

m^{DEL}
Freewing

F-105 Thunderchief

64mm EDF Sport Scale Park Jet

User Manual

WINGSPAN: 530MM (20.8")

LENGTH: 800MM (31.5")

EMPTY WEIGHT: 360g (W/O BATTERY)

EN	1~8
中	9~16



www.sz-freewing.com

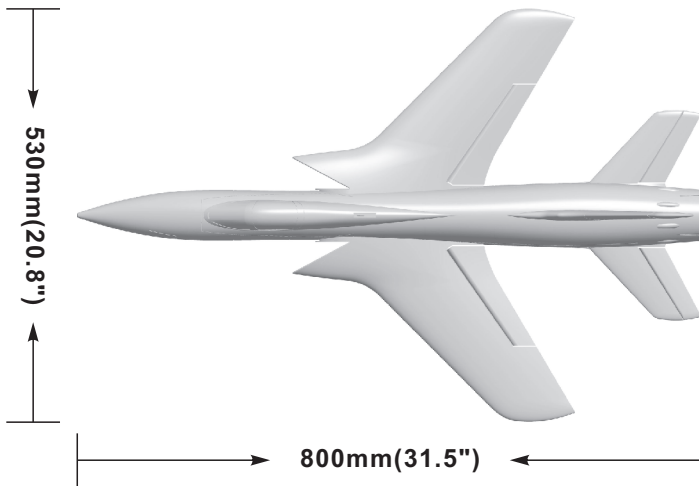


MADE IN CHINA

Introduction.....	1	Center of Gravity.....	5
Basic Product Information	2	Control Direction Test.....	6
Package List	2	Dual Rates	6
PNP Install Instructions		Accessories Description	
Install Main Wing.....	3	Motor Specifications	7
Install Horizontal Stabilizer.....	3	Motor Overview	7
Install Vertical Stabilizer.....	4	Accessories Introduction	
Install Pushrod.....	4	Servos Introductions.....	8
Pushrod instructions.....	5	Install nose landing gear	8
Battery Size.....	5	Install rear landing gear.....	8

Note:

1. This is not a toy! Operator 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.



Standard version

Wing Loading : 70g/dm²
 Wing Area : 7dm²
 Motor : 2627-4500KV
 Brushless Outrunner Motor
 Ducted fan: 64mm 5-Blade Fan
 ESC: 30A Brushless
 Servo: 9g Plastic Servo (2pcs)
 Top Speed : 120KPH/75MPH
 Empty Weight:360g(without battery)
 Bench Tested Thrust: 750g

Landing gear: fixed landing gear
 (Optional spare part, need to purchase separately.)

⚠ 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.

The package don't include the landing gear, if you need, please contact your local dealer.

