



INSTRUCTION MANUAL

Thank you for purchasing this product. Please read this manual carefully before use and retain it for future reference.

Technical parameter of the hexacopter

Fuselage Length: 386mm	Gross Weight: about 193g	Motor: Coreless motor
Overall height: 60mm	Battery: Li-polymer 7.4V 700mAh	
Main Rotor Diameter: 135mm	Charging Time: about 2 hours	

Introduction

- Multi-rotor design insures more stable and powerful performance and make all kinds of 3D action more easier.
- Headless Mode and One Key Return are available.
- New designed structure makes assembly and maintenance easier.
- Adopting 2.4G auto connection technology, scores of hexacopters can be played at the same time.
- Equipped with the newest 6-Axis Gyro control system, this hexacopter has the characteristics of stable flight and easy operation.
- Full charged battery can support 8.5 minutes steady flight.

Thank you for purchasing this product. Please read this manual carefully before use and retain it for future reference.

Safety Guidelines

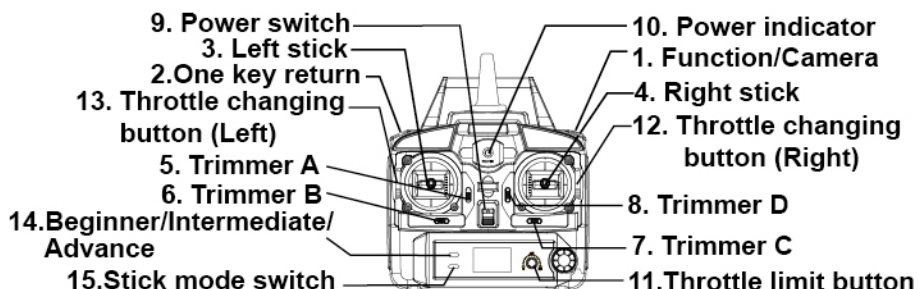
- This product is not a toy. It is not applicable for children who are under 14 years old.
- Please read this instruction manual carefully before playing and operate the product according to the manual.
- The users are in full charge of proper operating the hexacopter. The manufacturer and dealers disclaim all responsibility for the damage caused by misuse.
- Keep the small accessories away from the kids to avoid accident.
- Keep batteries away from fire or high temperature environment.
- When flying the hexacopter, keep it 1~2 meters away from user or others to avoid injury due to collision.
- Not to decompose or modify the product which may cause malfunction or accident.
- Fly the hexacopter within your eye vision for easy and safety control.
- Need adult supervision when this hexacopter is being played by children.
- Only batteries of the same or equivalent type as recommended are to be used.
- Insert batteries with correct polarity.
- Non rechargeable batteries are not to be charged; the transmitter need 3XAA batteries for work.
- Do not mix old and new batteries.
- Rechargeable batteries are to be removed from the toy before being charged;
- Rechargeable batteries are only to be charged under adult supervision;
- Exhausted batteries are to be removed from the toy;
- The supply terminals are not to be short-circuited.

The LCD Remote controller

Main features of the remote controller

- Adopt microcomputer control remote controller system and 2.4G auto connection technology, scores of cotpers can be played at the same time without any interference.
- Control the function of upward,downward,forward,backward, leftward, rightward,turn left, turn right and 3D flips & roll of the copter.
- Throttle control stick can be freely switched according to player's habit.

Sketch and function switches of the remote controller

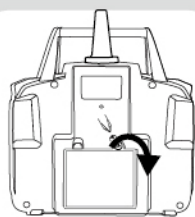


Remote Controller(Transmitter)

