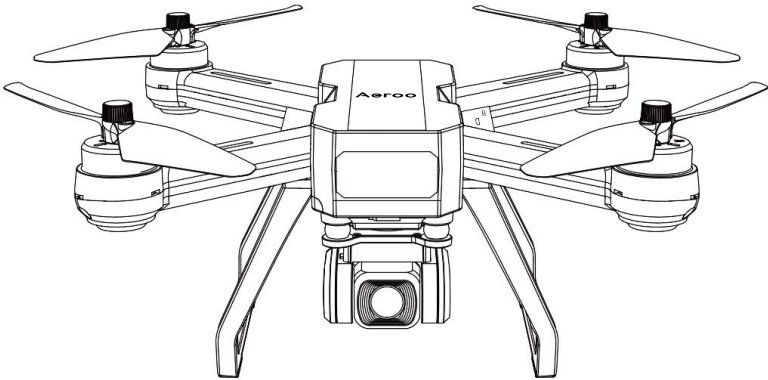


Aeroo

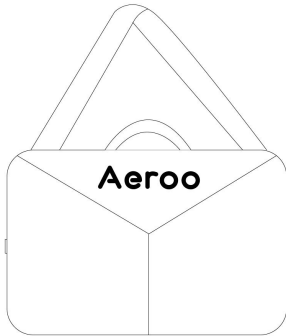
User Manual



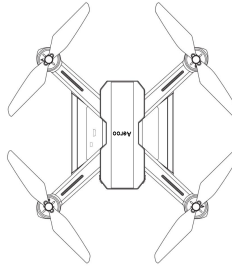
Contents

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| Introduction | 2 |
| Aircraft | 5 |
| Payload Release System | 14 |
| • Fishing | 16 |
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| Setup | 27 |
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In-The Box



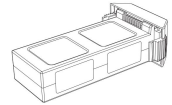
Carry Bag



Aircraft



Remote Controller



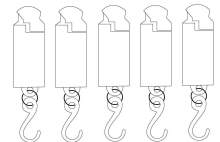
Aircraft Battery



USB Type-C cable



Micro USB Cable



Safety Clips (5)



Extra propellers (4)



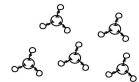
Release Hooks (10)



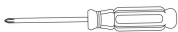
Scales



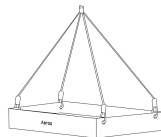
Quick Release Clip



3-Way Swivels (5)



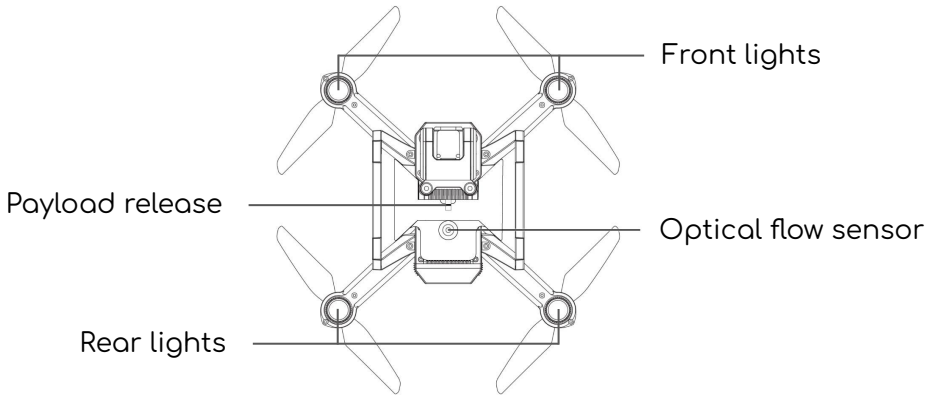
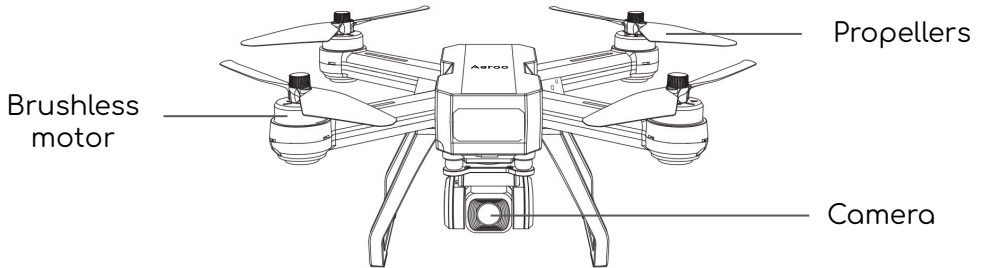
Screwdriver

