Manuals+ — User Manuals Simplified.

PROTOCOL AERO 2.0 Drone with Live Streaming Camera Instruction Manual

Contents

**PROTOCOL AERO 2.0 Drone with Live Streaming Camera**

SAFETY WARNINGS

HAVE FUN, BUT SAFETY FIRST!

- Read and follow instructions on how to synchronize electronics before each flight.
- To prevent damage to people or property, always avoid contact with other objects while in flight.
- Inspect aircraft prior to each flight and do not fly if damaged.
- Never expose product or any of its electronic parts to moisture, water, or heat sources.
- To prevent overheating, allow battery a cool-down period before recharging.
- To prolong engine life, allow a cool-down period between flights.
- Use only the charger and/or charging cable that is supplied with this item.
- Do not strike, cut, or pierce the internal battery or subject it to hard impacts.
- Do not mix old and new batteries or mix different types of batteries.
- Never attempt to modify function of vehicle or controller or attempt repairs using parts other than those supplied by Protocol. Spare parts are available at

THIS DEVICE USES COMPONENTS THAT OPERATE AT HIGH SPEEDS. AS WITH ANY SUCH DEVICE, USE CAUTION TO OPERATE SAFELY. FAILURE TO FOLLOW ANY OF THESE GUIDELINES MAY RESULT IN BODILY INJURY OR DAMAGE TO PERSONAL OR PUBLIC PROPERTY.