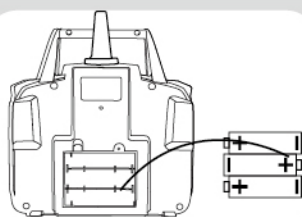
No.	Function switch	Function description
1	Function/ Camera	One key roll button: When the hexacopter is flying, press this button, the hexacopter will roll forward once. Camera button: When the hexacopter is powered on and mounted with camera, this is the camera on-off button. Headless mode on-off button: Press this button for about 2 seconds, the remote control will send out 2 beep sounds and letters "stick mod" will be flashing on the LCD screen, the indicator light of the hexacopter turns from constant "on" to "flashing", then, the hexacopter is in the headless mode. Press this button again for about 2 seconds, the remote control will send out 2 beep sounds and "stick mod" keeps constant "on", indicator light of the hexacopter turns from flashing to constant "on", then, the hexacopter exit headless mode.
2	One key return	When the hexacopter is flying in headless mode, press one key return button, the hexacopter will fly towards player. Press the one key return button again or operate the forward /backward control stick, the hexacopter will exit the one key return function.
3	Left stick	STICK MODE 2:upward/downward,turn left/turn right; STICK MODE 4:upward/downward,leftward/rightward. STICK MODE 1:forward/backward,turn left/turn right; STICK MODE 3:forward/backward,leftward/rightward.
4	Right stick	STICK MODE 1: upward/downward,leftward/rightward; STICK MODE 3: upward/downward, turn left/turn right; STICK MODE 2: forward/backward,leftward/rightward; STICK MODE 4: forward/backward,turn left/turn right.
5	Trimmer A	In stick Mode 2 and 4, this button is null. In stick Mode 1 and 3, it helps to tune the hexacopter's forward and backward flight.
6	Trimmer B	In stick Mode 3 and 4, it helps to tune the hexacopter's sideward flight. In stick Mode 1 and 2, it helps to tune the hexacopter's left and right direction turning speed.

No.	Function switch	Function description
7	Trimmer C	In stick Mode 3 and 4, it helps to tune the hexacopter's left and right direction turning speed. In stick Mode 1 and 2, it helps to tune the hexacopter's sideward flight.
8	Trimmer D	In stick Mode 1 and 3, this button is null. In stick Mode 2 and 4, it helps to tune the hexacopter's forward and backward flight.
9	Power switch	It controls the power source of the transmitter. Slide the power switch to the "ON" position, the transmitter is powered on; slide the power switch to the "OFF" position, the transmitter is powered off.
10	Power indicator	The indicator light keeps blinking slowly: the transmitter is not activated. The indicator light keeps flashing rapidly: the transmitter is sending out connectional signal to the hexacopter. The indicator light keeps on without blinking: the transmitter is ready for controlling the flight.
11	Throttle limit button	The throttle of the hexacopter can be adjusted by this button, player can use this button to increase or decrease the hexacopter's upward/downward speed.
12/13	Throttle changing button	Slide down or slide up the 2 buttons at the same time to select the throttle control stick.
14	Beginner/ Intermediate/ Advance	There are 3 flight modes of the hexacopter : low speed, medium speed and high speed.
15	aileron/rudder changing button	Also named Stick Mode changing button. Press this button to change the control stick mode.

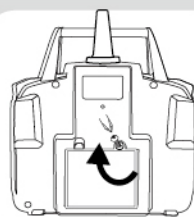
How to install the battery of remote controller



Pic.1



Pic.2



Pic.3

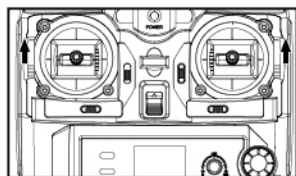
How to remove and insert batteries.

1. Unscrew counter clockwise to open the battery compartment cover. (Pic.1)
2. Install 3 X AA batteries into the battery compartment according to the given polarity. (Pic. 2)
3. Screw clockwise to close the battery compartment. (Pic. 3)

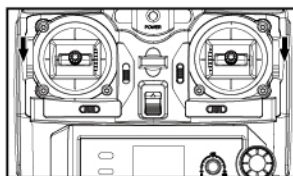
Select throttle control stick

There is 1 throttle button on either side of the remote controller.

1. Slide both of the 2 buttons to "R", the right stick is the throttle control stick.
2. Slide both of the 2 buttons to "L", the left stick is the throttle control stick.
3. Both of the 2 buttons should be either on the position of "R" or "L", otherwise, the remote controller can not be activated.