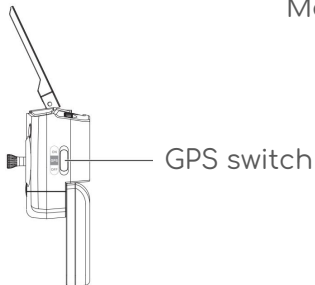
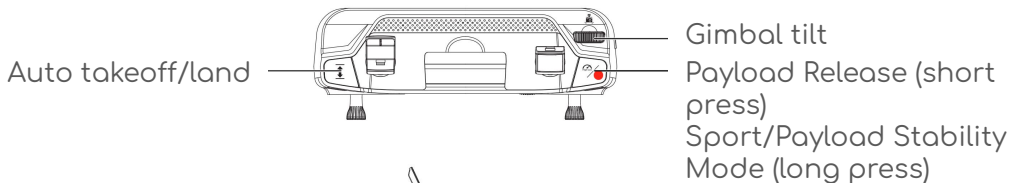
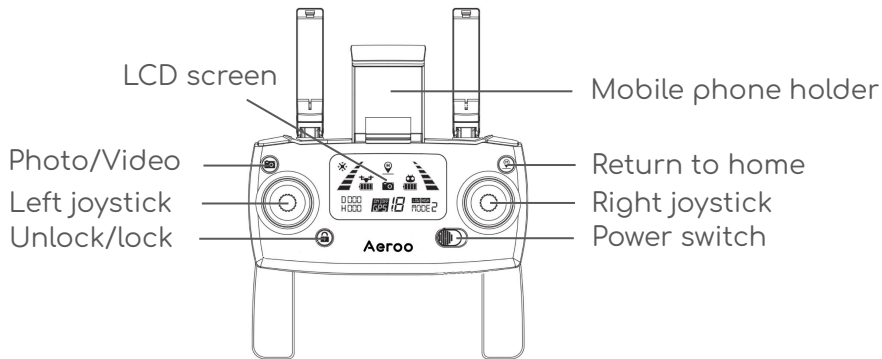


Payload Box

If you purchased the Aeroo Fishing/Delivery Drone Combo, you will have an extra 2 batteries and landing pad

Major Parts





Aircraft



GPS mode

- When in GPS mode, the Aeroo drone connects to multiple satellites, forming a virtual box around the drone to accurately hover in
- If GPS signal is weak, it will enter altitude hold or optical flow positioning mode. (refer to the app status bar)
- Please land the drone ASAP when GPS signal is poor to avoid accidents

Optical flow positioning mode

- Optical flow positioning helps the aircraft hover with increased stability in areas of weak GPS signal.
- If the aircraft does not receive GPS signal, or GPS is turned off and within 3m from the ground, it automatically enters into optical flow positioning mode.

Aircraft status indicator lights

| No. | Indicator | Meaning |
|-----|---|--|
| 1 | Front and rear lights flash yellow rapidly | Aircraft 2.4GHz (rc to drone) disconnected |
| 2 | Front and rear lights flash red, green and yellow alternatively | Aircraft is in initialisation detection status |
| 3 | Front lights glow solid red, rear glows solid yellow | No GPS Signal, aircraft is in Atti mode |
| 4 | Front lights glow solid red, rear glows solid green | Good GPS signal, aircraft preparing for GPS mode |
| 5 | Front and rear lights flash green rapidly | Aircraft is in gyroscope calibration status |
| 6 | Front and rear lights flash yellow alternatively | Aircraft is in horizontal calibration |
| 7 | Front and rear lights flash green alternatively | Aircraft is in vertical calibration |
| 8 | Front light glows solid red, rear light flashes red slowly. | Aircraft is low voltage, 20% battery level left. |
| 9 | Front light glows solid red, rear light flashes red rapidly | Aircraft is very low voltage, 10% battery left |
| 10 | Front and rear lights flash once every 1.5 seconds | Gyroscope error |
| 11 | Front and rear lights flash twice every 1.5 seconds | Barometer error |
| 12 | Front and rear lights flash three times every 1.5 seconds | Compass error |
| 13 | Front and rear lights flash four times every 1.5 seconds | GPS module error |

Return to Home



The Return-to-Home (RTH) function brings the aircraft back to the last recorded home point. Ensure the RTH altitude is set above surrounding obstacles.

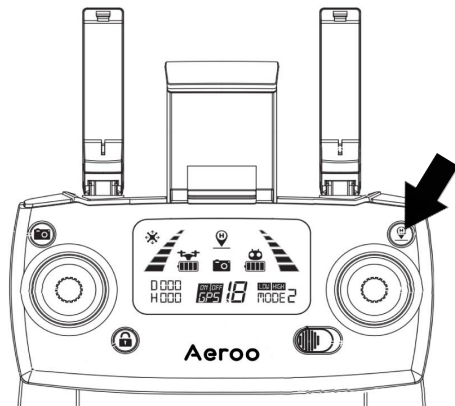
There are 3 types of RTH:



If a strong GPS signal was acquired before takeoff (over 7 satellites), the home point is the position where the aircraft was launched. The rear lights change from yellow to green at the point it is recorded



Smart RTH

When the drone has GPS enabled, use the RTH button  on the controller or tap the RTH button  in the “M RC Pro” app. During the Smart RTH, you can use the controller to guide the aircraft around obstacles. Press the RTH button again to cancel RTH and regain control.



Low Battery RTH

The low battery failsafe is triggered when the intelligent flight battery is depleted to a point that may affect the safe return of the aircraft. Users are advised to return home or land where safe immediately when prompted.

- If the battery icon on LCD screen is  and the remote is making “di-di” sound, the aircraft will return home automatically unless it is already within 30m altitude or 100m distance.
- When the battery depletes to  and a steady “beep...beep...beep” sound is heard, the aircraft will automatically return home unless the aircraft is beyond 15m altitude or 15m distance, in which case it will automatically land at that point.

