

### Important statement

- This drone is only suitable for children over 14 years old. For beginners, it is recommended to practice under the guidance of experienced ones.
- The drone's blades revolve at high speeds and can cause damage to the users, spectators and animals. Stand away from the drone to reduce the risk of getting hurt.
- Factory is not responsible for any accidents during flight.
- Any questions for operating, repairing, please contact local after-sale service.

**Warnings**

- Checking the surroundings before flying.
- Do not let the drone fly out of your sight.
- Parental supervision recommended when flying the drone.
- Please make sure no other player is using the same frequency as yours.

**Warning**

- Please check the charger, wire, plug, shell and parts regularly. Once damaged, please replace before flying.
- Please always use the original charger provided by factory.
- Please always turn off the controller and unplug drone power while clean the product.
- Parental guidance is recommended when installing or replacing the batteries.
- Batteries or battery packs must be recharged or disposed properly.
- Turn off the controller and unplug drone power when not in use.
- Please do not fly the drone and controller.
- Please keep and read this instruction manual carefully.

### Don't fly the drone in below conditions

Under high-voltage power lines and signal tower    In crowds    In thunder and lightning outdoors

Near Airport, Railway    In public area    Forests and rivers    Heavy winds

### Standard components

### Name of components

No.	Name	Quantity
1	Reverse blades	2
2	Positive blades	2
3	Upper shell	1
4	Bottom shell	1
5	Reverse motor	2
6	Positive motor	2
7	Li-ion battery	1
8	Receiver board	1
9	Camera	1
10	Transparent lampshade	4
11	Turn table	4
12	Arm	4

### Controller instruction

### Battery Installation

\*Open the battery door with a screwdriver. Install new batteries as shown in the polarity diagram (+/-) inside the battery compartment. Tighten the battery door.

**Caution:**

- Please make sure the battery is correct installed.
- Please remove used batteries, do not mix the battery with different type.

### Calibration between drone and controller

**Step one**

Turn on the controller and the drone power. Put the drone on a flat surface, when you hear the "beep beep beep" sound, pair completed. Long press "On/Off" button to turn on and start the drone. Please always power down on the surface.

**Step two**

As shown in the picture, put both throttle to the right corner. Hold till the flash to light turns into solid bright, when you hear the "beep beep beep" sound, calibration is finished.

**WARNING**

Please use our battery when the drone is not in use. Note: it may cause damage to controller if battery is not removed.

### Controller's function

- On/Off**
  - On: Long press "On/Off" button to turn on the controller.
  - Off: Long press "On/Off" button to turn off the controller.
- Lock/Unlock**

Turn on the controller and the Drone power, when you hear the "beep beep beep" sound, pair completed. Push the throttle lever to left corner, push direction lever to the right corner (push them at the same time), to start the motor. When the motor starts work, release both lever. Push throttle lever to straight corner, push the direction lever to the left corner to start the motor (Push them at the same time).
- Throttle control**

Unlock the controller, push the throttle up to ascend the drone, push the throttle down to descend the drone, leave the throttle in middle, the drone will hold its altitude.
- One key take off / One key landing**

Unlock the controller, press "One key take off/One key landing" button, drone will hover one meter above the ground. Press again, drone will land automatically.
- Turning Left/Right**

After pairing, push the throttle lever to left/right, the drone will turn left/right.
- Forward/Backward**

After pairing, push the direction lever to up/down, the drone will fly forward/backward.
- Left and right**

After pairing, push the direction lever to left/right, the drone will fly to left/right.
- 3 Trim**

After the drone take off, without move the throttle, if the drone's direction is moving, press "trim" button to adjust the direction.
- Take photo/video**

Short press "Take picture/video" button to take photo, long press it to take video. Photos and videos will save in the app.
- Speed/Flip**

Short press the button to adjust the speed. There three speed level, when the buzzer beep one sound, it's speed level one, drone will move slowly. When the buzzer beep two sounds, it's speed level two. When the buzzer beep three sounds, it's level three, which is the fastest speed level. When the throttle is in zero position, Long press the button to flip, buzzer will stop ringing, push the direction lever, drone will do 360° flip.
- Headless mode**

**Start and settings:** Short press the headless mode button, the remote control beeps twice, the aircraft indicator light flashes slowly, headless mode start. Now the direction of the aircraft's head is the front of headless mode. If there has a crash or flying forward deviation, please restart to adjust the required direction frequency. Exit headless mode: Short press the headless mode button again, (the remote control beeps and the aircraft indicator light is always on), it is exit headless mode in headless mode, no matter which direction the head of the aircraft turns, the current position of the remote control is the right and behind of the aircraft. At this moment, push the joystick up, the aircraft can recall the aircraft.

**12. On key to return**

When the rear of the aircraft are aligned with the pilot, after a short press the button, the aircraft will automatically return. If attack happen during return you can correct the channel through the left and right joystick. Short press the button again to end the return trip. Use the back and forth direction joystick also can end the return trip.

### Operations

Before you fly the drone, please do some simulated flight practice.

Throttle (Top position)	Ascend	Push the throttle lever up, drone will fly up.
Throttle (Zero position)	Descent	Push the throttle lever down, drone will fly down.
Spin around	Turn left / Turn right	Push the throttle lever to left, drone will turn left. Push the throttle lever to right, drone will turn right.
Flight forward and backward	Fly forward / Fly backward	Push the direction lever up, drone will fly forward. Push the direction lever down, drone will fly backward.
Left/Right	Left / Right	Push the direction lever left, drone will fly to left. Push the direction lever right, drone will fly to right.