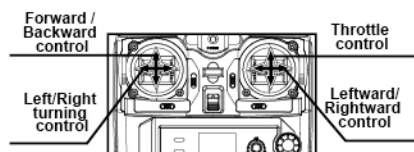


Pic.4



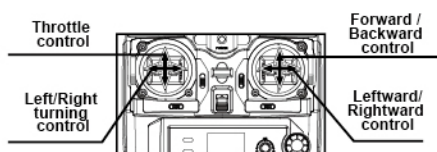
Pic.5

Stick mode selection



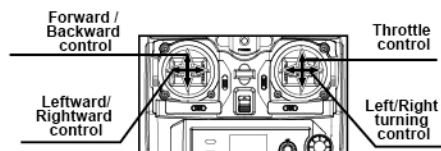
Pic.6

STICK MODE:1



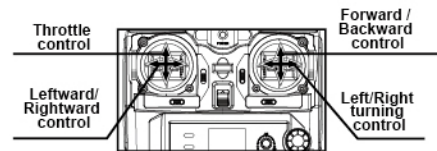
Pic.7

STICK MODE:2



Pic.8

STICK MODE:3



Pic.9

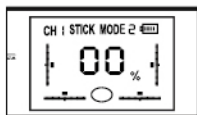
STICK MODE:4

When the right stick controls the throttle, press the AILE/RUDD button to select the Mode(Mode 1 or Mode 3).

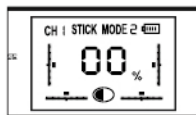
When the left stick controls the throttle, press the AILE/RUDD button to select the Mode(Mode 2 or Mode 4).

Flight mode selection

There are 3 flight modes available: low speed, medium speed and high speed. Player can select the flight speed by pressing the flight mode button.



Pic.10



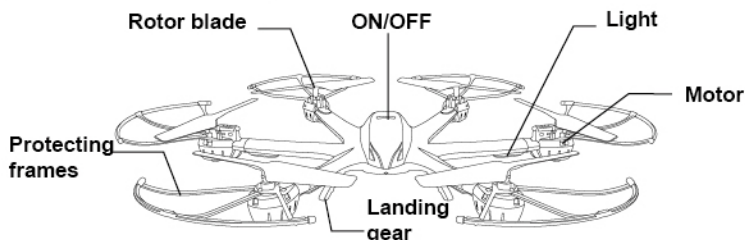
Pic.11



Pic.12

The hexacopter

Major parts of the hexacopter



Protection frame and landing gear installation



Pic.13



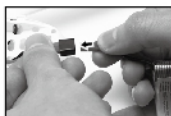
Pic.14

1. There are 3 interfaces on each motor cabinet. Insert the frame plugs into the interfaces and fix it. (Pic.13)
2. There are 4 interfaces at the bottom of the hexacopter, insert the landing gear plugs into the interfaces and fix it. The landing gear is trapezoid, make sure that the longer waist of the trapezoid is point to the direction of the hexacopter's nose. (Pic.14)

How to change new battery for the hexacopter



Pic.15



Pic.16



Pic.17



Pic.18

1. Open the battery door by screwing counter-clockwise. (Pic.15)
2. Unplug the battery wire from the power wire plug of the hexacopter and take out the battery. (Pic.16)
3. Plug the new battery wire into the power wire plug of the hexacopter and insert the battery into the battery compartment. (Pic.17)
4. Close the battery door and fasten it by screwing clockwise. (Pic.18)

How to charge the hexacopter

Turn off the hexacopter, open the battery door by screwdriver, unplug the battery cable from the power wire plug and take out the battery. Insert the charger to the power outlet, the indicator light will be green; connect the battery cable with the charger wire plug, the indicator will be red when charging is proceeding; once the battery is full charged, the indicator light will be green. Full charging takes about 2 hours.

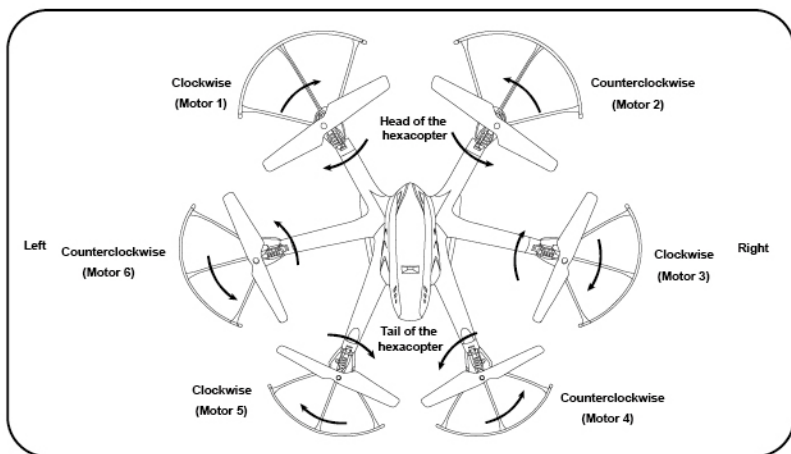


Pic.19

NOTE: Battery should be full charged before storing.

