www.freewing-model.com

F-86 SABRE V2

64mm EDF Jet

USER MANUAL

WINGSPAN:805MM(31.7") LENGTH:843MM (33.2")
EMPTY WEIGHT:570G (W/O BATTERY)

EN 1~8

Freewing F-86 introduction

Thank you for purchasing our Freewing 64mm EDF super scale jet, the F-86 Sabre! Before you assemble this model jet, please carefully read the instructions and follow the correct process for assembly and adjustment. If you encounter problems during assembly and debugging, please first resolve them by referring to the instructions. If the problem persists, please contact the distributor or directly contact us.

The Freewing 64 Series F-86 Sabre 64mm EDF super scale jet uses EPO material, its wingspan is 805mm, length is 843mm with exquisite contour simulation and engraved lines. The color scheme is based on the real aircraft with the reference number 51-2910 (Beauteous Butch II) and deeply restored.The main wings are fixed with screws, while the horizontal tail and vertical tail are fixed with glue. The plastic ball buckle connected to the control surface horn, it effectively improves the control accuracy of the control surface. The auxiliary fuel tank adopts a sliding rail installation design without glue, and the bottom is covered with a plastic cover to assist in landing and avoid scratching. The PNP version is equipped with a 64mm 12 blade ducted fan, a 4S 2840-2850KV out-runner brushless motor, and a 40A ESC with reverse thrust function.

When using the 4S 2200mAh lipo battery, the flight weight is 875g (no landing gear), the wing load is 64.6 g/dm^2, and approximately 3.5 minutes of flight time can be obtained. Strong power allows us to easily fly. The larger size and excellent aerodynamic design make it easier for the aircraft to maintain stable posture during the hand launching. Excellent performance tuning enables this product to easily and accurately perform various routine flight actions during flight. In good weather conditions, it can even maintain a cruising speed of 40KPH to gain more flight time.We also provide optional items such as landing gear and gyro to meet various needs. Install a simple landing gear, takeoff can be done by taxiing. After removing the foam filled in the mounting hole of the rudder servo, an additional 9g servo can be used to quickly realize the vertical tail rudder function; Install a Freewing Guard gyro, downloading and importing preset flight data can further avoid the influence of objective weather conditions and enhance the flight experience.

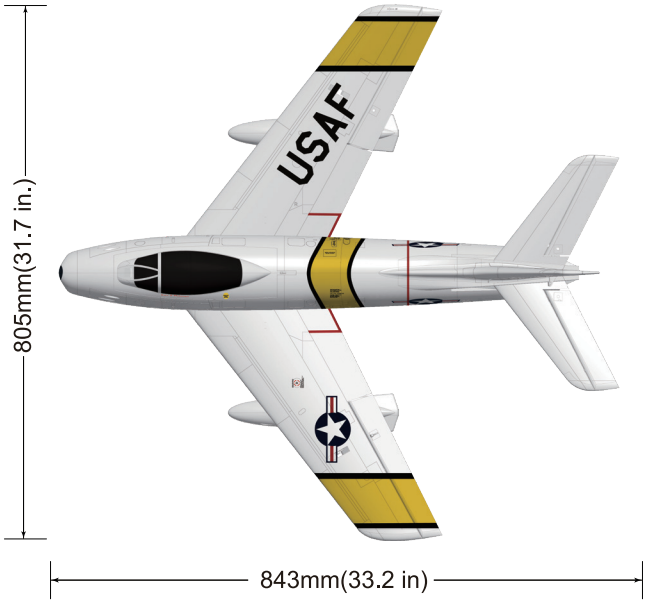
Compared to the first 64 series F-86 from Freewing ten years ago, the new F-86 Sabre has undergone comprehensive improvements in appearance, manufacturing processes, and flight performance. As a small scale jet, it features the best size settings available today, a more flexible takeoff mode, and outstanding performance and power, it will provide you a great flight experience.

⚠ **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.

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.

