WonderTech

NO.W105C

14+

ORION

2.4GHZ 6-AXIS GYRO DRONE

3D ROLL · 2.4G · 6-AXIS
One-key return & Headless mode

INSTRUCTION MANUAL

Technical parameter of the model

Fuselage Length:62mm	Gross Weight:about 17g
Overall Height:24mm	Battery:Li-polymer 3.7V 150mAh
Main Rotor Diameter:30mm	Motor:Coreless Motor
Charging Time:about 20 minutes	

Product/spare parts included in this packaging

Description	QTY (pc)	Description	QTY (pc)	Description	QTY (pc)
Model	1	Blades A	2	Blades B	2
Remote control	1	Manual	1	Battery	1
Reader	1	Memory card	1	USB charger	1
Protection frame	4				

Introduction

- Multi-rotor design insures more stable ang powerful performance and make all kinds of 3D action more easier.
- Innovative designs, easy of installation and convenient for maintenance.
- By using of the 2.4G auto connection technology, scores of copters can be played at the same time with high stability.
- Equipped with the newest 6-Axis Gyro control system, this model has the characteristics of stable flight and easy operation.
- Full charged battery can support 5 minutes steady flight.
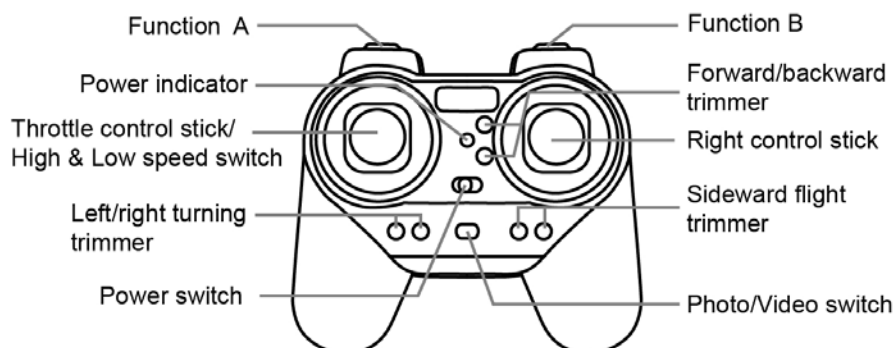
Safety guidelines

- 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 model. 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 model, 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 model within your eye vision for easy and safety control.
- Need adult supervision when this model 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 3XAAA batteries for work.
- Do not mix old and new batteries.

Remote controller

Main features of the remote controller

- Adopt microcomputer control remote controller system and 2.4G auto connection technology, scores of copters 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.
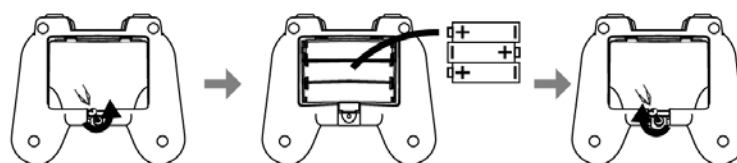
Sketch and function switches of the remote controller

Function A ——————
Power indicator ——————
Throttle control stick/ High & Low speed switch ——————
Left/right turning trimmer ——————
Power switch ——————

—————— Function B
—————— Forward/backward trimmer
—————— Right control stick
—————— Sideward flight trimmer
—————— Photo/Video switch

No.	Function switch	Function description
1	Function A: Light/Photo/ Headless mode (long press)/One-key return(short press in headless mode)	This is the light switch of the model. Press it once to turn on the light and press it once again to turn off the light. Take photo: Press the "PHOTO" button, the red indicator light of the camera will flash for once, which means that one photo has been taken. Enter headless mode: Press this button for about 2 seconds, the remote control sends out 2"murmur" sound and the drone indicator light changes from constant on to flash; then, the drone is in headless mode. Exit headless mode: Re-press this button for about 2 seconds, the remote control will send out 3 "murmur" sound and the drone indicator light changes from flashing to constant on; Then, the drone exits the headless mode. One-key return: While the drone is flying in headless mode, press this button, the drone will fly towards the remote control. Re-press the one-key return button or push the forward/backward control stick to cancel the return control.
2	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 model. The indicator light keeps on without blinking: the transmitter is ready for controlling the flight. When the photo/video button is pressed down, the indicator light will change to green color, which means that the camera is standby for taking photo and shooting video.
3	Throttle control stick/High & Low speed switch	Upward/downward, turn left/turn right. This is the speed toggle switch of the remote control. L is low speed; H is high speed.