PARTS
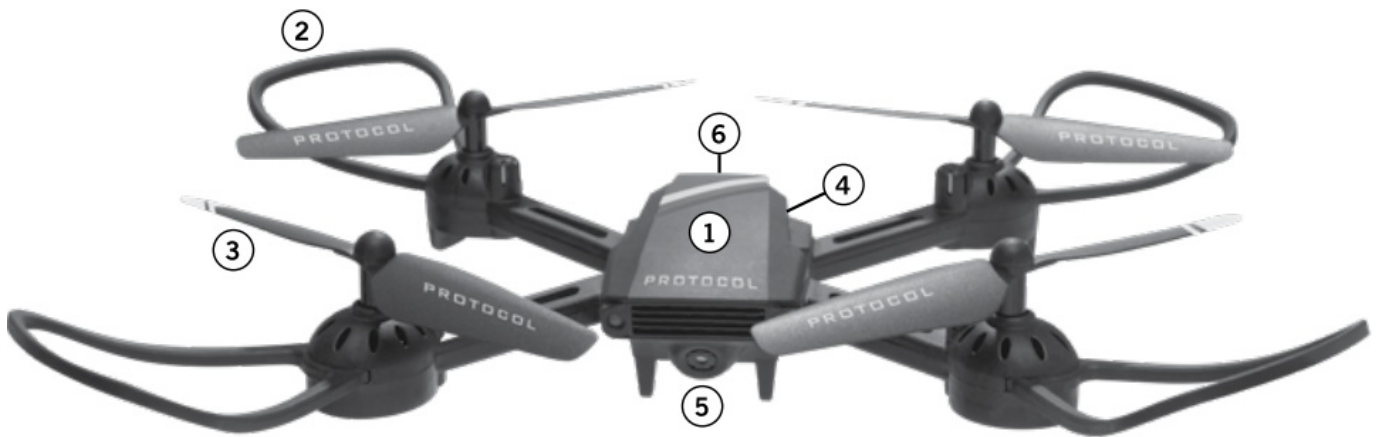
DRONE

1. Canopy
2. Blade Guard

3. Blade

4. Battery Compartment

5. Camera

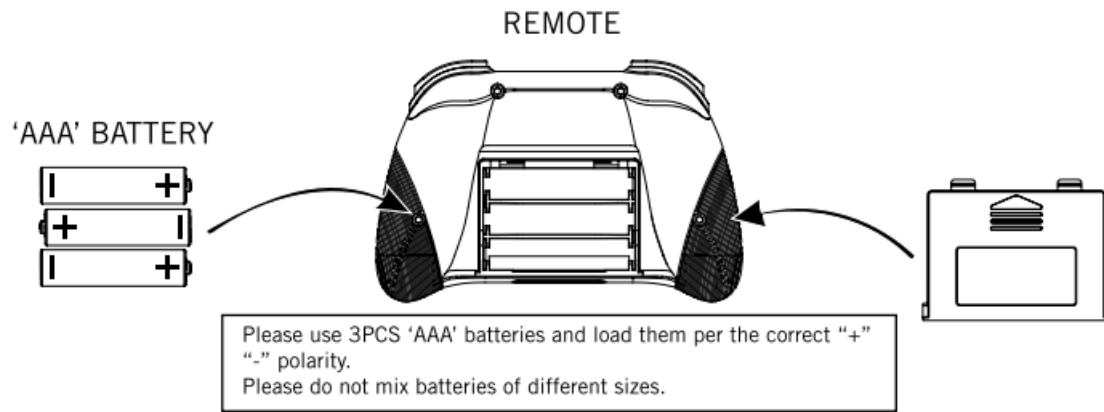6. Power Switch

REMOTE

1. Power Switch

2. Forward/Backward

3. Bank Left/Right

4. Throttle

5. Turn Left/Right

6. Take Off/Landing

7. Compass Mode (Short press) /Return (long press)

8. Performance Mode Selector

9. 360° Flips

10. Power Indicator

11. Spin (short press)/Circles (long press)

12. Emergency Landing (short press)

    /Calibration (long press)

13. Right Trimmer

14. Backward Trimmer

15. Left Trimmer

16. Forward Trimmer

17. Phone Mount Slot

Short press = press & release
Long press= press for 1 second & release

REMOTE BATTERY AND PHONE INSTALLATION

INSTALLING THE BATTERIES

REMOTE

'AAA' BATTERY

Please use 3PCS 'AAA' batteries and load them per the correct "+" "-" polarity.
Please do not mix batteries of different sizes.

Remove battery cover from controller. Insert 3 x 'AAA' batteries according to indicated polarities. Replace battery cover.

1. Install batteries carefully.
2. Do not mix old and new batteries.
3. Do not mix different types of batteries.

INSTALLING THE PHONE

1. Pull the center portion of the remote up to expose the phone mount.
2. Pull up the top part of the clamp and insert the phone.

CHARGING THE DRONE BATTERY

1. Make sure the drone is turned off.
2. Disconnect the battery from the drone.
3. Connect the USB charging cable to the battery.
4. Plug the charger into a USB port. The USB light will stay off while charging and will turn on once fully charged.
5. Plug the battery back into the drone.

Charging time: 30 minutes — Flying time: approximately 6 minutes
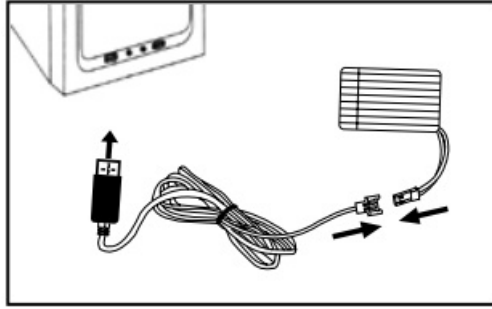
DO NOT CHARGE OVERNIGHT OR BEYOND
THE CHARGING TIME STATED. DO NOT LEAVE BATTERY UNATTENDED.

Battery: Li-Po, 3.7V, 300mAh
If you purchased extra batteries, allow the engines to cool between flights in order to prolong engine life.

CAUTION WHEN CHARGING

1. When charging, place product on a dry, well-ventilated surface and keep away from heat sources.
2. Always use adult supervision while charging.
3. In order to increase battery longevity, avoid repeat charging and excessive discharging.
4. As battery temperature is high immediately after flight, charge after cooling down for higher efficiency.
5. Do not strike or subject battery to hard impacts or sharp surfaces.
6. Do not use any other charger than that which is supplied with this item.
7. Do not use or leave battery near a heat source such as fire or space heater; exposure to heat may result in reduced performance or in some cases dangerous conditions.
8. If battery is left in charging state for an extended period of time after being fully charged, the battery may automatically discharge.
9. Never leave the battery unattended during charging.
10. Do not disassemble battery.
11. Do not submerge battery in water.

START-UP PROCEDURE

Before flying, the drone and transmitter must be turned on in sequence and synchronized.

1. Turn on the drone. The lights on both sides of the drone will flash to indicate it's on. The blue lights are at the front and the yellow lights are at the back. Place it on an even surface in front of you.
2. Turn on the remote control by pressing and holding the power button until you hear a beep.
3. Push the throttle up and down and then release. The lights will turn steady to indicate it has synced.
4. Your drone is now synchronized, and in stand-by mode awaiting Engine Idle command.
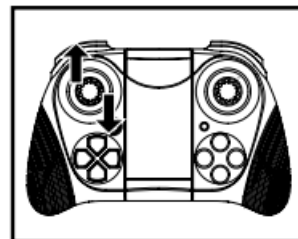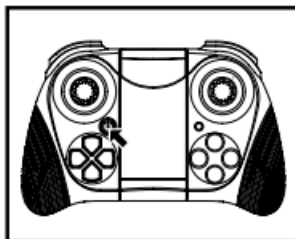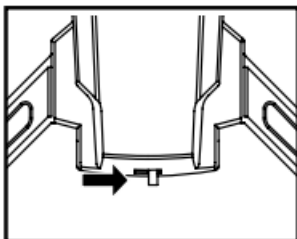
NOTE:

1. If after 30 seconds, it has not recognized the drone, turn off the controller and repeat Start-Up procedure.

STARTING THE ENGINE; ENGINE IDLE
After synchronizing the drone, move the throttle stick up and release to go into idle mode. The blades will rotate but the drone will not lift.
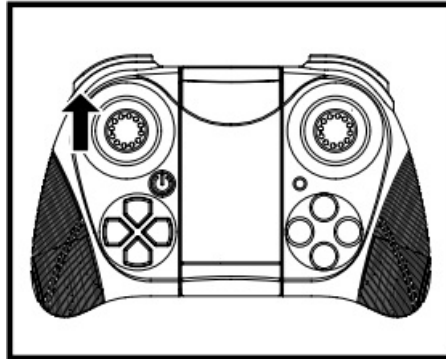

# OPERATION: FLYING THE DRONE

TAKE-OFF:

1. Press the take off button. The remote will beep and the drone will hover a few feet off the ground. Then gently advance the throttle to a desired height and release. The drone will hover at that height.*
2. From idle mode, gently advance the throttle up to a desired height and release. The drone will hover at that height.*

LANDING:

1. Press the landing button to lower the drone to the ground. OR
2. Push down on the throttle until the drone is on the ground.

OR

UP

DOWN
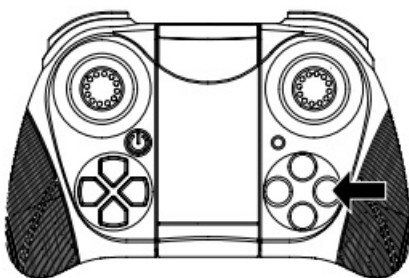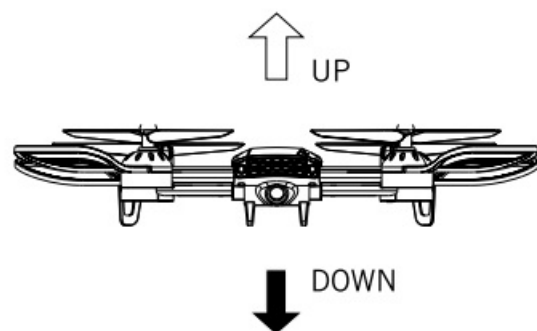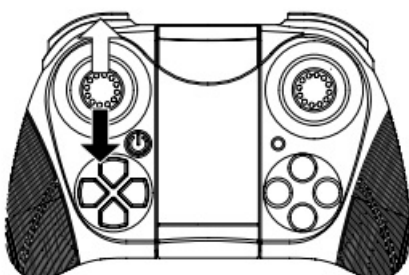
NOTE:
EMERGENCY LANDING: Press the Emergency Landing button and release and the drone will automatically stop.

The drone may drift a bit, especially in the first 30 seconds until the altitude sensor gets a good fix on the position. Some drift is normal.

OPERATION FLYING THE DRONE

COMPASS MODE
Users have the option to exit the default orientation (blue lights at the front, yellow lights at the back). In Compass Mode, users can operate the drone without orientation. Regardless of where the drone is pointing, it will turn left or right according to the remote's command. Compass Mode is good for beginners and is useful for drones that fly too far away for the user to be able to tell the orientation.

Follow the below instructions to change to Compass Mode:

1. Sync and turn on the engines.
2. Make sure your drone is aligned with the remote as indicated in the picture.
3. Follow the take-off procedure.
4. Press down on the Compass Mode button once. The drone's LEDs will start to flash. This indicates that the drone is now in Compass Mode.
5. Press the Compass Mode button again to leave Compass Mode.