Product Basic information

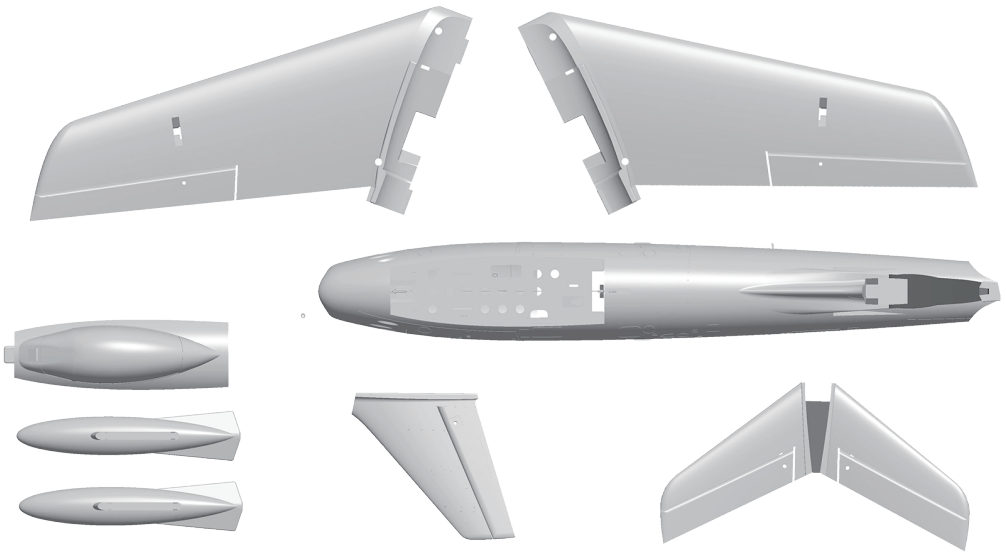


Standard Version

Wingload：55g/dm²
Wing Area：14.2 dm²
Servo：9g Digital Plastic Gear Servos (3pcs)
Motor：2840-2850KVI/R Motor
Ducted fan：64mm 12-blade fan
ESC：40A Brushless ESC(Thrust Reverse function)
Weight：570g(w/o Battery)
Li-Po Battery：4S 2200-2600mAh

⚠ 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.

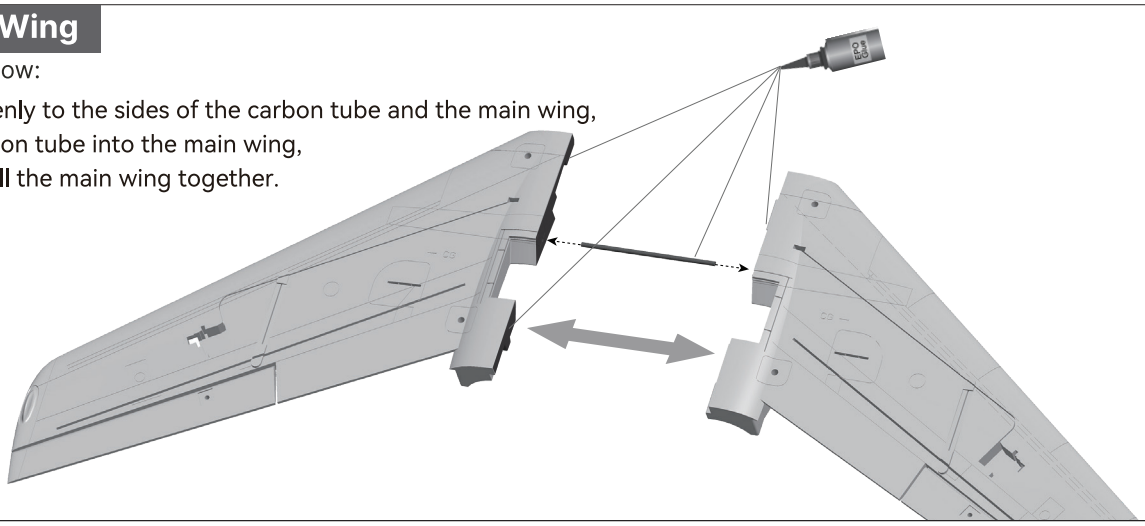
No.	Name	PNP	ARF Plus
1	Fuselage	Pre-installed all electronic parts	Pre-installed servo
2	Main wing	Pre-installed all electronic parts	Pre-installed servo
3	Horizontal tail	√	√
4	Vertical tail	√	√