Contents

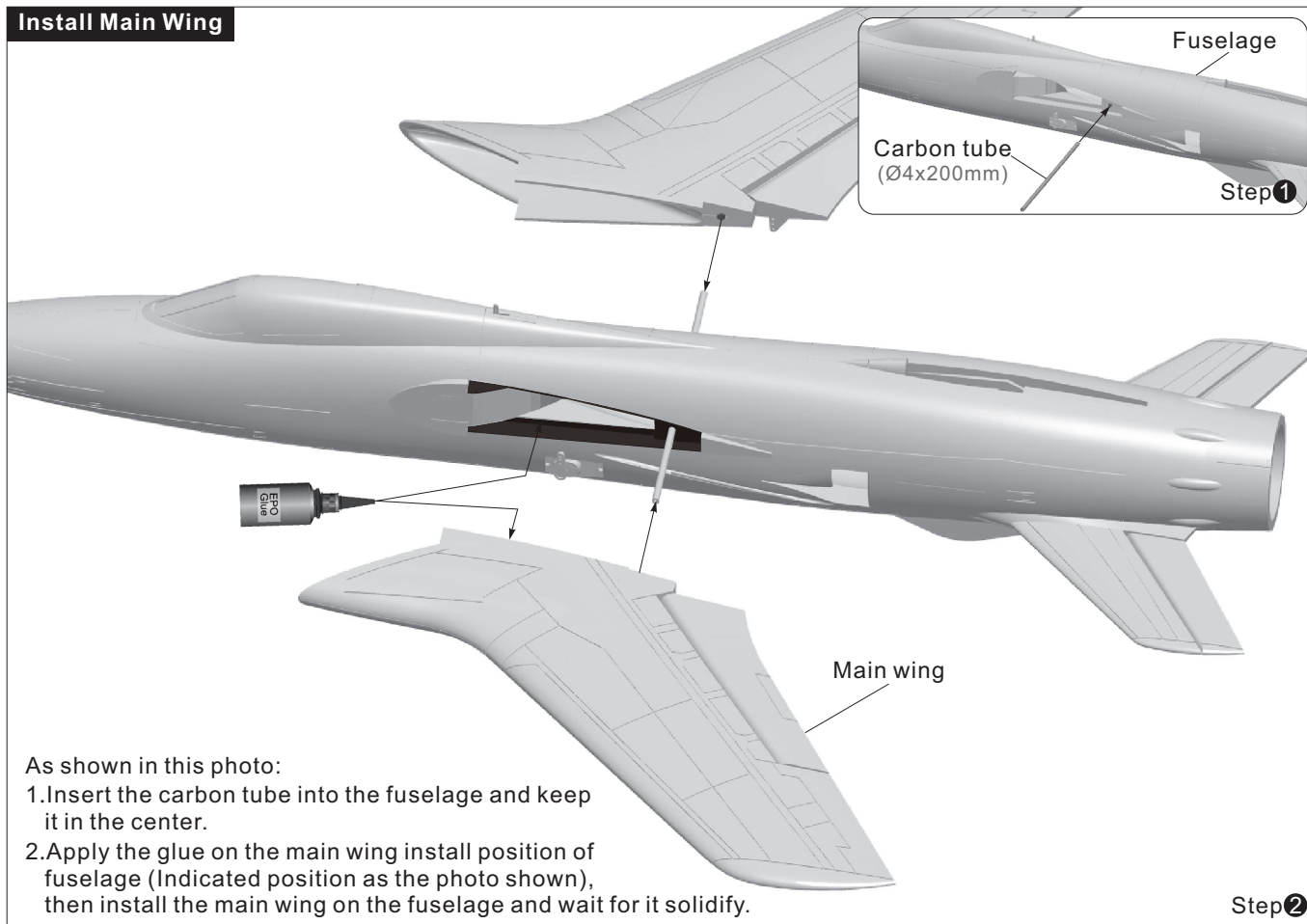


Different equipment include different spareparts. Please refer to the following contents to check your sparepart list.

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

No.	Name	PNP	ARF Plus	Airframe
5	Linkage Set	✓	✓	✓
6	Fin	✓	✓	✓
7	Glue	✓	✓	✓
8	Manual	✓	✓	✓

Install Main Wing



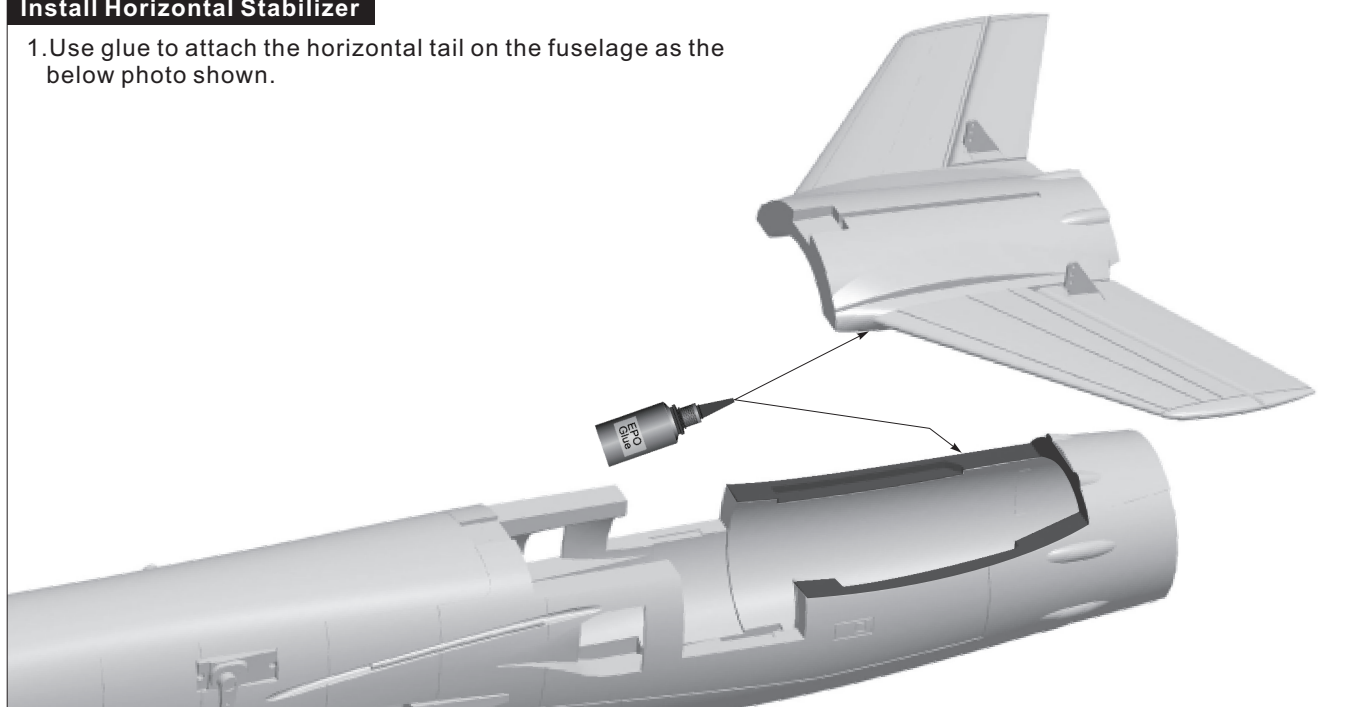
As shown in this photo:

1. Insert the carbon tube into the fuselage and keep it in the center.
2. Apply the glue on the main wing install position of fuselage (Indicated position as the photo shown), then install the main wing on the fuselage and wait for it solidify.