Preparation for flight

- Make sure that the battery (at the bottom of the hexacopter) is well installed and connected with power wire of hexacopter. The hexacopter is OFF.
- Turn on the hexacopter; the flash light will keep flashing quickly, the gyro of hexacopter will be in signal detecting condition. Set the hexacopter to flat surface, about 4 seconds later, the flash light will keep constant "ON". It means that signal connection is finished and the hexacopter is ready for flight.
- To ensure steady flight, please set the value of the Trimmer to the midpoint.
- Push up the throttle stick slowly and the hexacopter takes off.
- To avoid any misunderstanding, we have defined the orientation of the hexacopter as follows: The hexacopter is set to be copter nose right ahead and tail facing the player. The copter nose direction is named as "forward", the tail direction is named as "backward". The copter flies up to the sky is named as "upward"; the copter flies down to the ground is named as "downward". Player's left side is named as "left", player's right side is named as "right". All the directions we are talking about in this manual are subject to the definition above.



Pic.20

- The blue lights are at the front of the hexacopter; the orange lights are at the back of the hexacopter.
- When the hexacopter is on, checking the rotation direction of the rotor blades; the front-left and right-back rotor blades should be rotating in clockwise direction; the right-front and left-back rotor blades should be rotating in counter-clockwise direction.
- If the hexacopter keeps flying to one side, it can be corrected by adjusting the trimmer on the remote control.

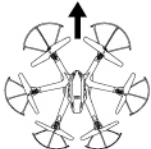
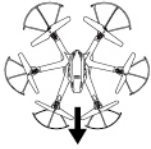
Remarks:

- Signal connection between the hexacopter and the remote control is required for the first use.
- Set the connection one by one to avoid signal connection error.
- To better protect the battery, please unplug the battery cable from the power wire after the use.

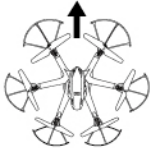
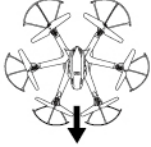
Trimmer Functions

1. If the hexacopter keeps moving forward/backward even there is no control signal given, users may adjust the elevator trim to keep the hexacopter balanced.

STICK MODE 1 or 3:

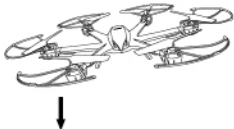
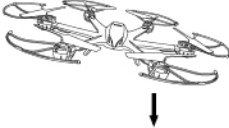
	<p>If the hexacopter keeps moving forward, push down Trimmer A until it gains balance.</p>
	<p>If the hexacopter keeps moving backward, push up Trimmer A until it gains balance.</p>

STICK MODE 2 or 4:

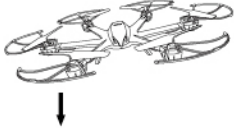
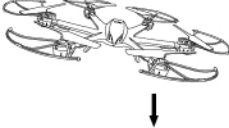
	<p>If the hexacopter keeps moving backward, push up Trimmer D until it gains balance.</p>
	<p>If the hexacopter keeps moving forward, push down Trimmer D until it gains balance.</p>

2. If the hexacopter keeps moving leftward/rightward even there is no control signal given, users may adjust the aileron trim to keep the hexacopter balanced.

STICK MODE 3 or 4:



	<p>If the hexacopter keeps moving leftward, turn right of Trimmer B until it gains balance.</p>
	<p>If the hexacopter keeps moving rightward, turn left of Trimmer B until it gains balance.</p>

STICK MODE 1 or 2:



	<p>If the hexacopter keeps moving leftward, turn right of Trimmer C until it gains balance.</p>
	<p>If the hexacopter keeps moving rightward, turn left of Trimmer C until it gains balance.</p>

3. If the hexacopter keeps spinning even there is no control signal given, users may adjust the rudder trim to keep the hexacopter balanced.