COMPASS MODE
(short press)
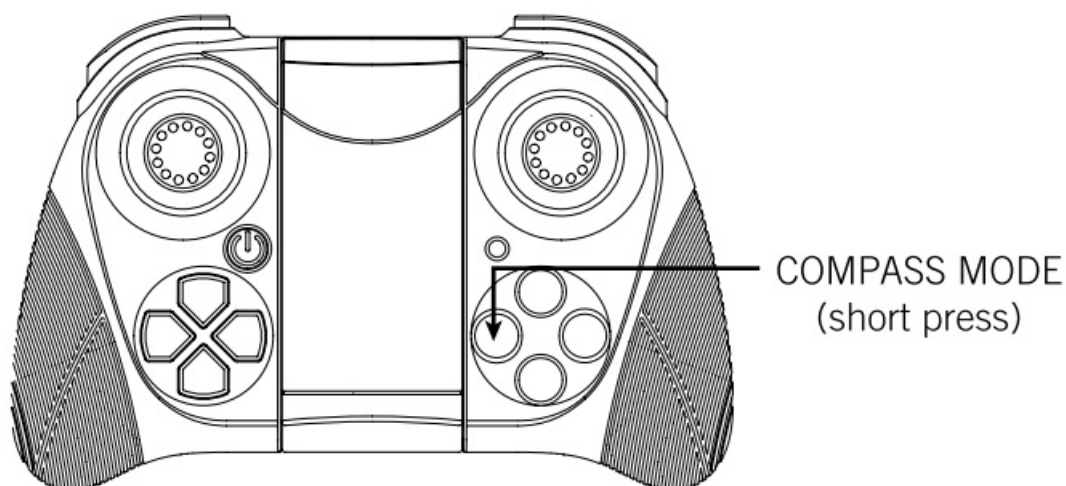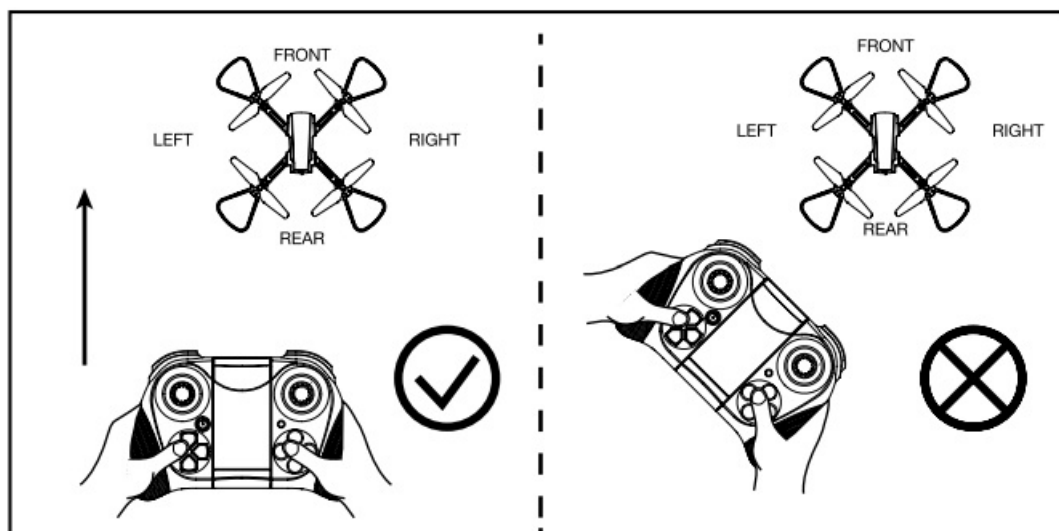
**FIRST TIME FLYERS!!! TAKE YOUR TIME! GO SLOW!**

