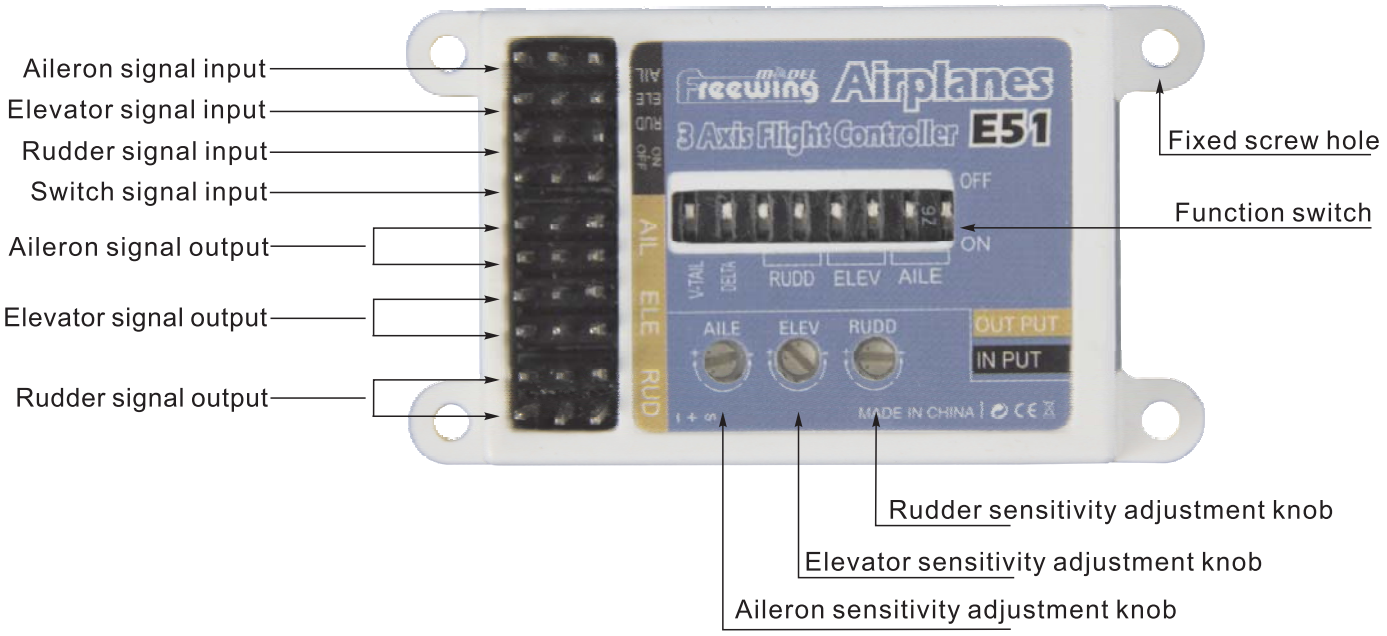
Thank you for using our Freewing 3-axis gyro, which is designed and developed only for the fixed-wing airplanes. It can automatically calculate the movement of aileron/elevator/rudder, rear output compensation to the corresponding channel to maintain its stable flight. Add the gyro, it control more precise and stable,it allows you to fly easier and calmly. Beautiful and sturdy plastic box with 4 pcs screws, it fixed the gyro more reliable in order to prevent any damage since gyro fall off. In function, it supports the aeroplane, delta wing(trianguler wings), V-tail plane. Please read the user manual carefully before starting.

Gyro Diagram



Functions

1.Stability augmentation of aircraft : It can automatically calculate the movement of aileron/elevator/rudder, rear output compensation to the corresponding channel to maintain its stable flight, enhance its wind resistance and reduce the stall problem, it fly easier in level flight, inverted flight, side flight, 3D flight... and don't affect planes' handling, let it fly more smoothly

2.It supports kinds of normal aeroplane, delta wing plane, V-tail plane...etc.The factory default is normal aeroplane mode.

3.Multi-channel output, aileron/elevator/rudder have two independent output channels, it can set up positive and negative correction independently, it also can connect two aileron/elevator/rudder servo simultaneously to achieve more control way.

4.Independent sensitivity adjustment Aileron、elevator、rudder have its independent sensitivity adjustment knob, it can adjust the best sensitivity which match with airplane.