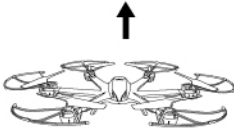
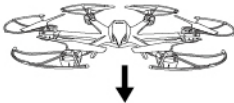


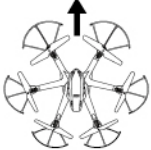
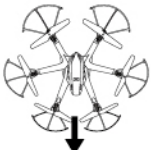
STICK MODE 1 or 2:

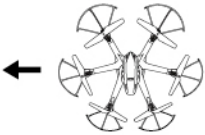
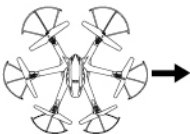
	<p>If the hexacopter keeps spinning counterclockwise in the air, turn right of Trimmer B until it gains balance.</p>
	<p>If the hexacopter keeps spinning clockwise in the air, turn left of Trimmer B until it gains balance.</p>

STICK MODE 3 or 4:

	If the hexacopter keeps spinning counterclockwise in the air, turn right of Trimmer C until it gains balance.
	If the hexacopter keeps spinning clockwise in the air, turn left of Trimmer C until it gains balance.

Operating

Upward		Push up the throttle control stick, the rotation speeds of the mains rotors are increasing and the hexacopter ascends accordingly.
Downward		Push down the throttle control stick, the rotation speeds of the mains rotors are decreasing and the hexacopter descends accordingly.
Turn left		Turn the left/right turning control stick to the left, the hexacopter will turn left.
Turn right		Turn the left/right turning control stick to the right, the hexacopter will turn right.
Forward		When the hexacopter is flying, push up the forward/backward control stick, the hexacopter will move forward.
Backward		When the hexacopter is flying, push down the forward/backward control stick, the hexacopter will move backward.

Leftward flight		Turn the sideward flight control stick to the left side,the hexacopter will fly leftward.
Rightward flight		Turn the sideward flight control stick to the right side,the hexacopter will fly rightward.

3D Roll

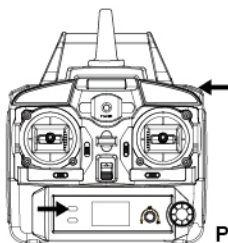
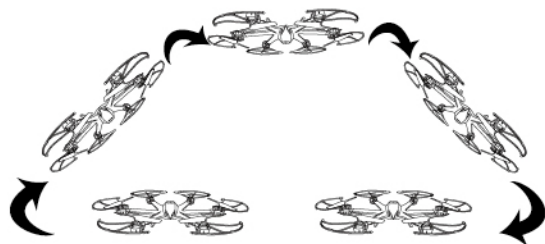
There are 3 channels of the remote control: low speed channel, medium speed channel and high speed channel. At any channel, press the roll button on top of the remote control, the hexacopter will roll forward or roll backward accordingly. When the remote control is at high speed channel, roll action can be done through controlling the forward/backward control stick and the leftward/rightward flight control stick.

Manual Roll(at high speed channel):

When both of the left and right control stick travels are more than 95%, roll action will be performed once; when both of the left and right control stick travels are less than 95%, the hexacopter will perform the flight according to the received control signal.

One key Roll (at any channel):

To easily enjoy the fun of rolling, player can press the one key roll button on top of the remote control to perform roll action. Before rolling, make sure that the hexacopter is flying 3 meters above the ground; then, press the one key roll button, the hexacopter will roll forward or backward according to the given signal.



Pic.21

TIPS:

- 1.Beginners are recommended to play the hexacopter at low speed or medium speed channel.
- 2.It is better to play the hexacopter at open and wide space.

Headless mode:

Enter into headless mode:

Once signal of the hexacopter and the remote control is successfully connected, press the function button located at top right of the remote control for 2 seconds, the remote control will send out two beep sounds and there will be letters of "stick mod" flashing on the LCD screen, the hexacopter's indicator light turns from constant 'ON' to "flashing". That means the hexacopter is in headless mode.