Practice hovering until you are comfortable with flight before attempting any other maneuvers. Make small movements letting the stick return to the center. If you start to lose control, don't panic. Just press land.
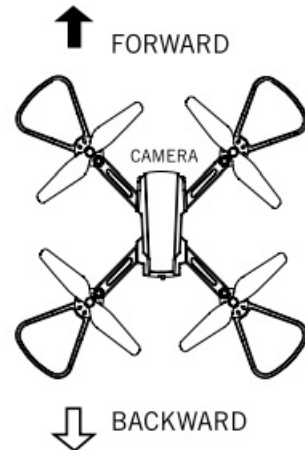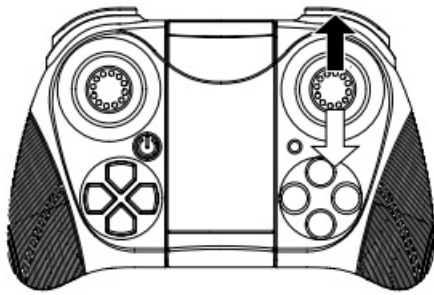
Pull the throttle left or right, the drone turns to the left or right.
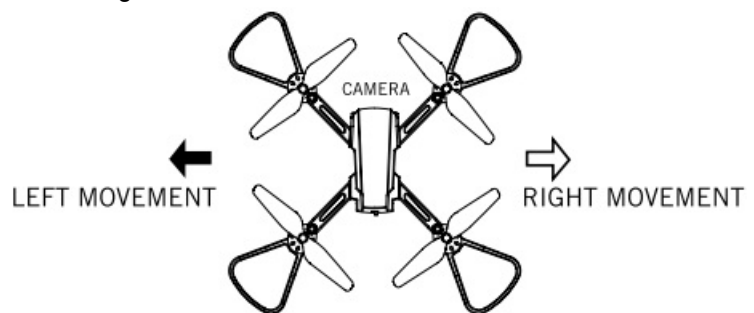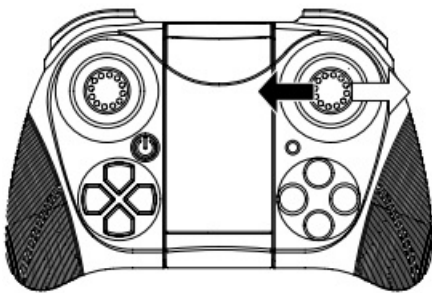
Push the direction lever up or down, the drone flies forward or backward.
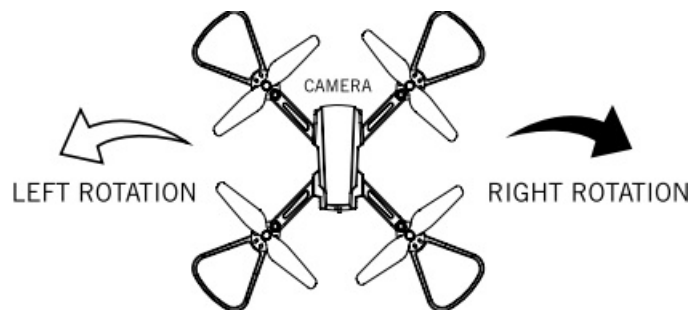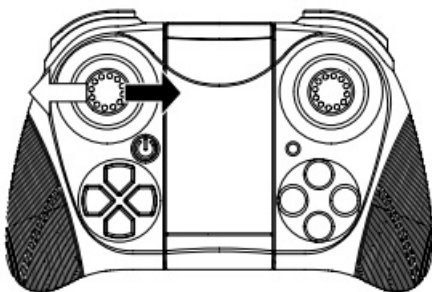
Pull the direction lever to the left or right, the drone banks to the left or right.
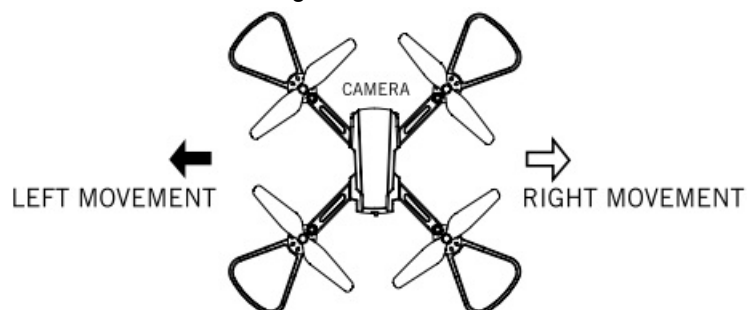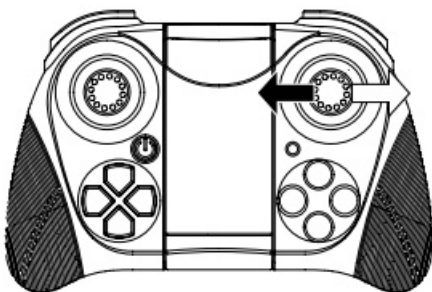
PERFORMANCE MODES

The Aero 2.0 features multiple performance or speed modes. Choose the speed based on flight experience and level of comfort. At higher speeds, the drone will pitch more than at lower speeds. Aero 2.0 is quite fast at its highest speed and requires more piloting skills to fly competently. For safety take time to develop advanced skills