Step 2

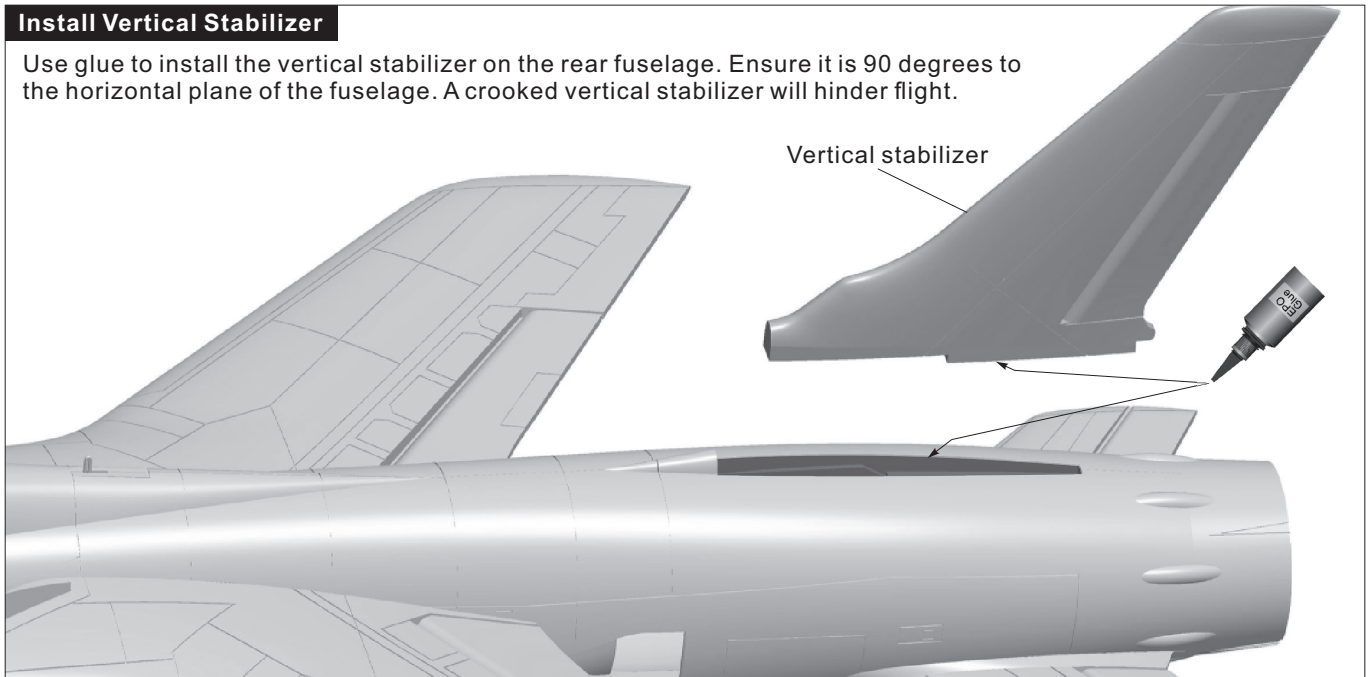
Install Horizontal Stabilizer

1. Use glue to attach the horizontal tail on the fuselage as the below photo shown.



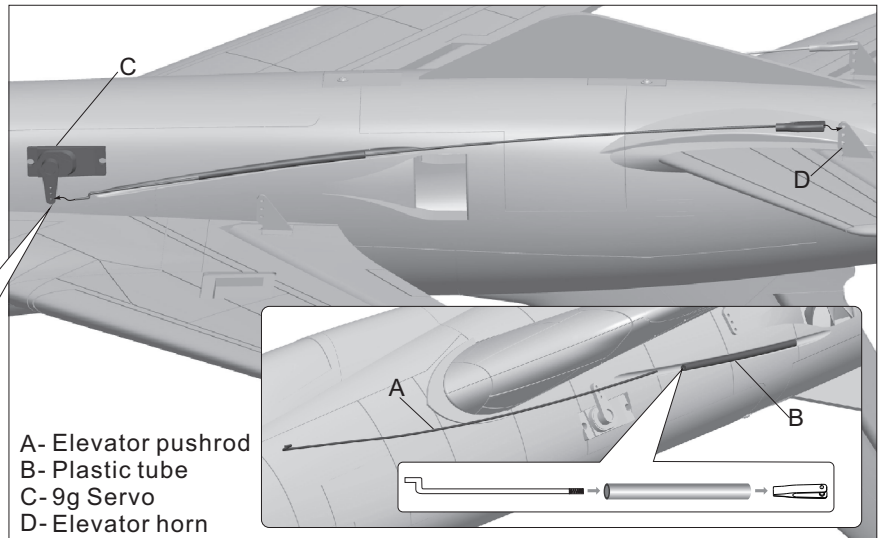
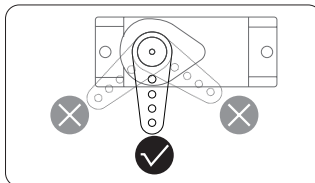
Install Vertical Stabilizer