No.	Name	PNP	ARF Plus
5	Cockpit	√	√
6	Annex bag	√	√
7	Missile	√	√
8	Manual	√	√

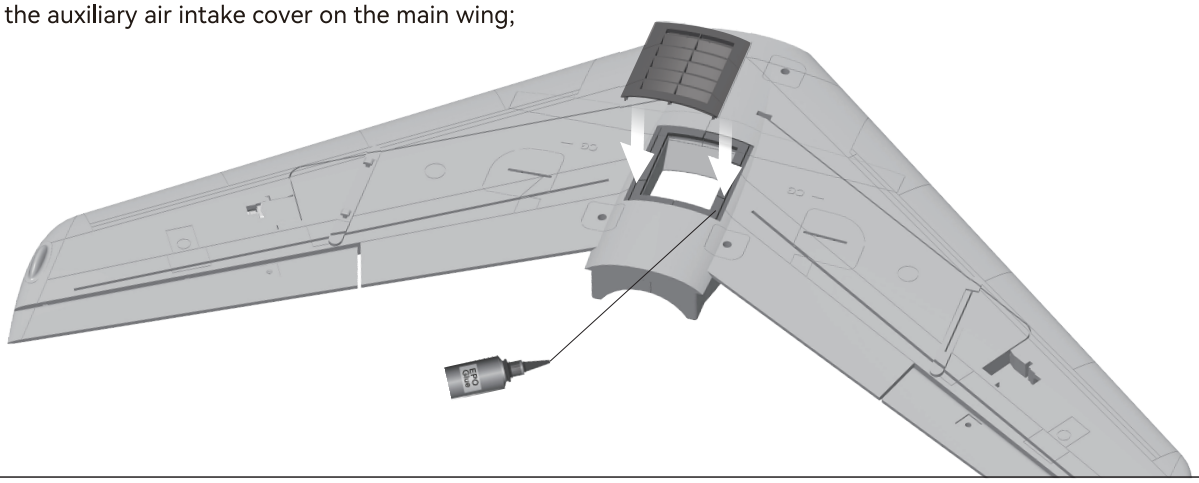
Install Main Wing

As the photo show:

1. Apply glue evenly to the sides of the carbon tube and the main wing, insert the carbon tube into the main wing, and then install the main wing together.

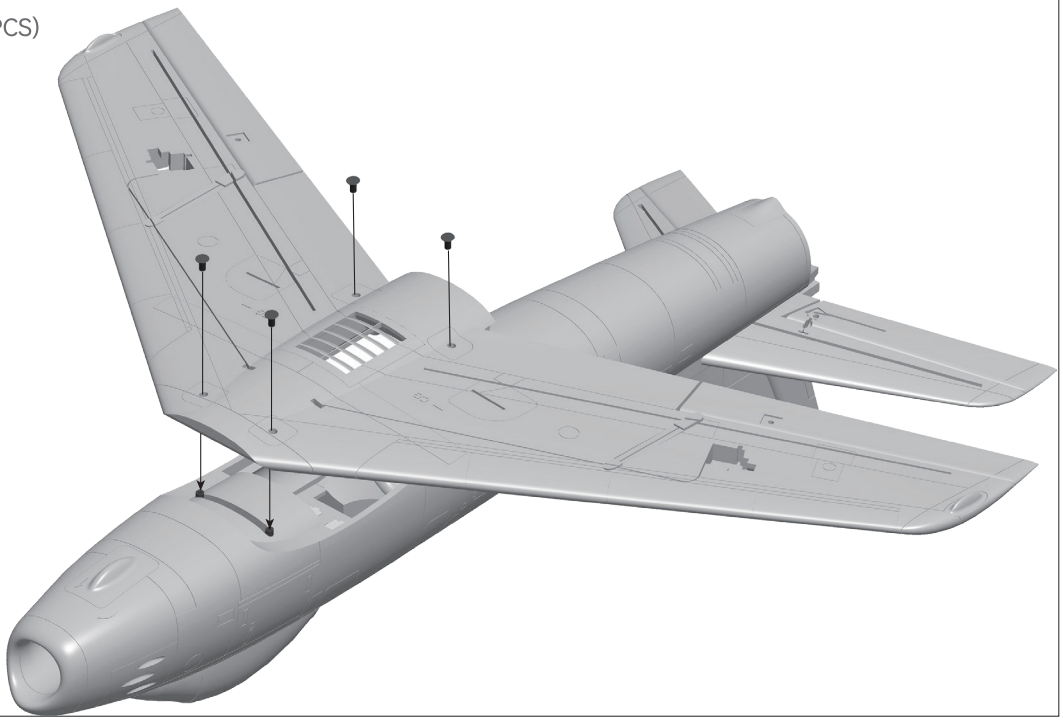


2. Apply the glue evenly to the bonding area of the air inlet;
3. Install the auxiliary air intake cover on the main wing;