by practicing at lower speeds first. Press the Performance Mode button to change the speed mode. The remote control indicator will beep once at slowest speed mode and multiple times as speed mode is increased.
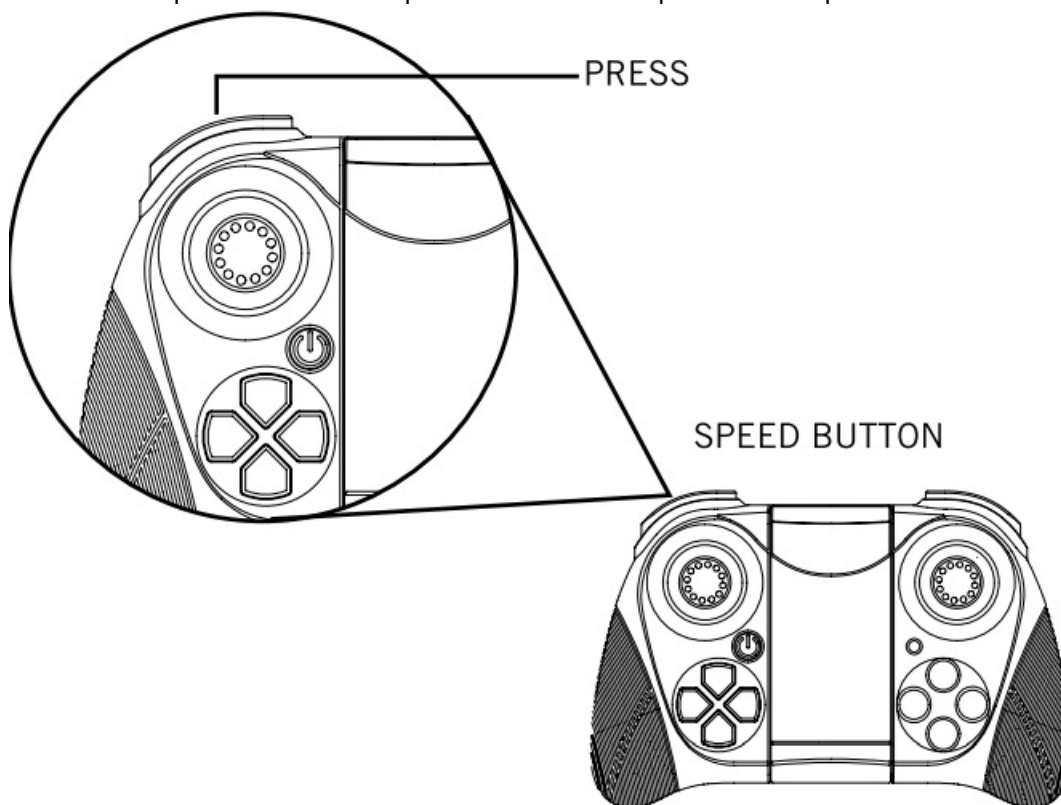
TRIM ADJUSTMENT

FORWARD/BACKWARD TRIM
When the drone drifts forward/backward unintentionally, you can correct it by pressing the opposite trim button until it evens out. Press 1 when drifting backward Press 2 when drifting forward
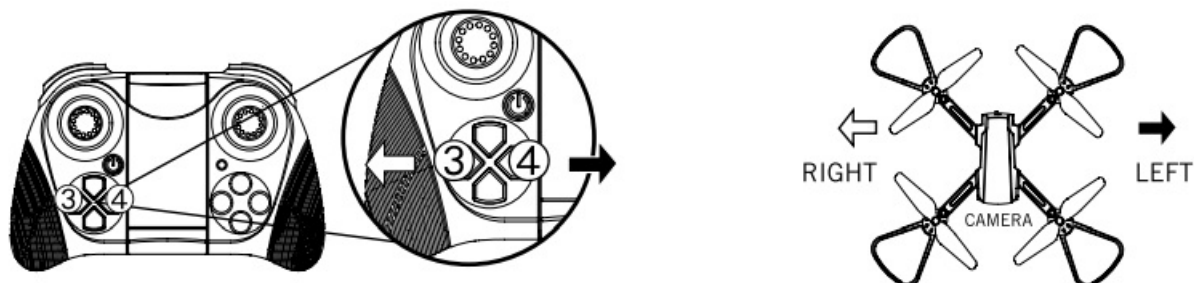
LEFT/RIGHT TRIM
When the drone veers left/right unintentionally, you can correct it by pressing the opposite trim button until it evens out. Press 3 when drifting right Press 4 when drifting left
NOTE: Trim adjustments are designed to counter drifts not caused by wind.
The remote will emit a long beep when trim is centered.

360° FLIPS

Once you have become skilled with the basics of drone flight, you can try some advanced maneuvers.

1. Make sure the drone is at a height of 10 feet.
2. To flip, press the Flip Button and then push the direction stick in the desired direction. The drone will flip in that direction.

Left 360° Flip

Right 360° Flip
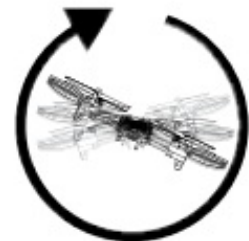
Forward 360° Flip

Backward 360° Flip

OTHER FEATURES

RETURN

- Press the return button for 1 second and release.
- The drone will start to fly backwards.

- To cancel return, press the button again or push the direction stick in any direction.

ONE KEY RETURN

SPINNING & CIRCLING

- To spin, press & release the button. The drone will spin in place. Press and release the button again to leave spin mode or push the direction stick in any direction.
- To circle, press the button for 1 second and release. The drone will make Circles. Press the button again for 1 second and the drone will leave circle mode.