5.8-digit DIP switcher, the setup of gyro function become simple and convenient.

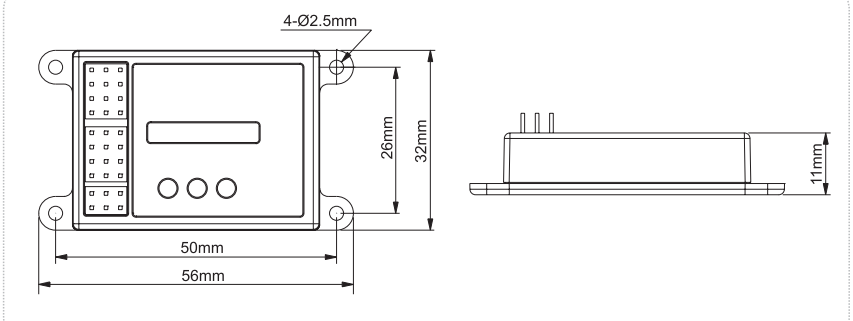
6.Controlling switcher of flight manual is used through the channel of on/off on the remote control to control the start function. In flight, flight manual control is able to be achieved by this switch so that you can feel the flight functions of plane whether it is controlled or not, you can enjoy the flight with gyro or without gyro.

7.Red LED light and blue Led light, very easy to distinguish the working mode and status.

8.Light weight, small size, can be used for many airplanes, screw lock fixation is more reliable, very good to prevent the crash of flight cause gyro fall off.

Technical Parameters

1. Dimension ： As the right photo shown
2. Weight ： 12g
3. Voltage：3.5-7.2V
4. Current: 50mA(max)
5. Gyro：2000 d/s
6. Input signal：50HZ pwm
7. Output signal：50HZ pwm
8. Working temperature：-40 ~ +80℃

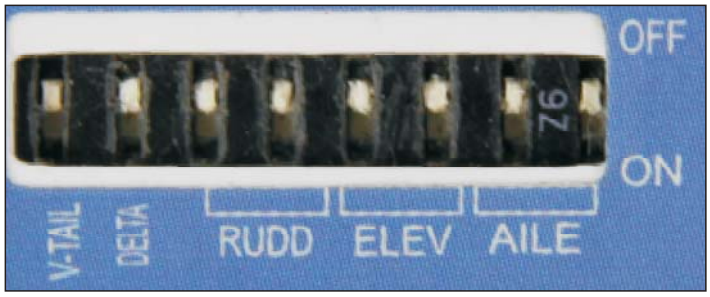


LED Light Instruction

1.Power on indication Process:
Red Led light flash 5 times quickly.(gyro is locking now, please make sure the airplane is in static), then red LED light become to continuous light. Now the gyro finish its lock, and work normally.
2.Radio channel indication:
Red LED continuous light means radio channel turn on. Now the gyro work normally. (you can shake airplane to check gyro function), Red Led light off means turn off the gyro channel in radio, now the gyro don't work.
3.Blue LED light indication:
Blue LED light off means normal aeroplane working mode. Blue LED light flash means turn on the delta plane mode. Blue LED continuous light means turn on the V-tail wing control mode. Delta plane and V-tail plane can't open at the same time.

DIP Switch Function Setup

Before power on, please refer to the following photo to set up the corresponding function.After power on, it also can change freely, gyro will real time read the DIP switch and through red/blue LED light show its condition, Set the corresponding models and features, and test each channel can output correctly.



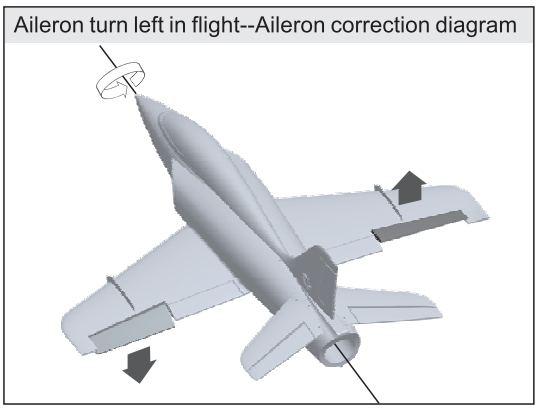
1.V-tail denote the V-tail plane function, Delta plane (triangular wings) denote the Delta plane function. We can use DIP switch to control the two functions on/off. (Note: the two functionn can't switch on in the same time.) When the two function are off, means its in airplane function.
2.RUDD, ELEV, AILE, the six pcs DIP switch denote the positive/reverse switch of output signal of rudder /elevator/aileron.

