

User Handbook

Specifications:

Main Rotor Dia. : 105.5mm

Software: WK-REMOTE

Gyro: Six-Axis

Overall Length: 145mm

Transmitter: 2402D/DEVO-4/6/7/7E/8S/10/12S/F4/F7

Drive Motor: HS-8520

Overall Width: 145mm

All-up Weight: 89g(Battery included)

Battery: 3.7V 600mAh Li-Po

Receiver: RX2646H-DS

Features:

- 1) Equipped with Wi-Fi module, support Iphone, Ipad series products.
- 2) Support Walkera Devo series Transmitters.
- 3) The usage of 6-Axis gyro and Intergration design of the flight status control, ensures the precise location of the flight performance.
- 4) Adopting quad-motors Ratio Gear driving system, stable flight, and can easily do the front and back, left and right rolls.
- 5) The simple and compact modularized design, easy to install and maintain.
- 6) Flight time will be up to 10 minutes on a 3.7V 600mAh Li-Po.
- 7) The RX firmware can be Updated Online (required UP02 upgrade cable and adapter).

QR W100S



Adopted with ratio gear motor

Doubled the flight time, up to 10 minutes

Lower power loss and improvement in efficiency

More stable and easier to control



WiFi Version

Support Iphone and Devo Seris Radios
(MODEL with WiFi module)

DIY Video Version

RC Cube

Upgrade WK series radios with FPV function!

Support WK/Spectrum/Futaba/JR series Radios and
DIY Video with iPhone or iPad.
(Model With WiFi module and needed to complete RC Cube)

FPV advanced Version

Support the FPV radio DEVO F4/F7 and to enjoy the FPV videos
(exchange the WiFi module to TX5805/5806 module)

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01

Forewords



02

Safety matters
needing
attention**Dear customer:**

Thank you for purchasing a Walkera radio control aircraft product. In order to quickly and safely master the operation of the QR W100S, please read the user handbook carefully and then keep it in a safe place for future consultation and reference.

2.1 Important Statement

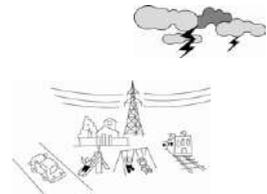
- (1) This product is not a toy. It is a piece of complicated equipment which harmoniously integrates engineering materials, mechanics, electronics, aerodynamic and high frequency radio. Correct installation and adjustment are necessary to avoid accidents taking place. The owner must always operate in a safe manner. Improper operation may result in serious property damage, bodily injury or even death.
- (2) We accept no liability for damage and consequent damage arising from the use of these products, as we have no control over the way they are maintained, used and operated.
- (3) This product is suitable for experienced RC UFO pilots aged 14 years or more. All minors must be accompanied by a responsible adult when flying.
- (4) The flight field should be legally approved by the local government. We accept no liability for any safety duties or fines arising from operation, usage or mis-control after the sale of the products.
- (5) We consign our distributors to offer technical support and service after sale. Please contact the local distributors for problem resolution caused by usage, operation, maintenance, etc.

2.2 Safety matters needing attention

RC UFO flight is a high risk hobby, whose flight should be kept far away from other people. Mis-assembled or broken main frame, defective electronic equipment, and/or problematic radio system will lead to unforeseen accidents such as bodily injury or property damage. The pilot **MUST** pay attention to the flight safety and UNDERSTAND his responsibility for accidents caused by his carelessness.

(1) Far away from obstacles and people

A RC UFO in flight has risk of uncertain flight speed and direction which is potentially dangerous. When flying, please keep your RC UFO far away from people, high buildings, high-tension lines, etc, and avoid operating in rain, storms, thunder and lightening.

**(2) Keep away from humidity**

RC UFO should be kept away from humidity and vapor because its complex, precise electronic components and mechanical parts may be damaged.

**(3) Proper operation and maintenance**

Please use Walkera original spare parts to upgrade, modify or maintain your UFO in order to ensure its safety. Please operate your UFO within the range of functions permitted. It is forbidden to use it outside of the safety laws or regulations.

**(4) Avoid flying alone**

At the beginning of learning about radio-controlled flight there are some difficulties to overcome. Please avoid flying alone. Invite experienced pilots to guide you (two of the most effective methods to practice are via a PC flight simulator and/or under the supervision of a skilled pilot).



QR W100S

2.4GHz

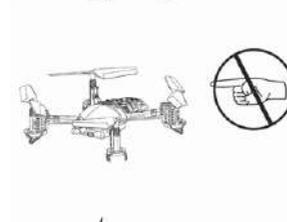
(5) Safe operation

Please fly your UFO according to your physical status and flight skills. Fatigue, listlessness and mis-operation will increase the possibilities of accidental hazard.



(6) Away from highly spinning parts

Please keep pilot, people and object away from the spinning blades of both main rotor and tail rotor.



(7) Protect from heat

A RC UFO is made from metal, fiber, plastic and electronic components, etc. Please keep away from heat and sunshine in order to avoid distortion, even damage, caused by high temperatures.



2.3 Attention before flight

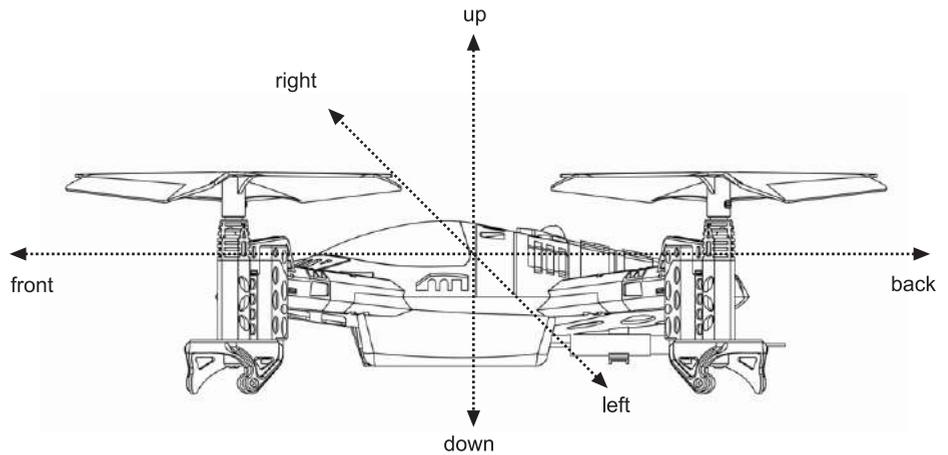
- (1) Make sure that the battery power is saturated.
- (2) Make sure the connections between the power cables of the battery pack and motors are solid. Continuous vibration may loosen the batteries or cables in flight, possibly resulting in a loss of control.
- (3) Please check whether all 4 blades are at the same horizontal level or not. If not, please adjust first before flight or the QR W100S won't fly well.



02

**Safety matters
needing
attention**

We define the orientation of UFO in order not to cause confusion in the following descriptions. That is to say, the tail boom of UFO is facing the pilot (tail in), and its head facing forward (front of pilot). The left hand of pilot is the left side of UFO, the right hand of pilot is the right side of UFO. Its head is to the front and its tail boom is to the back. The direction in which main body of UFO is facing is up, and its skids are facing down.



