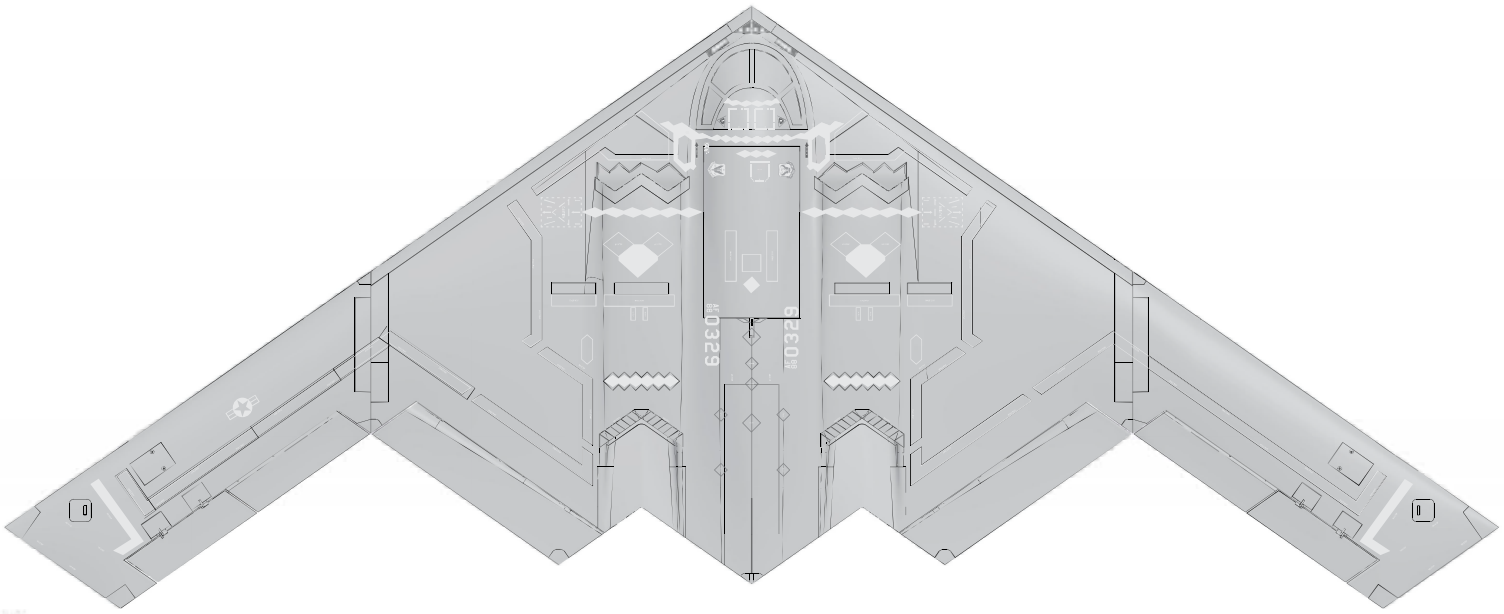
B-2 Spirit Bomber

Wingspan:2200mm
Length:886mm
Empty Weight:3200G[w/o Battery]



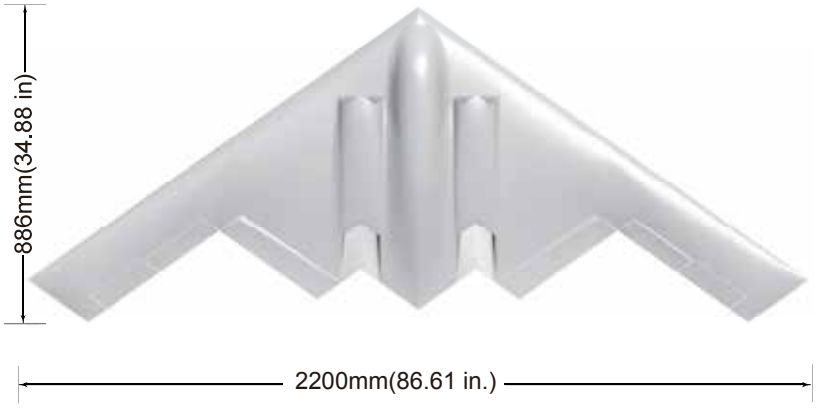
MADE IN CHINA

Note:

1.This is not a toy! Operater should have a certain experience, beginners should operate under the guidance of professional players.
2.Before install, please read through the instructions carefully and operate strictly under instructions.
3.Cause of wrong operation,Freewing and its vendors will not be held responsible for any losses.
4.Model planes' players must be on the age of 14 years old.
5.This plane used the EPO material with surface spray paint, don' t use chemical to clean, otherwise it will damage.
6.You should be careful to avoid flying in areas such as public places,high-voltage-intensive areas,near the highway, near the airport or any other place where laws and regulation clearly prohibit.
7.You cannot fly in bad weather conditions such as thunderstorms,snows....
8.Model plane's battery, don't allowed to put in everywhere. Storage must ensure that there is no inflammable and explosive materials in the round of 2M range.
9.Damaged or scrap battery should be properly recycled, it can't discard to avoid spontaneous combustion and fire.
10.In flying field, the waste after flying should be properly handled,it can't be abandoned or burned.
11.In any case, you must ensure that the throttle is in the low position and transmitter switch on, then it can connect the lipo-battery in aircraft.
12.Do not try to take planes by hand when flying or slow landing process. You must wait for landing stop, then carry it.