Gyro Sensitivity Adjustment

Gyro output sensitivity set-up is as the following photo shown:
Clockwise rotation, sensitivity increases. counterclockwise rotation, sensitivity decreases.

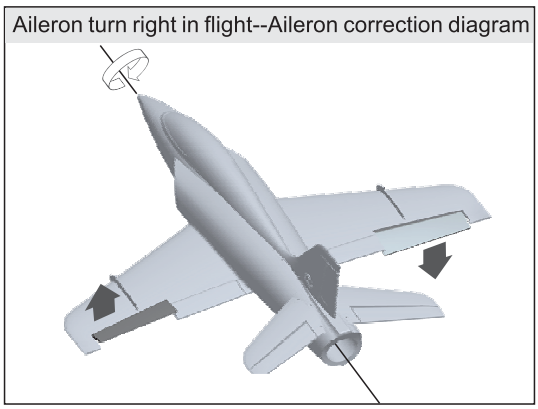
Gyro Adjustment

Aileron turn left in flight--Aileron correction diagram



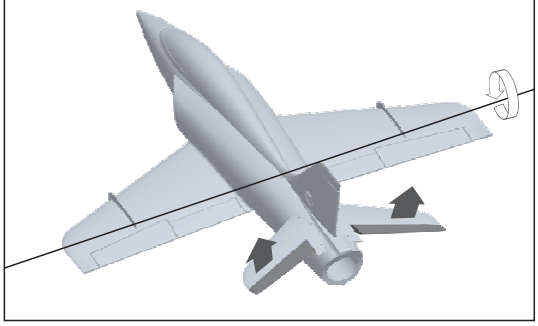
Turn left the roll axis in flight, please pay attention of left/right aileron adjustment directions as the photo shown, the arrow direction is correct direction. If action is not correct, it should be re-set.

Aileron turn right in flight--Aileron correction diagram



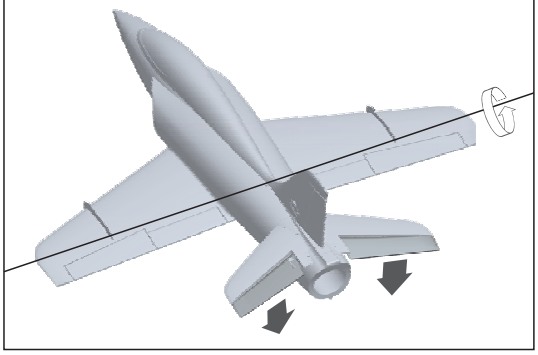
Turn right the roll axis in flight, please pay attention of left/right aileron adjustment directions as the photo shown, the arrow direction is correct direction. If action is not correct, it should be re-set.

Nose-down in flight--Elevator correction diagram



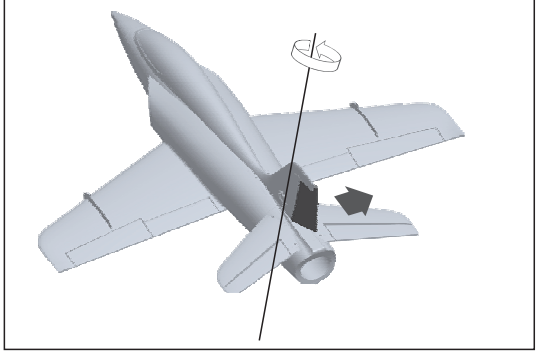
Rotate the pitch axis upwards and pay attention to the adjustment direction of the elevator as the photo shown. the arrow direction is correct direction. If action is not correct, it should be re-set.