Use glue to install the vertical stabilizer on the rear fuselage. Ensure it is 90 degrees to the horizontal plane of the fuselage. A crooked vertical stabilizer will hinder flight.



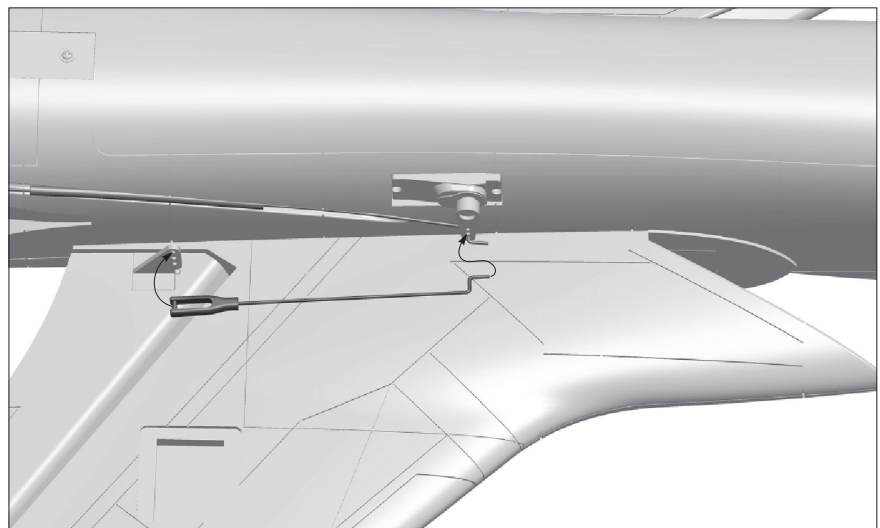
Install Elevator pushrod

1. Use a servo tester or radio to center each servo.
2. Insert the threaded side of the rod to the plastic tube and tighten the clevis.
3. One side pushrod insert to the servo arm, adjust its length. And insert the clevis to the elevator pushrod horn.
4. Repeat these 3 steps for the other side.



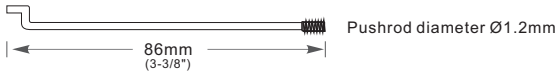
Install Aileron pushrod

1. Use a servo tester or radio to center each servo.
2. One side pushrod insert to the servo arm, adjust its length. And insert the clevis to the aileron pushrod horn.
3. Repeat these 2 steps for the other side.



