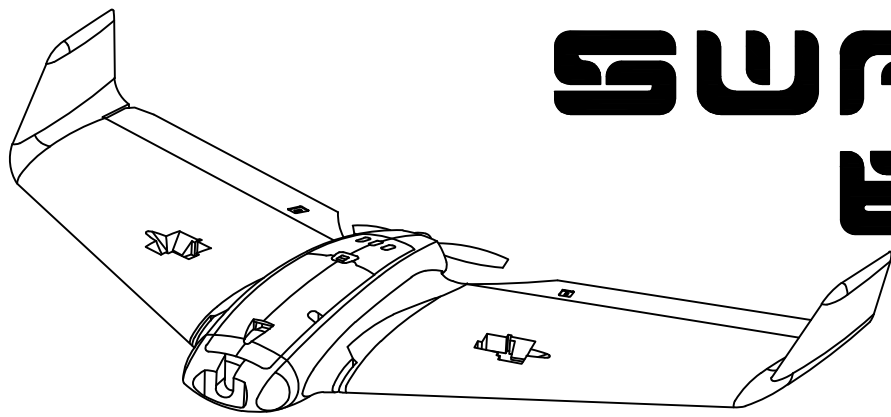
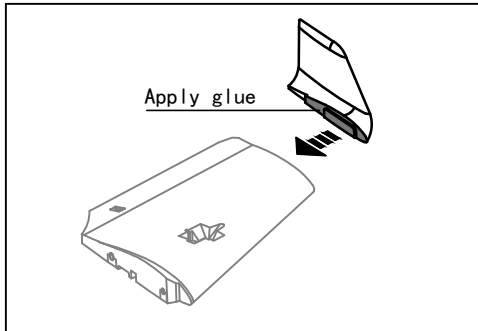


# SWALLOW B70

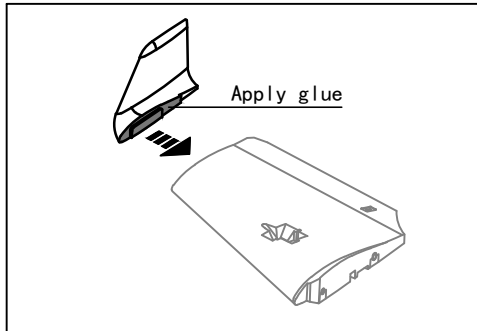


**WARNING!**  
This product is NOT a toy, Adult supervision is required for those under 14 years old.

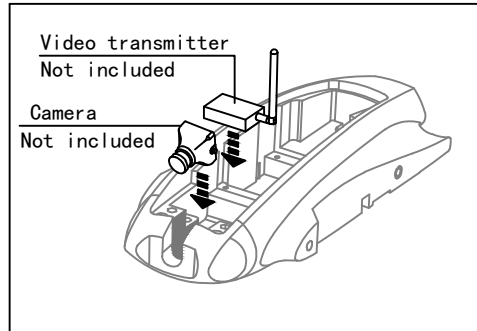
**WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision.



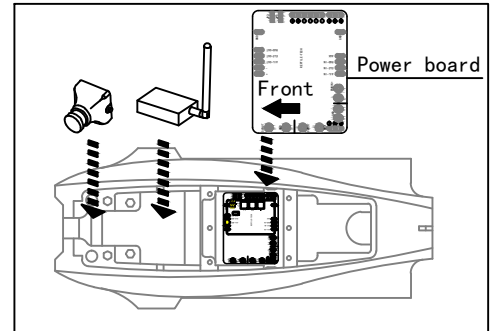
The winglet sticky on the wing.



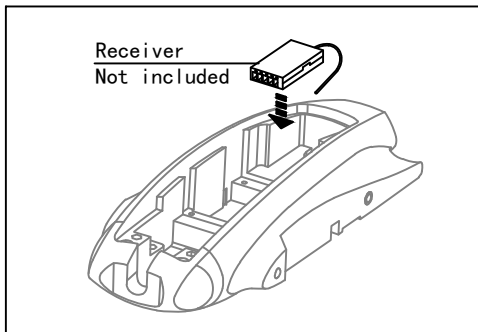
The rear cover and the body with glue.