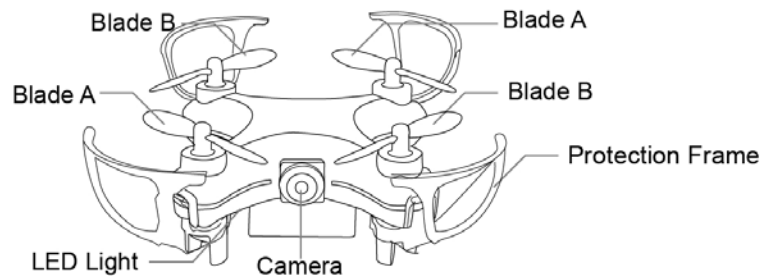| No.	Function switch	Function description
4	Left/Right turning trimmer	Leftward/rightward fine tuning.
5	Power switch	It controls the power source of the transmitter.Slide the power switch to the "ON" position, the transmitter is powered on; slide the power switch to the "OFF" position, the transmitter is powered off.
6	Function B: 3D Eversion/Video	When the model is flying, press the 3D eversion button and push the right control stick to the top/bottom/left-most/right-most at the same time, the model will roll forward/backward/leftward/rightward accordingly. Shoot video: press the " VIDEO" button, the red indicator light of the camera will keep flashing, which means that video is being taken; press the "VIDEO" button again, thered indicator light of the camera will change to green light and video taking is ended.
7	Forward/Backward trimmer	When the model keeps flying backward, press the upper button until it gains balance. When the model keeps flying forward, press the lower button until it gains balance.
8	Right control stick	Forward/backward, leftward/rightward.
9	Sideward flight trimmer	When the model keeps flying inclined leftward, press the right button until it gains balance. When the model keeps flying inclined rightward, press the left button until it gains balance.
10	Photo/Video switch	While the model is flying, press down this button and then press function button A to take photo or press down function button B to take video.

How to install the battery of remote controller

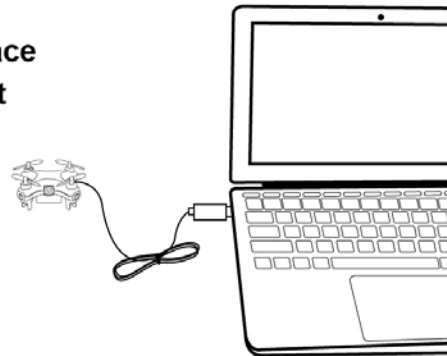### How to remove and insert batteries.

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

The model

Blade B

Blade A

Blade A

Blade B
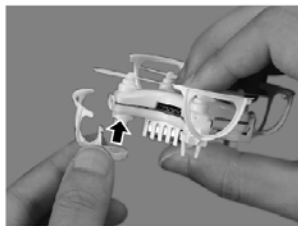
Protection Frame

LED Light

Camera

How to charge the model

Insert the USB charger into the USB interface of the computer or remote control; connect the battery cable with the USB wire plug. The indicator light of the USB will be off when charging is proceeding; once the battery is full charged, the indicator light turns red. Full charging takes about 20 minutes.
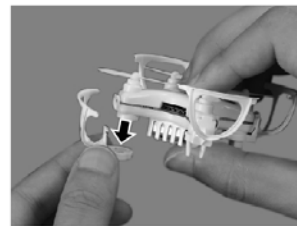

NOTE: Battery should be full charged before storing.

Install and remove the protection frame

1.Insert the foot of the model into the base of the protection frame and push up the base until the buckles fixed.

2.Slightly break apart the buckles and pull down the base until it is removed from the foot of the model.

