TERRACOPTER EVO™
RC CAR/DRONE

INSTRUCTION MANUAL

PROTOCOL®

PROTOCOL

AIR

FLY FIRST™

THANK YOU.

Thank you for your purchase of Protocol's **TerraCopter EVO RC Car/Drone.** You are about to experience the best of what remote control flight has to offer. We strongly recommend that you take the time to read this manual thoroughly. It contains many tips and instructions on how to get the most out of this aircraft and maintain it for a long life.

As with any aircraft, this is a precision flying machine. Treat it well and enjoy all the fun it has to offer, flight after flight.

TABLE OF CONTENTS

01	Safety & Precautions
02	Parts
05	Remote Battery Installation
06	Charging the Drone
08	Turning On & Syncing the Drone
09	Operation - Flying the Drone
13	Operation - Driving the Car
14	High & Low Speed Modes
15	Trim Adjustment
17	Troubleshooting
18	Flying Outdoors
19	Replacement Parts & Limited Warranty

HAVE FUN, BUT SAFETY FIRST!

PRECAUTIONARY SAFETY WARNINGS:

- 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.
- Charge device in a cool, dry place and under adult supervision.
- Never leave the device unattended while charging.
- To prevent overheating, allow battery a cool-down period before recharging.
- 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 www.protocolny.com

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.

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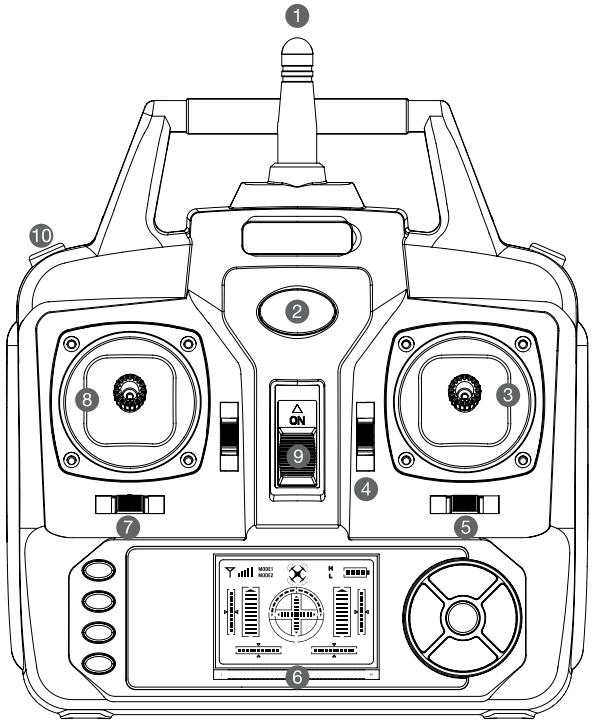
NEW YORK

PARTS

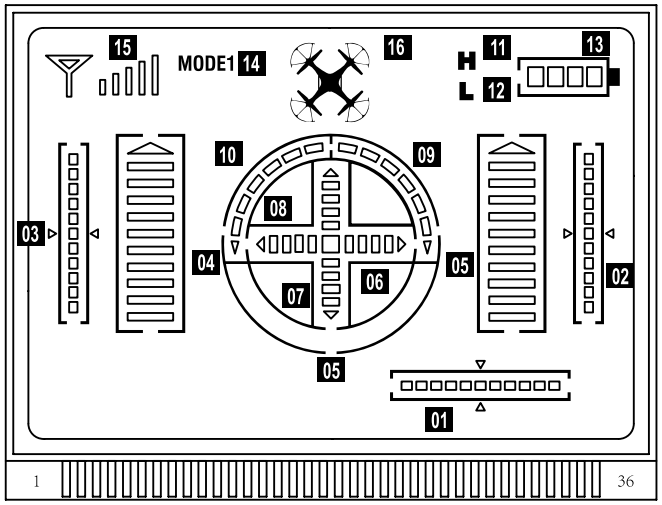
DRONE
1. Canopy
2. Blade
3. Wheels
4. Battery Compartment
5. On/Off Switch

PARTS



REMOTE
1. Antenna
2. Indicator Light
3. Right Direction Lever (4-way directional)
4. Trim Forward/Backward
5. Trim Bank Left/Right/ Mode Switch
6. LCD Display
7. Take Off/Landing
8. Throttle/Turn Left/Right
9. Power Switch
10. High/Low Speed Mode Selector