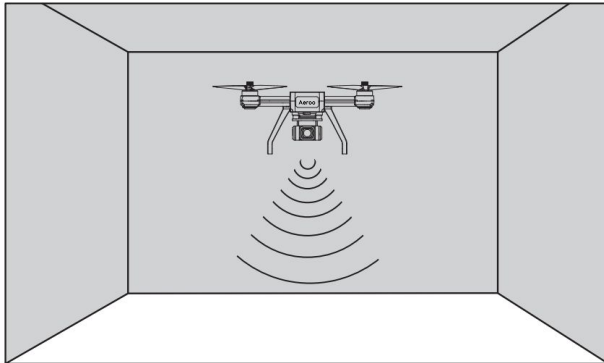
Out of range RTH

If the controller signal is disconnected for longer than 6 seconds, Aeroo’s onboard flight control system will take over transmitter control and return to the home point. If signal is restored during the RTH, the returning flight will continue unless cancelled via the RTH button.

Vision System

The vision system consists of optical flow lens modules. It is an image positioning system, obtaining the aircraft's position through rapidly taking, processing and aligning via AI to ensure accurate positioning and safe, low altitude maneuvers. (insert under drone picture)

The vision positioning system is typically used when indoors or when GPS is weak or unavailable. It works when the aircraft is less than 3m to the ground.



Vision System contd.

The measuring precision of the optical flow system is impacted by the light strength and ground surface texture. Once the optical flow is unavailable, the aircraft will enter altitude-holding mode automatically.

Please be cautious in the following situations:

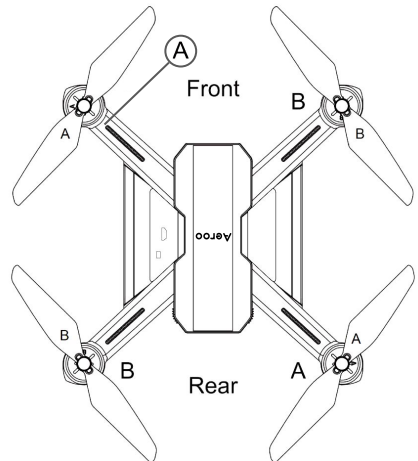
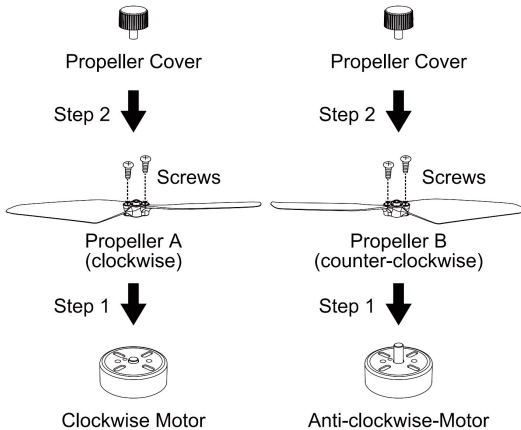
- Flying with a payload (particularly with the drop box)
- Flying fast at an altitude below 2m.
- Flying in low light
- Flying over monochrome surfaces (like pure blue of the ocean).
- Fly over strong light reflective surfaces or surfaces prone to reflection.
- Fly over water or transparent object surfaces.
- Fly over moving object surfaces (such as crowds, swaying juggles and glass).
- Fly over an area where light changes dramatically and rapidly.
- Fly over surfaces extremely dark ($\text{lux} < 10$) or extremely bright ($\text{lux} > 10,000$).
- Fly over surfaces without distinguishable texture (extremely smooth)
- Fly over surfaces with highly repeating textures (small grid brick in the same color).
- Fly over terrain tilting over 30 degrees.

Attach and Detach the Propellers

Match propellers to their respective “A” and “B” marks and fasten with 2 screws.

- Propellers must be matched to the correct motor A or B, otherwise the drone will not fly correctly.
- Propeller edges are sharp - handle with care
- Do not touch propellers while spinning
- Check all propellers are installed correctly and firmly before every flight
- Never fly with aged, chipped, broken or aftermarket propellers

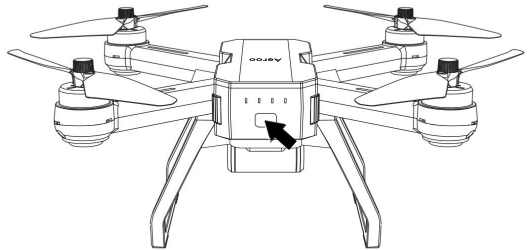
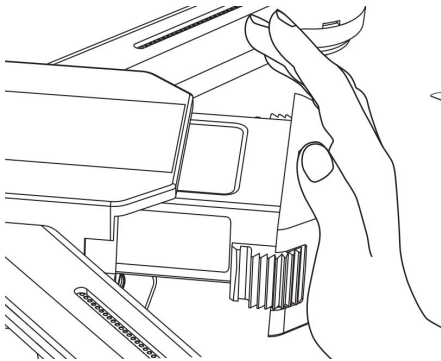
 Use the aligning pin under the props to keep steady while tightening



Aircraft Power Switch

To turn on: Insert battery into the drone. Hold the power button for 3 seconds. Aeroo indicator lights will turn on and startup sound will play. Set Aeroo on a flat surface ready for takeoff

To turn off: Hold power button again for 3 seconds. The indicator lights will turn off



Aircraft Battery



If you are storing the drone for a long time, charge the battery to ~ 50%

For optimal battery performance:

- Fully drain the battery in flight.
- Do not carry any payload at the end of the flight to balance cells.
- Wait 30 mins for the battery to cool before recharging after flight.
- Do not leave battery on very low or very high charge for longer than 1 week to prevent damage to cells.

