

WARNING **IMPORTANT**

1. This product is only suitable for users over the age of 8. Piloting this quadcopter will be difficult at the beginning. We recommend be accompanied by an experienced pilot at first.
 2. This product is designed with high-tech electronics and mechanical parts. Do not near people. Improper operation can result in injury or property damage. We will not accept any responsibility for this.
 3. We will not take any responsibility for accidents during the operation of this device.
 4. Contact customer service for help if you have any problems with the device.

Cautions:

1. Checking the surroundings before flying.
2. Do not let the plane fly out of sight while flying.
3. Do not let the child play alone, play together with adult.
4. Please make sure, there is no other player use the same frequency at the same area.

Do not fly in these areas.

No	Name	Quantity
1	Positive rotor blades	2
2	Reverse rotor blades	2
3	Upper Body	1
4	Bottom Body	1
5	Positive rotor	2
6	Reverse rotor	2
7	Li-polymer battery	1
8	Receiver board	1
9	Camera	1
10	Camera board	1

PACKAGE CONTENTS

QUADCOPTER COMPONENTS

REMOTE CONTROL FUNCTIONS

CONTROLLER INSTRUCTION

1. On/off
 (1) After putting on the battery, R/C is in sleep mode, indicator extinguishes when off. Short press the ON/OFF, the remote control enters the normal mode of work, the buzzer is short sound one beeping, and the power indicator is fading.
 (2) Power off: long press the ON/OFF, the buzzer is short sound two beeping, the power indicator is off, the remote control is off.

2. Training
 When the remote control and the aircraft are pairing the code, move the turning rocker to left and right, the aircraft will turn left and right.

3. Forward and backward
 When the remote control and the aircraft are pairing the code, move the rocker to forward and backward, the aircraft will fly forward and backward.

4. Left and right
 When the remote control and the aircraft are pairing the code, move the rocker to left and right, the aircraft will fly left and right.

5. Fine-tuning function
 The aircraft can be stabilized by adjusting the direction of the aircraft, in the opposite direction of flight.

6. Headless mode
 Short press the button to enter headless mode. The vehicle's flying direction will be the same as the demand of controller, no matter where the head is.

7. Speed/Speed
 Short press the button to adjust the speed. There are three speed levels. You will hear a beep sound while adjusting. Beep for level 1, beep two for level 2, beep three for level 3. The higher the level, the faster the speed. Long press the button for stunt. The beeper will keep ringing.

8. Take photo/video
 short press the button to take photo, long press the button to take video, press again to finish video

9. One key take off and one key landing
 In the fixed high mode, after pressing one key take off and one key landing buttons, automatically aircraft up to one meter from the ground level hover, trigger buttons again, aircraft flying will fall to the ground stops automatically

10. One key to return
 Short press the button for one key to return. Press again to finish return.

11. Calibration
 (1) If the aircraft is drifting to one side during takeoff, it can be calibrated to make the flight more stable
 (2) calibration method: the aircraft is placed on the horizontal surface, and the two rocker of the remote control is pushed to the lower right corner, when observed the indicator light flashes on the remote control, indicating that it has been calibrated.
 (note: the aircraft should be kept at the horizontal surface. During calibration, the aircraft will not be able to roll. After the calibration is completed, the indicator light will stop flashing quickly)

12. Low Voltage Warning:
 When the voltage of battery is lower than 2.5V, power light will blink, which means you have to change the battery. Meanwhile, a 'beep beep' sound will send from the buzzer, which means you have to stop flying the vehicle.

REPLACING THE PROPELLER BLADE

The propeller system is a precision instrument that may need to be repaired or replaced from time to time for optimal flight function. Crash landing from high-speed aerial flights may cause damage to propeller blades.

1. The aircraft has four blades, two white colors on front, and two black colors on back (see the diagram below).

2. When replacing the propeller blades, make sure to match both the color of the blade and the indication letter on the blade.

3. Replace broken blades with the correct blade.

White Blade Front Left=F
 White Blade Front Right=R
 Black Blade Back Left=R
 Black Blade Back Right=F

BATTERY WARNINGS

RECHARGEABLE BATTERY:
 This Quadcopter uses a Li-Poly rechargeable battery. If battery no longer stays charged, dispose of battery properly according to local disposal requirements.

CONTROLLER BATTERIES:
 Remote control requires 2 AAA batteries (not included). Please read the important battery safety warning below.

- Do not mix alkaline, standard (carbon-zinc) and rechargeable batteries (Nickel Metal Hydride).
- Do not mix old and new batteries.
- Non-rechargeable batteries are not to be recharged.
- Rechargeable batteries are to be removed from the item before being charged (if removable).
- Exhausted batteries should be removed immediately and must be recycled or disposed of properly according to state or local government ordinances and regulations.
- The supply terminals are not to be short-circuited.
- Only batteries of the same or equivalent type as recommended are to be used.
- Batteries are to be inserted with the correct polarity (see inside booklet for diagram).
- Do not dispose batteries in a fire—batteries may leak or explode.

LED Indicator LED

off	on
Idle and Charge Completion	Charging

Charger Specifications

Input	Charging Current	Full Voltage
5V	420~450mA	4.2 ± 0.03V

CAUTION The LED will be on continuously while the quadcopter is on. When it is low on power the indicator will blink. Please land the quadcopter.

