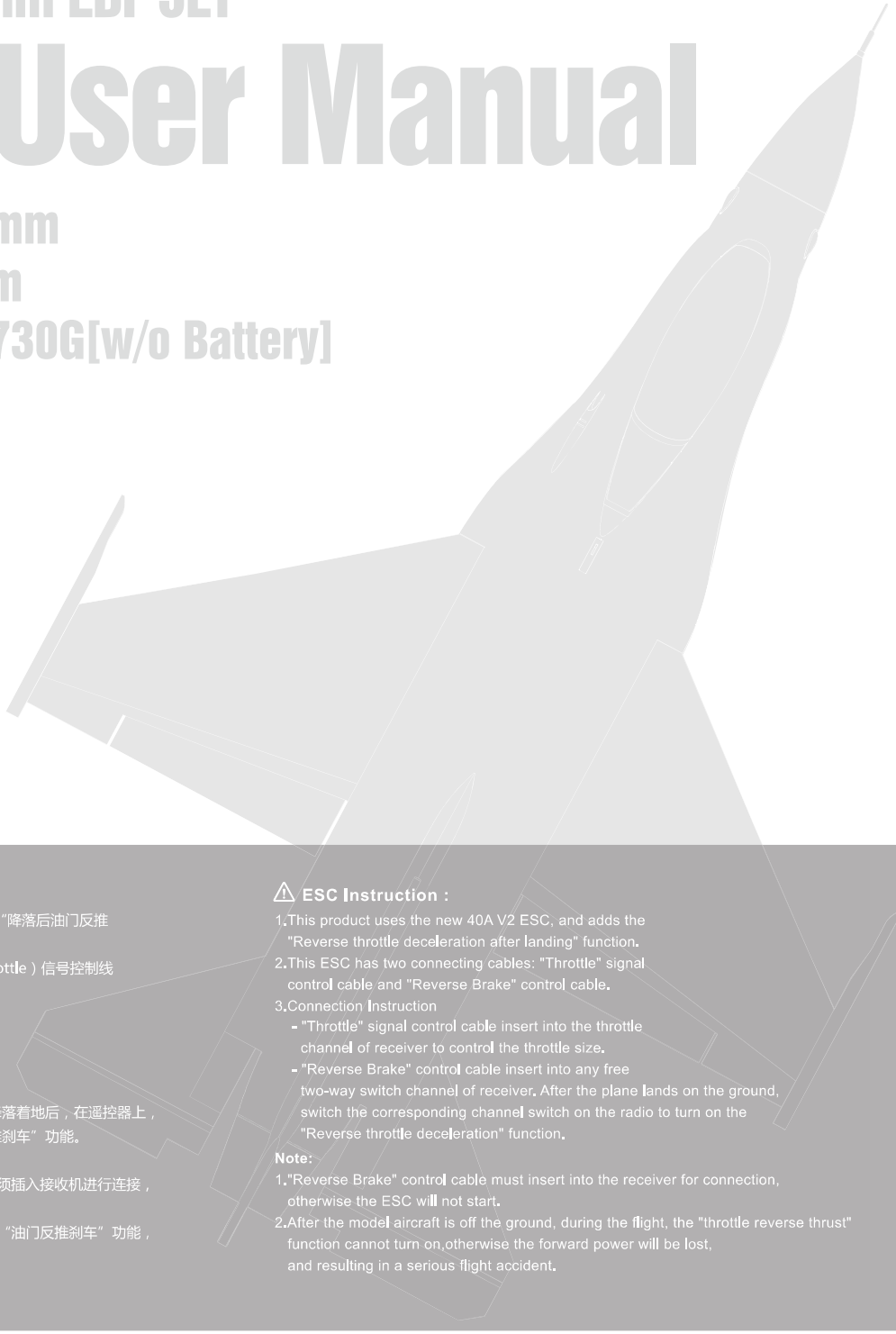
Freewing 64mm EDF JET

F-16 User Manual

Wingspan:680mm
Length:1050mm
Empty Weight:730G[w/o Battery]



⚠ 电调使用说明：

1. 本款产品使用了新的40A V2版电调，新增“降落后油门反推刹车”功能。
2. 此电调有二条连接线，分别为：油门（Throttle）信号控制线及油门反推刹车（Reverse Brake）控制线。
3. 连接说明:
   -油门信号控制线（Throttle）
   插入接收机油门通道，控制油门大小。
   -油门反推刹车（Reverse Brake）控制线
   插入接收机任意空闲二程开关通道。飞机降落着地后，在遥控器上，通过切换此对应通道开关，开启“油门反推刹车”功能。

警告：

1. 油门反推刹车（Reverse Brake）控制线必须插入接收机进行连接，否则，电调将不会启动。
2. 模型飞机离地后，在飞行过程中，不能开启“油门反推刹车”功能，否则会丧失动力，导致严重飞行事故。

⚠ 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. "Reverse Brake" control cable must insert into the receiver for connection, otherwise the ESC will not start.
2. 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.