Charging

- Always charge the battery fully before flight.
- Remove the battery from the aircraft to charge
- Never leave the battery unattended during charging
- Charge time ~ 5 hours.

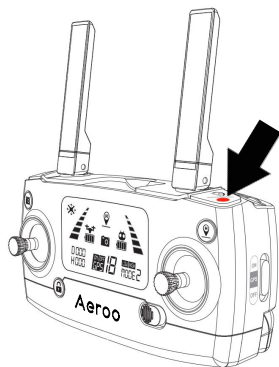


| Indicator | Meaning |
|--|--------------------------|
| Battery indicator lights flashing rapidly | Charging Error |
| Battery indicator lights flashing sequentially | Battery is charging |
| Battery indicator lights on solid | Battery is fully charged |

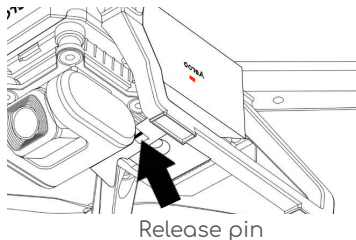
Payload Release System

The Aeroo Payload release system has a lightweight, carbon fibre construction designed to consistently release payloads of up to 250g

Do not exceed the **250g** max total payload at any time

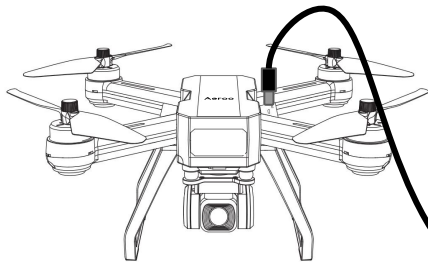


The payload release system is triggered by pressing the red ● on the front of the remote while the drone is flying.



The mechanism **WILL NOT** release the payload until the drone is unlocked.

Charging Payload Release

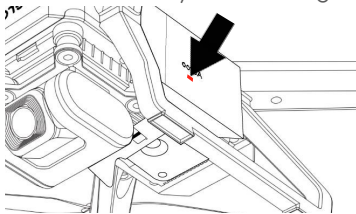


- Use the supplied Micro-USB charging cable and plug into a USB socket to charge
- Charge time ~ 90 minutes
- Battery life ~ 100 drops



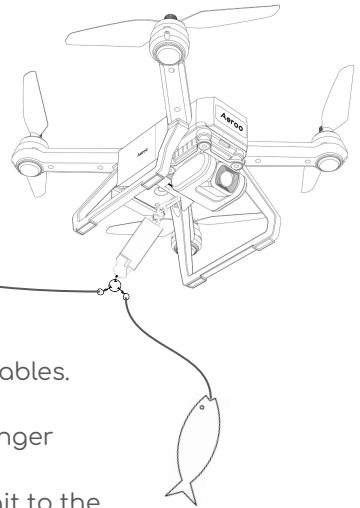
Payload Release Indicators

Battery indicator light



| Indicator | Meaning |
|-------------|----------------------|
| Solid red | ON or Charging |
| Solid green | Fully charged |
| Flashes Red | Critical Low Battery |

Fishing



Drone fishing is high risk and involves many variables.

- Always watch the drone and have your finger hovering over the release button.
- Have a minimum 5m leader from your bait to the drone to minimise swinging
- Use an included safety clip and 3 way swivel to protect the drone from tangled line or snags while flying out.
- Allow slack between the drone and rod on takeoff to avoid tangles
- Fly up at least 15m before flying out, to keep mainline below the drone

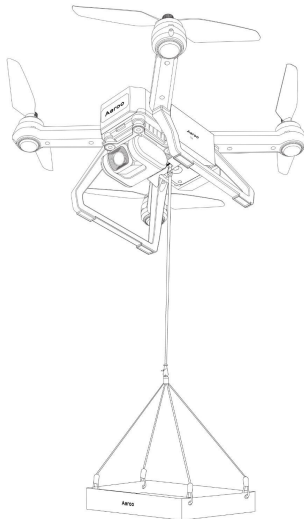
Fishing line drag increases the further out you fly, meaning the further out you go, the heavier your payload gets. We strongly recommend starting out using rigs weighing 50-100g and steadily increase the load with experience on your rod setup.

For rigs, tips and tricks, see our drone fishing guide here:



Delivery

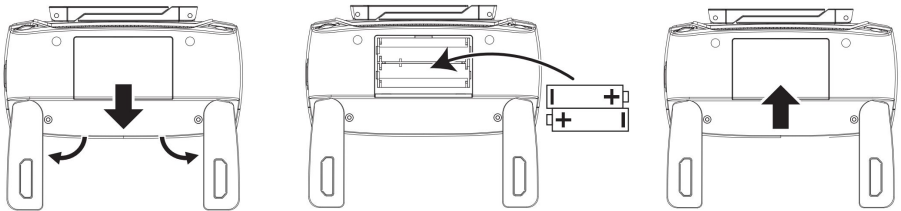
- Use only the included hooks to connect your payload to the release mechanism
- With the Quick Release System, you can attach bags to carry items or attach the payload box
- If you are using the payload box, ensure the total weight does not exceed 250g, ie box weighs 35g: $250\text{g} - 35\text{g} = 215\text{g}$ max