03

Definition of UFO Orientation

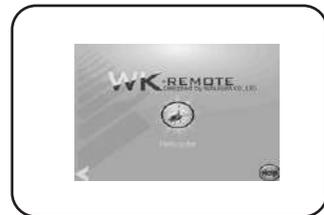


04

Standard equipment



▲ QR W100S



▲ WK-REMOTE software



▲ Li-polymer battery pack



▲ GA006 charger



▲ Tool kit

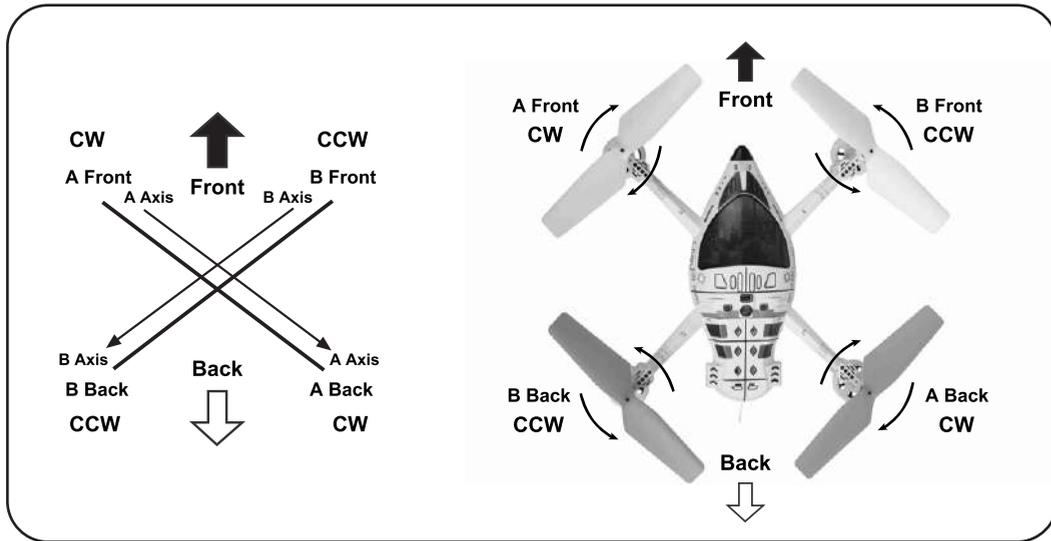


▲ User Handbook

QR W100S

2.4GHz

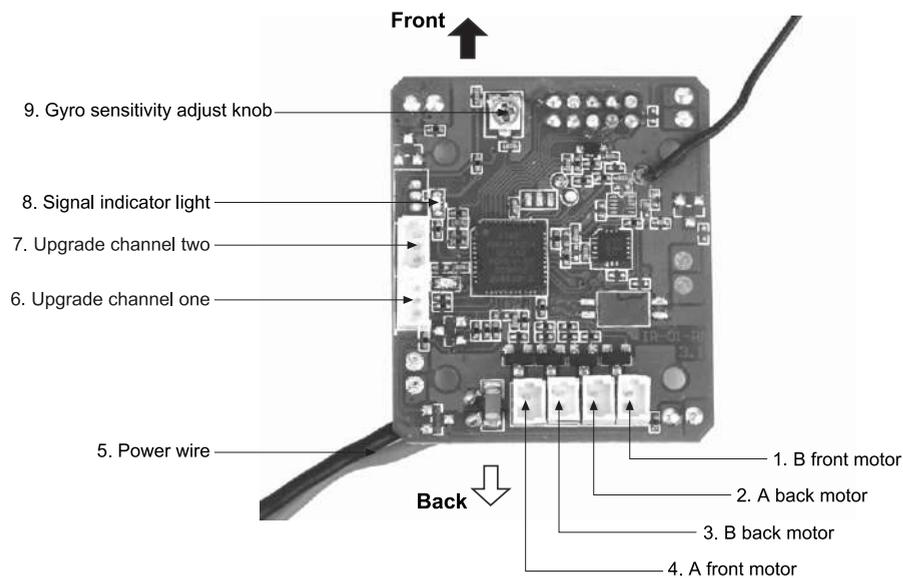
1. The front propellers are in white color while the rear propellers are in Orange.



2. After connecting the power of the QR W100S, please check the propellers rotation direction, A front/ back propellers rotate CW, B front/ back propellers rotate CCW.

6.1 RX2646H-DS receiver features

- (1) Receiver RX2646H-DS adopts 2.4G spread spectrum technology with the functions of automatic scanning, code pairing and LED receiving indication.
- (2) Integrated design of 6-Axis gyro and abitude control provides precise locating in air.



05

Additional
Instruction



06

Setup of the
RX2646H-DS
receiver



06

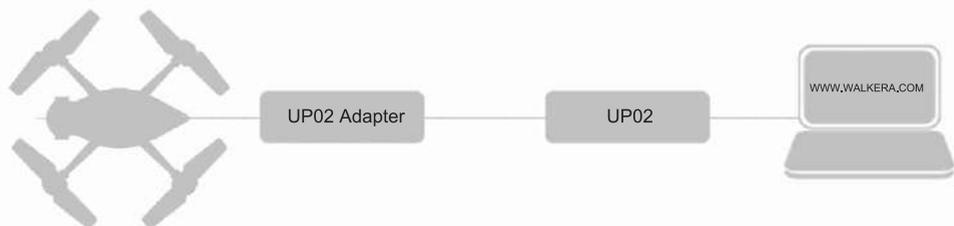
Setup of the RX2646H-DS receiver

6.2 Function of receiver

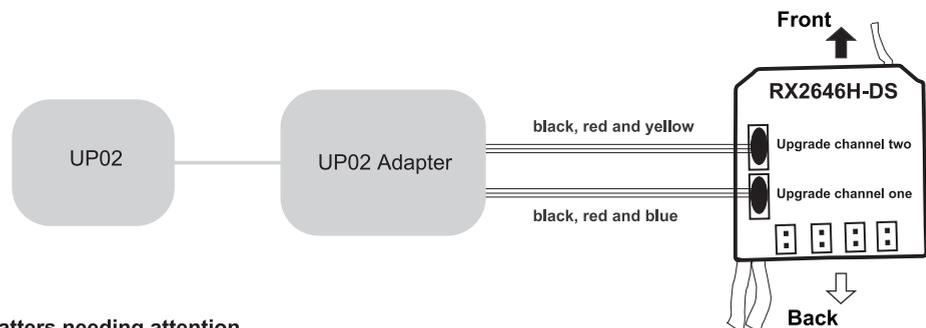
S/N	Full name	Function	Connection
1	B front motor	Connect to the B front motor wire.	Terminal is facing right.
2	A back motor	Connect to the A back motor wire.	Terminal is facing right.
3	B back motor	Connect to the B back motor wire.	Terminal is facing right.
4	A front motor	Connect to the A front motor wire.	Terminal is facing right.
5	Power wire	Connect to the lipo battery.	
6	Upgrade channel one	a. Upgrade spare; b. Connect with the Wi-Fi module signal wire; c. Connects to the plug of TX5805/TX5806 (FCC) transmitter power wire;	Terminal is facing left.
7	Upgrade channel two	Upgrade spare or insert the bind plug to clear the ID memory.	Terminal is facing left.
8	Signal indicator light	Display the status of received signal.	
9	Gyro sensitivity adjust knob	Adjust the gyro sensitivity of the front/back /left/right /tail.	

6.3 Adjustment of receiver

- (1) Adjust knob of the gyro: CW rotating increase the sensitivity of the Gyro, CCW rotating decrease the sensitivity of the Gyro. The default setting is Middle, generally there is no need to trim.
- (2) Clear fixed ID in receiver: Insert plug terminal into upgrade channel two of the receiver to clear fixed ID memory and disconnect plug terminal when the indicator of the receiver start to slowly flash.
- (3) Receiver upgrade:
 - (3.1) QR W100S control program upgrade can be downloaded online at Walkera Official Website: www.walkera.com.
 - (3.2) QR W100S control program upgrade tool includes UP02 cable and UP02 Adapter.



- (3.3) Plug the three colored cable (**black, red and blue**) into upgrade channel one and plug the three colored cable (**black, red and yellow**) into upgrade channel two (fixed ID may clear after upgrading).



6.4 Matters needing attention

- (1) All the wires should be connected in a correct way. Misconnection will result in failure to receive signal, even damage to the receiver.
- (2) Please use special adjustment pen to rotate the gyro tuning knob in order to not damage the knob.
- (3) The QR W100S must be still and place in a horizontal position when matching code.

- (1) GA006 is suitable for 1 cell (3.7V) Li-ion or Li-polymer battery and can charge 2 pieces of batteries maximum at the same time.
- (2) Please plug the pin of your battery into the jack of the GA006 first and then connect to the power. Otherwise, the LED may not become red and the voltage may be higher than 3.8V. You need to disconnect the USB power supply and reconnect it.
- (3) When USB power supply is well connected and battery is charging, the LED will become red. After your battery is full charged, the LED will not become red.

8.1 Software Installing

The software is designed for iPhone or iPad, please download the software WK-REMOTE at APP Store.

8.2 Connecting instruction

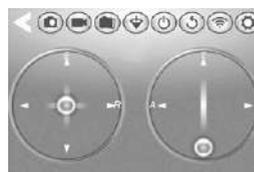
- (1) Connect the UFO power and the indicator light will flash quickly.
- (2) Enter the iPhone or iPad setting interface to active the Wi-Fi. Then the WK***** could be found at the Wi-Fi search list. If there is a "✓" symbol, it means successful binding. Exit after finish.
- (3) Enter software WK-REMOTE in the iPhone or iPad and then enter Model Select interface. Touch icon  to enter control interface. And then touch the icon  of data transmission switch (data transmission switch is colorful). It means successful binding if the UFO indicator light becomes solid. On the iPhone or iPad screen, there will be real-time video image shown. Then you are able to control the UFO. (Note: When flying, please keep away from other Wi-Fi signal environment in case of interference)



Booting interface

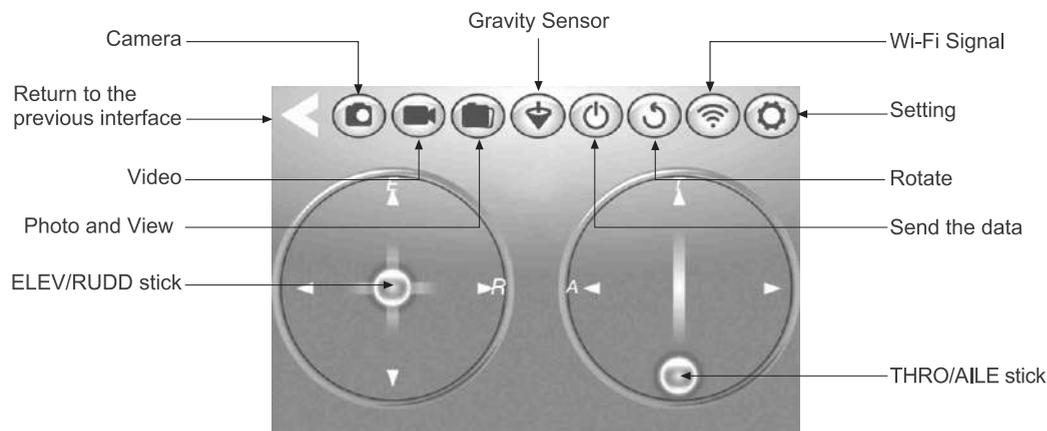


Model Select interface



Control interface

8.3 Control interface instruction



07

Instruction for GA006 Charger



08

WK-REMOTE software control

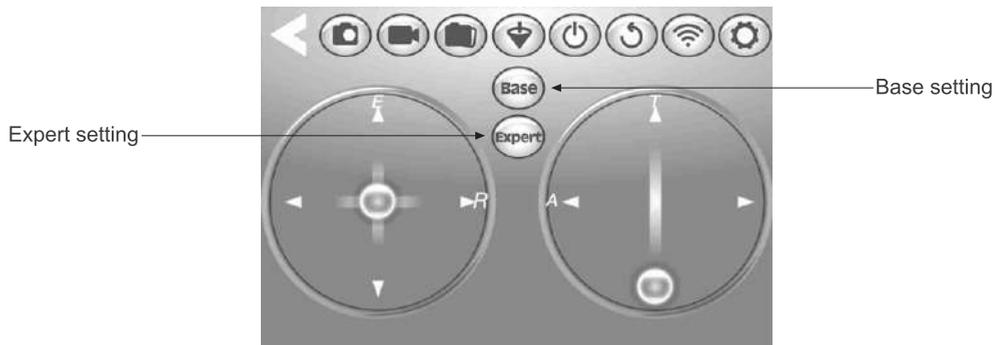


08

WK-REMOTE software control

8.4 Function setting

Touch in flight control interface to enter to setting menu, show as below:



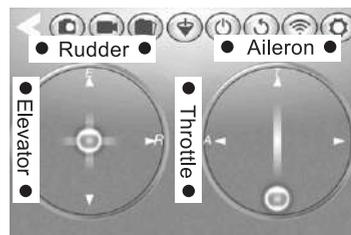
8.4.1 Base setting

Touch base setting icon shown as on above picture, there are Model select, Mode select, Reverse setting. Shown as below:

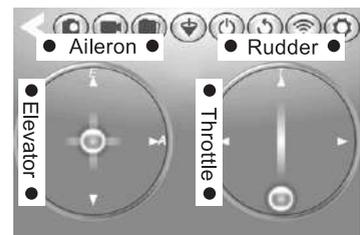


(1) Model select: there are 4 model can be selected.

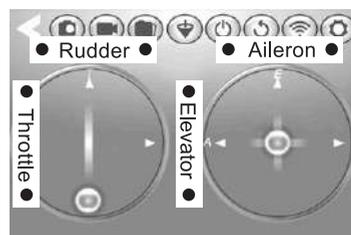
(2) Mode select : there are 4 mode available. Throttle stick on the right (Mode1 and Mode3) and throttle stick on the left (Mode2 and Mode4).



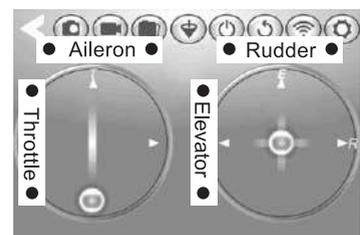
Mode 1(Throttle stick on the right)



Mode 3(Throttle stick on the right)



Mode 2(Throttle stick on the left)



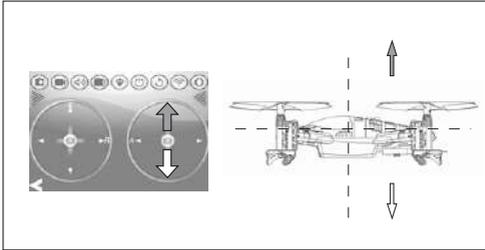
Mode 4(Throttle stick on the left)

- (3) Reset: When touch this Reset icon, all settings will be reset to the factory original setting.
- (4) Reverse setting: Elevator, Aileron, Throttle, Rudder, Gyro, Pitch and so on, all of them are normal. Unselected symbol is gray means normal options, selected the symbol is colorful means reverse setup.

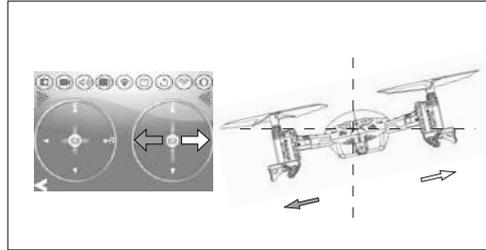
8.4.2 Expert setting: It doesn't need any Expert setting.

8.5 Operating methods

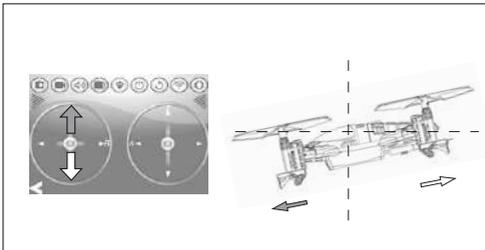
8.5.1 Manual flight control (take Mode 1 as example)



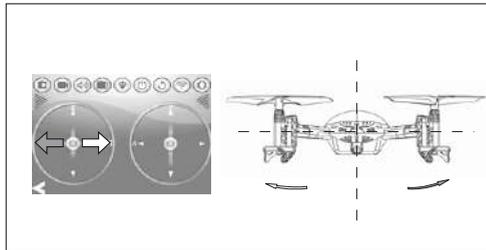
- (1) Throttle stick control: Press and hold the throttle control ball and then pushed up, the motor rotates, the higher it push, the faster the motor will rotate(fly higher); The motor will slow down when push down, the lower it push, slower the motor rotates.



- (2) Aileron stick control (left and right): When moving the AILE control ball left, the UFO accordingly flies left; When moving the AILE control ball right, the UFO accordingly flies right.



- (3) Elevator stick control(forward and backward): When moving the ELEV control ball up, the UFO accordingly flies forward; When moving the ELEV control ball down, the UFO accordingly flies backward.

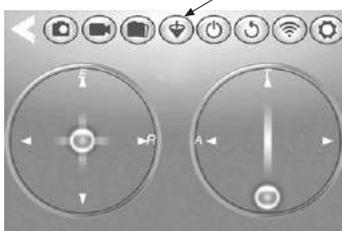


- (4) Rotate control: When moving the RUDD control ball left, the UFO accordingly rotate left(CCW); When moving the RUDD control ball right, the UFO accordingly rotate right(CW).

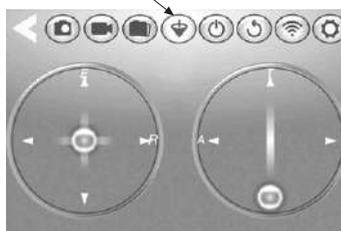
8.5.2 Gravity sensor control when flying(take sample for mode 1)

Touch the gravity sensor button on the screen, colorful is ON while gray is OFF. Please refer to below Illustration:

Gravity Sensor key Non Active status



Gravity Sensor key Active status



08

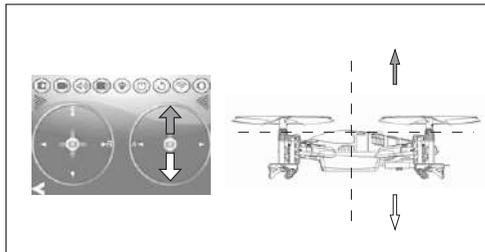
**WK-REMOTE
software
control**



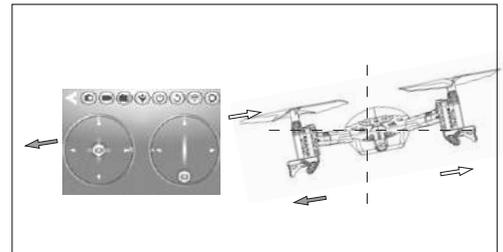
08

WK-REMOTE software control

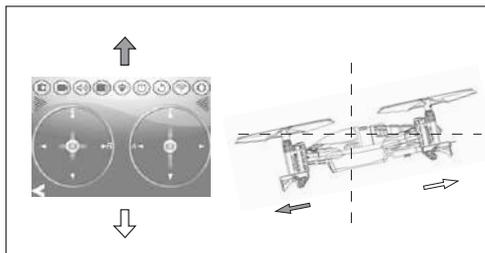
When switch the gravity sensor to colorful status, elevators and aileron control will be changed to gravity sensor control mode(can be operated by one hand). the direction control show as below:



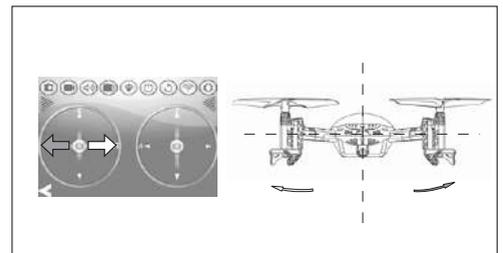
(1) Throttle stick control: Press and hold the throttle control ball and then pushed up, the motor rotates, the higher it push, the faster the motor will rotate(fly higher); The motor will slow down when push down, the lower it push, slower the motor rotates.



(2) Aileron stick control (left and right): When moving the phone to the left, the UFO will fly to the left; when moving the phone to the right, the UFO will fly to the right (The control ball won't scroll in mode 1 and mode 4 while in mode 2 and mode 3, the ball will scroll.)



(3) Elevator stick control(forward and backward): When moving the phone to the front, the UFO will fly forward; when moving the phone to the back, the UFO will be backward. (The control ball won't scroll in mode 1 and mode 4 while in mode 2 and mode 3, the ball will scroll.)



(4) Rotate control: When moving the RUDD control ball left, the UFO accordingly rotate left(CCW); When moving the RUDD control ball right, the UFO accordingly rotate right(CW).

8.6 Matters needing attention

(1) Touch the icon  for pause during the flight. Gray is OFF and forbid to use the control ball on the screen. Touch the icon again to continue. Colorful is ON and active the control ball at the same time.

(2) If the Wi-Fi can not to connect:

Possible causes	Solutions
The UFO battery is low.	Confirm the battery is fully charged.
Wi-Fi can not search the network.	Please close the Wi-Fi and research with the net again.