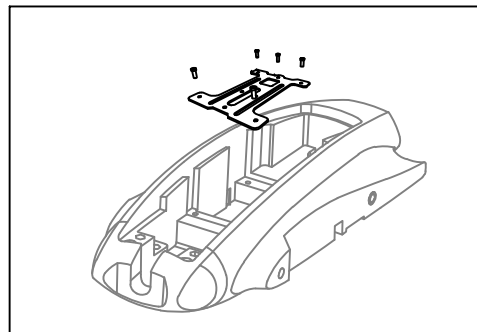
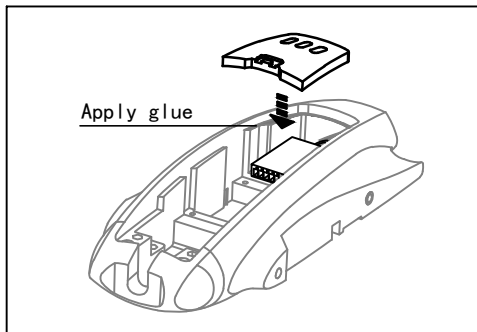
Load the camera into the head space and secure it.



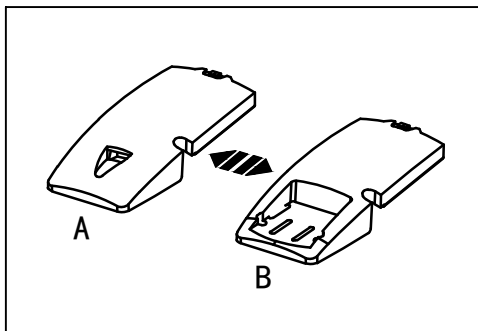
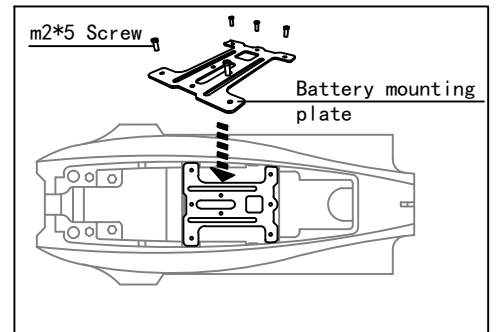
The power supply panel is installed in the lower equipment compartment of the middle of the fuselage.



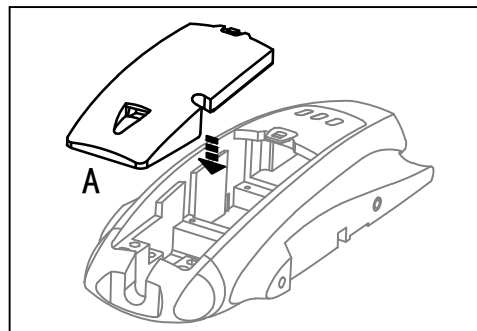
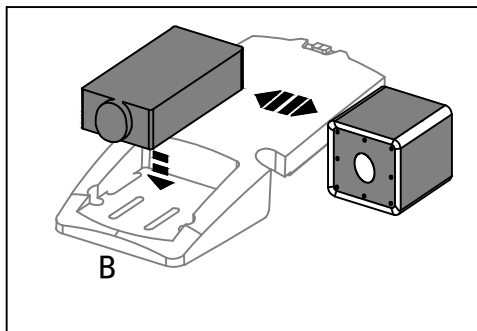
The receiver is fitted into the rear fuselage compartment.



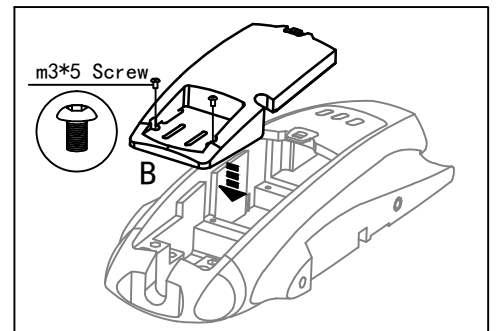
The battery board is mounted in the middle of the fuselage.