Exit headless mode:

When the hexacopter is in headless mode, press the function button at top right of the remote control of 2 seconds, the remote control will send out 2 beep sounds and the letter "Stick mod" is keeping constant "on"; the hexacopter's indicator light turns from flashing to constant "on". That means the hexacopter has exited the headless mode.



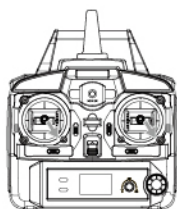
Pic.22

Check up on the direction of the hexacopter in headless mode:

When the hexacopter is in headless mode, flight direction proof is needed. Set the head of the hexacopter ahead of the player, turn both of two control sticks to the lower right corner for about 2 seconds, the hexacopter's indicator light will turn from slowly flashing to quick flashing and flight direction proof is finished.



Pic.23

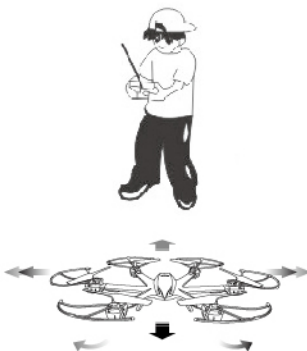


Pic.24

Flight direction control in headless mode:

- When checking up on the flight direction of the hexacopter, set the hexacopter nose right ahead and tail facing the player's, at this time, the hexacopter's nose is pointing forward; this direction will be constantly considered as "forward" when forward signal is given from the remote control, no matter where the hexacopter nose is pointing to. That is to say, the player's straight front side is defined as "forward"; the player's back side is defined as "backward", the player's left side is defined as left; the player's right side is defined as right.

- When the hexacopter is flying in headless mode, player should keep facing the forward direction. Otherwise, the hexacopter will be out of control. The hexacopter control is showed as below:

Push up the forward/backward control stick, the hexacopter will fly forward, away from player.		Turn right the sideward flight control stick, the hexacopter will fly to the right side of the player.
Push down the forward/backward control stick, the hexacopter will fly backward, towards player.		Turn right the turning control stick; the hexacopter will turn to the left side of the player.
Turn left the sideward flight control stick; the hexacopter will fly to the left side of player.		Turn left the turning control stick; the hexacopter will turn to the right side of the player.

One key return:

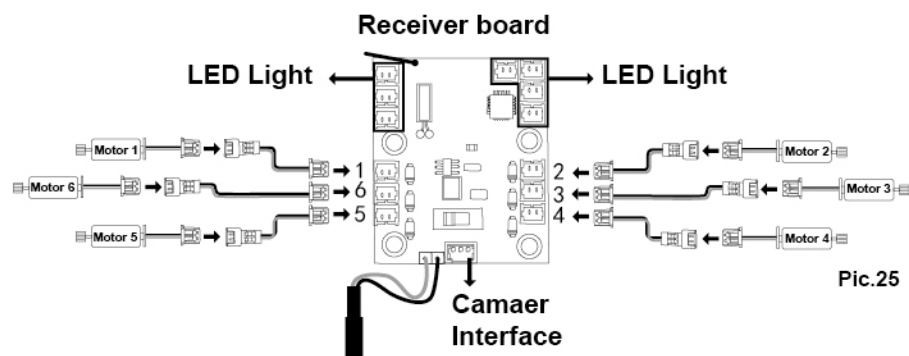
When the hexacopter is flying in headless mode, press one key return button, the hexacopter will fly towards player. Press the one key return button again or operate the forward /backward control stick, the hexacopter will exit the one key return function.

Remarks:

- Flight direction proof is needed when the hexacopter is going to fly in headless mode. When checking up on the flight direction, the hexacopter should be set right ahead and tail facing the player; the player should face the direction where the hexacopter nose is pointing to. Player should stand in the same direction when playing the hexacopter.
- When the hexacopter is flying in headless mode, if the flight direction is inconsistent with the player's operating direction or there's direction deviation, please stop playing and carry out the flight direction proof action again.

Schematic diagram of the connection of the motors and the PCB

It is important that the installation of the PCB and the wire connection of the motor to the PCB should be connected properly according to the diagram shown as below.



Pic.25

- 1.Motor 1 should be connected with interface 1.
- 2.Motor 2 should be connected with interface 2.
- 3.Motor 3 should be connected with interface 3.
- 4.Motor 4 should be connected with interface 4.
- 3.Motor 5 should be connected with interface 5.
- 4.Motor 6 should be connected with interface 6.