Pushrod Instructions

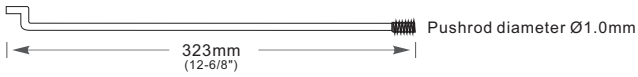
Aileron pushrod size



Aileron pushrod mounting hole



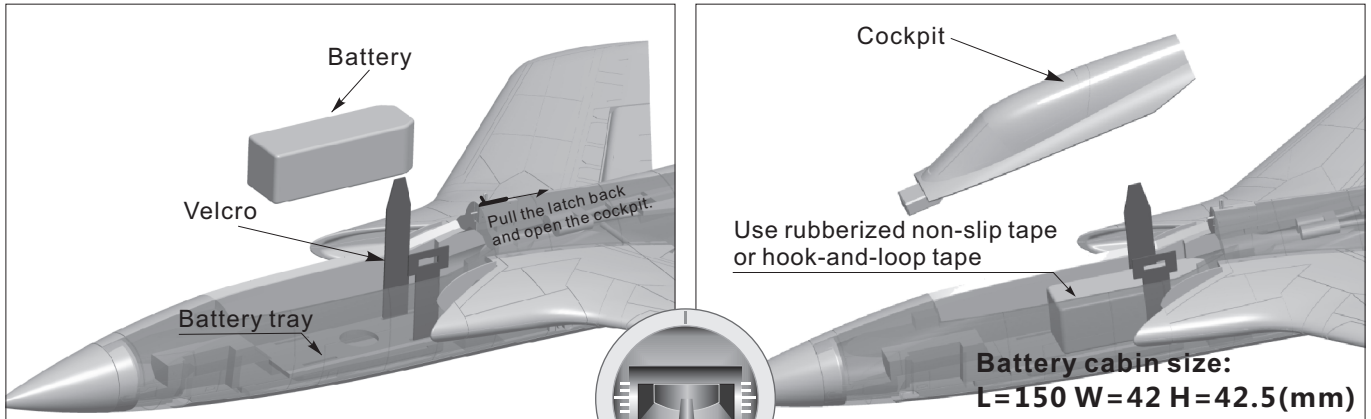
Elevator pushrod size



Elevator pushrod mounting hole



Battery Size



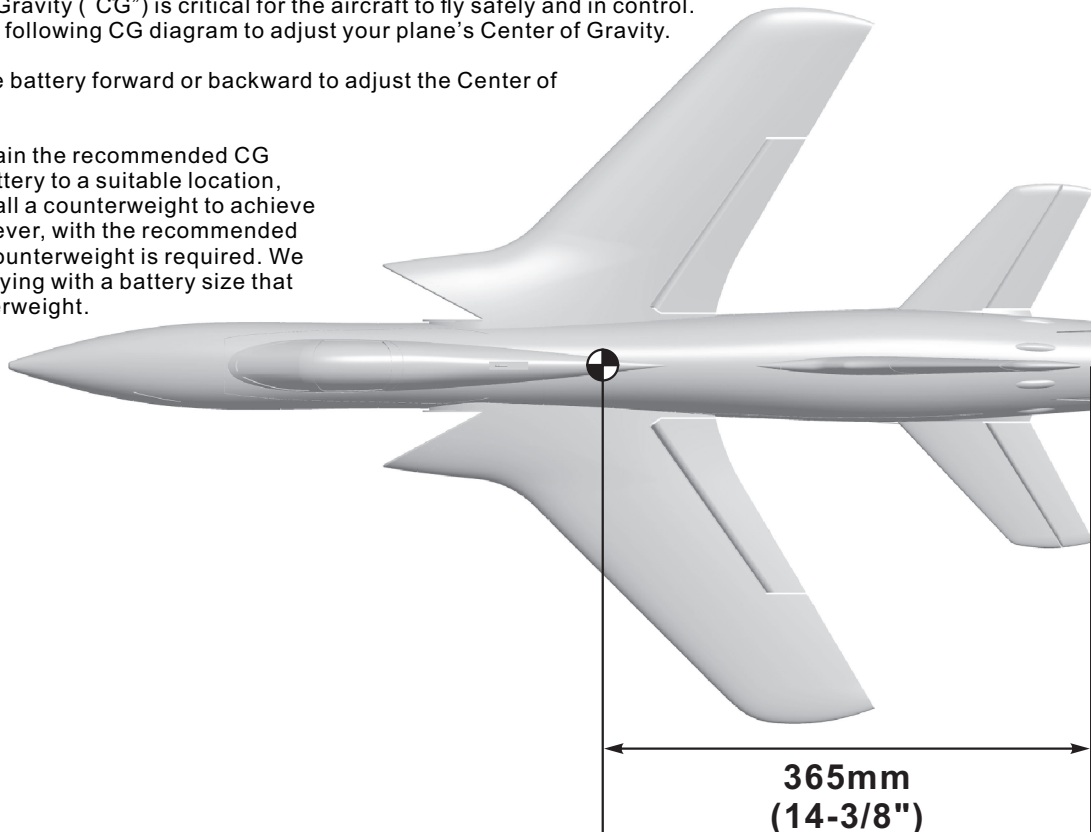
Before connecting the battery and receiver, please switch on the transmitter power and make sure the throttle stick is in the lowest position. Bind your receiver to your transmitter according to your transmitter's instruction manual.

We recommend the following LiPo battery:
3S 11.1V 1000mAh ~ 3S 11.1V 2200mAh
Discharge rate of C \geq 30C

Center of Gravity

Correct Center of Gravity ("CG") is critical for the aircraft to fly safely and in control. Please refer to the following CG diagram to adjust your plane's Center of Gravity.

- You can 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, no counterweight is required. We recommend not flying with a battery size that requires a counterweight.

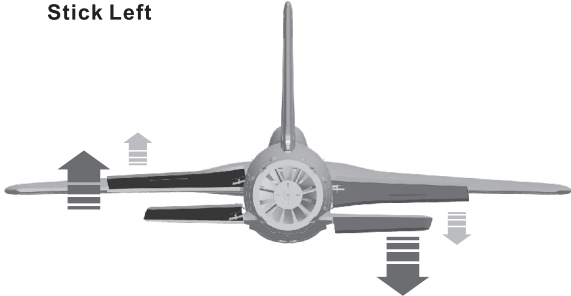


Control Direction Test

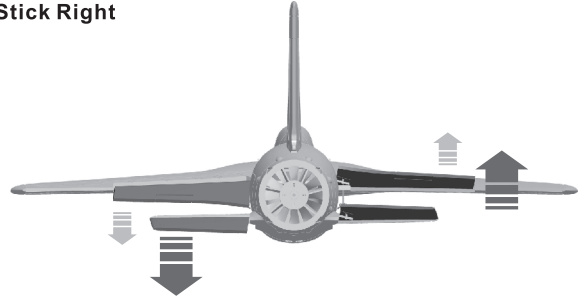
After installed the plane, before flying, we need a fully charged battery and connect to the ESC, then use radio to test and check that every control surface work properly.