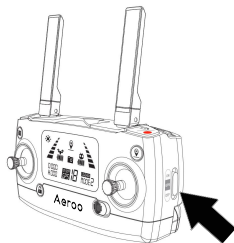
Remote Controller

Installing Remote Controller Batteries

1. Unfold the hand sticks and slide the battery door open
2. Install 2*AA batteries into the battery compartment
3. Slide the battery compartment shut

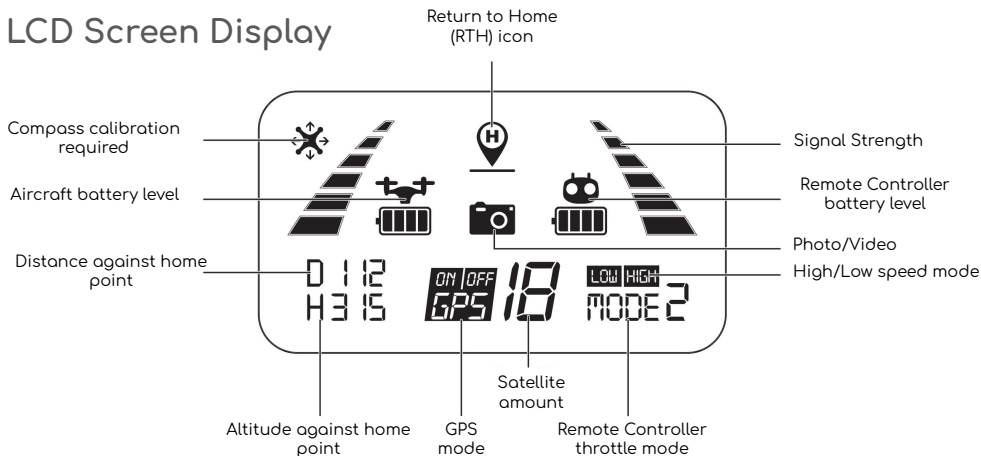


GPS Switch



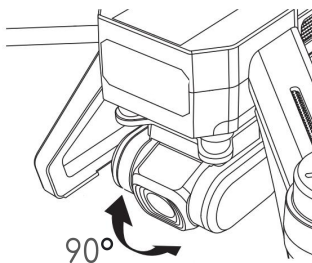
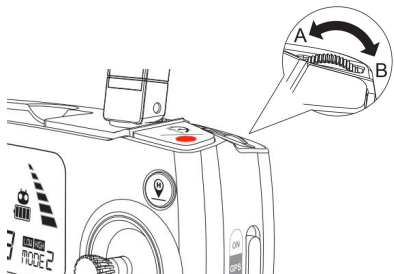
Choose the flight mode by switching the GPS button to the ON/OFF position. We strongly recommend keeping the drone in GPS mode. GPS status can also be checked on the LCD Display

LCD Screen Display





Gimbal Tilt

The camera angle can be adjusted between 0° and 90° by scrolling the gimbal trim wheel. When scrolling left, the camera will tilt upward. When scrolling right, the camera will tilt downward.



Photo/Video

Advanced camera controls and settings are found in the app. Alternatively, on the controller:

- Short-press the camera icon button  to take a photo.
- Long-press the camera icon button  to start and stop video



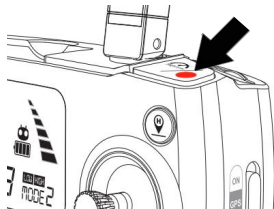
Photos and videos will automatically save through the app, 4k HD photos and videos are only saved to the micro SD card

Payload Stability Mode

Long press the red button to switch between Sport mode (fast) and Payload Stability Mode (slow).

Payload Stability mode controls Aeroo's acceleration and deceleration to minimise the swinging of your payload while flying, and should be used when carrying a payload in a confined space. Entering this mode will also prevent camera shake and help produce cinematic video.


Sport Mode should be used in all other scenarios for increased speed and wind resistance.

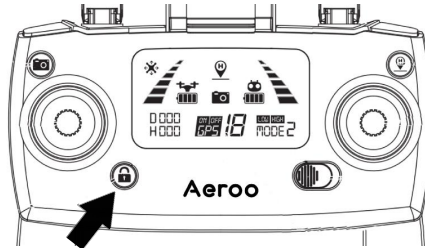


Payload Release Button

In the air, short press the red button to open and close the release pin

Motor Unlock


- When ready to fly, press the red  button on the remote to unlock motors and start spinning





Motor Lock

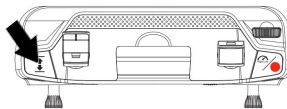
- After the aircraft has landed, hold the left throttle down for 3 seconds.
- The aircraft will be locked automatically after being idle for 15 seconds

Emergency Stop



- Beyond 30m distance and 15m altitude, you can hold the red  button for 3 seconds, the motors will stop mid air and the drone will fall out the sky.
- This is for emergencies only, do not use in normal flight

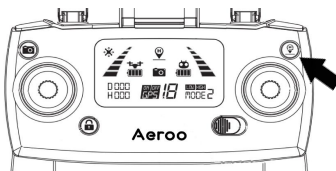
Auto takeoff/landing

- After unlocking Aeroo, press the  button and the aircraft will automatically takeoff and hover at 1.5m altitude
- In flight, press the  button and the aircraft will automatically land on the ground directly below it.