⚠ **NOTE:** This is not a toy. Not for children under 14 years. Young people under the age of 14 should only be permitted to operate this model under the instruction and supervision of an adult. Please keep these instructions for further reference after completing model assembly.

Product Basic information



Standard Version

Wingload: 48.2 g/dm^2
Wing Area: 83 dm^2
Servo:9g MG digital servo (2pcs)
9g Hybrid digital servo (7pcs)
Motor: 2952-2100KV I/R Motor
ESC: 60A with 8A UBEC
Ducted fan: 70mm 12-blade fan
Weight: 3200g (w/o Battery)

Other features

Material: EPO
Aileron: Yes Elevator: Yes
Rudder: Yes
Landing gear: Electric landing gear
Cabin door:Yes
Scale Pilot figure:Yes
Li-Po Battery: 6S 4000-6000mAh (1pcs)

⚠ Note: The parameters in here are derived from test result using our accessories. If use other accessories, the test result will be different. Any problem since of using other accessories, we are not able to provide technical support.

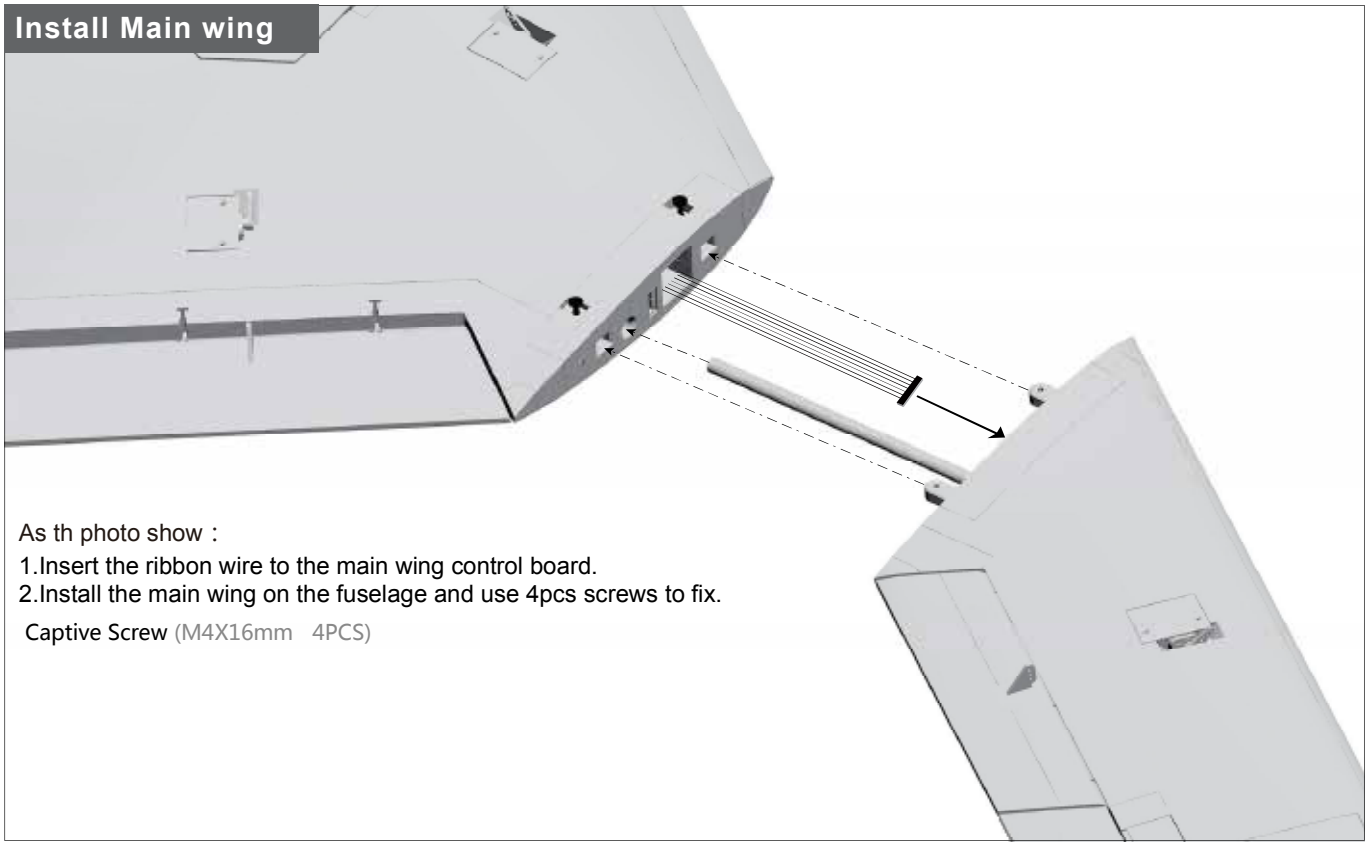
Package List

Different equipment include different spareparts. Please refer to the following contents to check your sparepart list.

