Ruko®
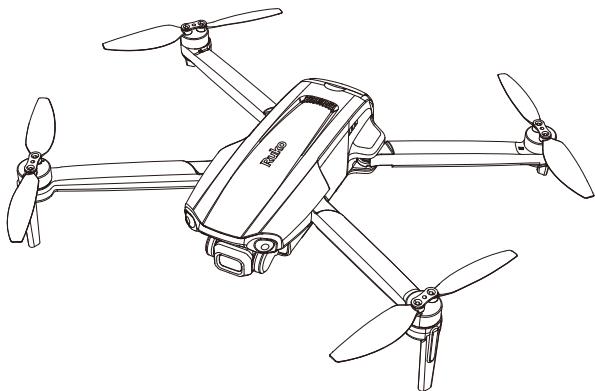
Flight Guide &
Safety Disclaimer

v1.0

F11PRO 2

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Contents

1. Learning to Fly

There are many steps involved in operating the drone, so it's important for you to learn about its features, settings, and how to use it.

Learning channels:

User Manual

Flight Guide

App Tutorial Animation

YouTube Operation Video

2. Flight Environment and Signal Interference
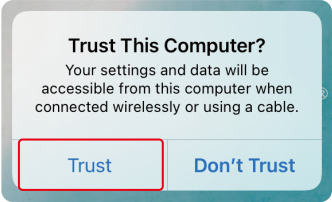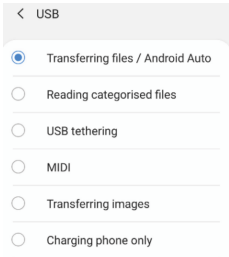
Any radio signals can be affected by obstacles and magnetic interference. Make sure to fly in an open area free of obstructions and interference.

Interference:

| Type	Interference consequences	Solutions
5.8G remote controller signal interference	1.The remote controller cannot control the aircraft. 2. The auto return home function is triggered 10 seconds after disconnection. 1.Cannot reach the advertised image transmission distance. 2.Imaging freezing.	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.
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. Recalibrate the compass. 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	 Please select "Trust" to allow permissions.	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. Please reconnect the data cable for correct settings.
Android	 Please select "Transferring files" to allow permissions.	

⚠ 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.)
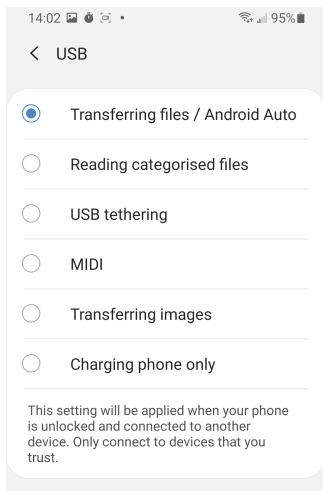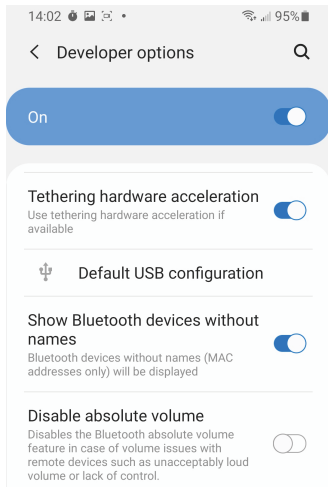
(Example phone: Samsung S9)

4. GPS Signal Searching

GPS signal searching depends on the flight 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 signal is unstable. 2.The search fails.	1.Cannot fly in GPS mode. 2.Unstable flight. 3.Drifting. 4.Unable to RTH.
Open and undisturbed outdoor area	About 60-90 seconds	Good signal	1.Flying stable. 2.Smart flight, smart RTH, and other GPS-dependent functions can operate normally.

5. Pairing & Calibration

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

	Operation procedure	Cautious
Remote Controller Pairing	1. Turn on the aircraft. 2. Turn on the remote controller. 3. Automatically pairing.	The automatically pairing takes about 20 seconds.
Compass Calibration (Strong magnetic interference)	When the interference value is below 180, you can manually initiate compass calibration: 1. Briefly press the compass button on the remote controller; 2. Rotate horizontally for 3 turns; 3. Rotate vertically for 3 turns.	1. The interference value can be checked on the app. 🍀 2. If strong magnetic interference is detected before takeoff and the interference value exceeds 180, the drone will automatically enter compass calibration mode.
Gyroscope Calibration	1. Turn the remote controller right joysticks to 5 o'clock 2. Autocomplete calibration.	Placed the aircraft on a level ground or landing pad.