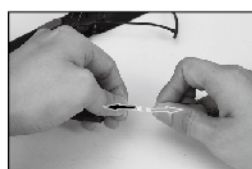
How to change the foot stand



Pic.26



Pic.27

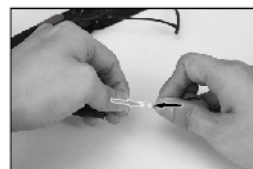


Pic.28

- 1.Take out the screws with a screwdriver by turning counter clockwise.(Pic.26)

- 2.Pull out the foot stand.(Pic.27)

- 3.Unplug the motor wire from the power wire plug. (Pic.28)



Pic.29



Pic.30



Pic.31

- 4.Connect the motor wire of the new foot stand to the power wire plug.(Pic.29)

- 5.Install the foot stand to the main body of the hexacopter.(Pic.30)

- 6.Lock the foot stand with screws.(Pic.31)

Install the holder of the mobile phone:



Pic.32

1. Connect the stand bar to the mobile phone fixing component. (Pic.32)



Pic.33

2. Adjust the fixing component upward or downward according to the size of the mobile phone. (Pic.33)



Pic.34

3. Set the mobile phone holder to the top of the remote control. (Pic.34)

Remark:



Pic.35

1. Pull back the lock center of the stand bar and slowly push up the holder, the mobilephone holder would be taken down. (Pic.35)

FPV HD CAMERA installation:



Pic.36

1. The camera should be fastened to the interface at the bottom of the hexacopter. (Pic.36)



Pic.37

2. Fix the camera by screwing clockwise. (Pic.37)



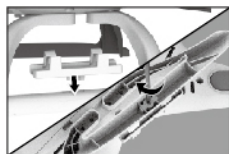
Pic.38

3. Insert the camera wire plug to the camera interface. (Pic.38)



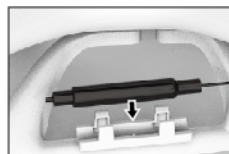
Pic.39

4. Insert the camera wire plug to port of C4005. (Pic.39)



Pic.40

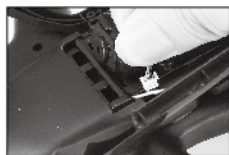
5. Insert the antenna bracket into interface of the foot stand and lock the screws. (Pic.40)



Pic.41

6. Install the antenna to the antenna bracket. (Pic.41)

HD CAMERA installation



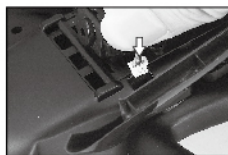
Pic.48

1.The camera should be fastened to the interface at the bottom of the hexacopter.(Pic.48)



Pic.49

2.Fix the camera by screwing clockwise. (Pic.49)



Pic.50

3.Insert the camera wire plug to port of C4002.(Pic.50)

FPV software download and installation

Install software

- For Android system, please visit our website www.El-HI.com to download the software "CAMTECH".
- For Apple IOS system, please go to the APP store to download the software "CAMTECH".

Instructions

Power on the quad-copter, the FPV indicator light (at the bottom of the quad-copter) is on. Enter into settings of the smart phone, open WIFI, search "CAMTECH" and connect it.

After successful connection, exit settings. Open "CAMTECH" at the smart phone; click "**CONNECT**" to enter into the control interface to watch the real-time video.



1.Open the software "CAMTECH".



2.Click the "**CONNECT**" button.



3.Image is showing on the screen.

Trouble shooting

	phenomenon	reason	solution
1	The lights are flashing quickly.	Gyro of the hexacopter is under signal detecting condition.	Set the hexacopter to any flat surface.
2	The lights are flashing on twice and flashing off once.	The hexacopter is not received the signal from the remote control or signal connection is interrupted.	For absence of signal, activate the remote control for the signal connection. For signal interruption, turn off the remote control and turn it on again.
3	The lights are flashing on and off.	The hexacopter is underpowered.	Charge the battery or change another full charged battery.
4	The hexacopter is shaking fiercely.	The rotor blade is out of shape.	Change the rotor blades.