4. Install the main wing onto the fuselage and fix it with screws

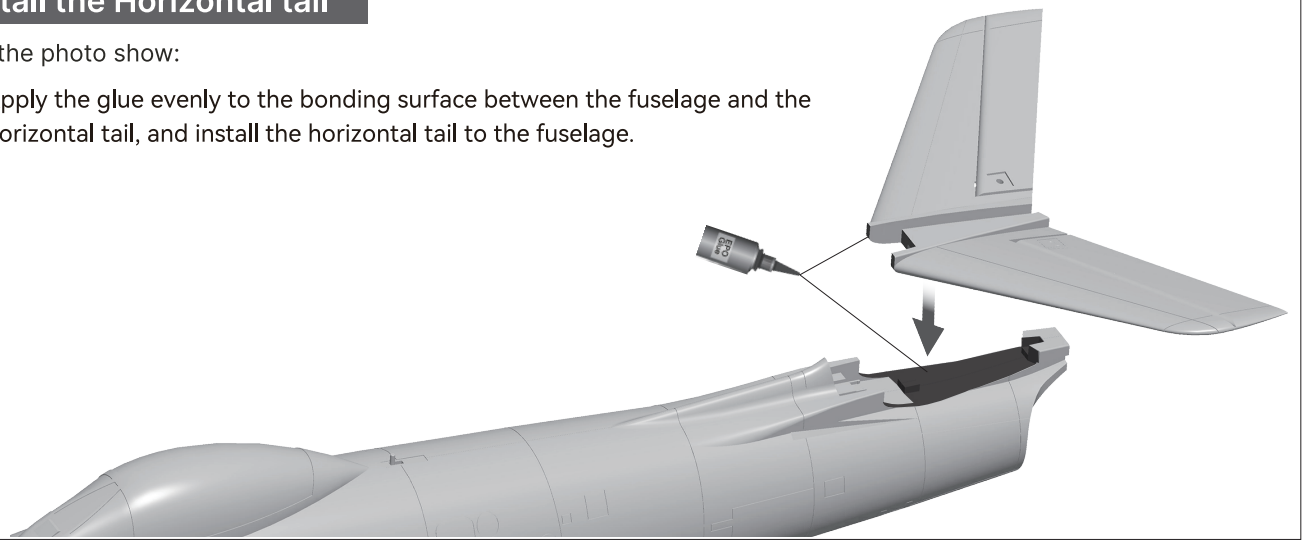
Screw (KA 3*10mm 4PCS)



Install the Horizontal tail

As the photo show:

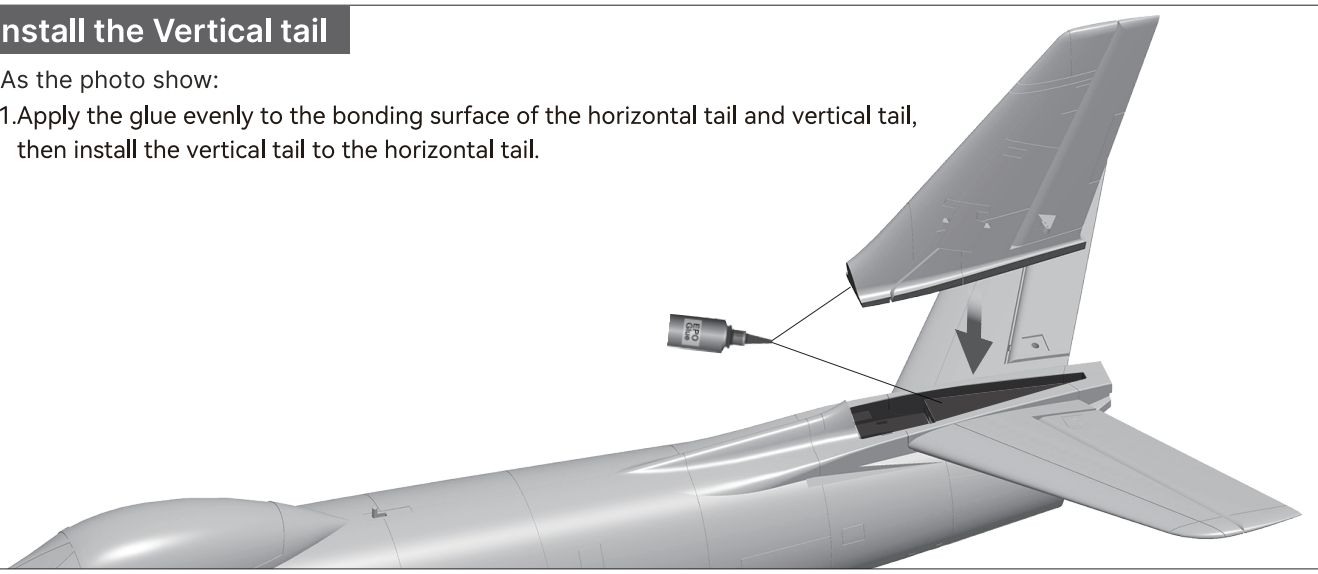
1. Apply the glue evenly to the bonding surface between the fuselage and the horizontal tail, and install the horizontal tail to the fuselage.



Install the Vertical tail

As the photo show:

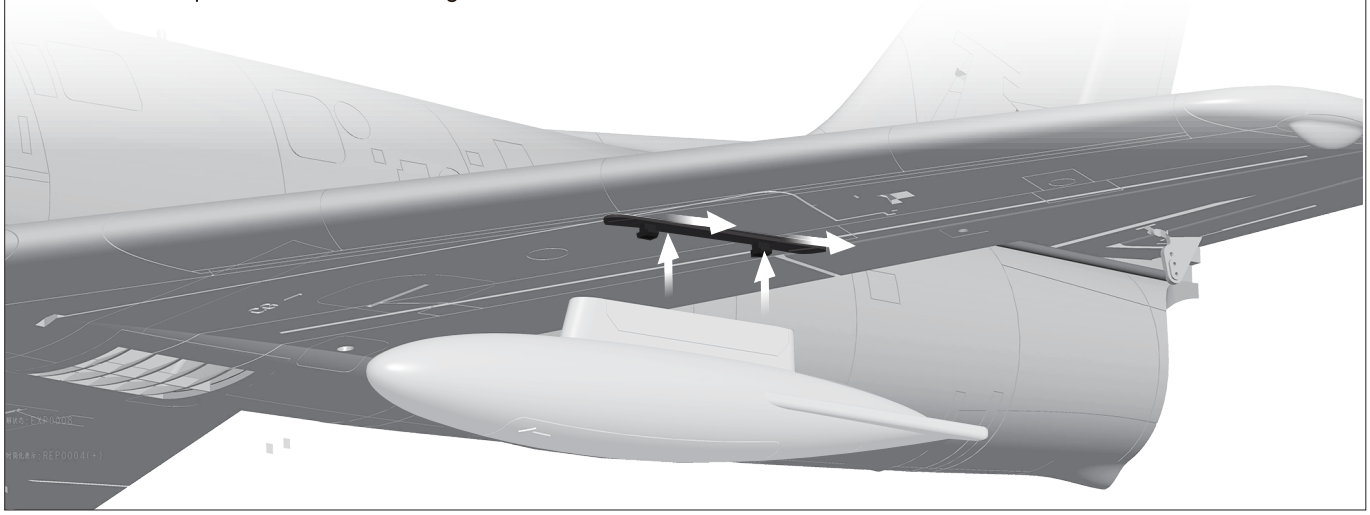
1.Apply the glue evenly to the bonding surface of the horizontal tail and vertical tail, then install the vertical tail to the horizontal tail.



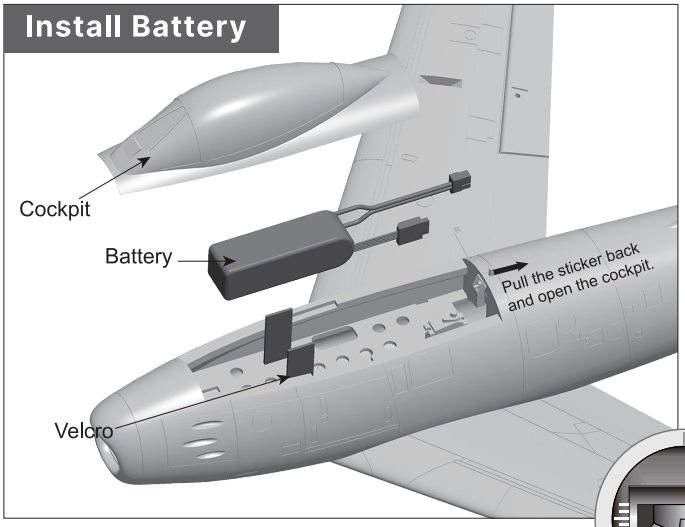
Install drop tank

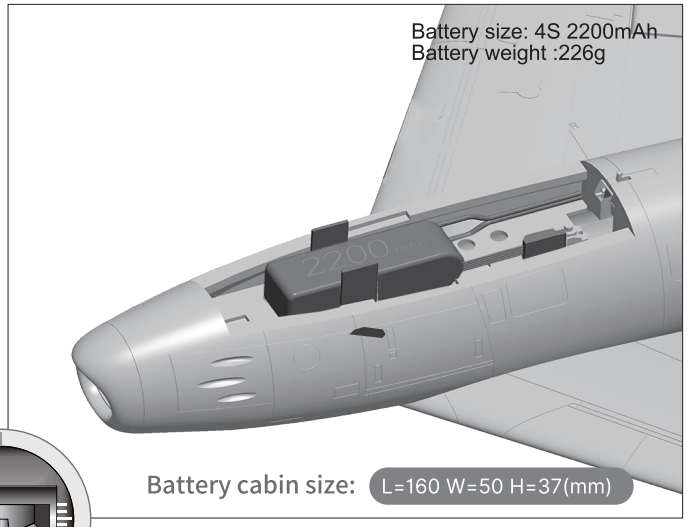
As the photo show:

1.Install the drop tank on the main wing.



Install Battery



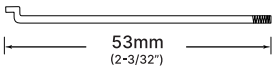


Before connecting the battery and receiver, please switch on the transmitter power and make sure the throttle stick is in the lowest position. Bind your receiver to your transmitter according to your transmitter's instruction manual.