MADE IN CHINA

EN 1~12
中 13~24

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2 Product basic information
2 Package list
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3 Install main wing
4 Install horizontal stabilizer
4 Install vertical stabilizer
5 Install wood piece
5 Install elevator pushrod
6 Install aileron pushrod
6 Install nose landing gear
7 Install rear landing gear
7 Install pitot tube
8 Install battery
8 Pushrod instructions
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23 舵量范围
预装电子配件介绍
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24 电机介绍

Freewing F-16 64 introduction

EN

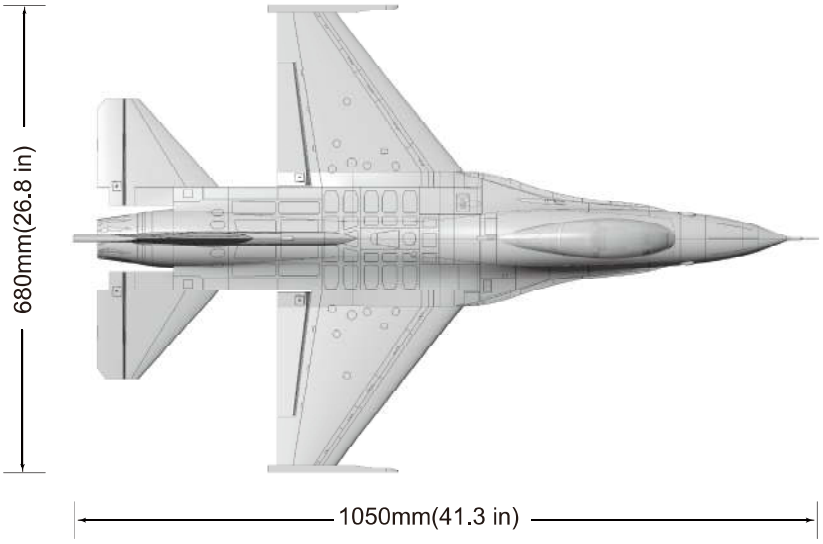
Thank you for purchasing our Freewing F-16 Falcon 64mm EDF jet model plane. This model is made of high-density EPO foam material. PNP has completed the painting and decal work before leaving the factory, and has been pre-installed the power system, ESC, servos and other operational structural components. For a long time, the F-16 model, with its excellent flight performance and beautiful appearance, has been deeply loved by many EDF jet enthusiasts. This latest 64-ducted model aircraft simplifies the control structure and landing gear, reduces its weight and reduces the wing load while ensuring the exquisite appearance. While improving and enhancing the flight performance, it effectively controls the product cost. It is an entry-level product that is very suitable for model aircraft enthusiasts in the new electric ducted jet field to try and 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