(3) If you need to change the UFO battery, please exit the software WK-REMOTE programe completely. When the Wi-Fi search list is re-refresh again, please select the corresponding net to connect . After success binding with the phone, please enter to the software WK-REMOTE again.

(4) The WK-REMOTE software's maximum remote radius is 25 meters, so do not operate exceed this radius.

9.1 Transmitter setup

9.1.1 DEVO-6/7/7E/8S/10/12S/F4/F7(optional radio)settings

(1) Type:Helicopter

(2) Swash type:1 Servo Normal

(3) Device Output

DEVO-6			DEVO-7			DEVO-7E			DEVO-F7		
Gear	FMOD SW	Active	GEAR	GEAR	ACT	Gear	HOLD SW	Active	Gear	GEAR SW	Active
Pitch	System	Active	AUX2	FMD	ACT	AUX2	FMOD SW	Active	Pitch	System	Active
									AUX2	FMOD SW	Active

DEVO-8S			DEVO-10			DEVO-12S		
Gear	GEAR SW	Active	Gear	GEAR SW	Active	Gear	GEAR SW	Active
Pitch	System	Active	AUX2	FMOD SW	Active	Pitch	System	Active
AUX2	FMOD SW	Active	AUX3	RUDD D/R	Active	AUX2	FMOD SW	Active
AUX3	RUDD D/R	Active	AUX4	AUX4 KB	Active	AUX3	AUX3 Lever	Active
			AUX5	AUX5 KB	Active	AUX4	AUX4 Lever	Active
						AUX5	AUX5 Lever	Active
						AUX6	AUX6 Knob	Active
						AUX7	AUX7 Knob	Active

(4) Reverse switch settings

DEVO-6		DEVO-7		DEVO-7E		DEVO-8S	
Elevator	Normal	ELEV	NORM	Elevator	Normal	Elevator	Normal
Aileron	Normal	AILE	NORM	Aileron	Normal	Aileron	Normal
Throttle	Normal	THRO	NORM	Throttle	Normal	Throttle	Normal
Rudder	Normal	RUDD	NORM	Rudder	Normal	Rudder	Normal
Gear	Normal	GEAR	NORM	Gear	Normal	Gear	Normal
Pitch	Normal	PITCH	NORM	Pitch	Normal	Pitch	Normal
		AUX2	NORM	AUX2	Normal	AUX2	Normal
						AUX3	Normal

DEVO-F4		DEVO-F7		DEVO-10		DEVO-12S	
Elevator	Normal	Elevator	Normal	Elevator	Normal	Elevator	Normal
Aileron	Normal	Aileron	Normal	Aileron	Normal	Aileron	Normal
Throttle	Normal	Throttle	Normal	Throttle	Normal	Throttle	Normal
Rudder	Normal	Rudder	Normal	Rudder	Normal	Rudder	Normal
		Gear	Normal	Gear	Normal	Gear	Normal
		Pitch	Normal	Pitch	Normal	Pitch	Normal
		AUX2	Normal	AUX2	Normal	AUX2	Normal
				AUX3	Normal	AUX3	Normal
				AUX4	Normal	AUX4	Normal
				AUX5	Normal	AUX5	Normal
						AUX6	Normal
						AUX7	Normal



09

Transmitter control



09

Transmitter control

9.1.2 2402D/DEVO-4 radio reverse setting

2402D		DEVO-4			
ELEV	NOR	ELEV	NOR	Remark: the switch in the "ON" position for reverse (REV); the switch in the "ON" reverse position for normal (NOR).	
AILE	NOR	AILE	NOR		
THRO	NOR	THRO	NOR		
RUDD	NOR	RUDD	NOR		

9.2 DEVO-F4/F7 with TX5805/TX5806(FCC) Video Select

Press ENT to the Main Menu. Press UP or DN to move the cursor → to point to System Menu, press ENT to System Menu; Press UP or DN to move the cursor → to point to Video Select, press ENT to Video Select setting interface. Press R or L to select Active. Press DN to move the cursor → to point to Channel item, press R or L to make the Number change between 1 and 8. With the TX5805/TX5806 (FCC) transmitting channel, 1-8 channels could be choosed to receive the image signal. Press ENT to confirm and then press EXT to exit.

Video Select	7.4V
→ Status	Active
Channel	1/8

Video Select	7.4V
Status	Active
→ Channel	1/8

9.2.1 TX5805 Transmitting channel selection

There are 8 different channels can be selected. You can choose the best frequency channel according to the image quality like follows(The left code switch 1 is idle):

ON							
<input type="checkbox"/> <input type="checkbox"/>							
1 2 1 2	1 2 1 2	1 2 1 2	1 2 1 2	1 2 1 2	1 2 1 2	1 2 1 2	1 2 1 2
Channel 1 code position	Channel 2 code position	Channel 3 code position	Channel 4 code position	Channel 5 code position	Channel 6 code position	Channel 7 code position	Channel 8 code position

Remark: TX5805 Transmitting channel is corresponding to the video receive channel.

9.2.2 TX5806(FCC) Transmitting channel selection

There are 4 different channels can be selected. You can choose the best frequency channel according to the image quality like follows:

ON	ON	ON	ON
<input type="checkbox"/> <input type="checkbox"/>			
1 2	1 2	1 2	1 2
Channel 2 code position	Channel 4 code position	Channel 6 code position	Channel 8 code position

Remark: TX5806(FCC) Transmitting channel is corresponding to the video receive channel.

9.3 Flight Modes switches of the Receiver

9.3.1 With DEVO-4/F4 radio

Note:Please strictly refer to below operations.

- (1) Pull the throttle stick to the lowest position, turn on the radio and connect the UFO battery, then comes to the code pairing status. Disconnect the UFO battery after code pairing successfully. Then push the throttle stick to the top position and connect the UFO battery, then comes to the code pairing status again. The receiver indicator will flash between red and green alternately after code pairing successfully. That's the flight mode switch status.(Shown as picture 1)



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Transmitter control

Picture 1

1. Pull the TX throttle stick to the lowest position.
2. Turn on the transmitter
3. Turn on the radio and connect the UFO battery, then comes to the code pairing status.
4. After code pairing successfully, disconnect the UFO battery
5. Push the TX throttle stick to the top position.
6. Connect the UFO battery then comes to the code pairing status again.
7. After code pairing successfully, the receiver indicator will flash between red and green alternately.

(2) In Flight Mode switch status, push and pull the Elevator Stick up and down four times or above to change the Flight Mode (Finish within 2 seconds). If red indicator flashes quickly, it's normal flight mode. If green indicator flashes quickly, it's roll flight mode.

1. Push and pull the Elevator stick up and down four times or more (finish in 2 second)
2. It is in Normal Flight mode when the red indicator flashes quickly, and it's in Roll Flight mode when the green indicator flashes quickly. (The Flight Mode can be changed)

(3) After choose the Flight Mode, pull the throttle stick at the lowest position, then flight available.

9.3.2 With DEVO-6/7/7E/8S/10/12S/F7 radio

Note: Please set the FMOD switch as "ACTIVE" in the Output setting of Transmitter.

Type	Channel	Mode	Status
DEVO-6	Gear	FMOD Switch	Active
DEVO-7	AUX2	FMD	ACT
DEVO-7E	AUX2	FMOD Switch	Active
DEVO-8S	AUX2	FMOD Switch	Active
DEVO-10	AUX2	FMOD Switch	Active
DEVO-12S	AUX2	FMOD Switch	Active
DEVO-F7	AUX2	FMOD Switch	Active

When the FMOD Flight Mode switch of the radio at "0" position, the receiver's red indicator of Flight Mode turns solid as the Normal Flight Mode; and turns to normal flight mode; When the FMOD mode switch of the radio at "2" position, (DEVO 7E at "1" position), the receiver's green indicator of Flight Mode flashing and turns solid as the Roll Flight Mode.



9.3.3 With 2402D radio

Note: Please strictly refer to below operations.

(1) Push the throttle stick to the top position, turn on the radio and connect the UFO battery, then comes to the code pairing status. The receiver indicator of Flight Mode will flash between red and green alternately after code pairing successfully. That's the Flight Modes switch status.

1. Push the TX throttle stick to the top position
2. Turn on the transmitter
3. Connect the power of the QR W100S
4. Begin the code pairing process
5. The indicator of Flight Mode will flash between red and green alternately.



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Transmitter control

- (2) In Flight Mode switch status, push and pull the Elevator Stick up and down four times or above to change the Flight Mode(Finish within 2 seconds). If red indicator flashes quickly, it's normal flight mode. If green indicator flashes quickly, it's roll flight mode.

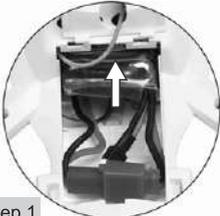

→


1. Push and pull the Elevator stick up and down four times or more(finish in 2 second)
2. It is in Normal Flight mode when the red indicator flashes quickly, and it's in Roll Flight mode when the green indicator flashes quickly.(The Flight Mode can be changed)

- (3) After choose the Flight Mode, pull the throttle stick at the lowest position, then flight available.

9.4 Turn on the power

9.4.1 Turn on the power



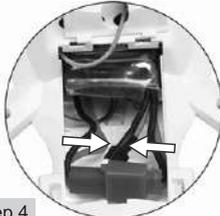
Step 1



Step 2



Step 3



Step 4

Step 1: Open the battery compartment, Install the battery pack into the battery compartment along the arrow direction.	Step 2: Turn on the power of transmitter.
Step 3: Pull down the throttle stick and throttle trim of transmitter to the lowest position, and then move the elevator trim, aileron trim, and rudder trim at the neutral positions, respectively.	Step 4: Connect the power cable of UFO to receive signal from transmitter.