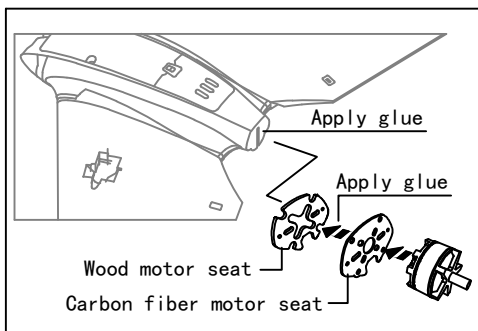
The front engine compartment covers two specifications for interchange use and can be fitted with video recorders.



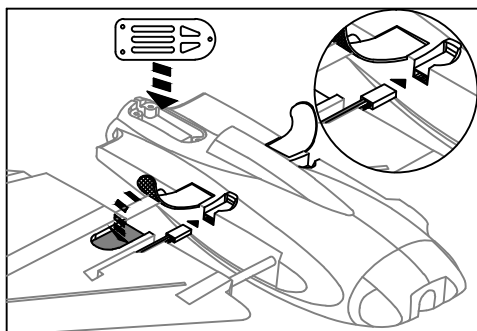
Installing the A hatch, use a magnet.



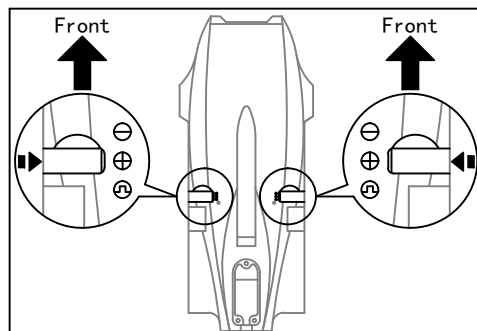
Installing the B hatch, use the M3 screw to reinforce.



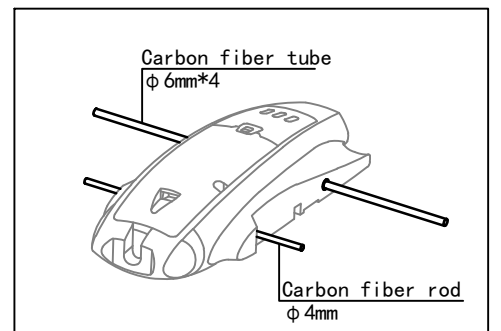
The carbon fiber motor seat and the wood motor seat are glued to the tail of the airframe.