Aileron

Stick Left

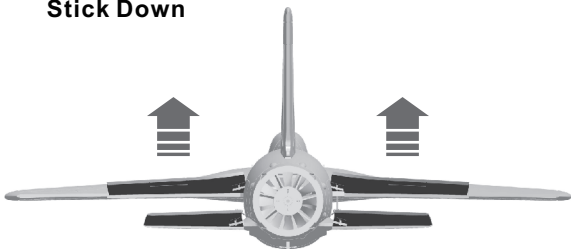


Stick Right

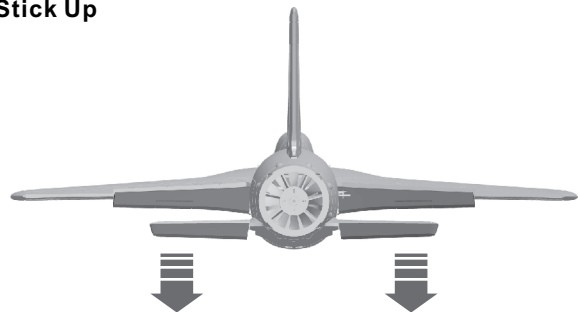


Elevator

Stick Down



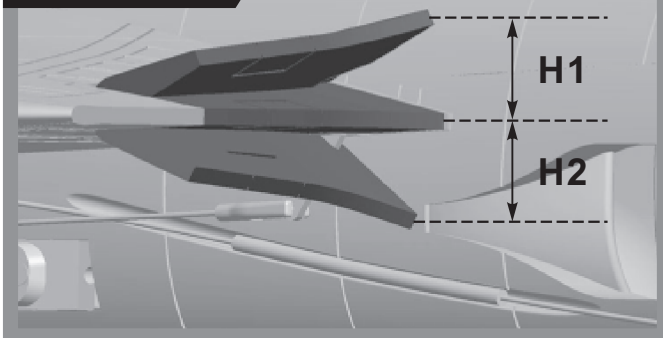
Stick Up



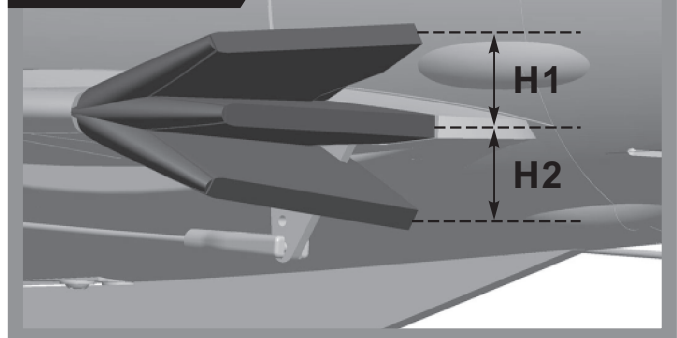
Dual Rates

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



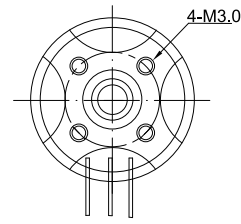
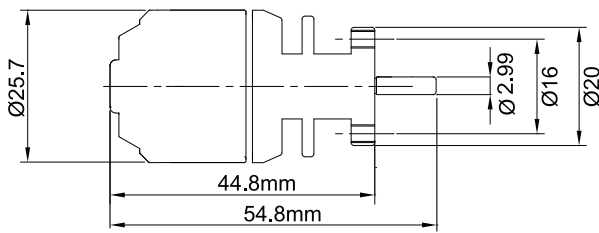
Elevator



	Aileron(measured closest to the fuselage)	Elevator(measured closest to the fuselage)
Low Rate	H1/H2 7mm/7mm D/R Rate : 75%	H1/H2 13mm/13mm D/R Rate : 75%
High Rate	H1/H2 9mm/9mm D/R Rate : 100%	H1/H2 15mm/15mm D/R Rate : 100%