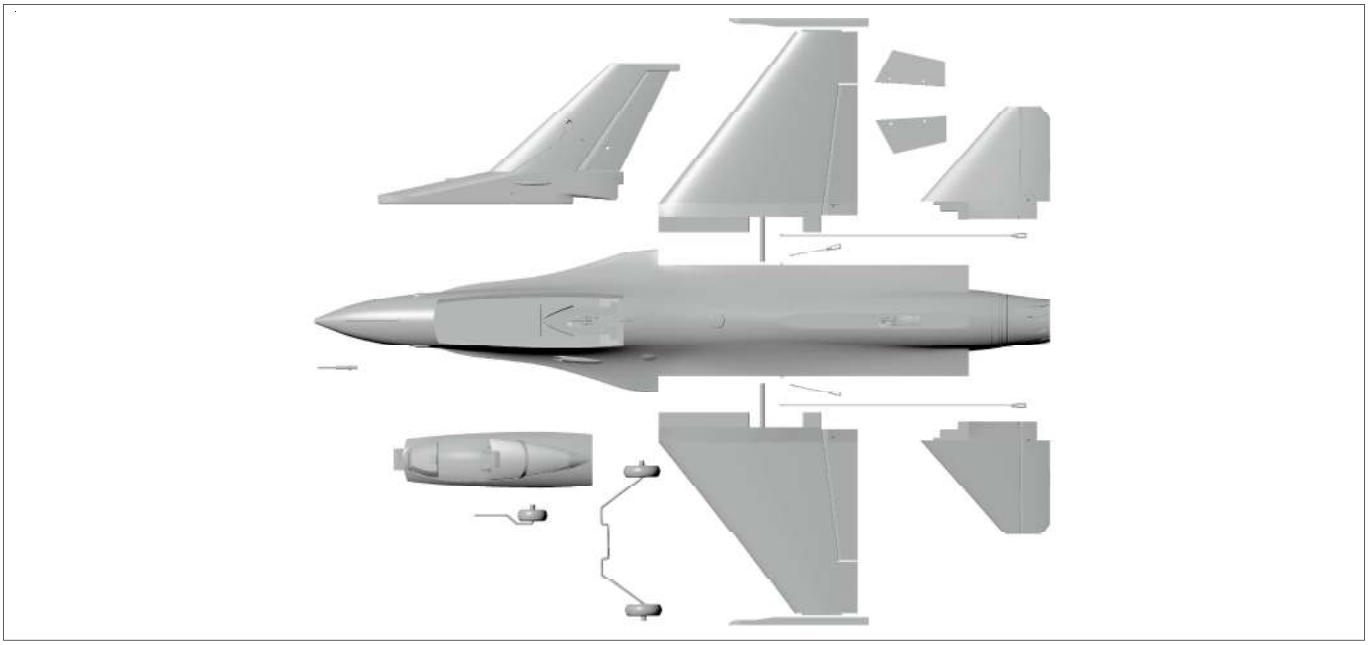


Standard Version

Wingload: 106 g/dm^2
Wing Area: 9 dm^2
Motor: 2836-3300KV O/R Motor
Servo: 9g Digital plastic servo ×4
ESC: 40A (V2 with Thrust Reverse Fuction)
Ducted fan: 64mm 12-blade fan
Weight: 730g(w/o Battery)
Li-Po Battery: 4S 1600-2200mAh
Landing gear: Fixed landing gear

⚠ 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



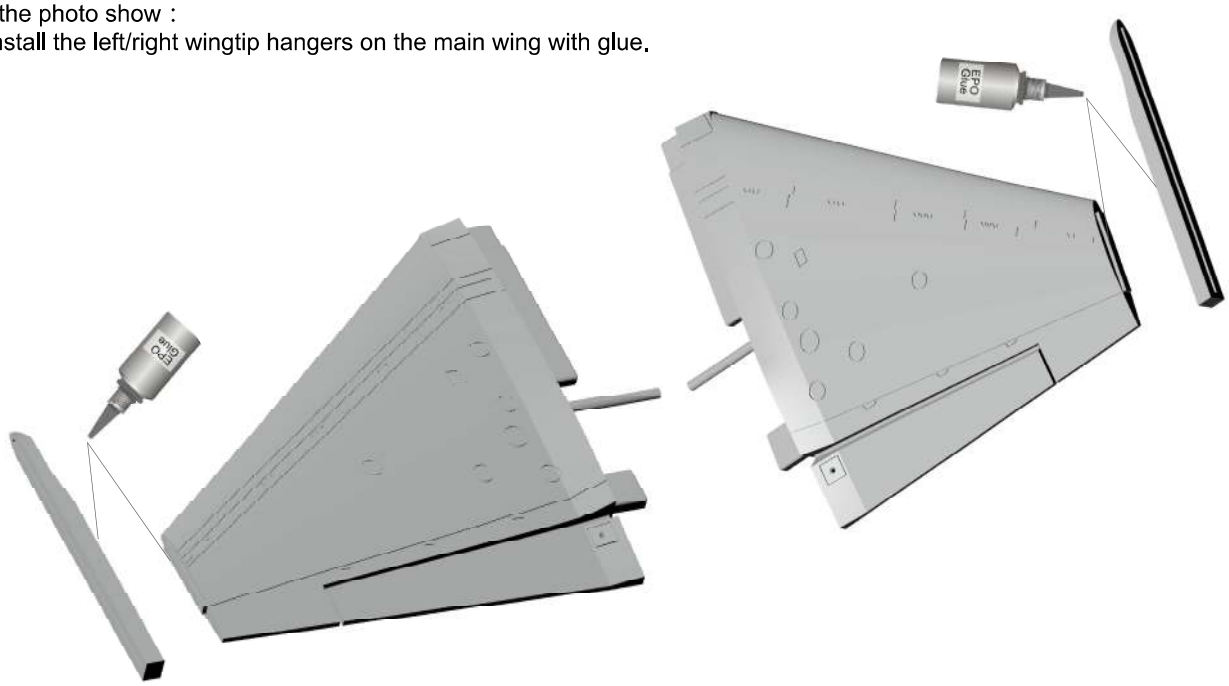
Different equipment include different spareparts. Please refer to the following contents to check your sparepart list.