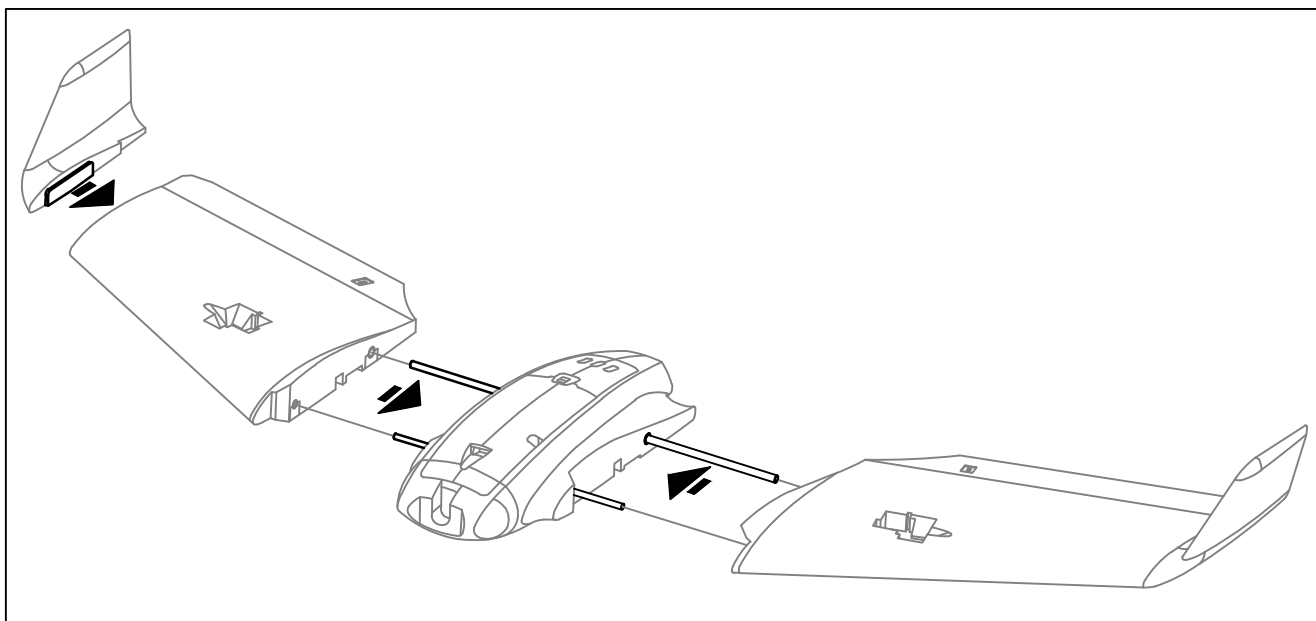
The airframe and the wing are locked by the Velcro.



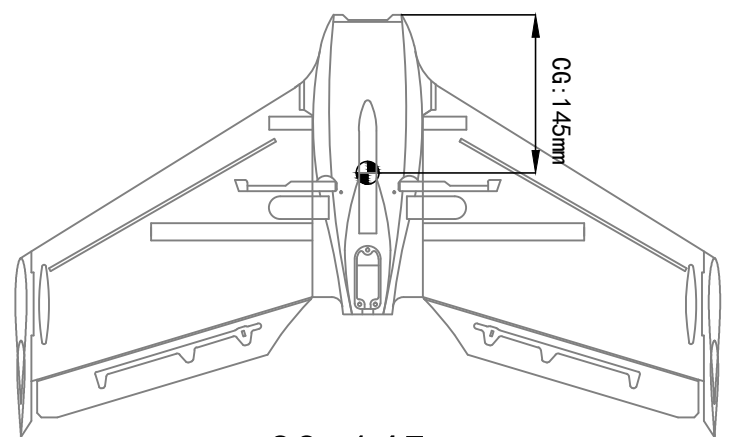
Schematic diagram of servo line connection.



The front airframe is 4mm carbon bar strengthened, and the rear airframe is 6mm carbon tube reinforced.