No.	Name	PNP	ARF Plus
1	Main wing	Pre-installed all electronic parts	Pre-installed servo
2	Fuselage	Pre-installed all electronic parts	Pre-installed servo
3	Fuselage tail	√	√

No.	Name	PNP	ARF Plus
4	Screw bag	√	√
5	Manual	√	√
6	Part bag	√	√

Install Main wing



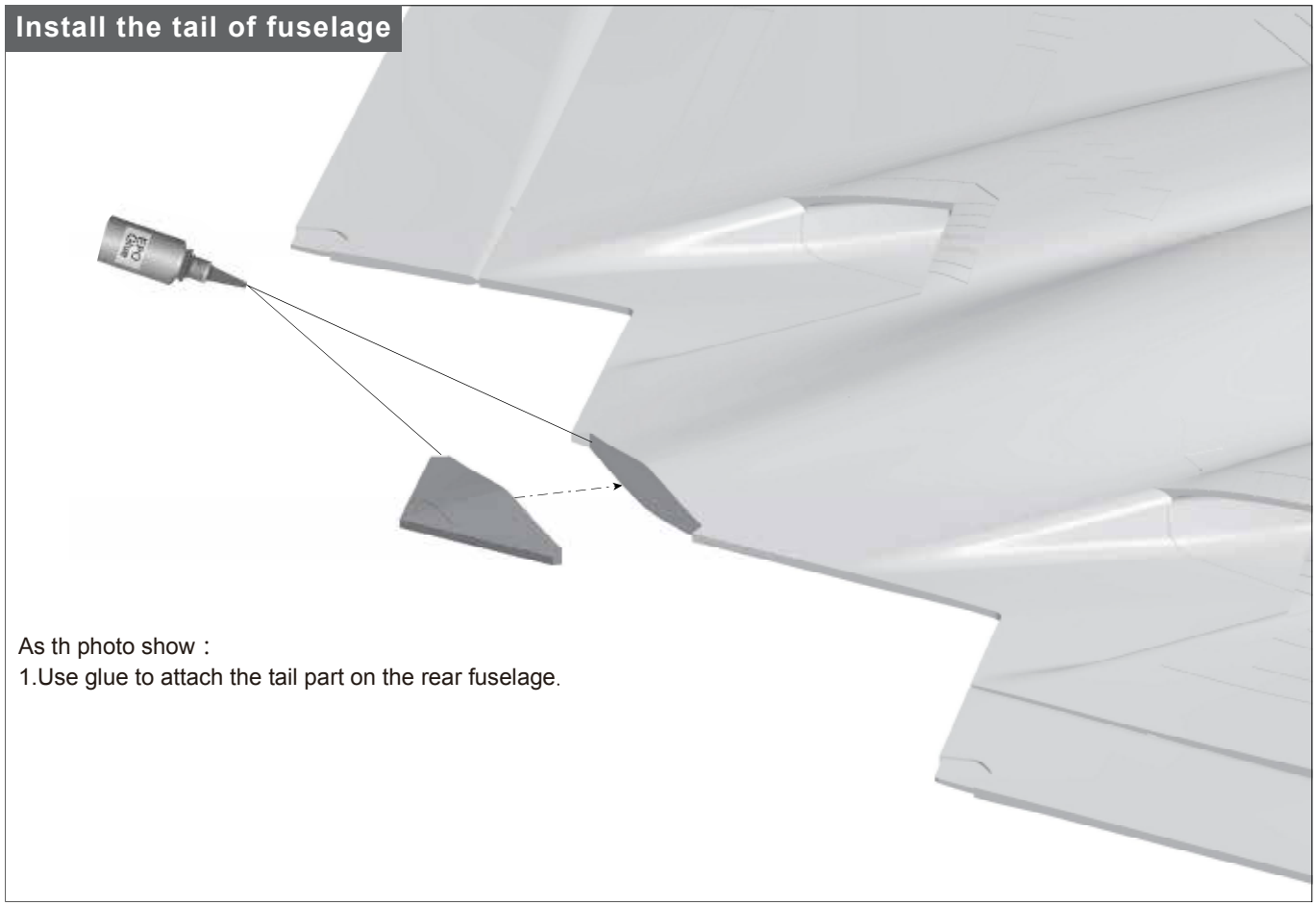
As th photo show：

1.Insert the ribbon wire to the main wing control board.

2.Install the main wing on the fuselage and use 4pcs screws to fix.

Captive Screw (M4X16mm 4PCS)

Install the tail of fuselage



As th photo show：

1.Use glue to attach the tail part on the rear fuselage.