PARTS

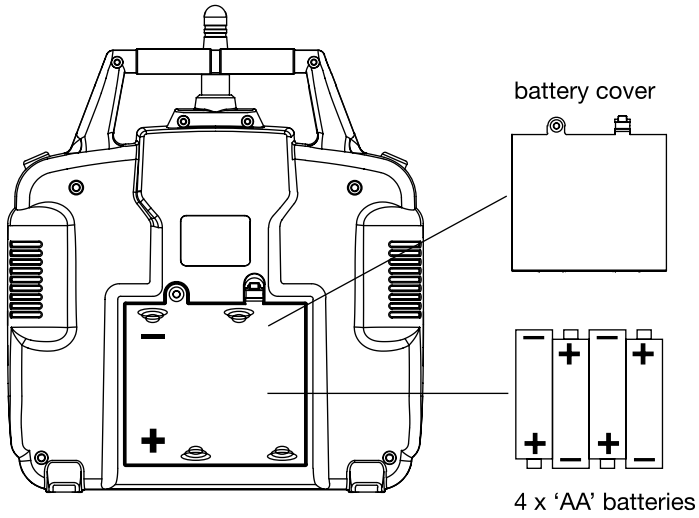


LCD SCREEN

01. Trim: Side-to-side Banking (defaults to center on start-up)
02. Trim: Forward/Backward (defaults to center on start-up)
03. Throttle (remains at center)
04. Throttle (defaults to zero on start-up)
05. Directional display (defaults to center on start-up)
06. Banking movement to Right
07. Backward Movement
08. Banking movement to Left
09. Right turn movement (defaults to zero on start-up)
10. Left turn movement (defaults to zero on start-up)
11. High Speed Mode Active
12. Low Speed Mode Active
13. Controller battery Level Indicator
14. Flight Mode 1 Active (Default); To change to Mode 2, press and hold Mode Switch to the right while turning on the transmitter.
15. Remote control signal strength
16. Indicates positive communication lock with the TerraCopter EVO

REMOTE BATTERY INSTALLATION

Unscrew and remove battery cover from controller. Insert 4 x 'AA' batteries according to indicated polarities. Replace and screw back in battery cover.

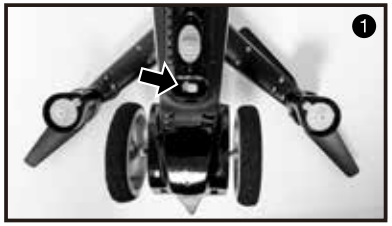


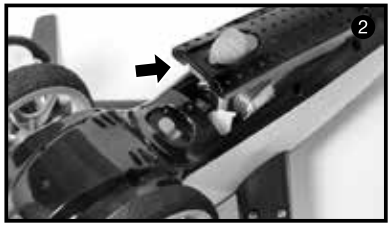
1. Install batteries carefully.
2. Do not mix old and new batteries.
3. Do not mix different types of batteries.

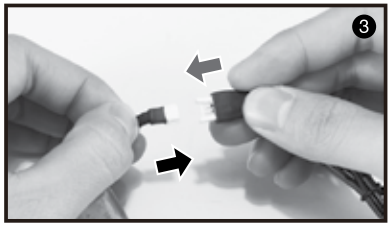
CHARGING THE DRONE BATTERY

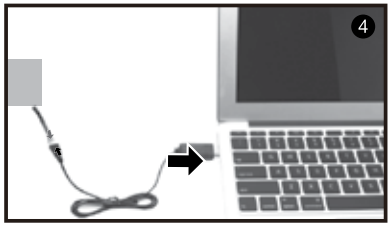
1. Make sure the drone is turned off.
2. Open the battery cover and remove the battery.
3. Connect the USB charging cable to the battery.
4. Plug the charger into a USB port. The USB light will flash green while charging and will remain steady once fully charged.
5. Plug the battery back into the drone and close the battery cover.