9.4.2 Matters needing attention

- (1) Please follow the rule: Power on the radio first then connect the battery of the quadcopter. After power on the radio, connect the UFO battery in 10 seconds, the indicator starts flashing. the indicator becomes solid after 1 to 3 seconds. After binding with the radio, the red indicator flash quickly means the radio binding successfully.
- (2) If more than 10 seconds passed before the power cable was connected binding will fail. When binding fails, disconnect the battery, turn off the transmitter and repeat step (1).

9.4.3 Trouble shooting a flashing receiver LED after connecting the power cable

Possible causes	Solutions
Code pairing failed.	Turn transmitter off then on and re-connect UFO power cable.
The throttle trim and throttle stick of transmitter are not at the lowest position.	Pull down the throttle trim and throttle stick to the lowest position and re-code pair.
The transmitter battery is low or empty.	Replace transmitter battery and re-code pair (re-bind).
The UFO battery is low or empty.	Replace the UFO battery with a fresh pack and re-code pair.
No function in receiver or transmitter.	Replace faulty receiver or transmitter and re-code pair.

QR W100S

2.4GHz

9.5 Disconnect the power



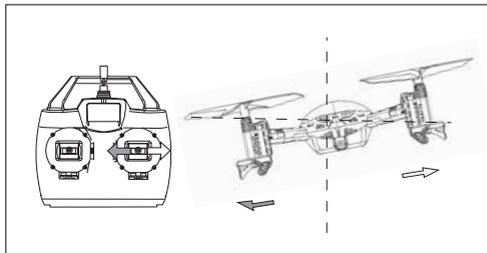
Step 1: disconnect the power cable of QR W100S

Step 2: turn off the transmitter.

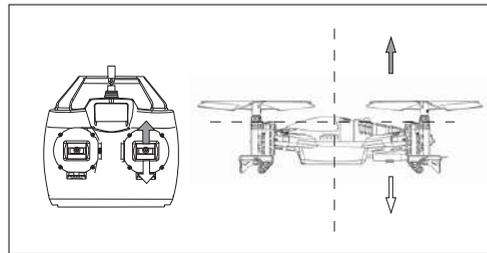
Step 3: Remove the battery.

9.6 Flight control

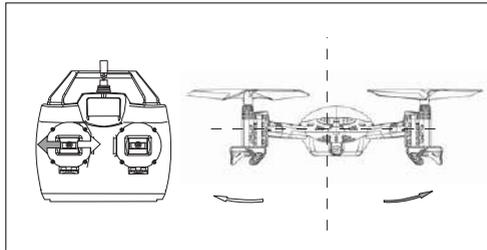
Mode 1 (throttle stick at right hand)



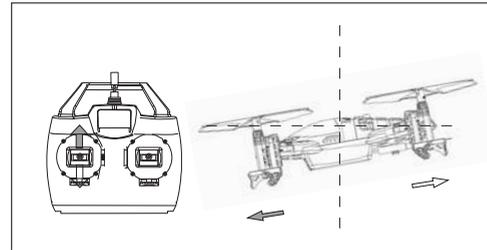
1. When moving the aileron stick left or right, the UFO accordingly flies left or right.



2. When moving the throttle stick up or down, the UFO accordingly flies up or down.

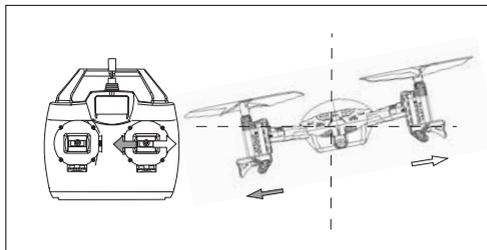


3. When moving the rudder stick left or right, the head of UFO accordingly flies left or right.

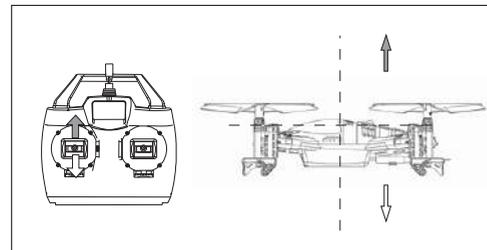


4. When moving the elevator stick up or down, the UFO accordingly flies forward or backward.

Mode 2 (throttle stick at left hand)



1. When moving the aileron stick left or right, the UFO accordingly flies left or right.



2. When moving the throttle stick up or down, the UFO accordingly flies up or down.



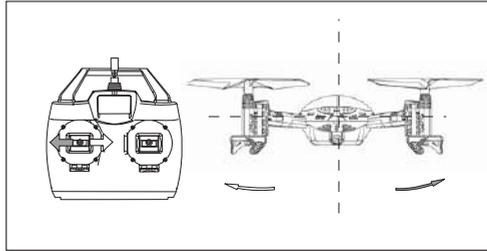
09

Transmitter control

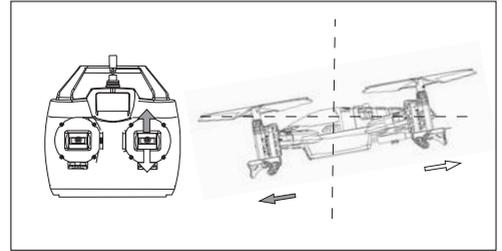


09

Transmitter control



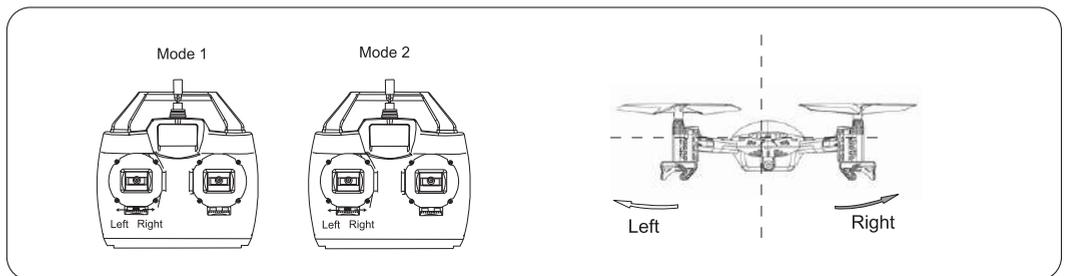
3. When moving the rudder stick left or right, the head of UFO accordingly flies left or right.



4. When moving elevator stick up or down, the UFO accordingly flies forward or backward.

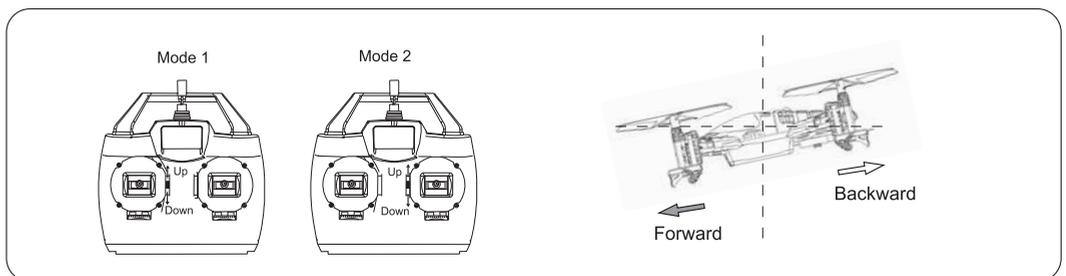
9.7 Trimming the flight actions

(1) Adjust the rudder trim



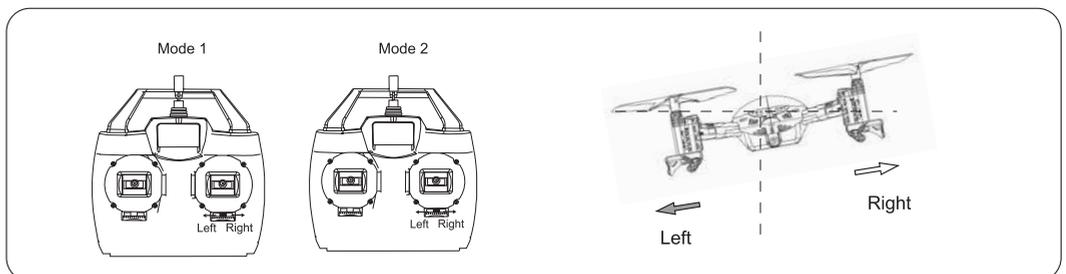
Move the rudder trim right if the head of UFO flies leftward during taking off; otherwise move the rudder trim left.

(2) Adjust the elevator trim



Move the elevator trim down if the UFO flies forward during taking off; otherwise move it up.

(3) Adjust the aileron trim



Move the aileron trim right if the UFO flies leftward during taking off; otherwise move it left.

9.8 Flight practice

9.8.1 Flight practice for the beginner

(1) Matters needing attention

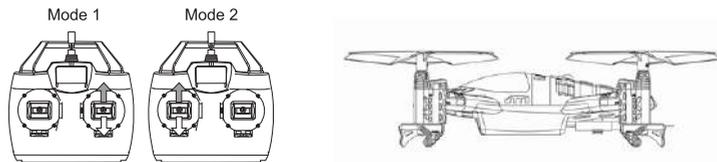
- (1.1) Beginners should be supervised and guided by skilled pilots when learning.
- (1.2) For the sake of safety, people should keep at least 5 meters away from the UFO during practice.
- (1.3) Choose a spacious open ground without people and obstacles as the flight practice field.