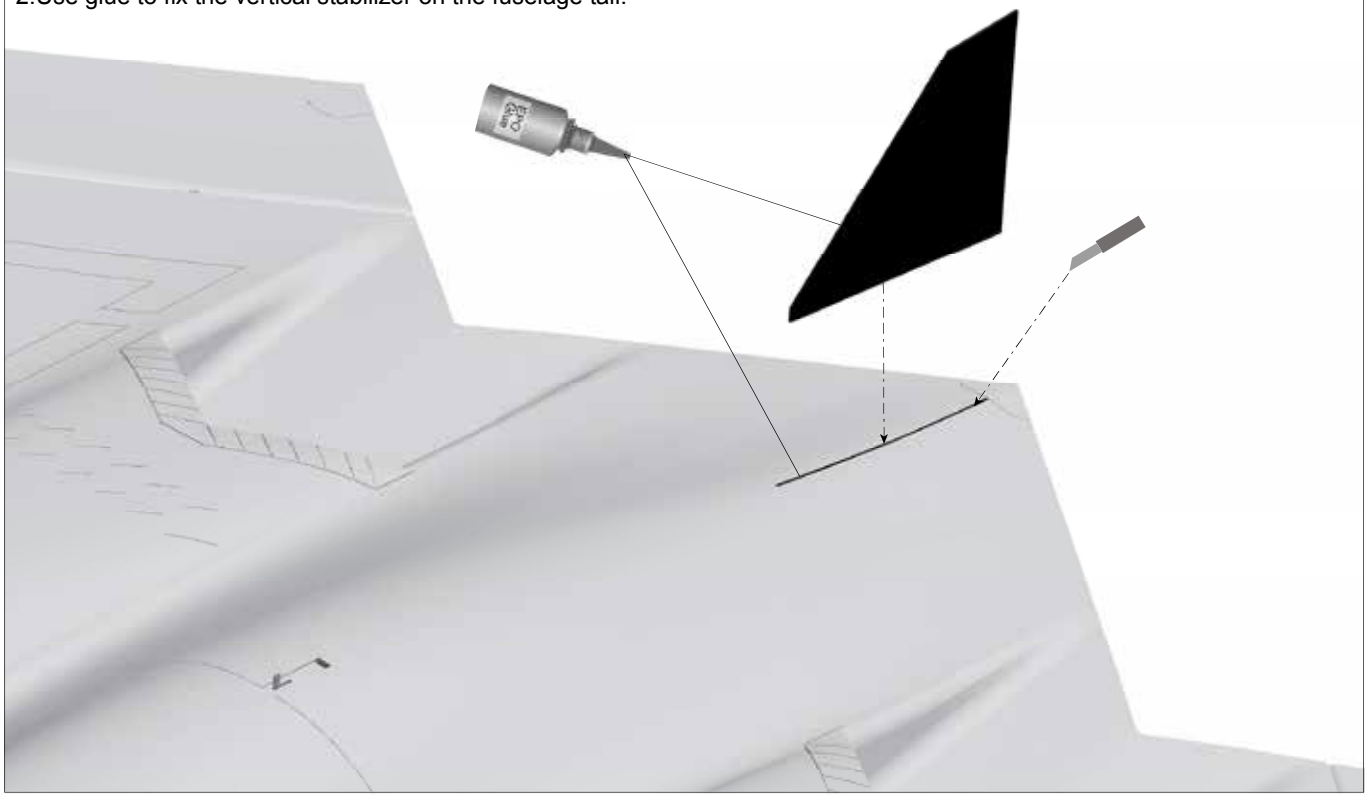
Install Vertical stabilizer

(This step is an optional step that can be installed or not)

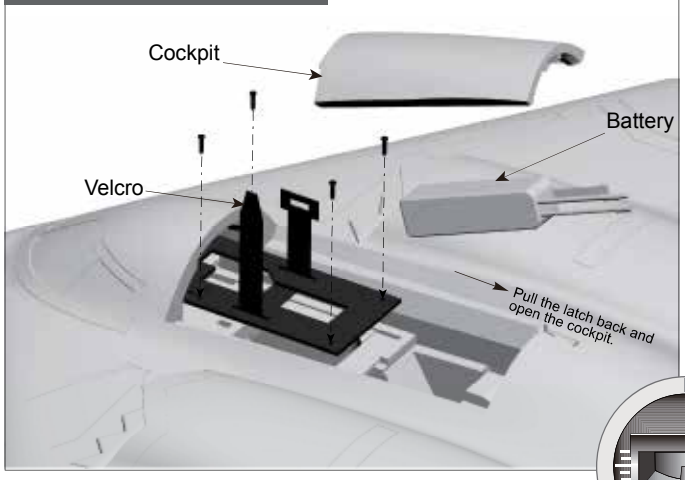
As the photo show：

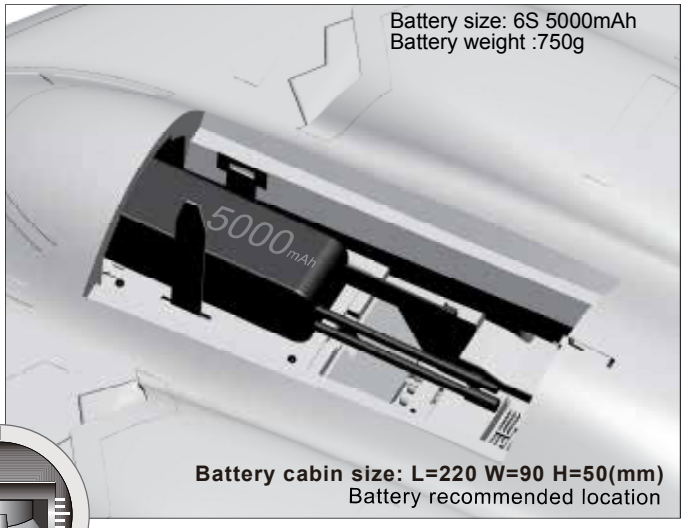
1.There is engraved line on the plane, and cut them down to about 10mm deep;

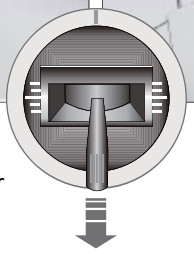
2.Use glue to fix the vertical stabilizer on the fuselage tail.



Install Battery





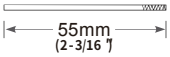


Before connecting the battery and receiver, please switch on the transmitter power and make sure the throttle stick is in the lowest position. Bind your receiver to your transmitter according to your transmitter's instruction manual.