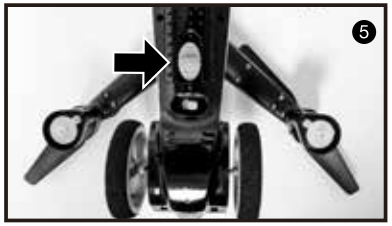
Charging time: approximately 100 minutes --- Flying time: approximately 5 minutes











*Battery: Li-Po, 7.4V, 340mAH

CHARGING THE DRONE BATTERY

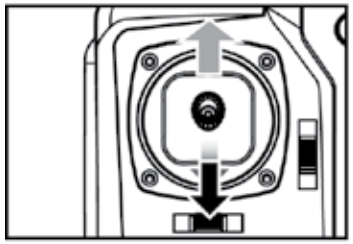
CAUTION WHEN CHARGING

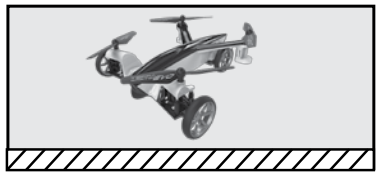
1. When charging, place product on a dry, well-ventilated surface and keep away from heat sources.
2. Always use adult supervision while charging.
3. In order to increase battery longevity, avoid repeat charging and excessive discharging.
4. As battery temperature is high immediately after flight, charge 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.

TURNING ON & SYNCING THE DRONE

1. Turn on the drone and place it on an even surface.
2. Turn on the remote control.
3. Both indicators on the drone and the remote will flash while they are syncing.
4. Push the throttle up and then down to sync. You will hear two beeps and the lights will go steady.

Tip: When syncing your drone keep it in a horizontal position for stable flight.





NOTE

1. If the TerraCopter EVO and the remote do not sync after following the checklist, reverse steps 1 and 2 of the process. Turn the remote and the drone off. Then, turn on the remote first and then the drone.
2. Turn on the controller; if, after 30 seconds, it has not recognized the drone, turn off the controller to retry synchronization.
3. If the TerraCopter EVO is unsteady in flight, it may not have been able to calibrate horizontally. Power down both drone and remote and restart pre-flight procedure.

OPERATION: FLYING THE DRONE

STARTING THE ENGINE:

1. Once the drone is synced, push up on the throttle once and release to go into idle mode. The blades will rotate but the drone will not lift.

OR

2. Pull the throttle and direction sticks to the center at the same time and release to go into idle mode. The blades will rotate but the drone will not lift.

TAKE – OFF:

1. Push the take off button to the right once and the drone will hover 3-4 feet off the ground. Then gently advance the throttle to a desired height and release. The drone will hover at that height.*

OR

2. Gently advance the throttle up to a desired height and release. The drone will hover at that height.

*In the first 30 seconds, the drone will sway up and down as it adjusts to flight. After that, the drone may sway up and down slightly but will maintain altitude.

LANDING:

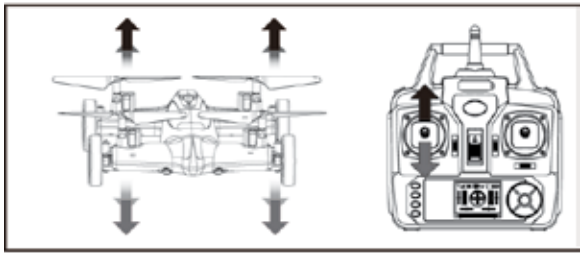
1. Push the landing button to the right to lower the drone to the ground.

OR

2. Push down on the throttle until the drone is on the ground.

*The engine will shut off if you choose to hold the throttle down for 3 seconds.

**Emergency Shut Off: When in flight, pull the throttle and direction stick to the center at the same time and the drone will shut off.

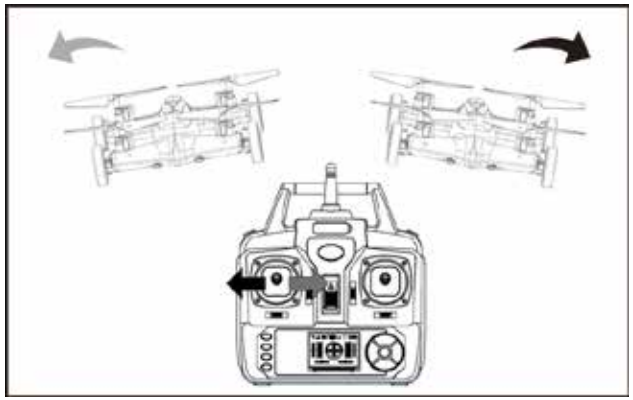


OPERATION: FLYING THE DRONE

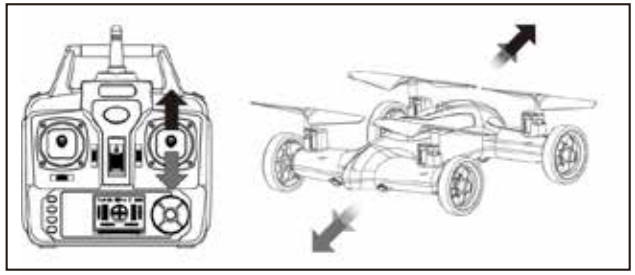
FIRST TIME FLYERS!!!