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	Pre-installed all electronic parts	Pre-installed servo
4	Vertical tail	Pre-installed all electronic parts	Pre-installed servo

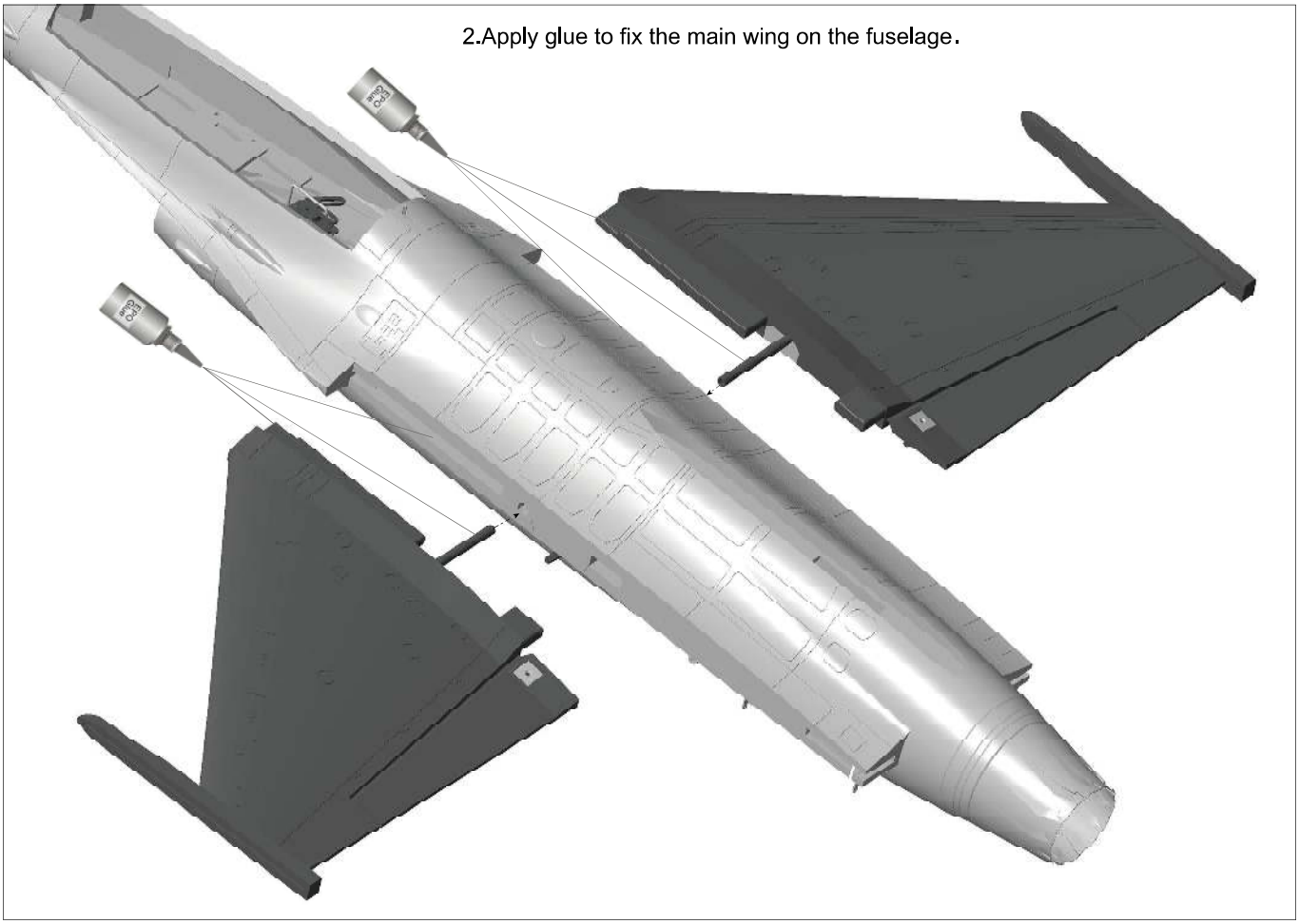
No.	Name	PNP	ARF Plus
5	Wheel	√	√
6	Pushrod	√	√
7	Glue	√	√
8	Manual	√	√