We recommend the following LiPo battery:
6S 22.2V 4000mAh~6S 22.2V 6000mAh
Discharge rate of C ≥ **35C**

Pushrod instructions

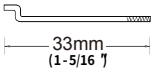
Nose gear steering pushrod length



Pushrod diameter Ø1.2mm

Nose gear steering pushrod mounting hole

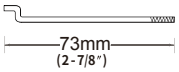
Nose cabin door pushrod length



Pushrod diameter Ø1.2mm

Nose cabin door pushrod mounting hole

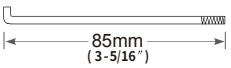
Rear cabin door pushrod length



Pushrod diameter Ø1.2mm

Rear cabin door pushrod mounting hole

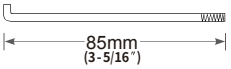
Aileron pushrod length



Pushrod diameter Ø1.5mm

Aileron pushrod mounting hole

Elevator pushrod length



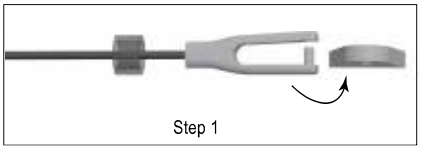
Pushrod diameter Ø1.5mm

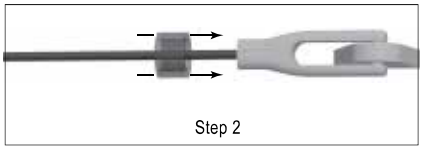
Elevator pushrod mounting hole

Important additional notes

The Y-type clevis used in this product is equipped with a transparent silicone ring for secondary reinforcement, which can effectively prevent the clevis from accidentally loosening.

As shown in the following figure, when you buckle the clevis into the control surface horn, use the silicone ring to cover the clevis.


Step 1

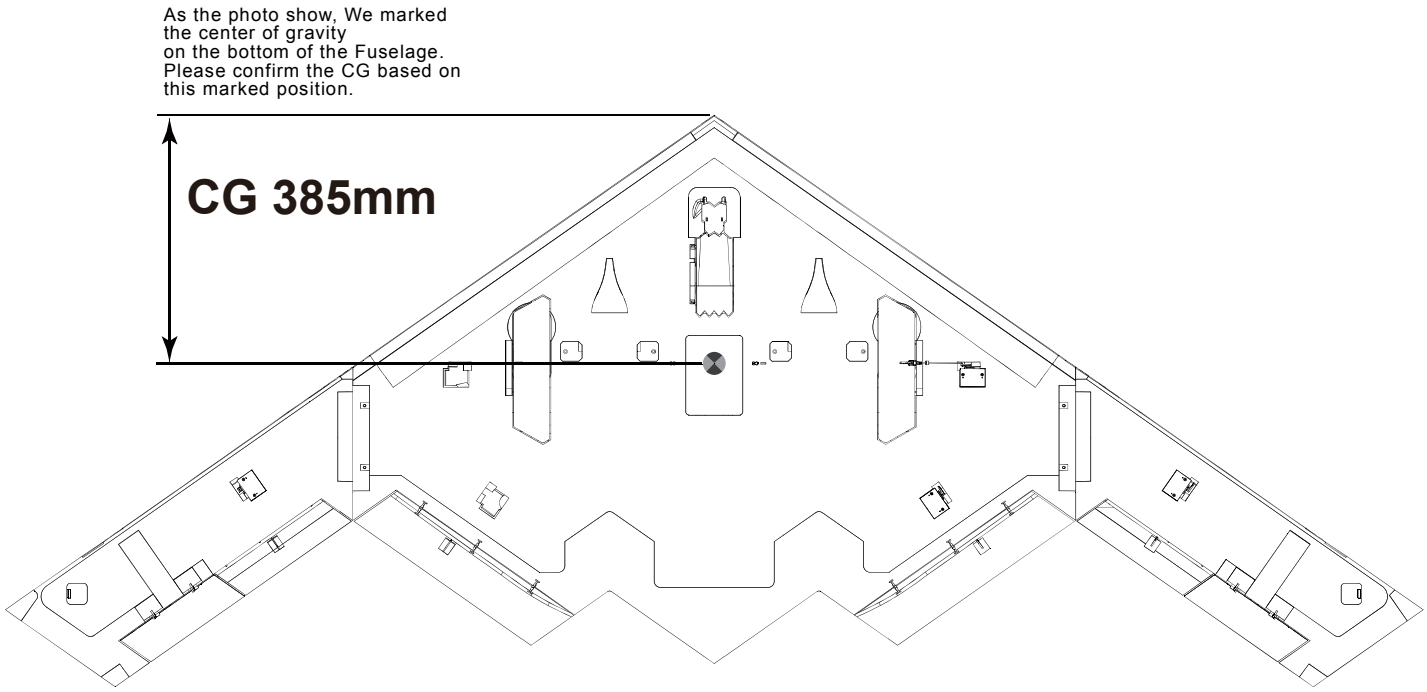

Step 2


Step 3

Center of Gravity

Correct Center of Gravity (”CG”) is critical for enabling safe aircraft stability and responsive control. Please refer to the following CG diagram to adjust your aircraft’s Center of Gravity.

- Depending on the capacity and weight of your choosen flight batteries, move the battery forward or backward to adjust the Center of Gravity.
- If you cannot obtain the recommended CG by moving the battery to a suitable location, you can also install a counterweight to achieve correct CG. However, with the recommended battery size, a counterweight is not required. We recommend flying without unnecessary counterweight.