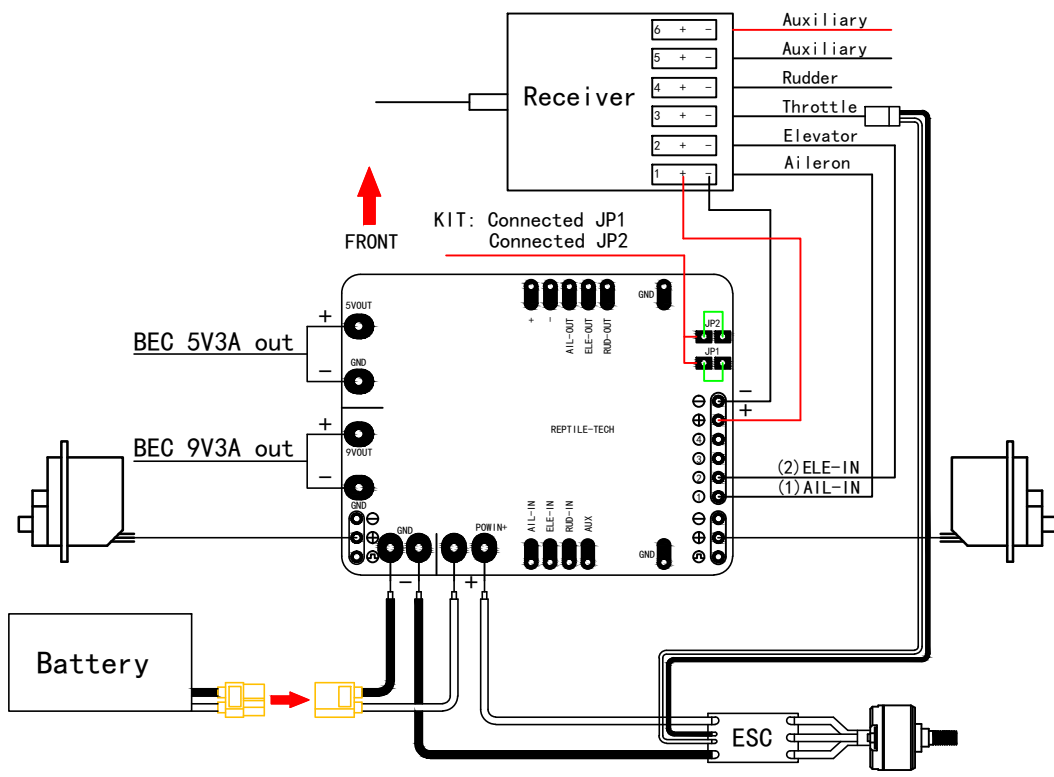


Carbon tube links for airframe and wing. The airframe and the wing are locked by the Velcro.