Install Main Wing

As the photo show :
1.Install the left/right wingtip hangers on the main wing with glue.

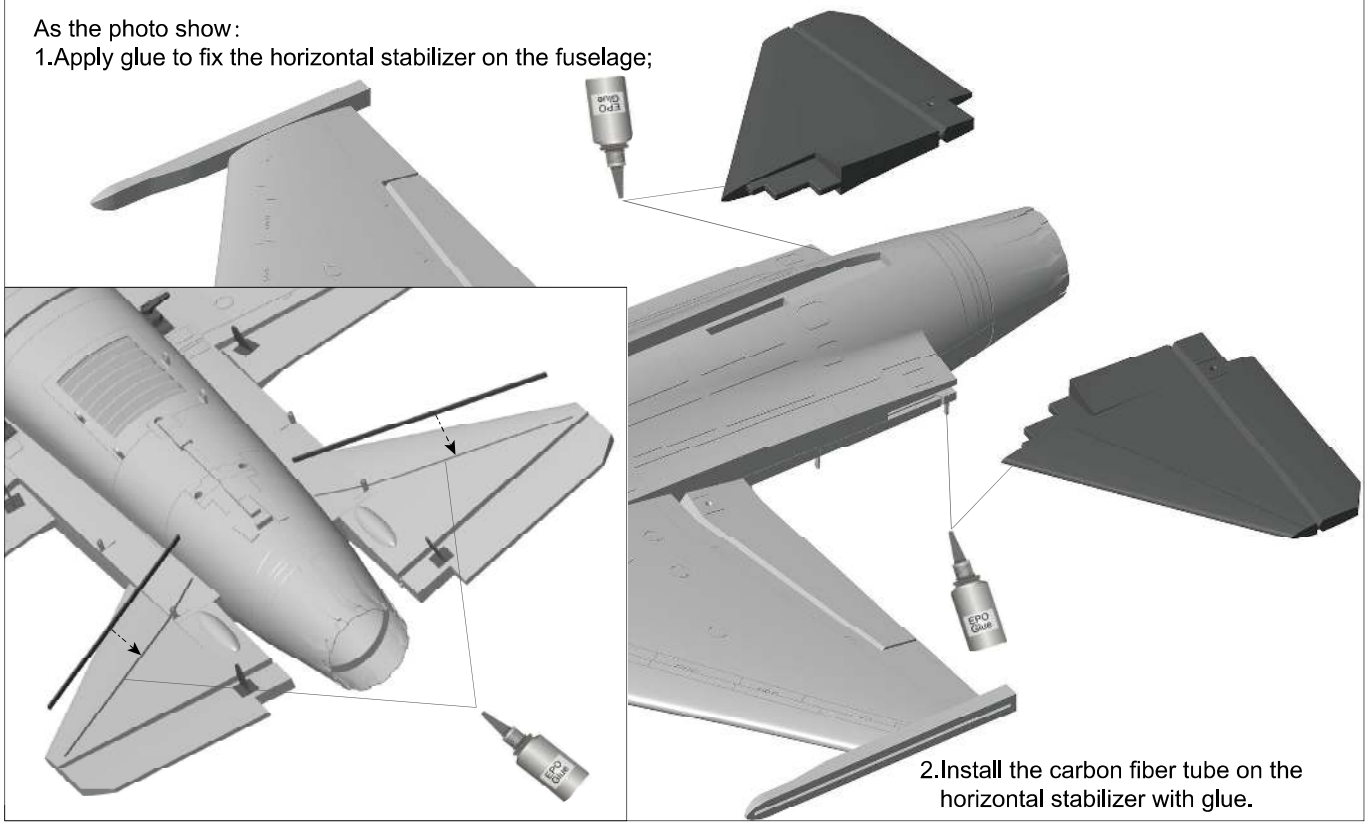


2.Apply glue to fix the main wing on the fuselage.