SPIN & CIRCLE

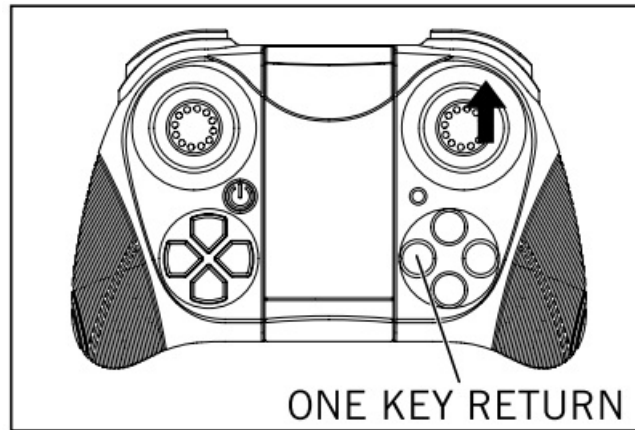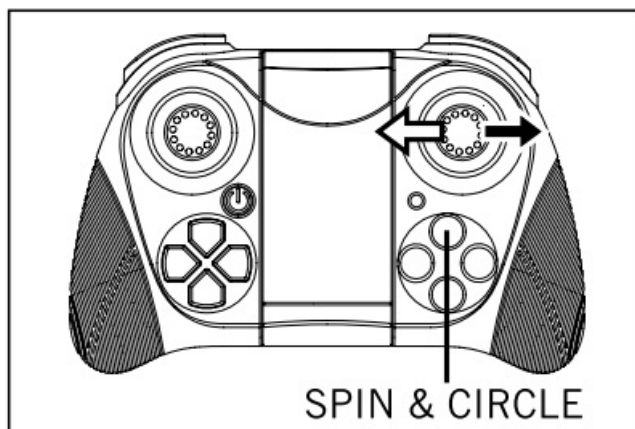## TROUBLESHOOTING

LOW BATTERY ALARM
The lights will flash when the battery is low. Land the drone as soon as possible and recharge the drone.

RE-CALIBRATING THE DRONE
If the drone crashes and after re-starting and trimming, it still is unstable, you have the option to re-calibrate the drone.

1. Turn on the drone and then the remote and sync.
2. Push the throttle and the direction sticks to the lower center corners and release.
3. OR Press the Calibration button for 1 second and release.
4. The lights will flash to indicate that the drone has re-calibrated.
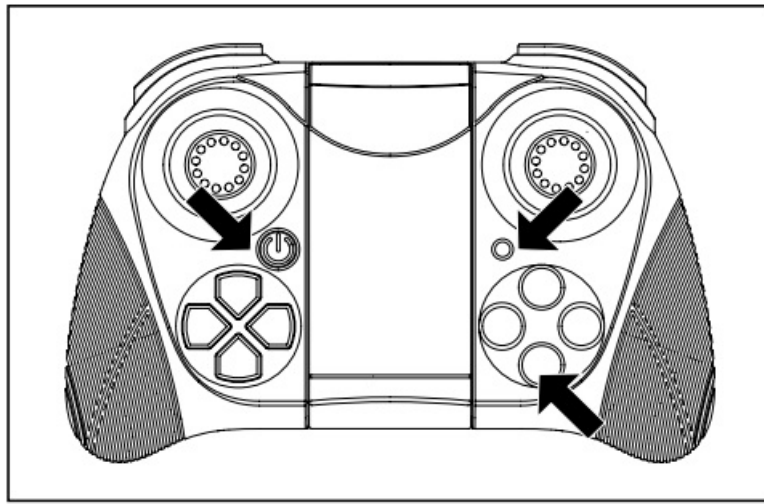
Allow 15 minutes to pass between full flights as this will give the motors a chance to cool down. Failure to do so could wear out and shorten the life of the motors.

| SYMPTOM	POSSIBLE CAUSE	POTENTIAL SOLUTION
Aero 2.0 does not respond	1. Communication between controller and aircraft was not synchronized during set up 2. Battery power depleted on aircraft, controller or both.	1. To synchronize, turn on aircraft first, place it on level ground, and then turn on controller. 2. Charge aircraft and/or replace batteries in controller.
Response to control inputs intermittent or erratic	1. Controller battery power nearly depleted.	1. Replace batteries in controller.
Aero 2.0 will not hover or strafe correctly	1. The aircraft was not on level ground during synchronization. 2. Trim settings are incorrect.	1. Re-synchronize aircraft and controller. 2. Reset the trim buttons on the controller and re-trim flight controls.
The motors stop running	1. If a propeller is stuck, the motors will automatically stop running.	1. Pull the throttle down and release to start the engines.