(2) Steps

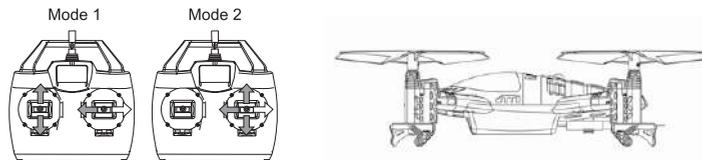
(2.1) Practicing throttle control - stationary flight

Start by standing directly behind the UFO, tail closest to you and head/nose pointing away. Practice taking off from the ground and then by slowly pulling down on the throttle stick, land it softly and horizontally. Repeat this step until the throttle can be finely and carefully controlled.

When hovering, the tail rotor counteracts torque but also pushes UFO to the left. Don't forget to counteract this effect using cyclic stick to the right and take off slightly inclined. It is important to hover vertically, stabilize UFO at 1.5m height and then land it.

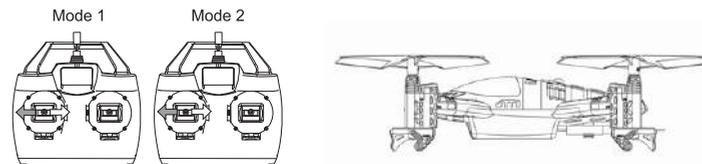


(2.2) Practice of aileron and elevator control



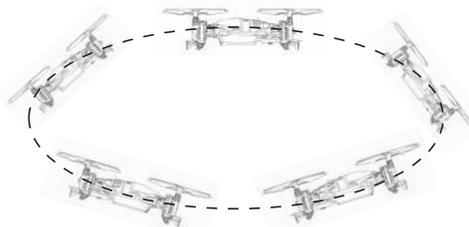
First increase throttle and enter a stable hover as practiced in the previous section. Next, use the elevator and aileron sticks to purposely fly the UFO in a 'cross pattern' forwards, backwards, to the left and to the right. In between each direction, return to hover over the take off point. Continue to repeat this step until it can be completed with ease.

(2.3) Practicing rudder control



Enter a stable hover as practiced in step one, then practice rotating the head of the UFO to face left then back to face right and back to face forwards (away from the pilot). Start with a rotation angle of 30 degrees or less and gradually increase it as you become more comfortable and more experienced.

(2.4) Practicing circular flight



After mastering steps (2.1) to (2.3) with ease, please draw or mark a large circle on the ground. Fly your UFO along this circular track until the flight is smooth and controlled.

You may wish to stand inside the circle at first to practice circular flight before needing to control the nose in orientation. Fly circles in both directions and at a constant altitude to be comfortable with this step.



09

Transmitter control



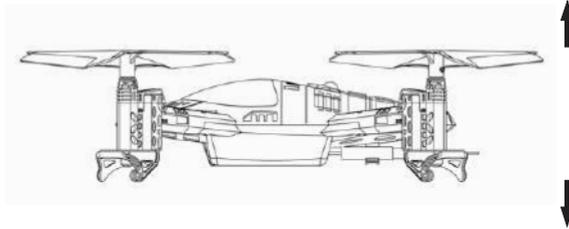
09

Transmitter
control

9.8.2 Advanced practice

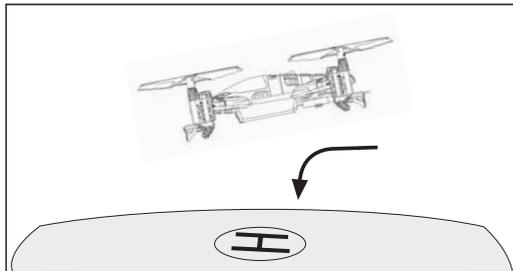
(1) Frog-hopping practice

Repeat the take off and landing action using the throttle stick whilst maintaining a vertical path. Increase your rate of ascent and descent gradually as you become more comfortable with the exercise. Be sure to slow down in time when landing!



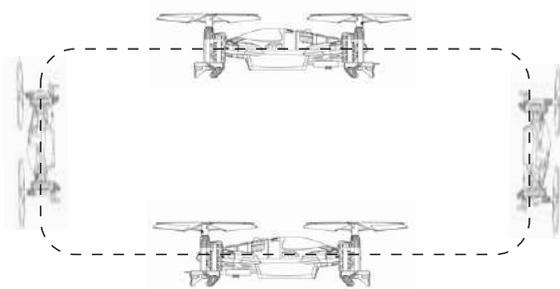
(2) Practicing controlled take off and landing

Mark out an area on the ground as a landing pad to help practice deliberately taking off and landing from a setted location. The process of take off and landing should be kept stable and as close to vertical as possible.



(3) Practicing square flight

Take the take off point as the center to draw a square whose side length is about 2 meters. Fly your UFO along the 4 sides and keep the flight height parallel to the line of sight. Make a 90 degree rotation at each corner of the quadrangle to adjust the flight direction. Train your straight flight skills and 90 degree flight course control. Fly in both directions around the circuit until familiar with the maneuver.



(4) Figure eight practice

Once you have mastered the previous steps you can try flying smooth flat figure eights. Try to maintain the same altitude during the entire flight path. Take care when flying where there is wind as it may cause the UFO to suddenly rise or fall unexpectedly.



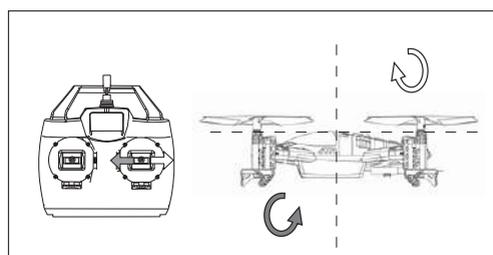
9.8.3 Roll flight practice

QR W100S can finish excited stunts actions, such as the front and back, right and left rolls.

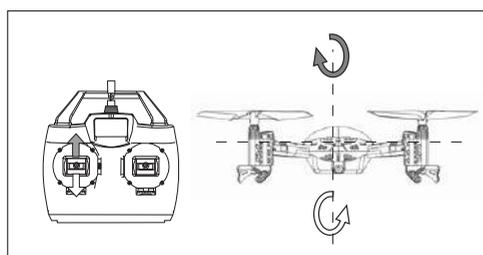
Matters need to be attention when the first flight:

- (1) Choose a spacious ground with soft grass to practice.
- (2) Select roll flight mode.
- (3) Advise beginner to increase servo distance of ELEV and AILE of the transmitter to 100%~110%. And can adjust according to personal skill level. The default setting is 100%.
- (4) Practice of throttle stick: when UFO roll from normal status, the throttle stick need to be pulled down slowly; Push up the throttle when it exchange normal status to roll. Please adjust according to personal skill level.

Mode 1 (throttle stick at right hand)

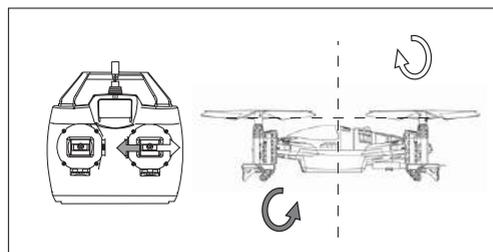


1. When moving the aileron stick left or right, the UFO accordingly rolls left or right.

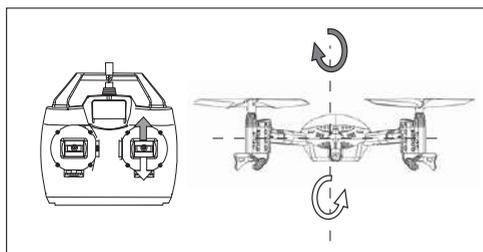


2. When moving the elevator stick up or down, the UFO accordingly rolls forward or backward.

Mode 2 (throttle stick at left hand)



1. When moving the aileron stick left or right, the UFO accordingly rolls left or right.



2. When moving the elevator stick up or down, the UFO accordingly rolls forward or backward.



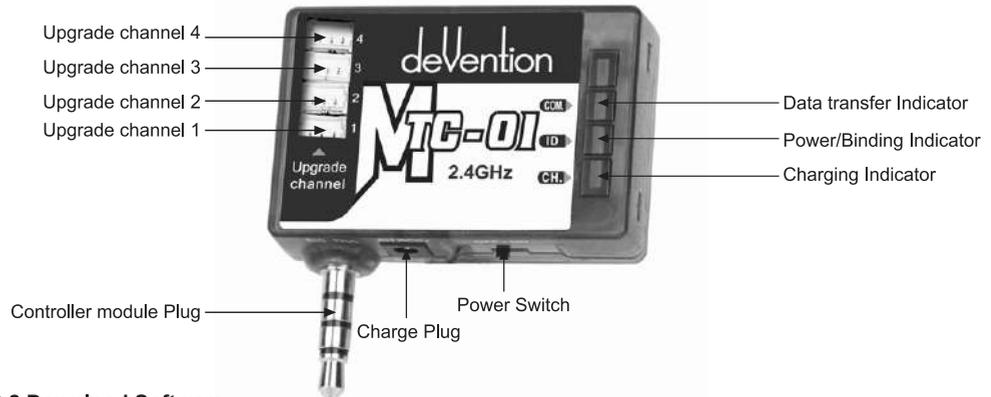
09

Transmitter control



10 MTC-01 control

10.1 MTC-01 controller module illustration



10.2 Download Software

- (1) For iPhone/iPad users, please go to the Apple Store (APP Store) to download the software RC-COPTER and install it.
- (2) Android system (above 2.0 version), please visit the Walkera official website (www.walkera.com) to download RC-COPTER.apk and install it.
- (3) Click the software icon , and install the software as per the instruction.