Nose-up in flight--Elevator correction diagram



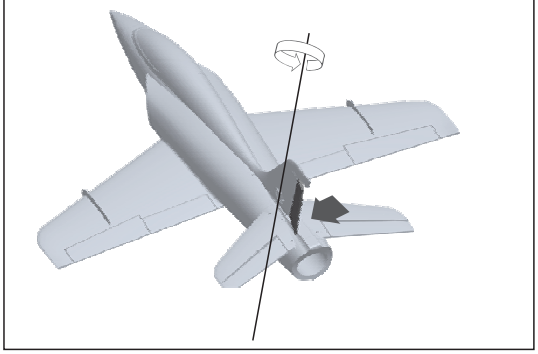
Turn downwards the pitch axis and pay attention to the adjustment direction of the elevator as the photo shown. the arrow direction is correct direction. If action is not correct, it should be re-set.

Turn left in flight--Rudder correction diagram



Turn left the rotation axis, and pay attention to the adjustment direction of the rudder as the photo shown. the arrow direction is correct direction. If action is not correct, it should be re-set.

Turn rightin flight--Rudder correction diagram

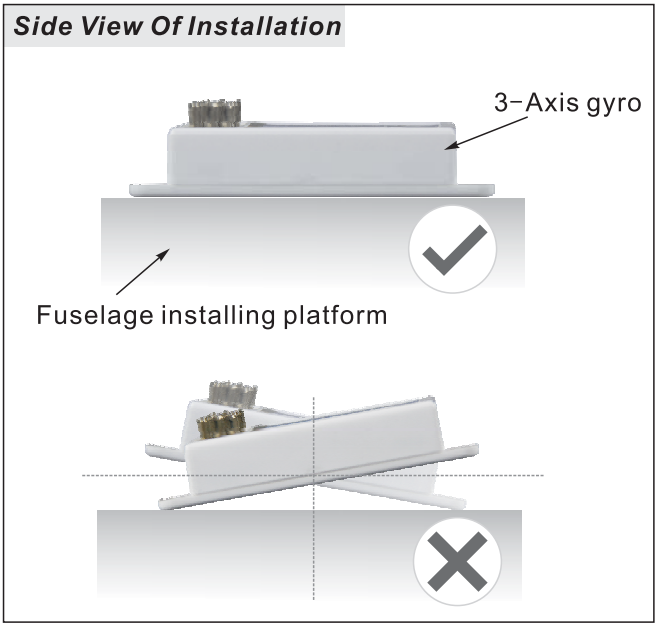


Turn right the rotation axis, and pay attention to the adjustment direction of the rudder as the photo shown. the arrow direction is correct direction. If action is not correct, it should be re-set.

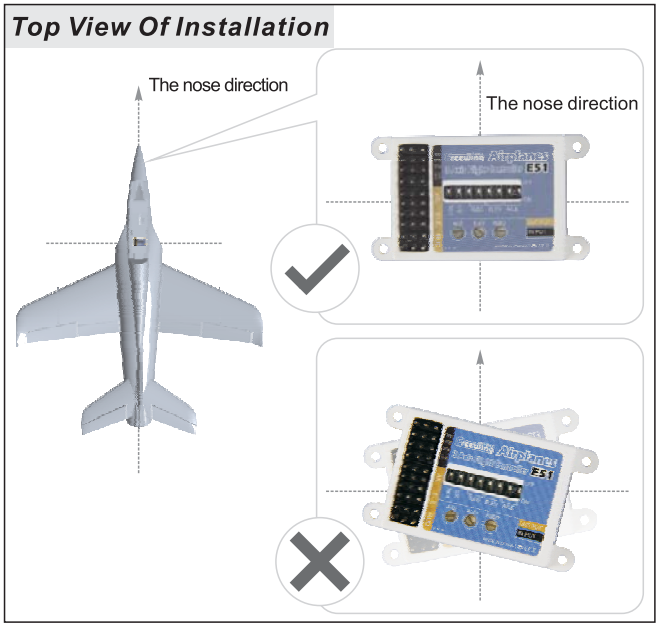
Gyro Installation

Gyro can install on the front or the back of the plane. Before install, please note the sticker on the back of gyro, it printed a plane pattern. When install on the gyro, you should check the plane nose cone of gyro sticker, it should be toward the direction of airplane nose cone. And install it in the center of airplane (it also can install on the battery compartment), put it flat and screw it on the plane. If there is any loosen in flight, it may cause the airplane out of control.