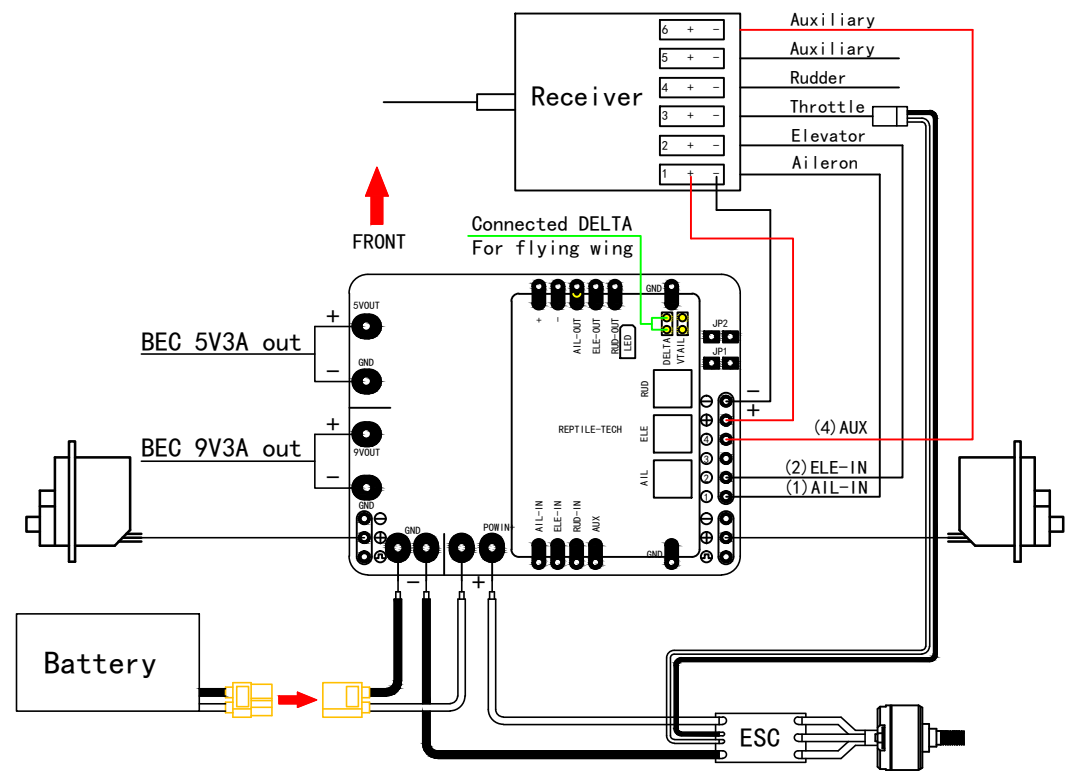


CG: 145mm

## KIT connection description



## PNP connection description

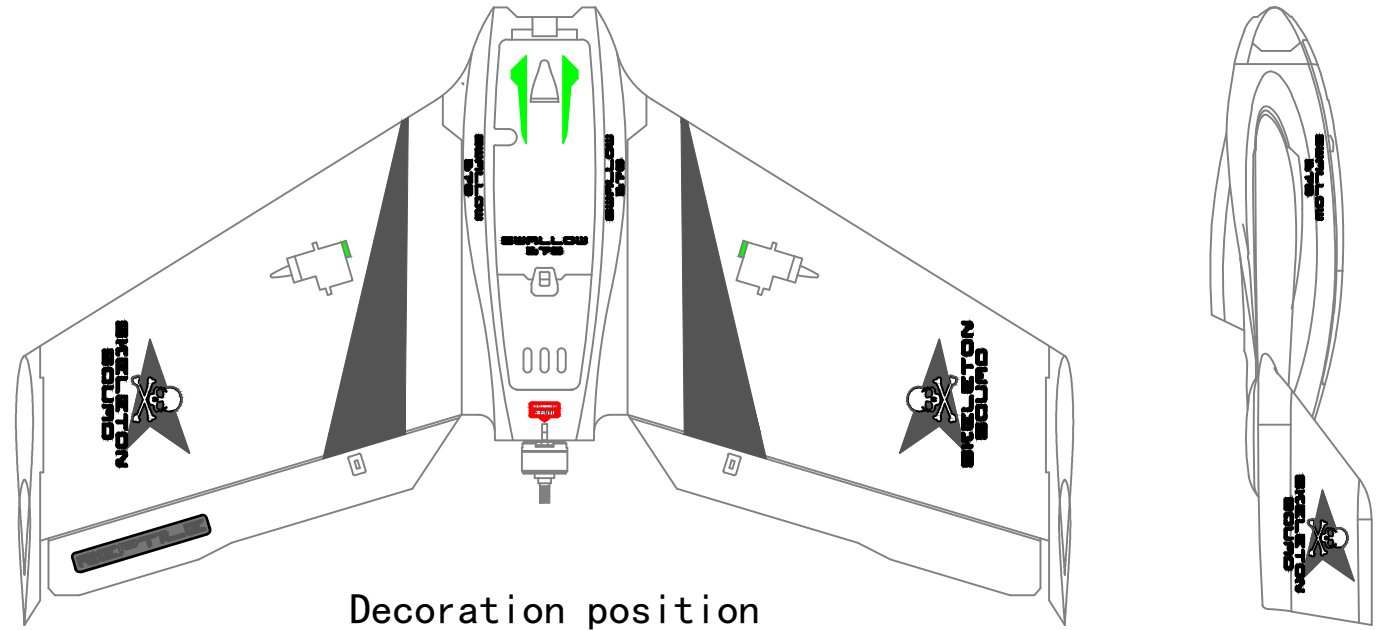


## Specifications Table

Wingspan	670mm
Length	390mm
Weight	140g (Without electronic equipment)
Wing size	10.2DM <sup>2</sup>
Flying weight	450g

## Recommended Table

Motor	2204/2300KV-2205/2300KV
ESC	20A-30A
Servo	9g*2PCS
Propeller	5"/6" (MAX 6")
LiPO battery	11.1V 1500MAH 3S
Radio	4 channels with elevon mixing



Decoration position

### Flight Controller Manual

**VERY IMPORTANT:** The Controller has to re-learn center position after installation, or replacing a new radio system, or making a trimming (or Sub-Trim) change within the transmitter, otherwise the servos may move to one side automatically when switching to hold mode. To do this, just quickly flip the flight mode switch twice between rate mode and hold mode within 1 second!