We recommend the following LiPo battery:
4S 14.8V 2200mAh~4S 14.8V 2600mAh (1pcs)
Discharge rate of C ≥35C

Pushrod Instructions

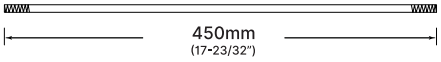
Aileron pushrod length



Pushrod diameter Ø1.2mm

Aileron pushrod mounting hole

Elevator pushrod length



Pushrod diameter Ø1.2mm

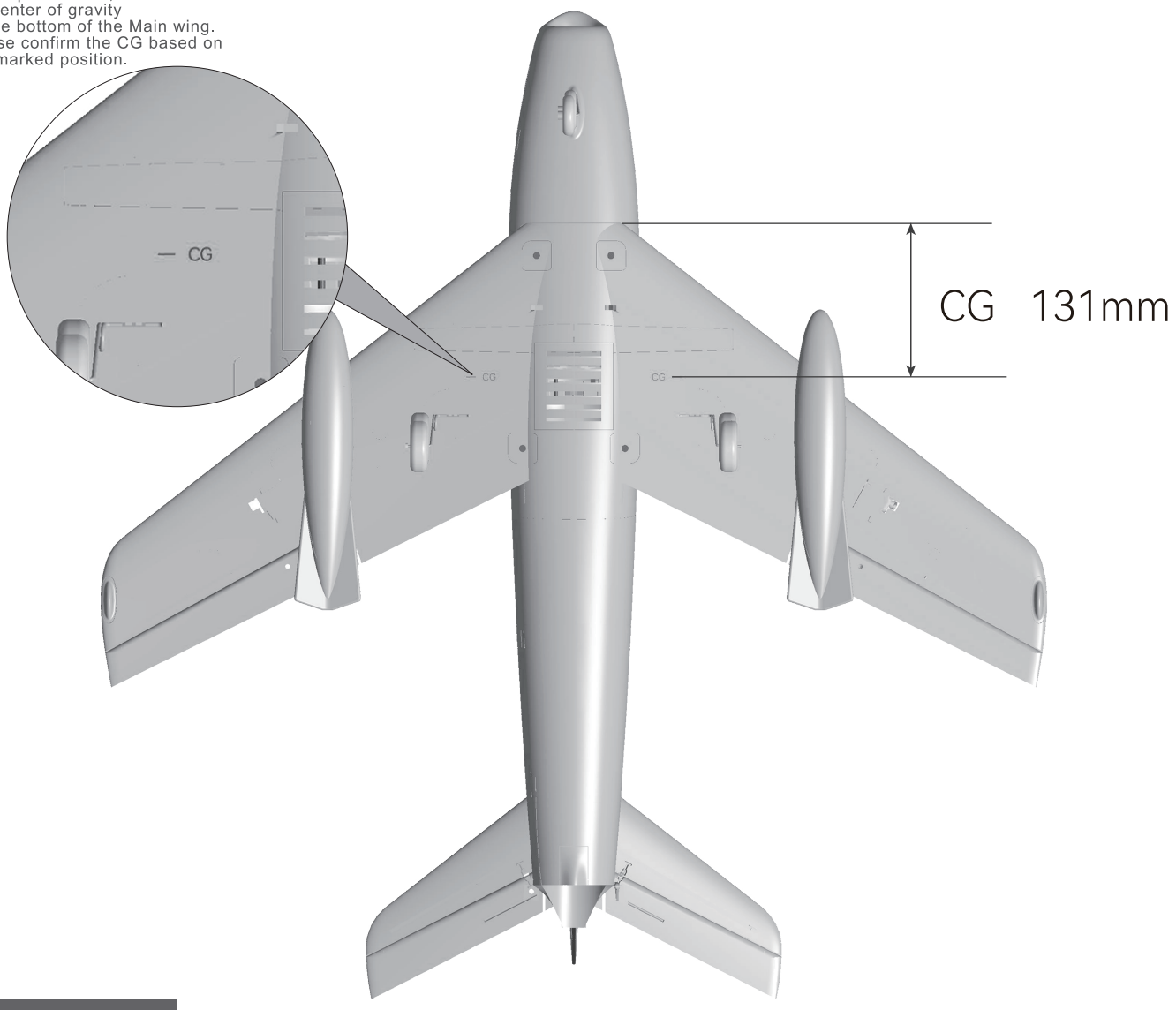
Elevator pushrod mounting hole

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.

As the photo show, We marked the center of gravity on the bottom of the Main wing. Please confirm the CG based on this marked position.



ESC Instruction

1.This product uses the new 40A V2 ESC, and adds the"Reverse throttle deceleration after landing" function.
2.This ESC has two connecting cables: "Throttle" signal control cable and "Reverse Brake" control cable.
3.Connection Instruction
- "Throttle" signal control cable insert into the throttle channel of receiver to control the throttle size.
- "Reverse Brake" control cable insert into any free two-way switch channel of receiver. After the plane lands on the ground, switch the corresponding channel switch on the radio to turn on the "Reverse throttle deceleration" function.

Note:
1.After the model aircraft is off the ground, during the flight, the "throttle reverse thrust" function cannot turn on, otherwise the forward power will be lost, and resulting in a serious flight accident.