HOW TO CHANGE THE BLADES

- All drones have two rotors that spin clockwise and two rotors that spin counter-clockwise.
- Make sure to place the blades on the correct axis or they will not spin correctly and the drone will not lift.
- Each blade is marked with A or B. There may be a number after the letter but you can ignore the number.
- Make sure to follow the graphic below to see where to place the blades.
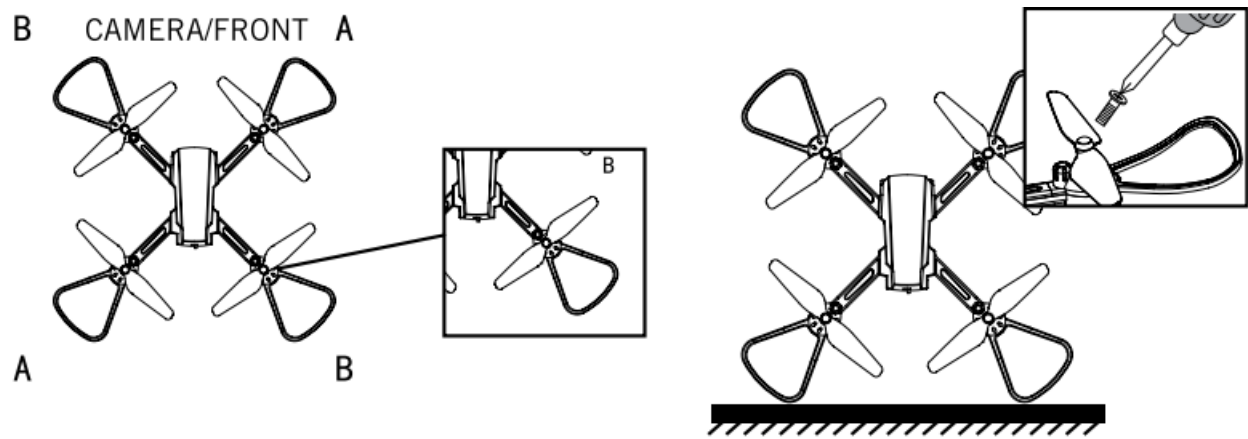
FLYING OUTDOORS

HOW TO PREVENT FLY AWAYS

To prevent "fly-away" situations (where drones seem to fly away out of control) it is important to first test and practice within close range before letting the drone fly too far away. Each drone is designed to turn off the engines if the radio signal is lost. It is important to know and test the range of your drone before flying. We recommend turning on and syncing the drone and walking away while testing the engines. Keep walking and testing until it is obvious when you reach the point where the signal is not controlling the drone. This will be the control limit for the conditions in which you are flying. Distance does vary somewhat based on environmental and weather conditions, so testing the limit is advised. Fly in a range that is good for easy visual operation of the drone.

IF YOU CAN'T SEE YOUR DRONE, THEN YOU CAN'T CONTROL YOUR DRONE.

Fly-aways are not covered by warranty as they are overwhelmingly caused by pilot error.

APP INSTRUCTIONS & PHOTO/VIDEO

Please check our website ProtocolNY.com for updates and instructions to our Apps.

INSTALLING AND CONNECTING TO THE APP

1. The App is available in both Apple and Android App stores. Search "Protocol Aero 2.0 2021 Edition" and download the App to your smartphone.
2. Turn on the drone and the remote.
3. Once it is turned on, Aero 2.0 will transmit a Wi-Fi signal, "Aero 2.0". Make sure your smartphone is connected to that signal.
4. Open the app and press "START".
5. The screen will show and live stream the camera view.

INSTRUCTIONS

Instructions for shooting photo/video and flying the drone through the app are accessible from the home page of the app.

REPLACEMENT PARTS

Thank you for your purchase of Protocol's Aero 2.0 Drone. We know that accidents can sometimes happen and that is why we offer spare parts kits on our website: www.ProtocolNY.com.

LIMITED WARRANTY

At Protocol, we're dedicated to bringing you innovative and well-designed products that make living fun and easy. We stand behind all of our products and warrant this to be free from defects in workmanship and materials for 30 days from the date of purchase. The warranty does not cover transportation damage, misuse, accident, or similar events. Specific legal rights pertaining to this warranty may vary by state. For service claims or questions please consult our **website www.ProtocolNY.com**.

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, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Class B device:

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.
- Consult the dealer or an experienced radio/TV technician for h elp.

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

Documents / Resources

PROTOCOL AERO 2.0 Drone with Live Streaming Camera [pdf] Instruction Manual
6182-2BGAA, 61822BGAA, 2AQMU-6182-2BGAA, 2AQMU61822BGAA, AERO 2.0 Drone with Live Streaming Camera, AERO, 2.0 Drone with Live Streaming Camera, 2.0 Drone, AERO 2.0 Drone, AERO Drone, Live Streaming Camera, Drone, Streaming Camera Drone