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

Types	Consequences	Solutions
No transmission image	The remote controller and the aircraft do not pair successfully. (The pairing time is about 20 seconds.)	Wait for the remote controller to automatically pair with the aircraft before entering the APP operation interface.
	USB permissions are not set correctly.	Please reinsert the cable correctly. When setting the USB Settings option that pops up, select "Transferring files" for Android, and "Trust" for iOS.
	USB cable is 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

7. Flying Tips

Flying Type	Precaution	Flying Height	Landing
Short-range flight	Choose an open area	Higher than obstacles	Use the one-key take off and one-key landing
Long-range flight	1.Choose an open area. 2.Fly out against the wind. 3.Remote controller and phone pointing to the aircraft to get the best communication status.	393.7ft (120m)	One-key return

8. Photograph Tips

	Tips	Cautious
Weather	Sunny and well-lighted	Dark weather affects image clarity.
Angle	Front-lighting	Backlight angle shooting will make the image darker and not clear.
Video shooting	1. Windless weather 2. Hover shooting, steady and uniform control of the aircraft	Insufficient light and strenuous maneuvering of the drone can affect flight stability and the stability of the imaging image.
Video storage	An SD card is recommended for storing higher resolution video files.	The video resolution between storage in the SD card and the App is different.

9. Battery Storage & Use Recommendations

Tips for storage:

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.

Tips for use:

Use Recommendations	Details	Cautious
Temperature	32°F-104°F (0°C-40°C)	In cold weather (below 30°F (0°C)), power consumption is fast, which will shorten the flight time.
Charging time	2.5 hours (using the Type-C fast charging cable that comes with the package)	1.DO NOT use high-power chargers. 2.DO NOT overcharge. 3.DO NOT charging immediately after flight.

⚠ Do not use batteries when the battery is damp, water stained, dropped, impacted, deformed by compression, or leaking.

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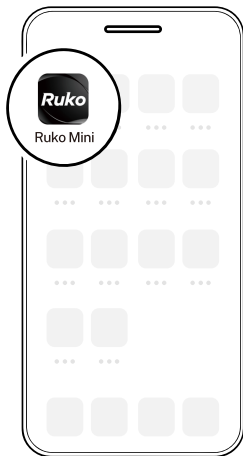
Flight Guide

1. Download App

Ruko Mini

Download on the
App Store

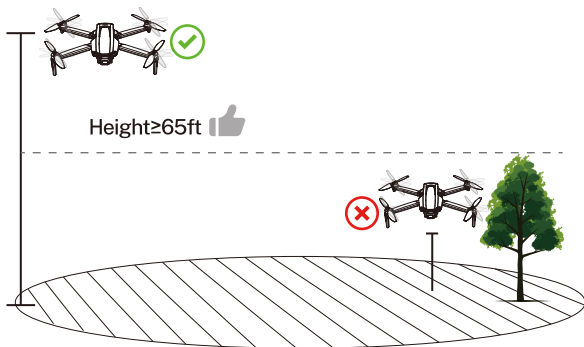

Download for
Android

Ruko Mini App

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2. Charge the Batteries

Charger not included

PD,QC3.0

3.Select an Open Flight Area
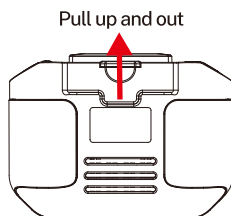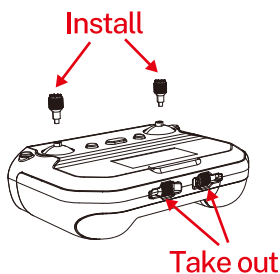

Height≥65ft 👍

⚠ Suggest to fly higher than the surrounding objects.