#### Features

- Two Model Types supported: delta and vtail.
- Three Flight Modes supported:
  - Rate Mode, Rate Mode for offset correction.
  - Hold Mode, HOLD mode for attitude lock.
  - Gyro Off Mode, transmitter control the plane directly.
- Two kinds of Gain Control Method supported: Master Gain from the radio, Independent Axis Gain from the Variable resistor on the Controller board.
- Using superior algorithm, Bring a more comfortable and more sensitive sense of control.

#### Specifications

- Voltage Range: 4.8-5.5V DC. (Do Not Use Dry Cell!)
- Dimensions: 35mm x 25mm.
- Weight: 5.0g.

#### Status LED Description

LED OFF: Flight Controller in Gyro Off Mode.  
LED ON: Flight Controller in Rate Mode.  
LED flash: Flight Controller in Hold Mode.

**WARNING: PLEASE READ THE FOLLOWING STEPS VERY CAREFULLY BEFORE YOU START TO INSTALL A NEW PLANE!**

#### Step 1: Mounting

Please make sure that the plate is installed in accordance with the directions indicated in the instruction.

#### Step 2: Model Type Selection

The DIP switches set the WING mode, Please match the type of your aircraft with Delta-wing (Flying-wing) and V-tail according to the pictures 1 to 2. If you change any DIP switch settings, power cycle the device to enable the new setting to take effect.

#### Step 3: Wiring

According to the definition of the interface of the diagram, the control board is welded on the power supply board, and then the power supply board is connected with the receiver according to the wiring diagram. (PIC.1/PIC.2)

This product applies PIC.1 wiring, please link the Delta port.

#### Step 4: Switch and Master Gain Channel Configure

Assign a 3-pos switch to the channel which connected the pins "IN-4" (AUX-IN) for switching the flight mode in flight. When use a 2-pos switch, you can only switch between Rate Mode and Hold Mode, so you can not switch to Gyro Off Mode. It will be set to Rate Mode by default if switch channel is not connected to the board. If your transmitter has Travel Adjust Function (End Point Adjust Function), you can change the switch channel's End Point to change Master Gain.

#### Step 5: Gyro direction and Gyro Gain configure

Before flight, you have to verify that the gyro compensation direction is OK, otherwise, it could lead to losing control or even crash during the flight!

The VR gain POTs on the Flight control the correction gain and direction for each of the pitch (ELE), roll (AIL) and yaw (RUD) axis.

- 5 o'clock = max gain in one direction
- 12 o'clock = zero gain
- 7 o'clock = max gain in opposite direction

To perform the examination, power on the board, pick the plane up and check it by following the steps below:

**CAUTION:** Keep all body parts, hair and loose clothing away from a moving propeller, as these items could become entangled.

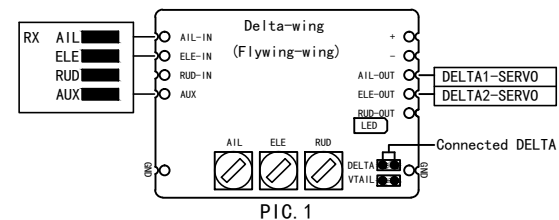
Move the entire aircraft as shown and ensure the control surfaces move in the direction indicated in the graphic. If the control surfaces do not respond as shown, do not fly the aircraft. Refer to the manual for more information.

For your first flight, the recommended gain value is 2/10 o'clock!

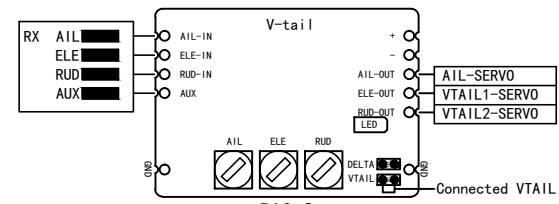
#### Step 6: re-learn center position

Quickly flip the flight mode switch three times between rate mode and hold mode within 1 second!

The gyroscope comes with delta wing hybrid control, without the need to design aileron hybrid controls on the remote controller.



PIC.1



PIC.2

#### SAFE Control Direction Test

	Aircraft movement	FC Reaction
Pitch		
Roll		