### The battery plug diagram

### Replace blades

Please check the blades regularly, once damaged please replace with new one.

- When replacing the blades, make sure the color and direction are matched. (F is for positive blades, R is reverse blades.)
- Important: do not change the wrong blades.

F-front left positive blades    R-front right reverse blades  
R-back left positive blades    F-back right positive blades

### Charging

- Plug USB to the drone, plug the other side to a mobile phone adapter or a computer.
- Turn off the Drone before charging.
- The charging indicator will light when charging, once charging completed, the indicator will off.
- It's normal that the led indicator flash when you plug USB charger with charger wire, while charger wire didn't plug with lipso battery.

**Caution**

When you hear a "beep-beep-beep" sound in flying means the drone's battery is full in short, please charge your Drone with the USB charger from factory. During flight, if the led indicator on controller keeps flash, it means the battery is dying, please land the drone and change the battery.

**Battery warning**

Rechargeable battery: Please dispose the rechargeable LiPo battery properly according to local law. Battery for controller: 2 pieces "AAA" battery are needed for controller, please read below warnings carefully.

- Do not mix the battery with different type.
- Do not mix the battery with used one.
- Do not charge non-rechargeable battery.
- Please remove the rechargeable battery from the drone before you charge it.
- Parental supervision recommended when charging the battery.
- Please install the battery as shown in the polarity diagram (+/-).
- Do not throw the battery into the fire, it may cause leakage and explosion.

**Note**

LED indicator	Charging specification	
	charging time	charging current
light off	light on	input
light on	light blink	5V
light on	light on	800mA
light on	light on	8-4V 0.1V

Battery and charge specification		charging time
battery type	battery specification	charging time
Li-Ion batteries	7.4V 450mAh	about 60 mins (charging current approx 0.8A)
	aircraft flight time: 8-7mins	

### Flight adjustment and notice for beginners

**Caution**

- Please check if the screws and blades are firmly tightened.
- Please make sure the battery are fully charged.
- Please make sure the blades are correctly installed.

**Cautions**

- Please make sure there is no obstacle in flying area.
- Please practice how to hover the drone first.
- Please stand 2 meters away from the drone.

Drone's default mode is optical flow, it can help the drone to achieve accurate fixed point and stable flight under 2 meters, specially indoor flight.

- Make sure the camera is clean and is stain.
- Make sure the light is enough, ground texture is rich as optical flow relies on ground texture to obtain movement information.
- Optical flow can not work in below conditions:
  - above the water.
  - in the dark.
  - no clear ground texture.
  - Optical flow may not work under 0.5 meters flight.

#### 1. Throttle lever practice

Throttle lever is on the left, slowly push the throttle lever up, then release the throttle lever, the drone will ascend and hold its altitude, slowly put the throttle down, then release the throttle lever, the drone will descend and hold its altitude. Practice again and again until you can fly the drone to any height you want and land off safely.

#### 2. Direction control practice

- Direction lever is on the right, slowly to the direction lever to left/right to control the direction of drone.
- Side flying practice way is the same as above.

### The application of App

- APP download and installation
  - Download according to the type of mobile phone
  - For Android system: Please go to Google Play, enter the key word "GD 145" to download the app.
  - For IOS system: Please go to App store, enter the key word "GD 145" to download the app.
- Control of APP
  - Open the app, you will see the screen as below picture:

#### 3. Rotation practice

- Slowly put the Throttle lever up.
- Put the throttle lever to left/right, the drone will turn to left/right.

#### 4. Precision practice

Once you are skilled with above 3 steps, you can practice the drone in a fixed area to get more precision practice.

#### 5. Trim

Push the throttle forward and observe how the drone reacts.

- Forward/Reverse movement trim: if drone tends to move forward, press the back arrow on the control pad. If the drone tends to move to the left, press the right arrow on the control pad.
- If the drone tends to move to the right, press the left arrow on the control pad. If the drone tends to move to the left, press the right arrow on the control pad.

Note: The controller beeps when you press a trim control. If there is no beep, you have reached the maximum trim adjustment.

### FCC Statement

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.

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

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum 20cm distance between the radiator and your body, and only the supplied antenna.

### Problem shooting

Troubles	Causes	Solutions
1. Turn on the drone, LED blinks, while the drone has no responding to all commands.	Pair between drone and controller failed.	Please refer to P3 for pairing.
2. Turn on the drone, the drone has no reaction to the commands.	No power.	Change the drone.
3. Blades keep moving after landing.	Throttle lever is not at the zero position.	Put the throttle lever to zero position.
4. Blades keep moving, while the drone can not take off.	1. Blades may installed wrong. 2. Not enough power.	1. Change the blades. 2. Charge the drone.
5. After trimming, drone keeps spin, and the speed of blades is different.	1. Blades may installed wrong. 2. Blades get damaged. 3. Calibration failed.	1. Install the blades. 2. Replace the blades. 3. Refer to p3 for calibration.
6. The drone can not take off after stop.	1. Blades are getting lost. 2. Blades get damaged.	1. Tighten the blades. 2. Replace the blades.

**Warning:** Not to operate under 14 years old.

MADE IN CHINA

NO.GD-145B

### Table of Contents

- 1 Attention
- 2 Standard components
- 3 Name of components
- 4 Controller instruction
- 5 Battery installation
- 6 Calibration between drone and controller
- 7 Controller's function
- 8 Operations
- 9 Replace blades
- 10 Charging
- 11 Battery warning
- 12 Note

# APEX

**NO.GD-145B**

User Manual