Preparation for flight

The remote control

- Recheck the playground; make sure that it is free from crowd, animals and other barrier.
- Slide down the throttle control stick to the bottom.

- Turn on the remote controller and the power light will blink slowly. Then slide the throttle control stick up to the top; the power light blinks at a higher speed; return the throttle control stick to the bottom; there will be a beep sound heard and the power light keeps flashing which means that the remote controller is sending out connectional signal. It will take about 10 seconds to finish the signal connection process. Once signal connection is completed, the power light will stay "on" without blinking and the remote controller is ready for flight.

The model

- Make sure that the battery (at the bottom of the model) is well installed and connected with power wire of model. The model is OFF.
- Turn on the model; the flash light will keep flashing quickly, the gyro of the model will be in signal detecting condition. Set the model to flat surface, about 4 seconds later, the flash light will keep constant "ON". It means that signal connection is finished and the model 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 model takes off.
●To avoid any misunderstanding, we have defined the orientation of the model as follows: The model 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.

Head of the model

Clockwise   Counterclockwise

Left   Right

Counterclockwise   Clockwise

Tail of the model

●The orange lights are at the front of the model; the blue lights are at the back of the model.
●Check the rotation direction of the rotor blades which is shown as .
●If the model keeps flying to one side, it can be corrected by adjusting the trimmer on the remote control.

Remarks:
●Signal connection between the model 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.
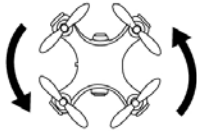
Trimmer functions

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

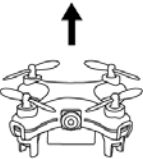|		
		If the model keeps moving forward, press the lower button of the trimmer until it gains balance.
		If the model keeps moving backward, press the upper button of the trimmer until it gains balance.

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

		If the model keeps moving leftward, press the right button of the leftward/rightward trimmer until it gains balance.
		If the model keeps moving rightward, press the left button of the leftward/rightward trimmer until it gains balance.

3. If the model keeps spinning even there is no control signal given,
users may adjust the turn left/turn right trimmer to keep the model
balanced.

		If the model keeps spinning counterclockwise in the air, press the right button of the turn left/turn right trimmer until it gains balance.
		If the model keeps spinning clockwise in the air, press the left button of the turn left/turn right trimmer until it gains balance.

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

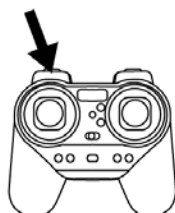|		
Leftward flight	←	**Turn the sideward flight control stick to the left side, the model will fly leftward.**
Rightward flight	→	**Turn the sideward flight control stick to the right side, the model will fly fightward.**

Headless mode

Enter into headless mode:

Once signal of the model and the remote control is successfully connected, press the function button located at upper-left of the remote control for 2 seconds and the remote control sends out 2 "beep" sound; then, the model's indicator light turns from constant "ON" to "flashing". That means the model is in headless mode.

Exit headless mode:

When the model is in headless mode, press the function button at upper-left of the remote control of 2 seconds, the remote control will send out 3 beep sounds. The model's indicator light turns from flashing to constant "on". That means the model has exited the headless mode.

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

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

Flight direction control in headless mode:

● When checking up on the flight direction of the model, set the model nose right ahead and tail facing the player's, at this time, the model'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 model 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 model is flying in headless mode, player should keep facing the forward direction. Otherwise, the model will be out of control. The model control is showed as below:

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

One key return:

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

Remarks:

● Flight direction proof is needed when the model is going to fly in headless mode. When checking up on the flight direction, the model should be set right ahead and tail facing the player; the player should face the direction where the model nose is pointing to. Player should stand in the same direction when playing the model.
● When the model 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.

Trouble shooting

Phenomenon	Reason	Solution
The model is without any function even control signal is given.	The model is under power and enters into low power protection state.	Charge the battery.
	Gyro of the model is still under trimmer middle point value detection state.	Set the model to the ground or any flat surface and then wait about 5 seconds.
	Signal between model and the remote control is not connected.	Please repeat the signal connection step by step to connect the signal.