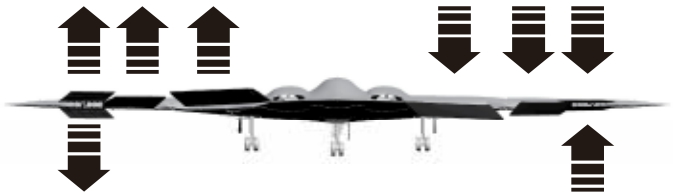


Control Direction Test

After installed the plane, before flying, we need a fully charged battery and connect to the ESC, then use radio to test and check that every control surface work properly.

Aileron

Stick Left



Stick Right

Rudder

Stick Left

Stick Right

Elevator

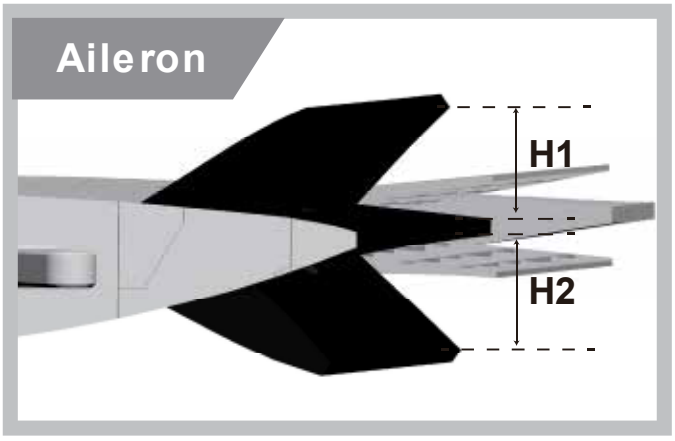
Stick down

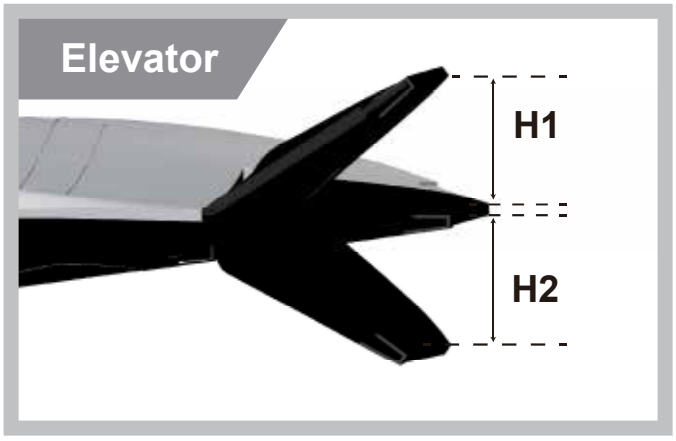
Stick up

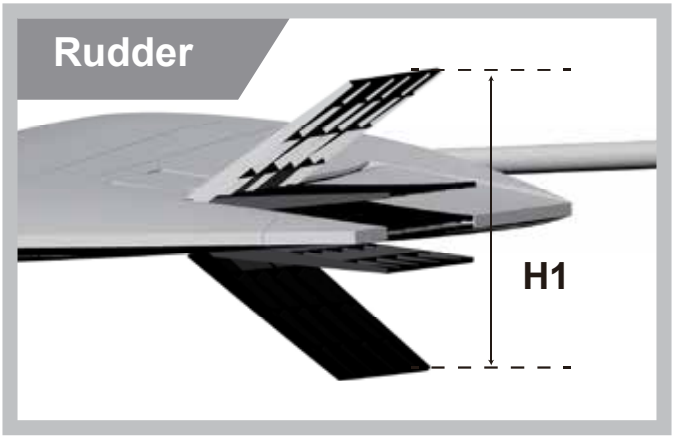
Rudder center position

Dual Rates

According to our testing experience, use the following parameters to set Aileron/Elevator Rate. Program your preferred Exponential % in your radio transmitter. We recommend using High Rate for the first flight, and switching to Low Rate if you desire a lower sensitivity. On successive flights, adjust the Rates and Expo to suit your preference.





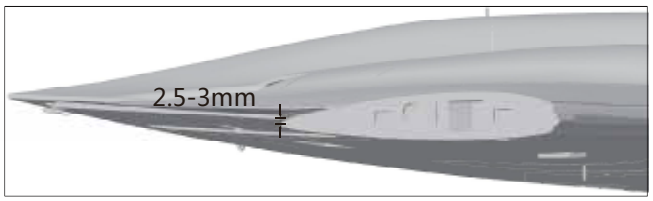


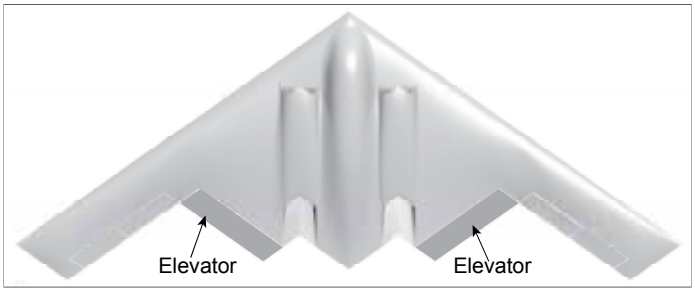
	Aileron (Measured closest to the fuselage)	**Elevator** (Measured closest to the fuselage)	**Rudder** (Measured from the bottom)
Low Rate	H1/H2 19mm/19mm D/R Rate : 100%	H1/H2 35mm/35mm D/R Rate : 100%	
High Rate	H1/H2 19mm/19mm D/R Rate : 100%	H1/H2 35mm/35mm D/R Rate : 100%	H1 Maximum opening size 102mm D/R Rate : 100%

⚠ Important Flight Notes:

1.Do not hit the rudder abruptly during high-speed taxiing, otherwise this jet may roll over;

2.Elevator need to mix 2.5-3mm of UP elevator;





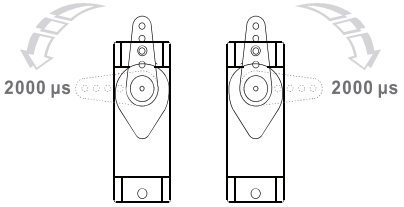
3.This jet has been equipped with an E52 gyro from the factory. The gyro has been preset to suit the flight parameters of the B2 aircraft. Customers do not need to set up the gyro, but need to pay attention to using the normal stabilization mode to fly (ie the gyro red light is always on mode).

