department.
- Keep batteries away from fire or high temperature environment.
- Please check the plug and other accessories periodically. If any damage is discovered, please do not use it until completely repaired.
- There is no warranty against damage caused to this product by an accident or collision.

WARNING:
CHOKING HAZARD - Small parts.
Not for children under 3 years.

NOT TO PLACE IN
FIRE OR WATER
DO NOT RECHARGE
DO NOT DISPOSE OF
DO NOT REPAIR
DO NOT OPEN
DO NOT USE
DO NOT USE
DO NOT USE

متابعة الشركة والمستخدمين
تعليمات الاستخدام

NO. U11

Depend on product configuration

Please understand that the picture on the package may differ from actual product.
Special warning level: the adult supervision once the product is being played by 3 years old children. It should be used by the people who are over 15 years old.

•Use in open area and be mindful of your surroundings. Drone is not equipped with obstacle avoidance.

•Drone battery must be charged with the provided USB cable with a power source no greater than a standard 5V wall charger.

MADE IN CHINA

Ruko®

www.rukotoy.com