10.3 Method

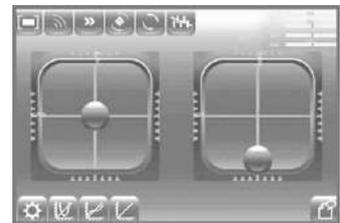
Notice : Please adjust phone to Airplane mode (Please refer to the mobile phone manual) in order to avoid accident from calling interference.

10.3.1 Active RC-COPTER software

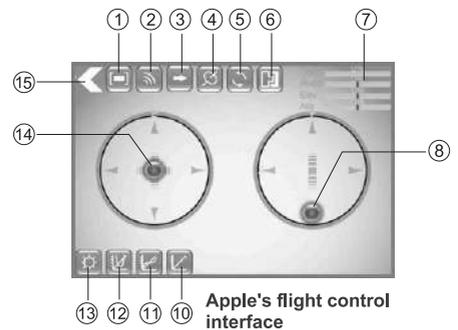
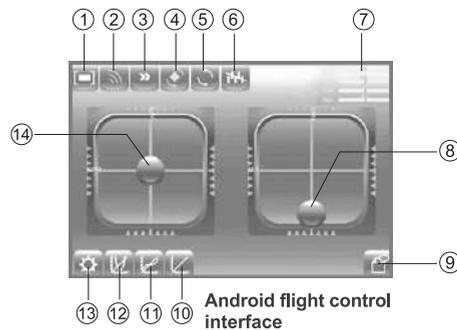
- (1) Find icon  on the phone interface and Active RC-COPTER software, as shown below.



- (2) Press  enter to control interface as shown below:



10.3.2 Following picture shows instruction in the control interface



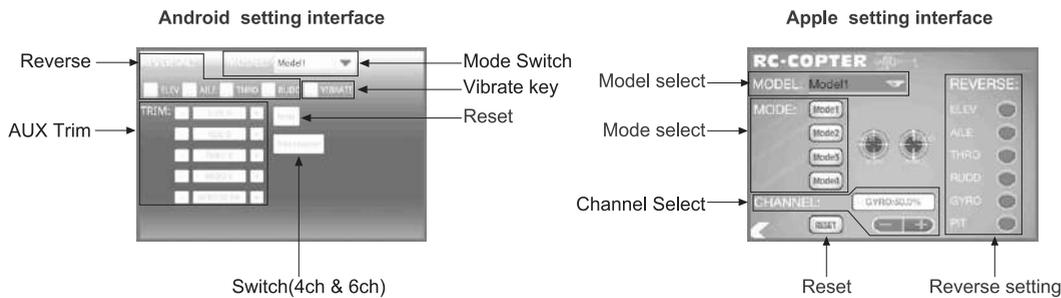
①	Touch Screen Size Switch Key	②	Binding	③	Throttle direction indicator/Mode Switch key
④	Gravity sensor	⑤	Interface rotation	⑥	Binding Reset
⑦	Channel Display	⑧	THRO/AILE stick	⑨	Help
⑩	PIT curve	⑪	D/R and Exponential curve	⑫	Throttle curve
⑬	Setup	⑭	ELEV/RUDD stick	⑮	Return to the previous interface

10.3.3 Binding

Plug the MTC-01 to the audio jack of phone, and turn on the MTC-01, the data transfer indicator is off after short green flashing, and the power indicator keeps blue light. Press Binding Icon in the flight control interface. The binding indicator is flashing in blue light (If the blue light don't flash, please press the Binding Reset Key in the flight control interface and then press the binding key until the binding indicator blue light flashes). Connect the UFO battery, the light becomes RED and flashing. The indicator of the UFO becomes solid after successful binding. At this point, the binding could be finished with touching any stick of radio (The throttle stick is excluded), or you can wait until the automatic binding by the phone (Longer time is needed). The data transfer Green light flashes, the power BLUE indicator keeps solid. The RED indicator of UFO becomes solid after flashing (the receiver programme is initialization), the binding is successful.

10.4 Function setting

Touch  in flight control interface to enter to setting menu, show as below:



10.4.1 Model select: there are 4 model can be selected.

10.4.2 Reverse setting: The settings of elevator, aileron, throttle, rudder, gyro, pitch, etc are normal. If not select as normal, select as reverse.

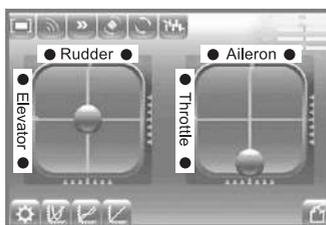
10.4.3 Vibration switch: If vibration switch turn on (not select as normal but turn on), when operate the control ball during the flight, the phone will vibrate.

10.4.4 AUX trims: touch + or - to change the value according to quadcopter performance.

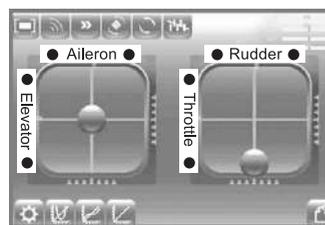
10.4.5 Channel Select: gyro sensitivity setting, touch + or - can change the values.

10.4.6 Mode switch

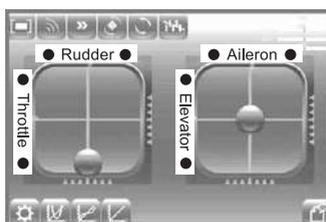
There are four switch modes. Right hand throttle (Mode 1, Mode 3); Left hand throttle (Mode 2, Mode 4).



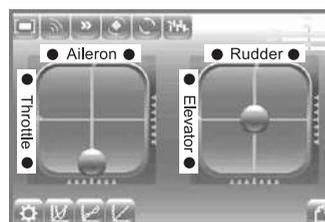
Mode 1 (Right hand throttle)



Mode 3 (Right hand throttle)



Mode 2 (Left hand throttle)



Mode 4 (Left hand throttle)



10

MTC-01 control



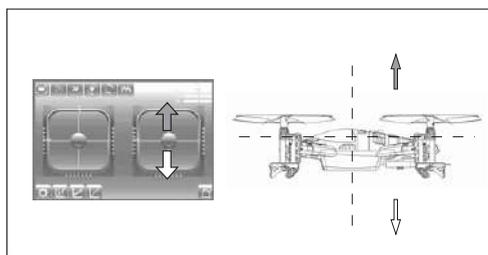
10 MTC-01 control

10.4.7 Reset: All the settings will renew to factory settings when you Press this key.

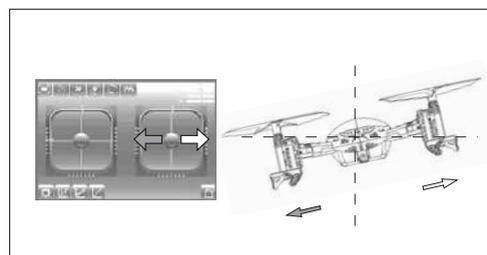
10.4.8 Throttle curve , Dual Rate and Exponential curve: no need to set.

10.5 Operating methods

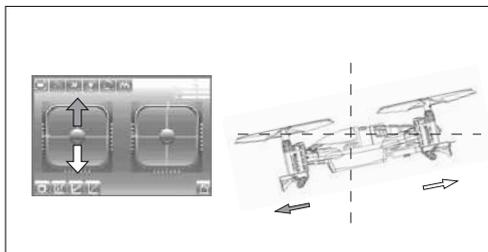
10.5.1 Manual flight control (take Mode 1 as example)



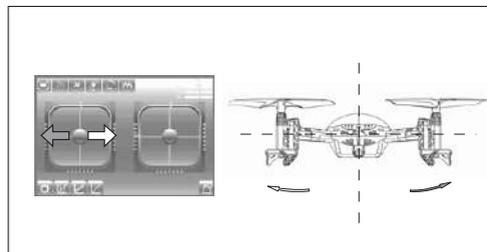
(1) Throttle stick control: Press and hold the throttle control ball and then pushed up, the motor rotates, the higher it push, the faster the motor will rotate(fly higher); The motor will slow down when push down, the lower it push, slower the motor rotates.



(2) Aileron stick control (left and right): When moving the AILE control ball left, the UFO accordingly flies left; When moving the AILE control ball right, the UFO accordingly flies right.



(3) Elevator stick control(forward and backward): When moving the ELEV control ball up, the UFO accordingly flies forward; When moving the ELEV control ball down, the UFO accordingly flies backward.

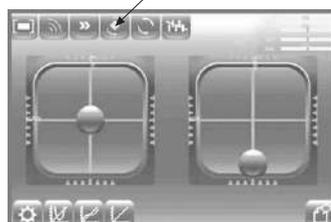


(4) Rotate control: When moving the RUDD control ball left, the UFO accordingly rotate left(CCW); When moving the RUDD control ball right, the UFO accordingly rotate right(CW).