CAUTION

BATTERY AND CHARGER SPECIFICATION

Battery type	Battery Specification	Usage Duration	Charge Time
Li-po battery	3.7V 400mAh	Helicopter flight time Approx. 8-10 Minutes	Approx. 90 Minutes Charging current Approx. 0.5A
Carbon Zinc Non Rechargeable	1.5V GP 15G R6P	Transmitter Operation Time 18Hours	Used for Lithium Polymer Approx. 3Times Charging

SYNCING THE REMOTE CONTROL & QUADCOPTER

STEP 1
 Insert the battery into the quadcopter and connect the plug. The two indicators will begin flashing. Place the quadcopter on a flat surface.

Important: Be sure the surface is flat and level. The quadcopter needs to calibrate its orientation.

STEP 2
 As shown in the figure, push the rocker of the remote control to the left and right at the same time. At this time, the indicator light of the aircraft flashes and then loosens the remote control, and the indicator light is always on and the calibration is complete.

WARNING
 When not in use for a long time, please take out the remote control battery and keep it properly. Note: If the remote control battery is not removed, the long storage will cause the leakage of the battery and damage the remote control device.

FLIGHT ADJUSTMENT AND SETTING

PLEASE PRACTICE SIMULATED FLIGHT BEFORE ACTUAL FLYING

Before you are familiar with the unit, please don't pilot it. Read the instruction carefully to get familiar with the direction controls.

1. Checking that propellers are securely attached to the motors. Pull the throttle down to prevent takeoff.
2. Place quadcopter in a clear open field and point the tail towards yourself.
3. Practice operating the camera button, and repeat practicing "Throttle height", "Left/Right", "Forward/backward", and bank left/right.
4. Strong impacts can jam the motors, using a long flat nose plier to unjam to rotor.
5. The simulation flight practice is very important, please keep practicing until you are comfortable with the controls.

STEP 3 RUDDER CONTROL PRACTICE
 1. Slowly raise the throttle stick
 2. Move the nose of the helicopter right or left and then slowly move the rudder stick in the opposite direction to fly back to its original position

STEP 4 PRECISION PRACTICE
 After you are familiar with all actions from step 1 to 3, draw a circle on the ground and practice within the circle to increase your accuracy
 You can reduce the size of the circle as you become familiar with the control reflexes.

STEP 5 DIRECTION CHANGE AND HOVERING PRACTICE
 After you are familiar with step 1 to 4, stand at side of the helicopter and continue practicing step 1 to 4. Then repeat the step 1 to 4 by standing in front of the helicopter

ADJUSTMENT OF EACH TRIM
 Slowly raise the throttle stick and observe just as the helicopter lifts off the ground if it leans in a direction. You can use the trim to correct this action.

STEP 1 THROTTLE CONTROL PRACTICE
 1. The throttle is on the left hand, push the throttle a little up to raise the copier to your line of sight then pull down a little to let the quadcopter slowly down to the floor. Repeat until you can easily and quickly control the altitude.

STEP 2 DIRECTION CONTROL PRACTICE
 1. Use the right stick to practice moving forward and backwards.
 2. Use the left and right stick to practice turns and banking.

Stable, flexible, 3D to roll easily

After you skilled above basic movements, you can play some of the breathtaking tumbling action. First, the aircraft flew more than 2 meters' height; Press the key roll over, then push the stick forward/backward, or left/right to top then release the aircraft can roll over.

INSTALL A MICRO SD CARD

If a MicroSD card is not installed the LEDs will flash 5 times. When a MicroSD card is installed the LEDs will stay illuminated.

Micro SD card sold separately. 8G (FAT&FAT32 format)

Indicating light

CAMERA / VIDEO OPERATION

The remote control can control the quadcopter's camera.

Photo Mode: Press the camera button to take a picture. The LED on the quadcopter will flash once to confirm it took a picture.

Video Mode: Press the video button to start recording a video. The LED on the quadcopter will blink slowly while it is recording. Press the video button again to stop recording.

To access the photos and video you will need a MicroSD card reader. The maximum capacity of MicroSD card is 64G(FAT format)

TROUBLE SHOOTING DURING FLIGHT

Situation	Cause	Solution
1 After turn on the quadcopter the LED indicators keep flashing but the quadcopter does not respond.	Transmitter and receiver fail pairing	- Sync the remote control and copter (refer to P.7) - Fully charge the battery
2 No response after the battery is connected to the quadcopter.	Check whether it is low power	Charging the helicopter
3 Main motor continues to spin after landing	Throttle stick not on the lowest position	Make sure the Throttle stick is on the lowest position
4 Helicopter rotor spins but cannot take off.	1. Check whether the blade assembled correctly or not. 2. Helicopter battery depleted.	Make sure the Throttle stick is on the lowest position
5 The helicopter still keeps turning after rudder trimming	The rudder never been initialized in the right place 2. Rotor blade deformation 3. Inconsistent speed during left/right pirouette.	1. Replace the main wing 2. Replace the main motor 3. Correct the level refer to P6
6 The quadcopter still keeps turning after trimming the rudder	1. The blade isn't fully installed 2. Correct the level refer to P6 3. Replace the main wing	1. The blade isn't fully installed 2. Correct the level refer to P6 3. Replace the main wing
7 The quadcopter shifts forwards/ backwards.	The trim is not even.	- Trim the elevator back to center. - Restart the remote control.
8 Can not fly the helicopter after crashing	1. Rotor blade turns off 2. Rotor blade deformation	1. Change replacement rotors 2. Tighten the Rotors

APEX

GD-90C

1 CAUTIONS

2 QUADCOPTER COMPONENTS

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11 TROUBLE SHOOTING DURING FLIGHT

MADE IN CHINA

WARNING For children under 14 years old, please use with adult supervision.

FCC Warning

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.

Note 1: 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 help.
- Note 2: 1.Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. The minimum separation generally be used is at least 20 cm.