4.Preparing the Drone
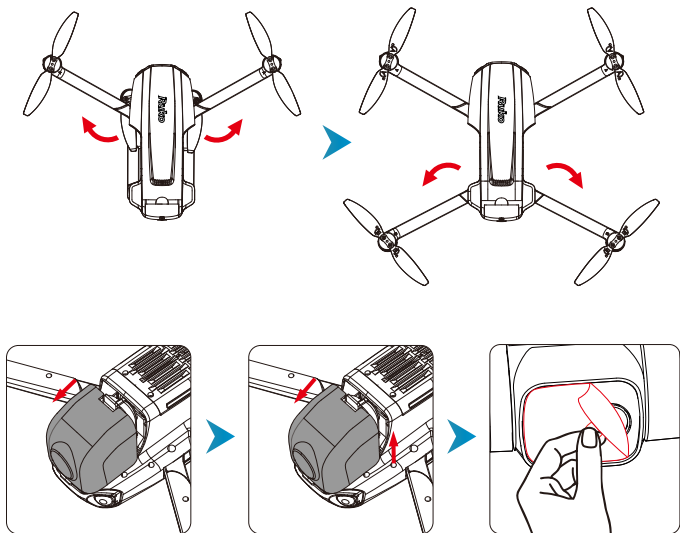
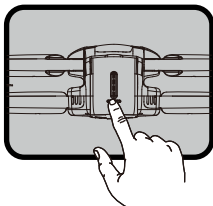# 5.Preparing the Remote Control

Install

Take out

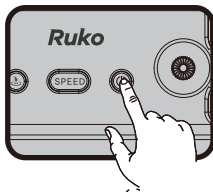Pull up and out

Back of remote controller

Mobile device
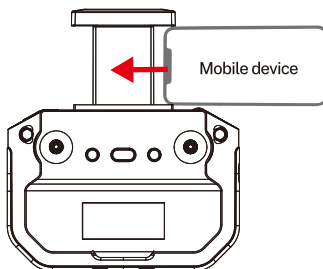
6.Power On and Pairing

- Long press the power button until the indicators are on and aircraft plays the startup sound.
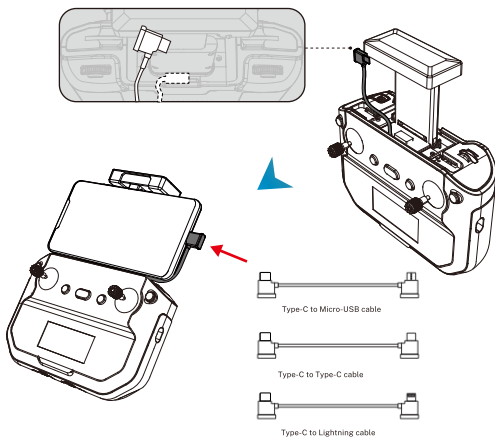

- Press once and then long press to turn on the remote controller.

⚠ It takes about 20 seconds for the remote controller to pair with the drone.

7. Data Cable Connection and Setup

Type-C to Micro-USB cable

Type-C to Type-C cable

Type-C to Lightning cable

⚠ The RC cable (Type-C connector) is placed inside the remote controller before shipping.

- When entering the APP interface please remember to ALLOW all popover permissions.
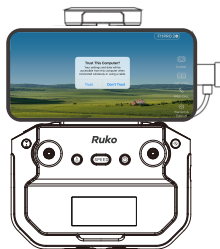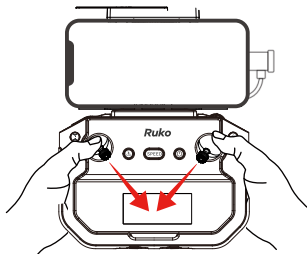
8.Search for GPS Automatically

GPS ≥3 bars

GPS search successfully

Solid green lights

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

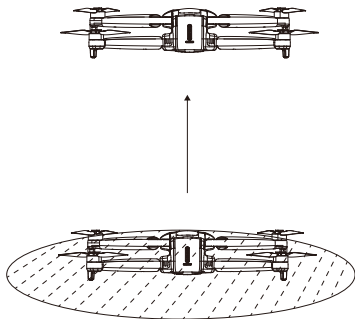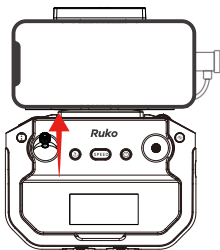- -

9. Start the Motors

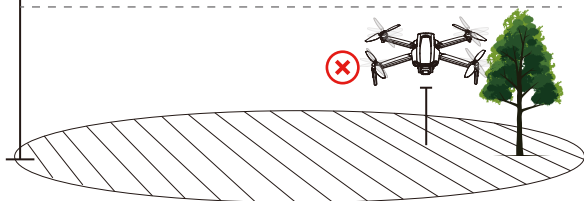• Push joysticks to 5 & 7 o'clock position.
(About 2 seconds)

10.Take off

- Push up the left joystick.