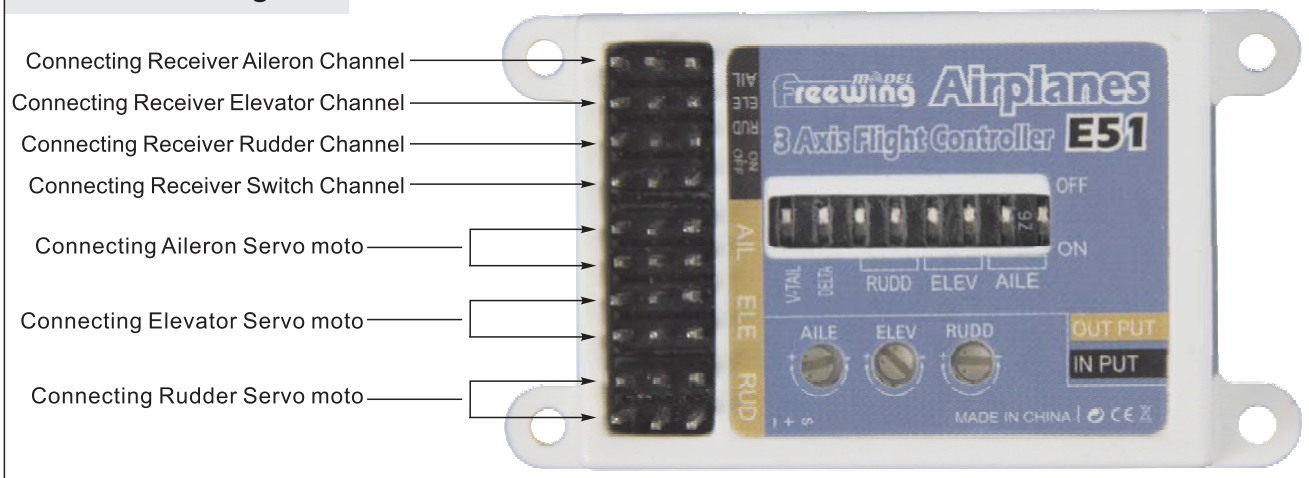
Side View Of Installation



Top View Of Installation



Connection Diagram



First Use Precautions

1.Before power on, please read the user manual carefully.
2.Check the connection line direction、position of channels are correct, check the position of DIP switch is correct.
3.Put the airplane in steady, and prevent shaking. Then power on, make sure the gyro lock successfully. When gyro is locking, the airplane must remain still. If the wind is strong, the best way is to place it onto stable and secure place.
4.Check the radio switch is normal, when gyro power on, red LED light should be continuous light. Shaking the plane, gyro will output the revising rate for aileron、elevator、rudder、flap. Gyro power off, red LED light should be off. Shaking plane, gyro don't output.
5.Gryo use state examination.Please refer to DIP switch set-up instruction, check the switch position, the flight mode is your want .If not, please revise to the desired mode .
6.Radio signal output examination. Firstly, use radio to check the control direction of aileron/elevator/rudder is correct. If not correct, please set up the positive、negative of radio channels, till the control direction is correct.
7.Gyro correction signal output examination. Refer to the gyro adjustment instroduction, check carefully that the direction of output signal of each channels is correct. If not correct, toggle the DIP switch of corresponding revision direction, set up the direction is correct. This is very important. Wrong revision direction will let plane out of control. If happen like that, you need to power off the gyro and landing.
8.Delta plane use aileron and elevator to mix. V-tail plane use elevator and rudder to mix. Radio don't need to set up its mix. Mix output need gyro to finish.
9.Gyro sensitivity adjustment. Sensitivity is that gyro adjust the control strength on the airplane. Clockwise rotation, sensitivity increases. counterclockwise rotation, sensitivity decreases. Usually we advise to adjust the gyro in 1/2 or 1/3,and then adjust it slightly as required. If you feel the airplane jitters greatly, adjust the sensitivity smaller to counterclockwise slightly and fly again. If no jitters in flight, adjust the sensitivity clockwisely to obtain optimal performance.The higher degree the gyro turns clock wisely, the greater the sensitivity. Different plane need different augmentation ,it need you practice in flight.

Packing List

1.Gyro ..... (1pcs)
2.Connection line ..... (4pcs)
3.Screw ..... (4pcs)
4.Screwdriver ..... (1pcs)
5.Manual ..... (1pcs)
6.Double-sided tape ..... (1pcs)