After installed this F-86 model plane, please connect to the receiver and power on, then adjust it.

1.When all channels of radio are fine tuned to zero and the control stick is centered: check whether each control surface on the aircraft is in the center position. If it is found that the control surface is not in the center position, please adjust the control rod to center it;

2.Please refer to the diagram below and use the radio to test each control surface to ensure that its movement direction matches the diagram. If the opposite movement occurs, first check whether the relevant channel in the radio has enabled the reverse function; If the problem persists, please contact us for assistance in resolving it.

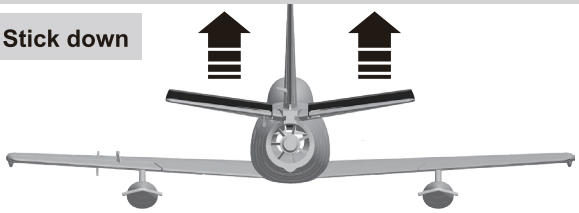
Aileron

Stick Left

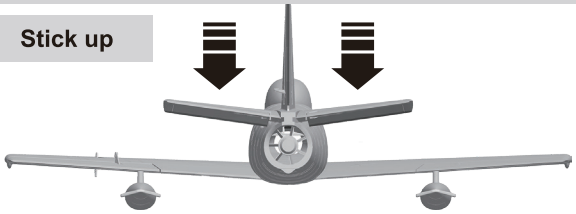
Stick Right

Elevator

Stick down

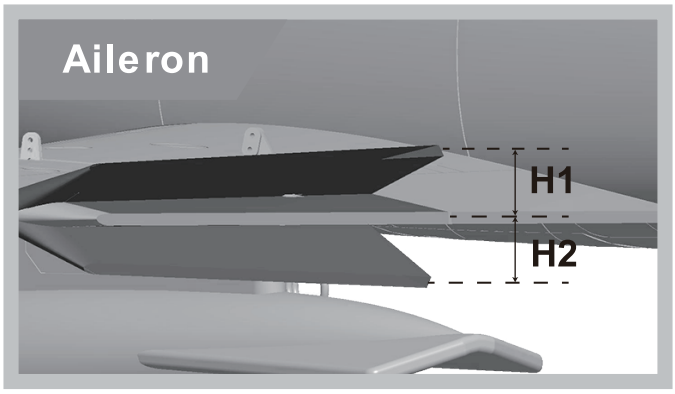


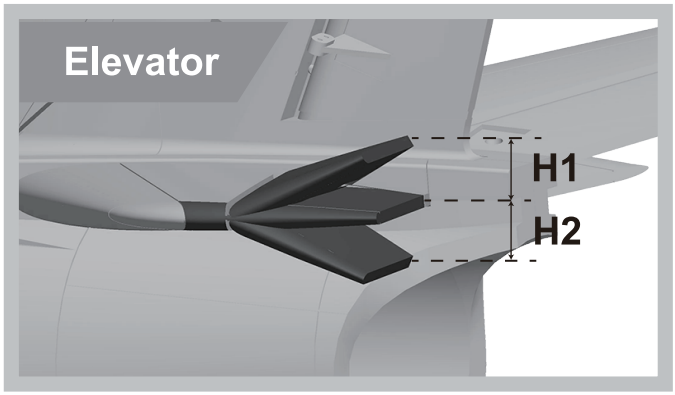
Stick up



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.

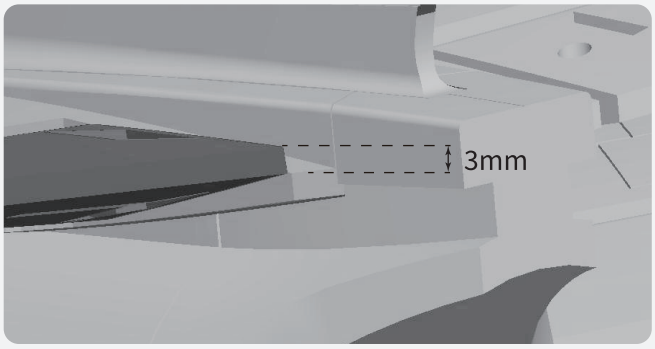




	Aileron (Measured closest to the fuselage)	Elevator (Measured closest to the fuselage)
Low Rate	H1/H2 7mm/7mm D/R Rate: 40%	H1/H2 12mm/12mm D/R Rate: 80%
High Rate	H1/H2 9mm/9mm D/R Rate: 50%	H1/H2 15mm/15mm D/R Rate: 100%

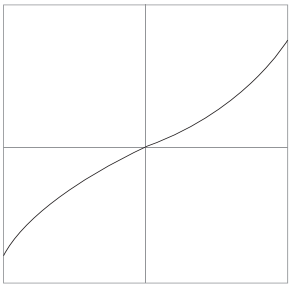
Flight note:

It requires 3mm up elevator for compensation



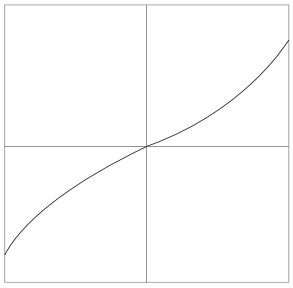
Remote Control EXP Setting Suggestion

1.Aileron EXP curve is shown as below :



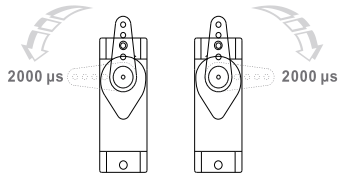
Futaba brand Remote Control : EXP A -30
EXP B -30
Spektrum brand Remote Control : EXPO 30% 30%

2.Elevator EXP curve is shown as below :

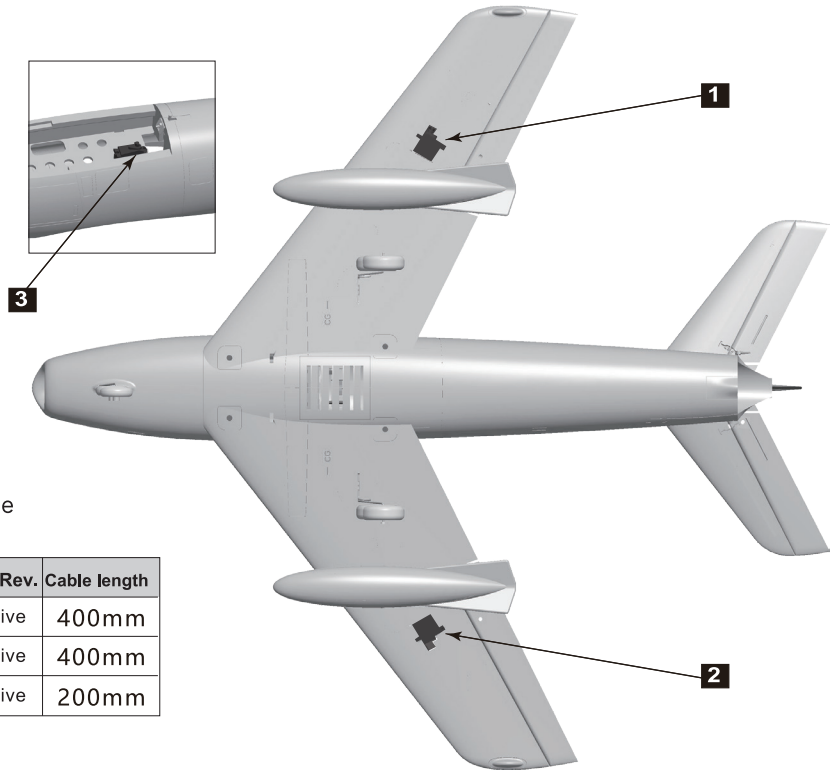


Futaba brand Remote Control : EXP A -30
EXP B -30
Spektrum brand Remote Control : EXPO 30% 30%

Servo Direction



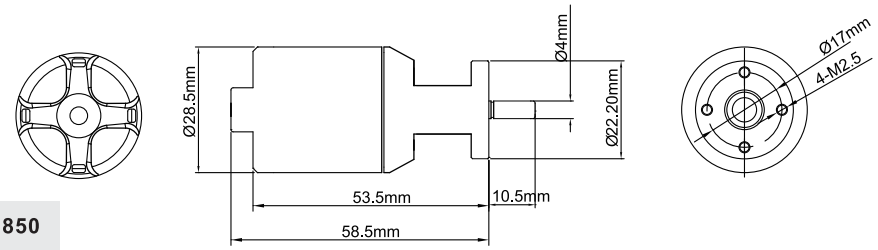
The servo positive or reverse rotation is defined as follows:
When servo input signal change from 1000μs to 2000μs,
The servo arm is **rotated clockwise**, its **positive servo.**
The servo arm is **rotated counterclockwise**, its **reverse servo.**



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
Aileron(L)	9g plastic servo	1	Positive	400mm
Aileron(R)	9g plastic servo	2	Positive	400mm
Elevator	9g plastic servo	3	Positive	200mm

Motor Specification



2840-2850

2840-2850KV brushless motor use 4S 14.8V lipo battery and 40A ESC.

⚠ Note: If you need other motor to use, please refer to the dimension shown on the left to select your motor, to make sure that the motor you purchased can install successfully.

Model	KV Value	Volate (V)	Current (A)	Pull (g)	RPM	Weight (g)	No Load Current	Propeller	ESC
2840-2850KV	2850RPM/V	14.8	40	1350	42180	145	2.7A	64mm Ducted Fan	40A