Height≥65ft 👍

NEW TO FLYING DRONES?

Check the Quick Start in the app

Search **"Ruko F11PRO 2 Quick Start"** on YouTube for first flight

Scan QR code for more tech and video support

Disclaimer and Safety Guidelines

Safety at a Glance

> ⚠ The Ruko F11PRO 2 is NOT a toy and is NOT suitable for people under the age of 14.

1. Symbol Explanation

- 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 individuals under the age of 14. Keep the drone out of reach of children and exercise caution when operating it around them.

- This product is a flying camera designed for easy flight when properly maintained. Read all accompanying materials before using the drone for the first time. These documents are included in the product package. It is recommended to operate the drone in GPS mode in an open outdoor area to familiarize yourself with its controls.

- Improper use of this 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 factors, WILL NOT be Ruko's responsibility.

- Ruko reserves the right to update this disclaimer and safety guidelines.

3. Flight Battery Safety Guidelines

3.1 Charging Precautions

- Do not use low-quality charging adapters or cables, otherwise, the battery may be damaged, reduce performance, or cause a fire.

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

- It is strictly forbidden to use batteries or charging cables that are not officially provided by Ruko. We are not responsible for any damage caused by charging cables that are not from Ruko.

- DO NOT charge the battery immediately after flight as the temperature may be too high. Wait until it cools down to room temperature before charging again. Slight heating during flight is normal due to the battery current output.
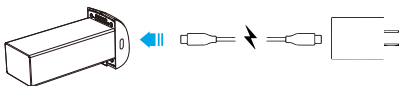
Original charging cable

Non-original charging cables
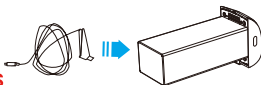
Overheating warning

3.2 Battery Safety and Maintenance Precautions

- Keep the product in a cool environment, avoid high temperatures, exposure to the sun, water suction, pressing, and descent from high altitude. Do not place the battery in a high temperature, humid, fire, and direct sunlight environment.
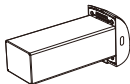
⊗ Liquid	⊗ Sun Exposure	⊗ Severely Squeezed

- It is recommended to charge and discharge the battery once a month, do not store it fully charged, keep 50%-60% of the electricity, and store it in a dry and cool environment.

✓ Dry & Cool	✓ 50%-60% electricity

- Remove the charger after the battery is fully charged.

- Fully charge the battery at least once per month to keep it healthy.

- It is forbidden to disassemble or pierce the battery with sharp objects in any way, otherwise, battery leakage will cause fire or even explosion.

- Do not touch the electrolyte in the damaged battery, otherwise it might harm your skin or eyes.

- Store the battery in a dry and ventilated place.

- Keep the battery out of the reach of children and animals.

4. Requirements of Flight Environment

- Only fly in an open area (radius of 35 feet or more) without obstructions to ensure stable image transmission.

35 feet radius or greater
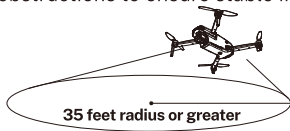
✓ Fly in open environment

- Flight Safety.

Sunny	Windless	Strong GPS Signal	Maintain Line of Sight	Fly Below 390ft
✓	✓	✓	✓	✓

- Only fly in an open area without magnetic fields or radio interference, obstacles, trees, high-tension wires, tall buildings, and other obstacles.

- Do not fly above or near crowds.

Obstacles	Tall Structures	Voltage power lines	Tree	Crowds
✖	✖	✖	✖	✖

Lightning	Snow	Rain	Fog	Windy
✖	✖	✖	✖	✖

- Do not fly in bad weather.