Motor Specifications

2627-4500
Item No.:MO026272

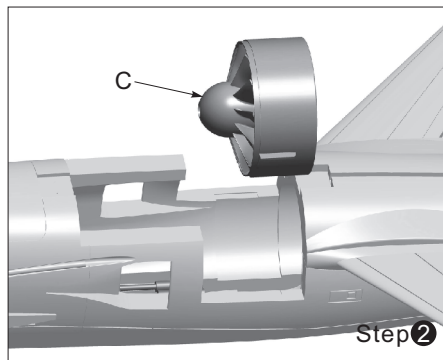
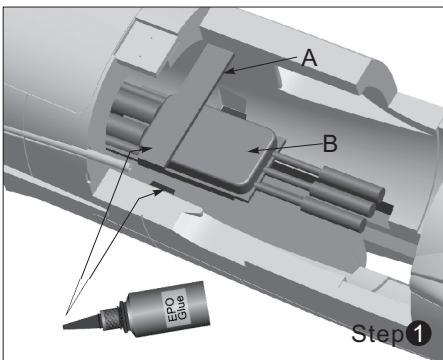
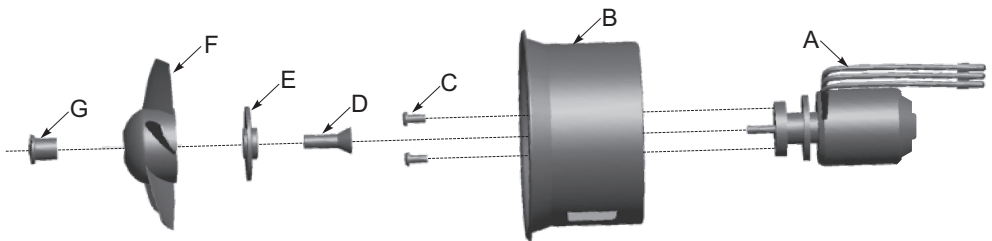


Power system No.	EDF Fans	Use voltage (V)	Current(A)	Max power (W)	Thrust(g)	Efficiency (g/w)	Motor Specifications (KV)	Rotating speed (rpm)	Weight (g)
E7201	64mm 5-blade EDF	11.1(3S)	28	310	750	2.4	2627-4500	49000	50

Motor Overview

Standard version

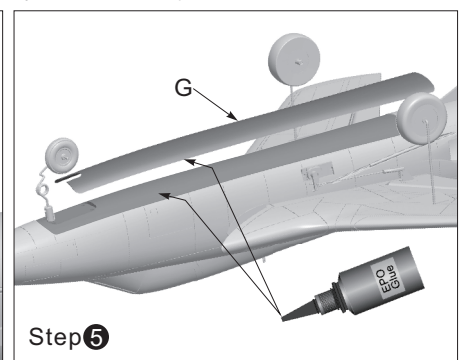
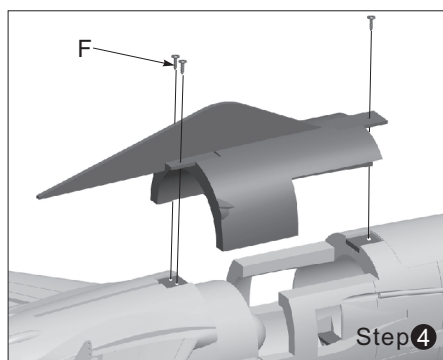
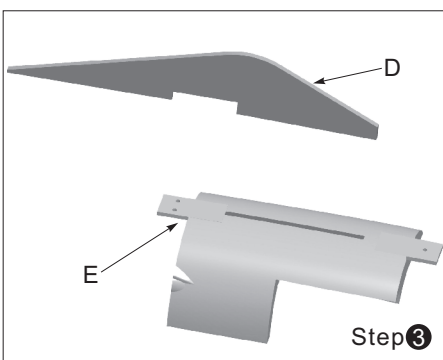
- A- Motor 2627-4500KV
- B- 64mm Outrunner ducted frame
- C- Screw (PM2.5x6 2pcs)
- D- Motor collet
- E- Motor collet backplate
- F- 64mm 5-blade ducted fan
- G- Nut



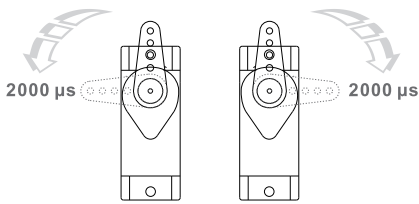
As the left diagram, install ESC and power system

- A-ESC fixed wood piece
- B-ESC
- C-64mm EDF power system
- D-Fin
- E-EDF cover
- F-Screw (KA2.3x8)
- G-Fuselage cover