4.Control box designed the delta wing and aileron mix, you don't need to set again in Radio.
Your radio use the normal mode is OK;

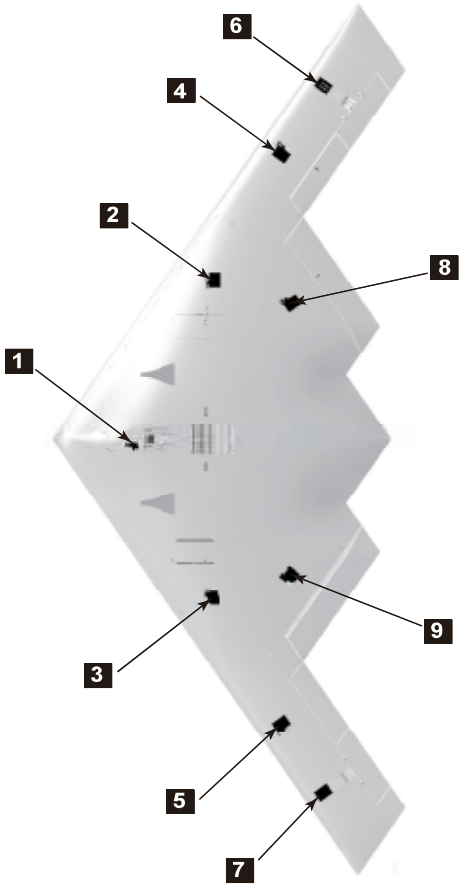
5.Gyro setting recommendation: A、Sensitivity level: Large
B、Aileron Sensitivity: 30% Elevator Sensitivity: 5% Rudder Sensitivity: 80%

Pre-Installed Component Overview

Servo Direction



The servo positive or reverse rotation is defined as follows:
When servo input signal change from 1000μs to 2000μs,
The servo arm is **rotated clockwise**, its **positive servo.**
The servo arm is **rotated counterclockwise**, its **reverse servo.**

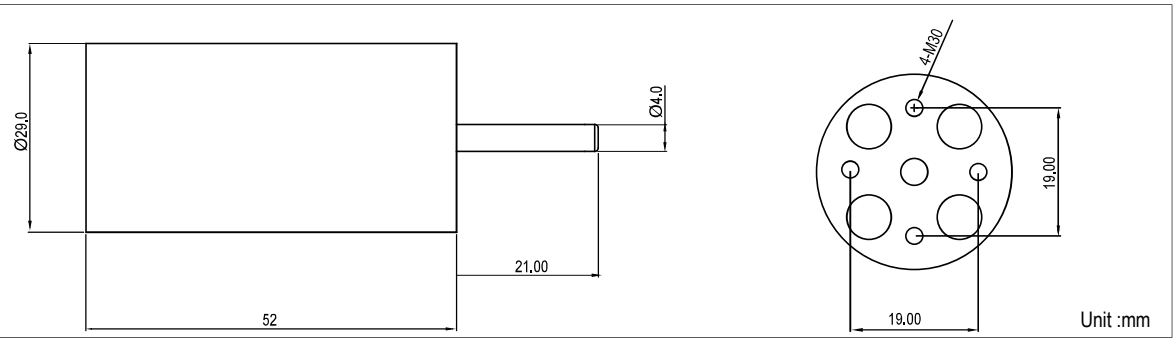


If you need to purchase another brand's servo, please refer to the following list to choose a suitable servo.

Position	Servo regulation	No.	Pos. / Rev.	Cable length
Nose gear steering servo	9g Digital-Hybrid	1	**Reverse**	300mm
Rear cabin door(L)	9g Digital-Hybrid	2	**Reverse**	100mm
Rear cabin door(R)	9g Digital-Hybrid	3	Positive	100mm
Aileron(L)	9g Digital-Hybrid	4	Positive	200mm
Aileron(R)	9g Digital-Hybrid	5	Positive	200mm
Rudder(L)	9g Digital-MG	6	Positive	400mm
Rudder(R)	9g Digital-MG	7	Positive	400mm
Elevator(L)	9g Digital-Hybrid	8	Positive	100mm
Elevator(R)	9g Digital-Hybrid	9	Positive	100mm