Practice hovering until you are comfortable with flight before attempting any other maneuvers.

MODE 1:

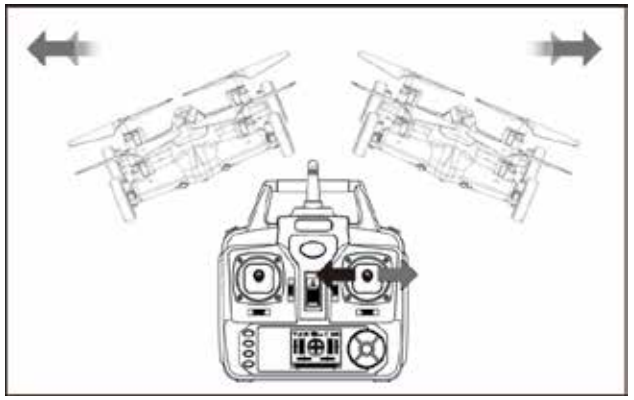


Pull the throttle left or right,
the drone turns to the left or right.



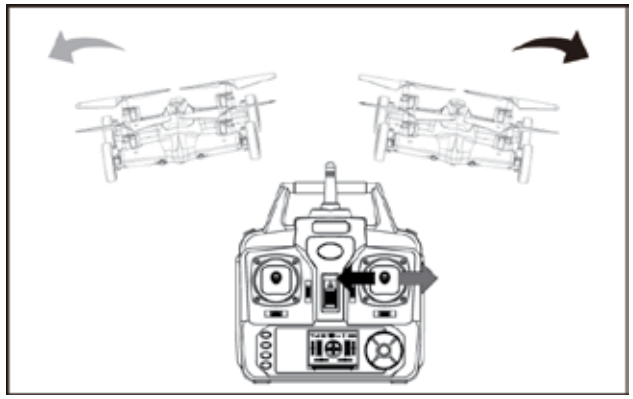
Push the direction lever up or down,
the drone flies forward or backward.

OPERATION: FLYING THE DRONE



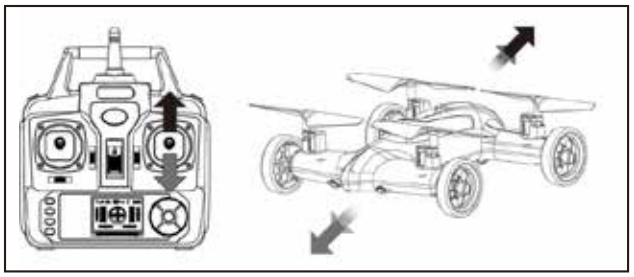
Pull the direction lever to the left or right,
the drone banks to the left or right.

MODE 2:

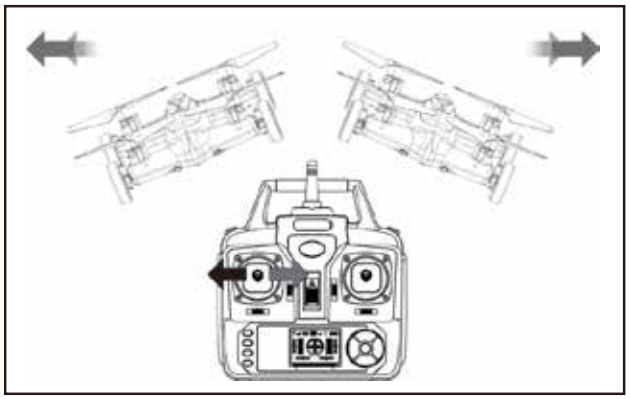


Pull the direction lever left or right,
the drone turns to the left or right.