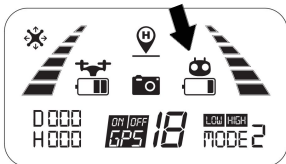
Return to home button

- Press the  button, the controller will beep and Aeroo will return to the recorded home point. Press the  button again to cancel.





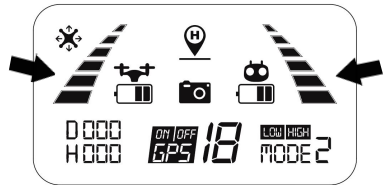
Low controller battery warning

- If the  icon appears on the LCD display, the controller will start beeping. Please change the controller batteries



Signal strength indicator

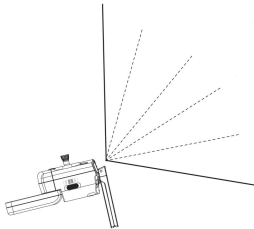
- The signal strength bar  shows the signal strength between the drone and remote.
- If the signal strength drops below 2 bars , the connection is very poor. The drone will return home automatically upon loss of signal






Optimal transmission zone

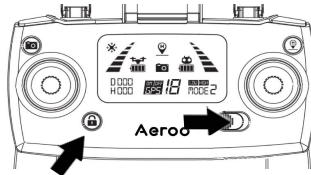
To maximise range:

- Ensure the remote is always pointed directly at the drone
- Fly in a clear environment with no interference or obstacles between the controller and drone
- Orient antennas perpendicular to the aircraft (see below)





How to Change Throttle Mode

1. Hold the red  button and turn on the remote controller, it will beep 2 times on startup.
2. Then, while the signal bars  are flashing, hold the RTH button  for 3 seconds to change the throttle control mode between mode 1 and mode 2 (default).

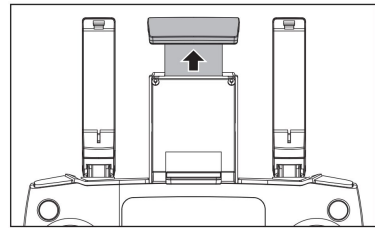
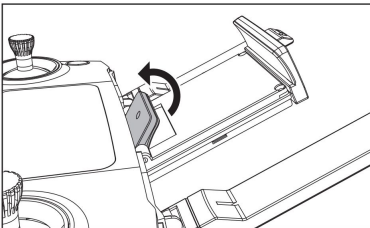
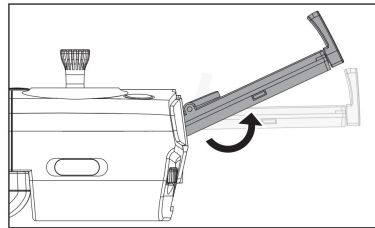
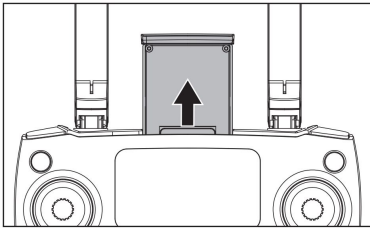


How to link the controller to the drone

1. Hold the red  button and turn on the remote controller, it will beep 2 times on startup.
2. Then, while the signal bars are flashing, power on the aircraft. The aircraft will beep and flash it's lights while linking.
3. Once the drone is linked, the controller will send out a long beep and and the signal bars  will turn solid.

Mobile Phone Holder

1. Unfold the antennas
2. Pull the holder up until the base pops out completely out
3. Gently tilt the holder upward until it clicks into place
4. Adjust the top of the holder to fit your device



Install “M RC PRO” App

- For Apple IOS devices, search “M RC PRO” in the Apple Store or scan the App store QR code below
- For Android devices, search “M RC PRO” in the Google Play store or scan the QR code below.
- For alternative download methods, contact us directly




Photos and videos will automatically save through the app, 4k HD photos and videos are only saved to the SD card



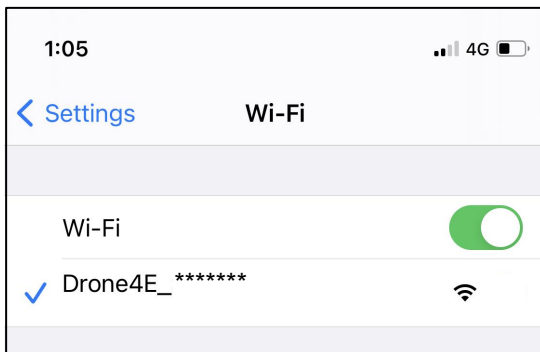
The M RC Pro app enables FPV image transmission and smart flying modes. Please note the M RC Pro app is external to Aeroo, the drone can be flown and operated without it.

Connect to Aeroo via Wifi



1. Enter Settings → Wifi on your device
2. Ensure Wifi is turned on and select “Drone4_*****” from the list of available networks
3. Once the  Symbol is shown, you are connected to the drone. Exit settings and enter the M RC Pro app



This process should only need to be done once as most devices will remember the Drone's wifi network



Compass Calibration

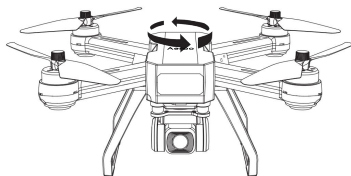
A compass calibration is required before every flight. Once you are connected to the drone, the  icon will show up on the controller LCD, and also a note  in the top left of the app, letting you know a compass calibration is required.