Motor Specification

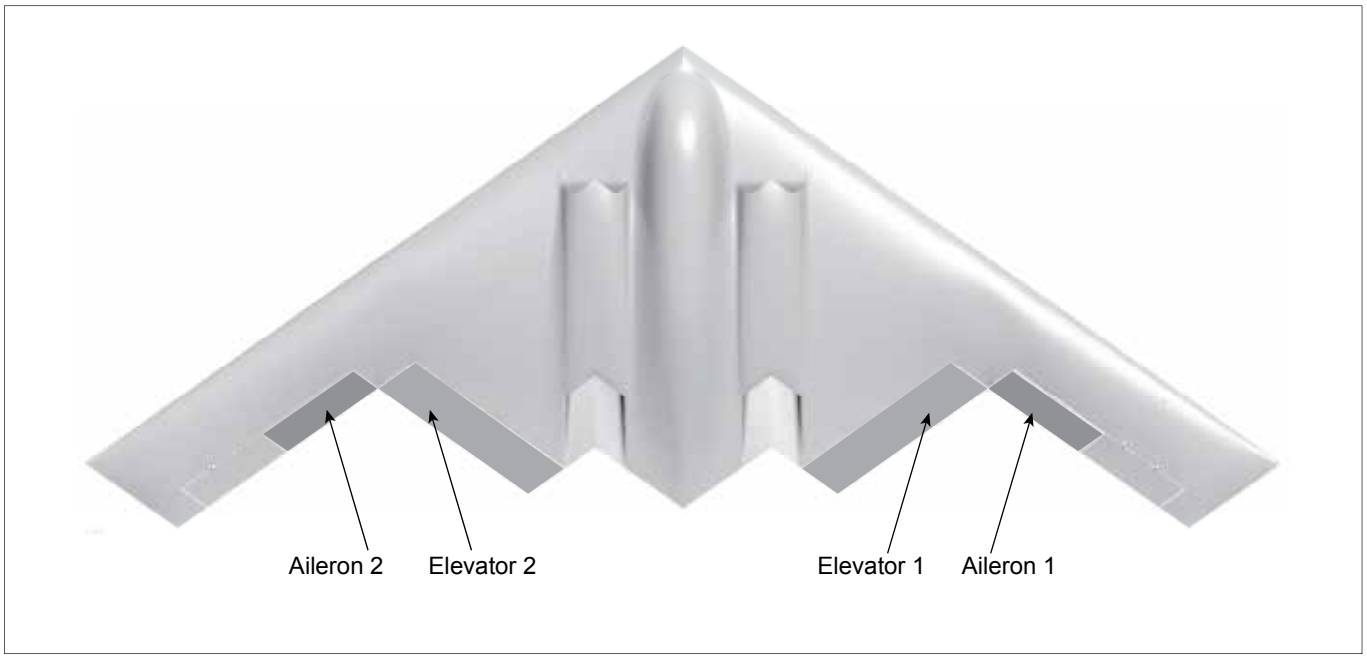
Item No.MI029521
2952-2100KV



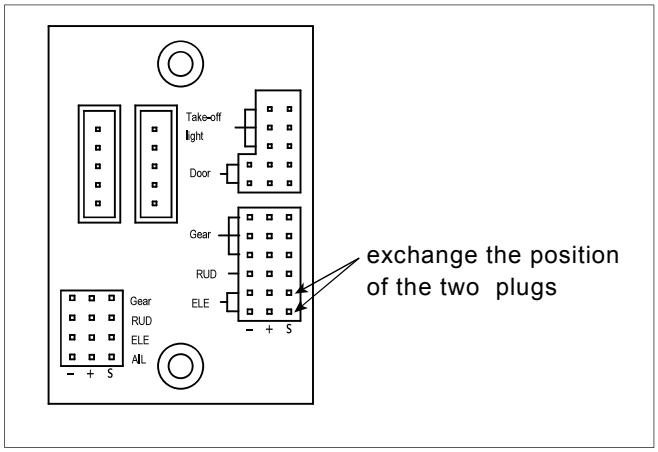
Item No.	Motor size	Motor(KV)	Thrust(g)	Current(A)	Use voltage (V)	Use ESC (A)	EDF Weight (g)	Max power (W)	Efficiency (g/w)
E7219	2952-2100KV	2100KV	2100-2200	50-55	22.2（6S）	60	230	1170	1.83

Jet adjustment instruction

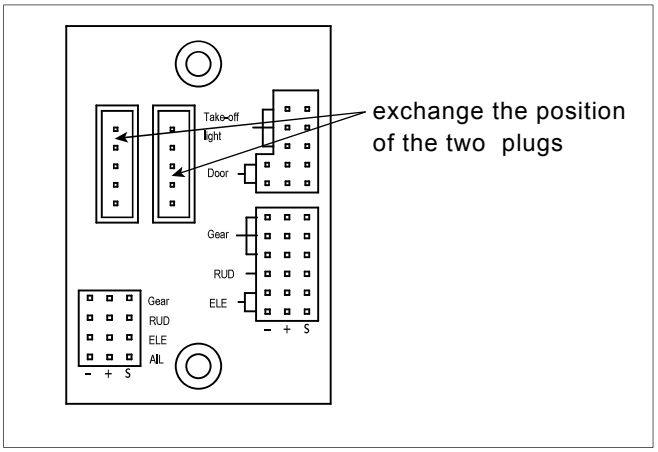
1.Control box of B2 designed the delta wing and aileron mix, you don't need to set again in Radio. Your radio use the normal mode is OK. And the control box also set the aileron and rudder mix.



2.If the direction of Elevator 1 and Elevator 2 is incorrect when the customer uses it, please try to exchange the position of the two ELE plugs on the control box, as shown in the following:



3.If the direction of Aileron 1 and Aileron 2 is incorrect when the customer uses it, please try to exchange the position of the two AIL plugs on the control box, as shown in the following:



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