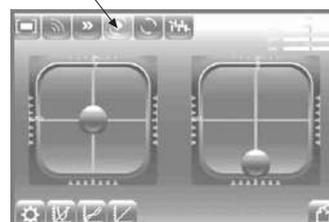
10.5.2 Gravity sensor control when flying(take sample for mode 1)

Touch the gravity sensor button on the screen, colorful is ON while gray is OFF. Please refer to below Illustration:

Gravity Sensor key Non Active status



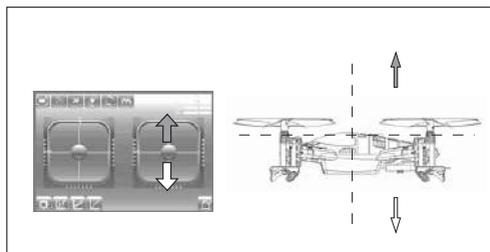
Gravity Sensor key Active status



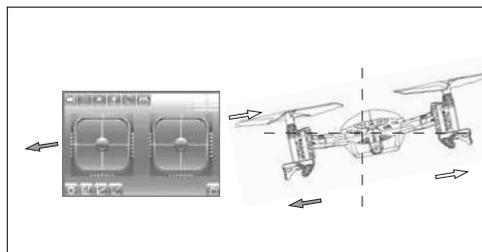
QR W100S

2.4GHz

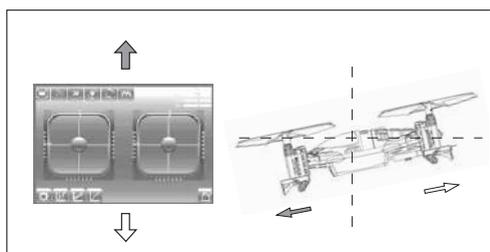
When switch the gravity sensor to colorful status, elevators and aileron control will be changed to gravity sensor control mode(can be operated by one hand), the direction control show as below:



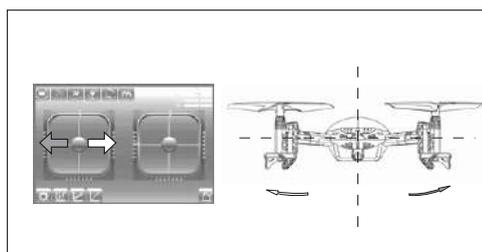
(1) Throttle stick control: Press and hold the throttle control ball and then pushed up, the motor rotates, the higher it push, the faster the motor will rotate(fly higher); The motor will slow down when push down, the lower it push, slower the motor rotates.



(2) Aileron stick control (left and right): When moving the phone to the left, the UFO will fly to the left; when moving the phone to the right, the UFO will fly to the right(For Iphone/ iPad , the controlled ball can't scroll in Mode 1 and Mode 4 mode, but can scroll in Mode 2 and Mode 3 mode).



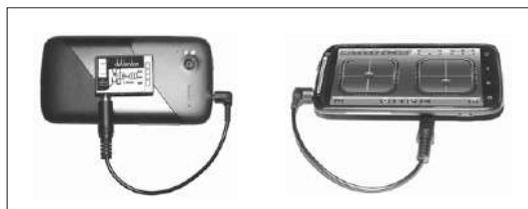
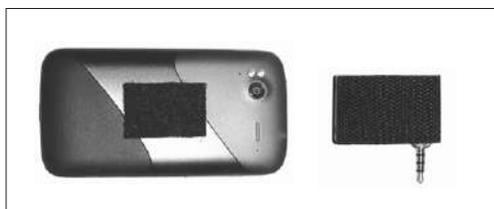
(3) Elevator stick control(forward and backward): When moving the phone to the front, the UFO will fly forward; when moving the phone to the back, the UFO will be backward(For Iphone/ iPad , the controlled ball can't scroll in Mode 1 and Mode 4 mode, but can scroll in Mode 2 and Mode 3 mode).



(4) Rotate control: When moving the RUDD control ball left, the UFO accordingly rotate left(CCW); When moving the RUDD control ball right, the UFO accordingly rotate right(CW).

10.6 The Usage of mobile extended line(Optional)

- (1) Paste the magic stickers seperately at the back of MTC-01 and mobile phone.
- (2) Insert MTC-01 into parent end of signal line, the other end(dual-sound channel end) plugs into the audio jack of phone.
- (3) Get the two magic stickers together for better flight control.The MTC-01 could also be hanged in the air without pasting the magic stickers.



10.7 MTC-01 for WK Series radios function manual

- (1) MTC-01 function for all radios with the simulated output signal socket: Connect MTC-01 to simulated output signal socket in the radio(please refer to below Illustration), that can control the correspond channel receiver of Devo series helicopters, The specific methods are as follows:



10
MTC-01
control



10 MTC-01 control

- (2) Connecting method: Insert MTC-01 into parent end of signal line, the other end plugs into the simulated output signal of the radio(attention: some radio could turn on by itself when you plug into the simulated output signal socket of the radio, in this case, don't need to turn on the radio after you connect it).(Shown as picture 1)
- (3) Please fix the MTC-01 onto the back of radio by using magic sticker. It could prevent the flight from poor contact between the plugs.(Shown as picture 2)



(4) Binding:

- (4.1) Turn on the MTC-01, the data transfer indicator light is off after short flashing, the power indicator light is Blue.
- (4.2) Turn on the radio(as mentioned above, some radio could turn on by itself when you plug into the simulated output signal socket of the radio, in this case, please don't turn on the radio first after you connect it), The binding Indicator is flashing in Blue light. Connect the UFO battery, the light becomes RED and flashing. The indicator of the UFO becomes solid after successful binding, at this point, the binding could be finished with touching any stick of radio(the throttle stick is excluded). or you can wait until the automatic binding by the phone(longer time is needed). The data transfer Green light flashes, the power BLUE indicator keeps solid. The red indicator of UFO becomes solid after flashing(the receiver program is initialization), the binding is successful.(Please refer to the corresponding radio manuals for other flight specifications).

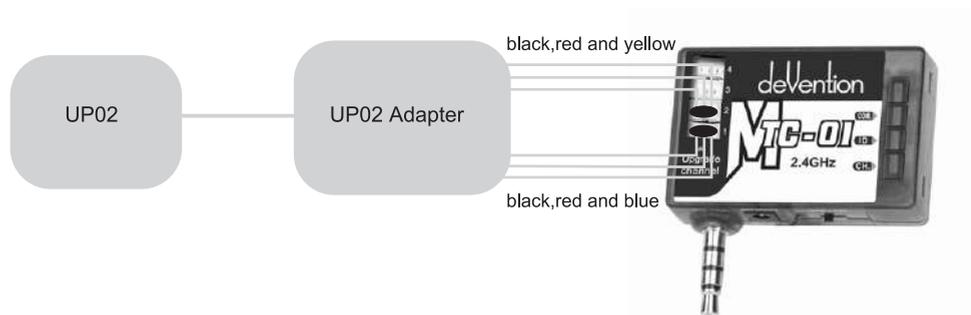
10.8 Update Online

There are two piece programe IC inside the MTC-01 module can be updated(Signal collection control programe IC and RF control programe IC).

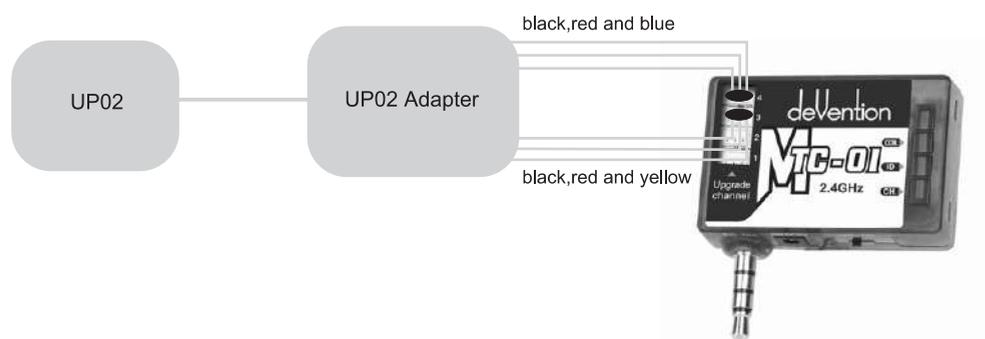
- (1) Please login Walkera official wesite to upgrade the MTC-01 Control Program.
- (2) Upgrade tool: UP02 cable and UP02 adapter.



- (3) Control Program IC upgrade by Signal: Plug the line binded with black, red and blue into the MTC-01 upgrade channel 1, Plug the line binded with black, red and yellow into the MTC-01 upgrade channel 2.



- (4) Control Program IC upgrade by RF: Plug the line binded with black,red and yellow into the upgrade channel 3, Plug the line binded with black,red and blue into the upgrade channel 4.



10.9 Charger

- (1) There is a 3.7V 80mAh LiPo battery in the controller. The battery can be charged with the USB wire.
- (2) The charge indicator becomes solid red when charge the battery, and will turn off Automatically after fully charged.
- (3) When MTC-01 power indicator and binding light flashing at the same time means you need to charge the inner battery at once.
- (4) Charging Voltage:5V; Charging Current: $\leq 500\text{mA}$.

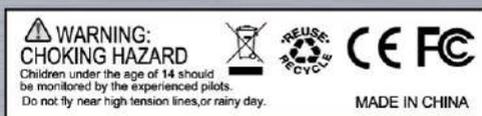
10.10 Matters needing attention

- (1) The different hardware of Andriod phone may lead to the failure of using MTC-01. It's depends on the products which you are using.
- (2) When using the phone to control, please adjust the volume at maximum to insure the normal data transfer. Please don't adjust the volume after successful binding. Please unplug the UFO battery firstly, and then turn off the MTC-01 after flight.
- (3) In case of emergency (A sudden flight for the UFO), please don't make the Mode switch after successful binding.
- (4) If a short stop is needed during flight, please press the Binding Key in the flight control interface. Both green light of the data transfer indicator and blue light of power indicator will be solid at the same time. The UFO will be out of control if move the Control Stick in the flight interface. The short stop could be removed by pressing the Binding Key slightly.

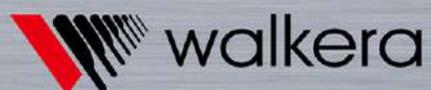


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MTC-01 control



The specifications of the R/C aircraft may be altered without notice.



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