OPERATION: FLYING THE DRONE



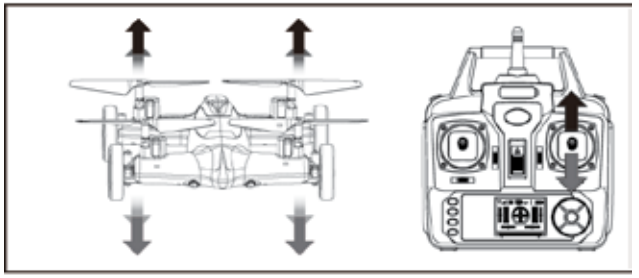
Push the direction lever up or down,
the drone flies forward or backward.



Pull the throttle to the left or right,
the drone banks to the left or right.

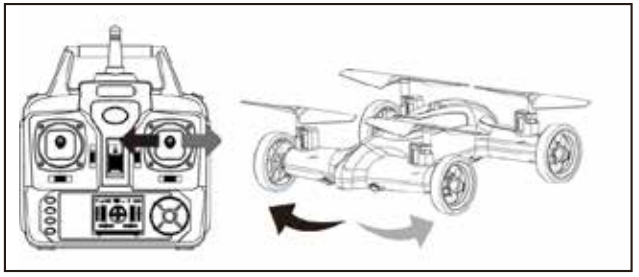
OPERATION: DRIVING THE CAR

TerraCopter EVO transitions seamlessly from flight to drive. To drive, simply move the direction lever in the desired direction.



FORWARD AND BACKWARD

When the drone is on land, push the direction lever up
or down to drive forward or backward.

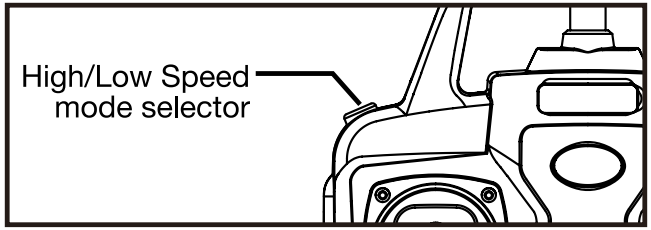


TURNING LEFT AND RIGHT

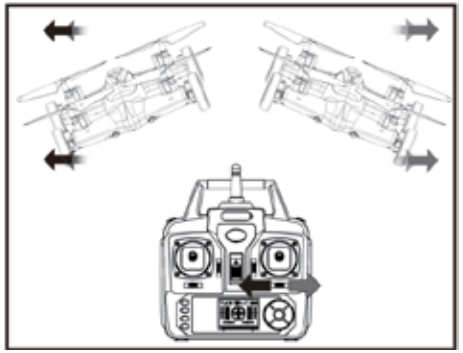
When the drone is on land, push the right direction lever
left or right to turn left or right.

HIGH & LOW SPEED MODES

The TerraCopter EVO features 2 speed modes. Choose the speed based on flight experience and level of comfort. Press the High/Low Speed Selector to change speed. The remote control indicator will beep once for low speed and twice for high.

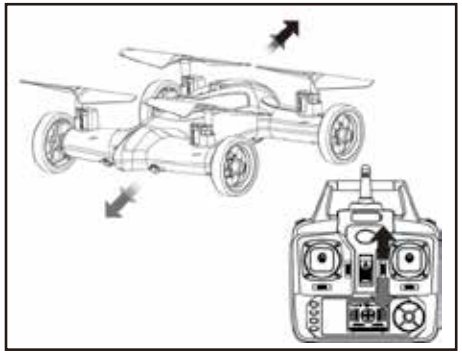


TRIM ADJUSTMENT



SIDEWAYS TRIM

When the drone veers to the left or right side unintentionally, you can correct it by pressing the trim button in the opposite direction until it evens out.



FORWARD/BACKWARD TRIM

When the drone veers forward/backward unintentionally, you can correct it by pressing the trim button in the opposite direction until it evens out.

TRIM ADJUSTMENT

RESETTING THE TRIM

1. Turn on the drone and remote and sync as normal.
2. Then push both left and right lever on the remote to the lowest right corners for 2-3 seconds. The lights on the drone will change from normal to quick flashing. After 2-3 seconds the lights will change back to normal. This means the drone has restarted/reset successfully.

TROUBLESHOOTING

*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
TerraCopter EVO 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 controller, then turn on aircraft and place it on level ground. 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.
TerraCopter EVO 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.

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.

