⚠WARNING IMPORTANT

1. This product is only suitable for users overthe age of 8. Piloting this quadcopter will be dificult at the beginning. We recommend be occampanied by an experienced pilot at first.
2. This product is designed with high-tech electronics and mechanical parts. Do not fly 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 responsibilty for accidents during the operation of this device.
4. Contact cutomer 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 when 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.


High-voltage power lines


The places of Crowds


Rainstorm and thunderstorm


Near the railway


Roads and nearby places


Forests and rivers


High winds

PACKAGE CONTENTS


controller

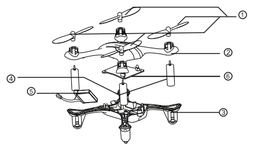

Li-Po Battery


USB Charge Cable


1x Small screwdriver

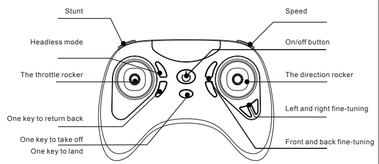

Replacement Rotors

QUADCOPTER COMPONENTS



No	Name	Quantity
1	Rotor Blades	2
2	Upper body	1
3	Bottom body	1
4	Motor	4
5	Ly-polymer battery	1
6	Receiver board	

REMOTE CONTROL FUNCTIONS



CONTROLLER INSTRUCTION

1.**On/off**
(1)On(After put on the battery, R/C is in sleep model,indicator extinguish 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 out and the remote control is off.
2.**Turning**
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.**Stunt**
Long press the button for stunt .The beeper will keep. ringing.
8.**Speed**
Short press the button to adjust the speed. There are three speed levels.You will hear a beep sound while adjusting . Beep one for level 1 ,beep two for level 2, beep three for level 3. The higher the level ,the faster the speed.
9.**One key take off and one key landing**
In the fixed high mode,after press the 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 aircraft, release the remote control rocker, 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 riot. After the calibration is completed, the indicator light will stop flash quickly).
12. Low voltage warning:
When the battery is lower than 2.5V of the remote control， the power light will flicker and alarm prompt to change the battery.
when the aircraft into the low voltage alarm, the buzzer will send a didi alarm of the remote control , indicating that the aircraft needs to stop flying

REPLACING THE PROPELLER BLADE

The propeller system is a precision instrument that may need to be repaired or replaceed 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

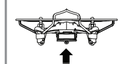
RECHARGEABLE BATTERY:
This Quadcopter uses a Li-Poly rechargeable battery.If battery no longer stays charged,dispose of battery properly according to local disposal requirements.
CONTROLLER BATTERIES:
Remote control requires 2"AAA"batteries (not included).Please read the important battery safety warning below.
- Do not mix alkaline,standard (carbon-zinc) and rechargeable betteries (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).
- Rechargeable batteries are only to be charged under adult supervision.
- Exhausted batteries should be removed immediately and must be recycled or disposed of properly according to state or local government ordinances and reulations.
- 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.

CHARGING BATTERIES

1.Take off the battery from the vehicle. Connect the battery with a USB cable . Plug the USB cable into a mobile phone adapter or a computer.
2.The Charging Indicator will blink when charging. The Charging Indicator will turn OFF when fully charged .

Charge with our dedicated charger.

⚠Caution During the flight, the indicator light of the aircraft is slow to flash while the remote control makes a "beep beep", indicating that the battery voltage is insufficient and please land down to recharge the battery.



Battery charge

Mobile phone adapter:: Output: 5V
Charging current: 1-2A.

LED Indicator LED		Charger Specifications		
off ○	on ☼	Input	Charging Current	Full Voltage
Idle and Charge Completion	Charging	5V	420~450mA	4.2±0.03V

⚠WARNING 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

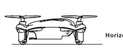
BATTERY AND CHARGER SPECIFICATION

Battery usage and charge duration reference			
Battery type	Battery Specification	Usage Duration	Charge Time
Li-po battery	3.7V 350 mAh	Helicopter flight time Approx. 6-8Minutes	Approx. 50Minutes /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	Non Rechargeable

APEX

SYNCING THE REMOTE CONTROL & QUADCOPTER


3.7V 350mAh
Li-Po Battery


Horizontal plane

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 it's orientation.

STEP 2

As shown in the figure, push the rocker of the remote control to the position in the lower right corner 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.

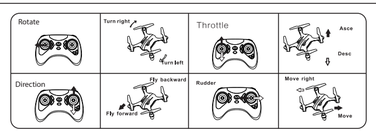
⚠WARNING
When not in use for a long time, please take out the remote control battery and keep it properly.
Note: If the remote control battery is not removed, the long storage will cause the leakage of the battery and damage the remote control device.

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 control sticks (as shown below), and repeat practicing "Throttle high/low" , "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.



FLIGHT ADJUSTMENT AND NOTICE FOR BEGINNERS

⚠CAUTION
- Check if the screws and blades are firmly tightened
- Check if the transmitter and helicopter are fully charged.

⚠CAUTION
- Make sure that no people or obstructions are in the vicinity.
- You must first practice hovering to fly safely, this is a basic flight action(meaning keep the helicopter in mid air in a fixed position)
- Please stand approximately 6ft diagonally behind the helicopter.

STEP1 THROTTLE CONTROL PRACTICE

1. The throttle is on the left hand, push the throttle a little up to raise the copter 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.

2.Hovering flight practic: Raise the quadcopter to a certain height then hover at that altitude.

3.Try increasing and decreasing the altitude quickly this time while still maintaining control.

STEP2 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.

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.

STEP5 DIRECTION CHANGE AND HOVERING PRACTICE

After you are familiar with step 1 to 4, stand at side of the helicopter and continue practicing step 1to4. Then repeat the step 1 to 4 by standing in front of the helicopter

ADJUSTMENT OF EACH TRIM

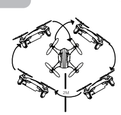
Slowly raise the throttle stick and observe just as the helicopter lifts off the ground if it leans in a direction. You can use the trim to correct this action.

1. Adjustment of Left/Right trim
Just before the quadcopter lifts-off, the nose leans left/right.
When it leans right adjust the trim to the left side.
When it leans left adjust the trim to the right side.

2. Adjustment of Forwards/Backwards trim
Just before the quadcopter lifts-off, the nose leans forward/backwards.
When it leans forwards adjust the trim down.
When it leans backwards adjust the trim up.

3. Adjustment of Roll trim
Just before the quadcopter lifts-off, the body rolls left/right.
When it rolls right adjust the trim to the left side.
When it rolls left adjust the trim to the right side.

Stable, flexible, 3D to roll easily



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 rollover, then push the stick of forward/backward, or left/right to top then release the aircraft can roll over.

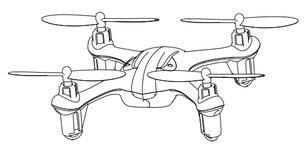
TROUBLE SHOOTING DURING FLIGHT

	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 rotor 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 unable to 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 triming or inconsistent speed during left/right pirouette.	1. The blades haven't been installed in the right place. 2. Rotor blade deformation 3. Didn't calibrate the flight.	1. Replace the main wing Replace the main motor 2. Change blade 3. Correct the level refer to P6
6	The quadcopter still keeps turning after trimming the rudder trim, or inconsistent speed during left/right turns.	1. The blade isn't fully installed 2.Rotor blade deformation 3.Rotor blade not match code	• Change blade • Correct the level refer to P6 • Replace the main wing • Replace the main motor
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

⚠WARNING
Product not recommended for users to operate the product

MADE IN CHINA

APEX



GD-90A

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.