Keep Aeroo away from any metal or areas of high magnetic interference

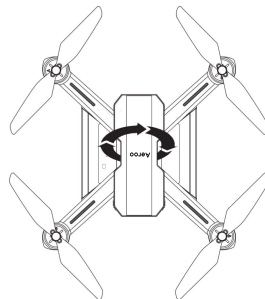
Step 1: Horizontal calibration

- Hold the drone horizontally and rotate it 360° 3 times on the spot. The lights will turn from yellow to green



Step 2: Vertical calibration

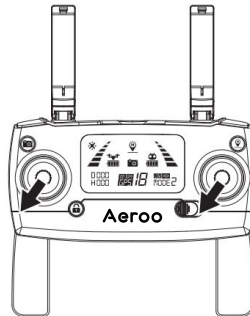
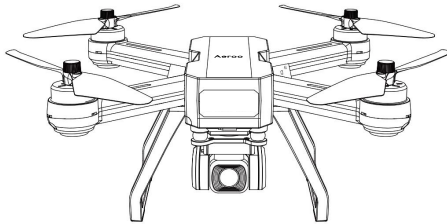
- Hold the drone vertically and rotate it 360° 3 times on the spot. The lights will turn from flashing green to solid green once completed



Gyroscope Calibration

This calibration is done in our factory and is not needed unless the aircraft initialisation procedure fails.

1. Power on and link the aircraft to the remote controller
2. Set the aircraft on flat ground
3. Hold both control sticks to the bottom left (see photo)
4. When the aircraft's front lights turn from flashing to solid on, the gyro calibration has succeeded.



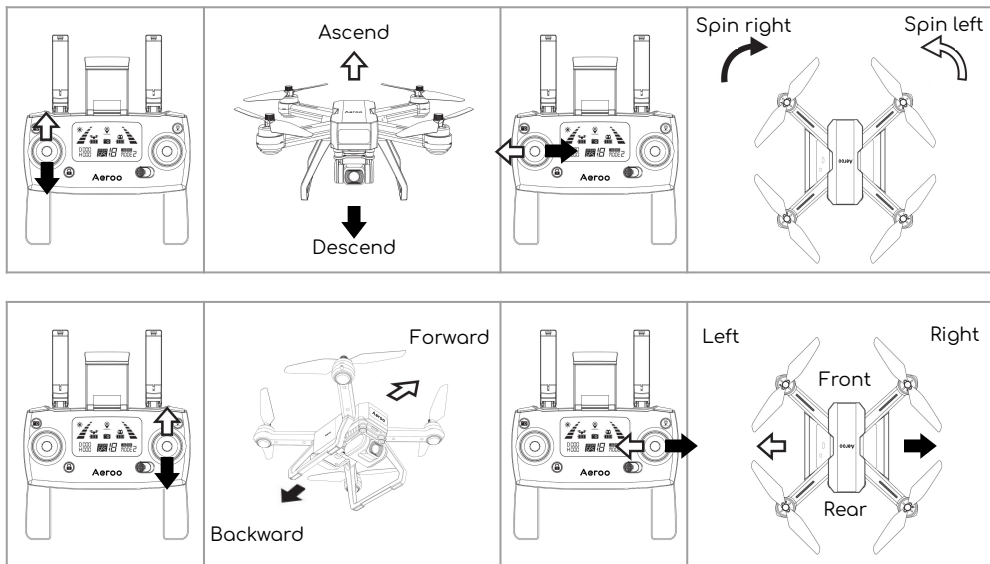
Controls



We strongly recommend flying Aeroo at a park or other safe, wide open space for the first time to get accustomed to the controls



Keep the camera facing away from you during takeoff to help with orientation



Appendix

| Aircraft | |
|---|---|
| Max safe payload | 250g |
| Flight time | Single flight up to 18 minutes (payload dependent) |
| Gross Weight (inc batteries and propellers) | 610g |
| Dimensions | 380mm*380mm*125mm |
| Diagonal | 280mm |
| Max ascent speed | 3m/s |
| Max Descent speed | 2m/s |
| Max Speed` | 40kph |
| Flight height limit | 120m |
| Max tilt angle | 35° |
| Max angular velocity | 200°/s |
| Operating temperature range | 0°C → 30°C |
| GNSS | GPS |
| Hovering Accuracy Range | Indoor: Vertical ± 0.3m, Horizontal ± 0.3m Outdoor: Vertical ± 0.5m, Horizontal ± 1.5m |
| Operating Frequency | Transmitter: 2.4-2.4835GHz FPV: 5.15-5.25GHz |
| Transmission Power (EIRP) | 2.4GHZ ≤ 20dBm 5GHZ ≤ 16dBm |

| Release Mechanism | |
|-------------------|-----------------|
| Battery Type | Li-po 200mAh |
| Charge time | 90 mins |
| Battery life | About 200 drops |

| Gimbal | |
|--------------------------|---------------------------------------|
| Controllable Range | Tilt: 0° to -90° |
| Mechanical Stabilisation | Rubber Dampeners |
| Electronic Stabilisation | 3 Axis Electronic Image Stabilisation |