REPLACEMENT PARTS

Thank you for your purchase of Protocol’s **TerraCopter EVO RC Car/Drone.** We know that accidents can sometimes happen and that is why we offer spare parts kits on our website: **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 **ProtocolNY.com.**

TERRA
COPTER
S1/0

Wi-Fi and APP Instructions For TERRACOPTER EVO

Age 14+

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

Phone Mount

1. Slide the phone mount onto the remote control's antenna.
2. Pull the clamp and insert the smartphone.

Install the App:

1. The App is available in both Apple and Android APP stores. Search "Protocol TerraCopter EVO" and download the App to your smartphone.

Shooting Video/Photo

1. Turn on the TerraCopter EVO and the remote control.
2. Once it is turned on, the TerraCopter EVO will blast a Wi-Fi signal, "TerraCopter EVO". Make sure your smartphone is connected to that signal.
3. Open the app and press ⇨ (Fig. 1).
4. The screen will livestream the camera view.
5. To film video, hit the video icon once. To stop filming, hit the icon again (Fig. 2)
6. To snap pictures, press the photo icon once.

Viewing and Saving Recorded Video/Photo

To see recorded video and images, press the picture icon. There are two subfolders, one for video and one for photos (Fig. 4).

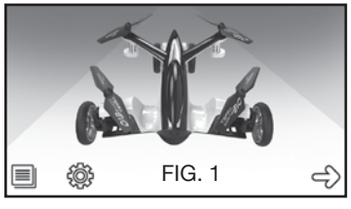


FIG. 1

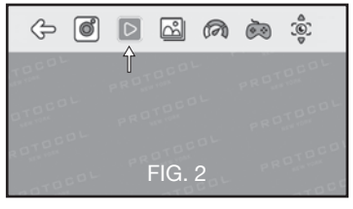


FIG. 2

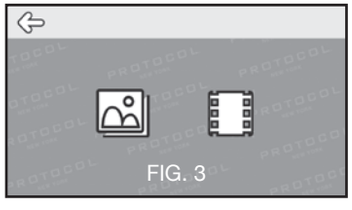


FIG. 3

Apple:

1. To view photos, access the photo folder. Press the photo you would like to view.
2. To save photos to your phone, press select. Then press the photos you would like to save. Then press "Add to Album".
3. To view video, access the video folder. Press the video you would like to view.
4. To save video to your phone, press select. Then press the video you would like to save. Then press "Add to Album".

Android:

1. To view photos, access the photo folder. Select the photo you would like to view.
2. To save photos to your phone, press select. Then press the photos you would like to save. Then press "Add to Album".
3. To view video, access the video folder. Press the video you would like to view.
4. To save video to your phone, press select. Then press the video you would like to save. Then press "Add to Album".

Deleting Content from the App:

Apple:

To delete content, press select, press the photo or video you want to delete, and then press "Delete".

Android:

Open the image or video, and then select delete.

Flying the Drone through the APP (optional):

*This is for advanced users. Make sure you are comfortable flying the drone through the remote control before using the App.

1. The screen on the App is set up to work like the remote control interface (Fig. 4). Press the remote icon to turn on the remote functions.
2. To drive, move the direction stick in a desired direction.
3. Slide the throttle and the direction sticks to the lower center at the same time and release to go into idle mode.
4. Press the up arrow to launch the drone.
5. Slide the throttle and direction sticks to control the drone as you would with the remote.
6. To trim the drone, slide the indicated trimmers.
7. To change the speed, tap the speed icon to change between low and high speeds (Fig. 5).
8. Press the down arrow to land the drone.

Troubleshooting:

If the drone doesn't respond to the APP while connected to the Wifi, then you need to re-sync the drone and APP. Turn everything off and reconnect to the APP.

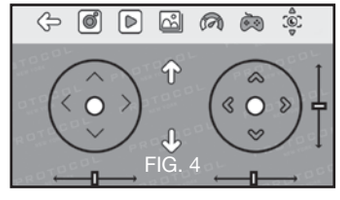


FIG. 4

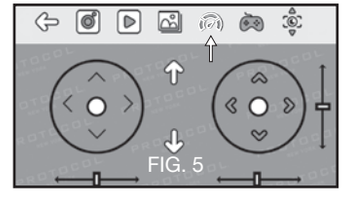


FIG. 5

Icon Key

1. Return to previous menu
2. Take photo
3. Record video
4. View photos and video
5. Speed Mode
6. Flight
7. Flip screen

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