- Only fly in a mild weather condition where the temperature is between 10°C and 40°C (50°F and 104°F).

- United States: Only fly in authorized areas. To learn more aircraft requirements, please visit the Federal Aviation Administration's aircraft page: https://www.faa.gov/

# 5. Flight Operation Guidelines

5.1 Pre-Flight Checklist

(1) Ensure the battery, remote controller, and mobile phone are fully charged.

(2) Make sure the battery compartment cover is fastened firmly and the battery is installed firmly.

(3) Ensure the arms of the aircraft are fully extended.

(4) Ensure the camera cover is moved before turning on the aircraft.

(5) Please make sure nothing obstructs the motors.

(6) Please make sure the camera lens and sensor are clean and without stains.

(7) Ensure that the propeller is free from damage, aging, deformation, no foreign matter entanglement, and firm installation.

(8) Make sure to complete the pre-flight checklist before flying.

(9) Know well the flight mode you select and all safety features and warnings.

5.2 Operation Safety Guidelines

(1) Please unfold the arms of the aircraft and turn on the power before flying.

(2) Please pay attention to the direction of the aircraft when flying. The camera direction is the forward of the aircraft.

(3) Do not answer calls, or text messages, or do anything that may distract you from operating your mobile phone to control the aircraft during the flight.

(4) Make sure that you are not under the influence of alcohol, drugs, or anesthesia, nor are you experiencing dizziness, fatigue, nausea, or any other conditions, which may impair your ability to operate the aircraft safely.

(5) It is important to set the proper RTH altitude before each flight. Make sure your phone is properly connected to the remote controller data and that permissions are turned on and connected successfully.

(6) Make sure to fly outdoors in an environment with strong GPS signals.

(7) As long as the aircraft has a sufficient GPS signal, it cannot switch to Attitude Mode. If the aircraft has not completed the GPS signal search, you can switch to Attitude Mode by pressing and holding the compass button on the remote controller.

(8) After turning off the GPS, the one-button return to home, low power return, GPS follow, surround mode, route planning, and aircraft finding functions are unavailable. Flight may become unstable, requiring users to have certain operational skills and proficiency.

(9) Do the compass and gyroscope calibration before each flight, otherwise, the aircraft may not work properly.

(10) Pay attention to control the aircraft at all times during the flight. Do not just rely on the Ruko Mini APP.

(11) GPS flight assistance features and App are only used to assist the pilot and cannot replace the pilot in controlling the aircraft. Please pay attention to the flight and operate the aircraft carefully to avoid hitting obstacles when returning.

5.3 Gimbal Camera Guidelines

- Please take off the gimbal camera cover before the flight.
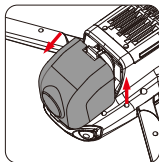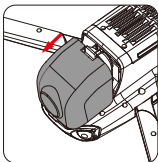
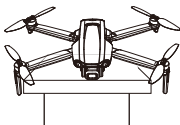- Please take off from solid and level surface, don't take off from grass or sand ground.

⊗ On the grass   ⊗ On the sand

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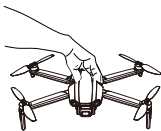

⊗ On the desk   ⊗ On the hollow wooden floor

- During the self-check process, external force is not allowed to interfere with the gimbal or pick up the aircraft, otherwise the gimbal will not work or be damaged. (The gimbal takes about 10 seconds to enter the self-check).


⊗ Picking up the aircraft
(during self-inspection)

⊗ Touching the camera

5.4 Image Transmission

- Please fly the aircraft at the highest altitude for a long distance flight, pay attention to the angle of the remote controller facing, and fly in an open and unobstructed place, otherwise, you can't get the longest image transmission distance.
(The longest image transmission distance is measured in an open and unobstructed environment without interference.)

- Please ensure the remote controller is always pointing at the aircraft when flying to provide the best communication status of the remote controller.
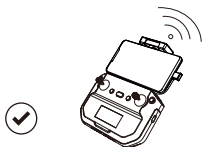
- Adjust the remote controller's angle along with the aircraft height and distance changes. The farther you fly, the smaller the angle between the aircraft and the remote controller. So the farther you fly, the remote controller needs to be slowly flattened to keep the same angle with the aircraft to get the best signal.

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