| Remote Controller | |
|---------------------------|---|
| Operating Frequency | 2.4-2.4835GHz |
| Max Transmission Distance | 1000m (app image transmission ~ 600m depending on device) |
| Operating Temperature | 0°C → 40°C |
| Battery | AA *2 |
| Transmission Power (EIRP) | 2.4GHz ≤ 20dBm |
| Operating Current/Voltage | 200mA@3V |

| Camera | |
|--------------------------|--|
| Image Sensor | 1/3 inch CMOS |
| Lens | Focal length 2.8mm (14mm in 35mm equivalent) Aperture f/2.0 FOV: approx 130° |
| ISO Range | 100-3200 (Auto) |
| Electronic Shutter Speed | 1/30s - 1/10000s |
| Still Image size | 3840x2160 |
| Video Resolution | 3840x2160 (4K) 30fps, 1920x1080 (1080p) 60fps |
| Colour Mode | RGB |
| Max Video Bitrate | 50Mbps |
| Supported File System | FAT32 |
| Photo Format | JPEG |
| Video Format | Mp4, Compressed Format H.264 |
| SD Card | Micro SD Card, Supports up to 128GB Capacity, Class 10 or higher |
| Operating temperature | 0°C → 40°C |

| Aircraft Battery | |
|----------------------------|------------|
| Capacity | 3400mAh |
| Voltage | 7.6V |
| Battery Type | Li-po |
| Energy | 25.84Wh |
| Net Weight | 152g |
| Charging Temperature Range | 5°C → 30°C |
| Charging Current | 2.1A Max |
| Charging Time | 5 hours |

| APP | |
|------------------------------|---|
| App Name | M RC PRO |
| Image transmission System | 5GHz |
| Real-time Image Transmission | 720@30fps |
| Latency | 200-300ms |
| Required operating system | iOS 9.0 or later Android 4.4 or later |
| Phone requirements | 802.11 AC Wi-Fi (if using an iPhone, iPhone 5 or later) |

Important Information

- ALL FLIGHT IS DONE AT YOUR OWN RISK
- Aeroo is NOT WATERPROOF
- The Aeroo drone is not a toy. It should be assembled and operated properly and safely.
- Improper use may cause serious injury or property damage.
- The minimum age to fly this drone is 14+

Flight Safety Guidelines

Before each flight, ensure you are flying in accordance local drone & goods transport regulations

- Safety should be the priority for every flight. You are responsible for ensuring the safe operation of the Aeroo drone and using it within its capabilities.
 - Stay away from manned aircraft, obstacles, crowds, power lines and trees
 - Never fly in winds over 25kph
 - Never fly in rain, fog, high temperatures (30°C+) or snow
- Aeroo is composed of highly sophisticated electronic components and mechanical parts. To avoid any damage to these components, always keep the drone in a dry environment, away from sea spray.

Disclaimer and Warning

This product is not a toy and is not suitable for people under the age of 14. Adults should keep Aeroo out of the reach of children and exercise caution when operating Aeroo in the presence of children

Inappropriate use of Aeroo can result in personal injury or property damages. Please read thoroughly the user manual and other associated materials before first use. These documents are included with your drone and are available through the downloads section in our website.

Aeroo is a flying camera and delivery drone and each unit has been thoroughly tested to work in accordance with the safety parameters set out in the user manual. Failure to read and follow the instructions and warnings set out in the user manual may result in product damage or loss, and serious injury to yourself and those around you.

By using Aeroo, you hereby signify that you have read this disclaimer and that you understand and agree to abide by the terms and conditions herein. THIS PRODUCT AND ALL ASSOCIATED MATERIALS AND CONTENT ARE PROVIDED "AS IS" AND ON AN "AS AVAILABLE" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED. AEROO DISCLAIMS WARRANTIES OF ANY KIND UNLESS EXPRESSLY PROVIDED IN AEROO'S AFTER SALES POLICIES, BE THEY EXPRESS OR IMPLIED, RELATING TO THE PRODUCT, PRODUCT ACCESSORIES, AND ALL MATERIALS INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE. ANY ANY IMPLIED WARRANTY ARISING OUT OF COURSE OF DEALING, USAGE OR TRADE AEROO DOES NOT WARRANT, UNLESS EXPRESSLY PROVIDED IN AN AEROO LIMITED WARRANTY, THAT ALL MATERIALS WILL BE UNINTERRUPTED, SECURE OR FREE OF ERRORS, VIRUSES OR OTHER HARMFUL COMPONENTS. ANY OF THOSE ISSUES WILL NOT BE WARRANTED OR WILL BE CORRECTED.

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DATA STORAGE AND USAGE IN THE M RC PRO APP IS STRICTLY EXTERNAL TO AEROO AND INQUIRANT CONTACT SHOULD BE MADE DIRECTLY WITH THE APP DEVELOPERS. THE AEROO SYSTEM OPERATES INDEPENDENTLY FROM THE APP AND AS SUCH USERS CAN USE THE APP AT THEIR OWN DISCRETION. AEROO ACCEPTS NO LEGAL RESPONSIBILITY FOR DAMAGES IN RELATION TO THE M RC PRO APP.

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Aeroo

Lifetime Technical Support

If you ever have any questions about your Aeroo Drone, please do not hesitate to contact us at support@aeroo.com.au.

Alternatively, you can read our FAQ on our website via the QR Code below