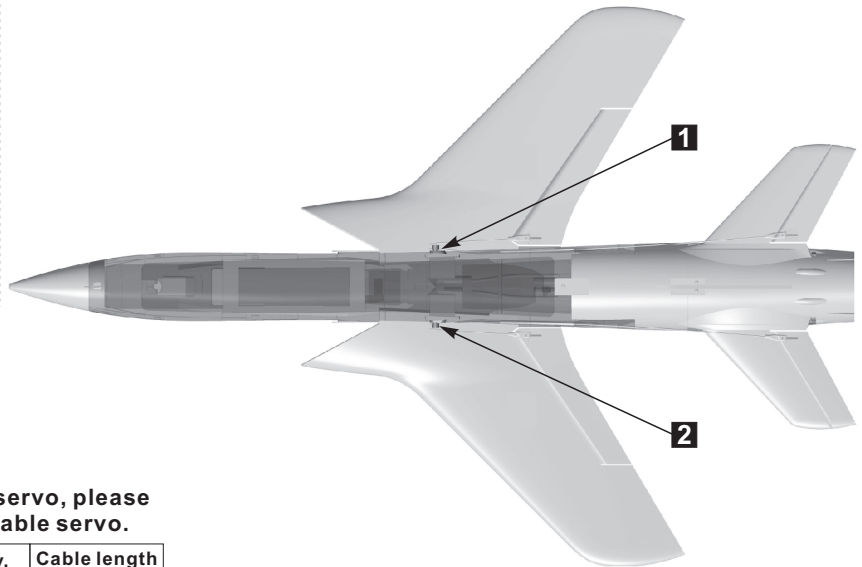
⚠ Note: When the ESC and battery are connected, avoid touching the ESC by hand to avoid accidental injury due to heat. When testing the EDF, please use safety test stand for testing. Never hold an EDF unit in your hand while it is powered on.



Servos Introductions



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
Main wing(L)	9g plastic servo	1	Positive	300mm
Main wing(R)	9g plastic servo	2	Positive	300mm

Landing Gear Assemble

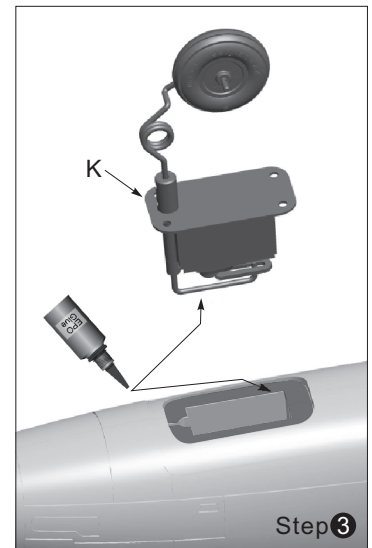
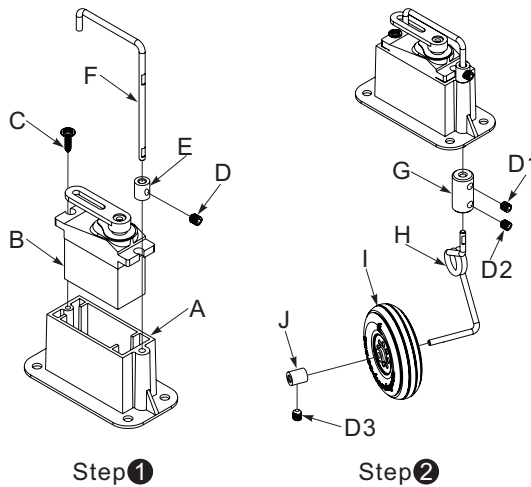
Landing gear is the optional part, please consult with the local distributor to purchase, and refer to the following instructions to install.

Install nose landing gear

Please refer to the following photo for assembly and installation of the landing gear.

Spare part name and parameters

- A-Servo fixed mount
- B-9g Servo
- C-Screw (PWA2.3x8 1pcs)
- D-Set screw (M3x3 4pcs)
- E-Nose wheel strut fixed piece
- F-Nose wheel strut (top)
- G-Wheel connecting part
- H-Nose wheel strut (bottom)
- I -Nose wheel (Ø35x10mm)
- J -Wheel chock
- K-Nose landing gear

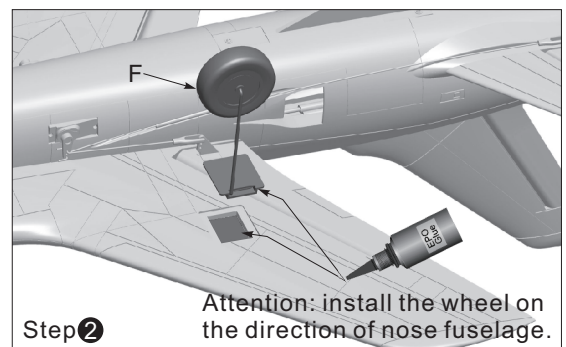
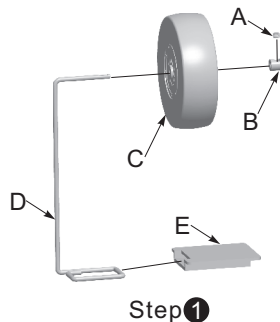


Install rear landing gear

Please refer to the following photo for assembly and installation of the landing gear.

Spare part name and parameters

- A-Set screw (M3x3)
- B-Wheel chock
- C-Nose wheel (Ø50x15mm)
- D-Rear gear main strut
- E-Main landing gear fixed mount
- F-Main landing gear door





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