Install Horizontal Stabilizer

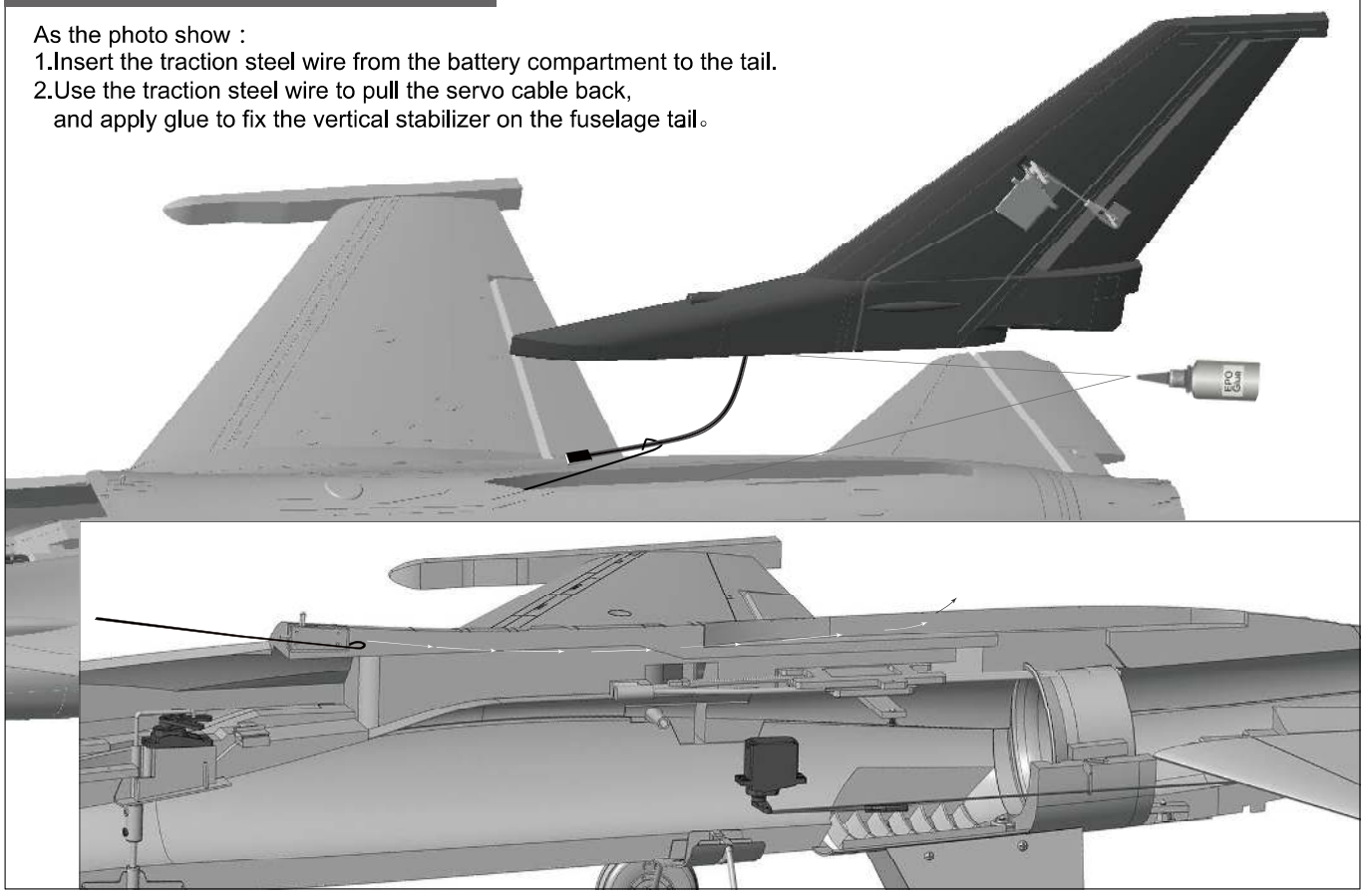
As the photo show:
1.Apply glue to fix the horizontal stabilizer on the fuselage;



2.Install the carbon fiber tube on the horizontal stabilizer with glue.

Install Vertical Stabilizer

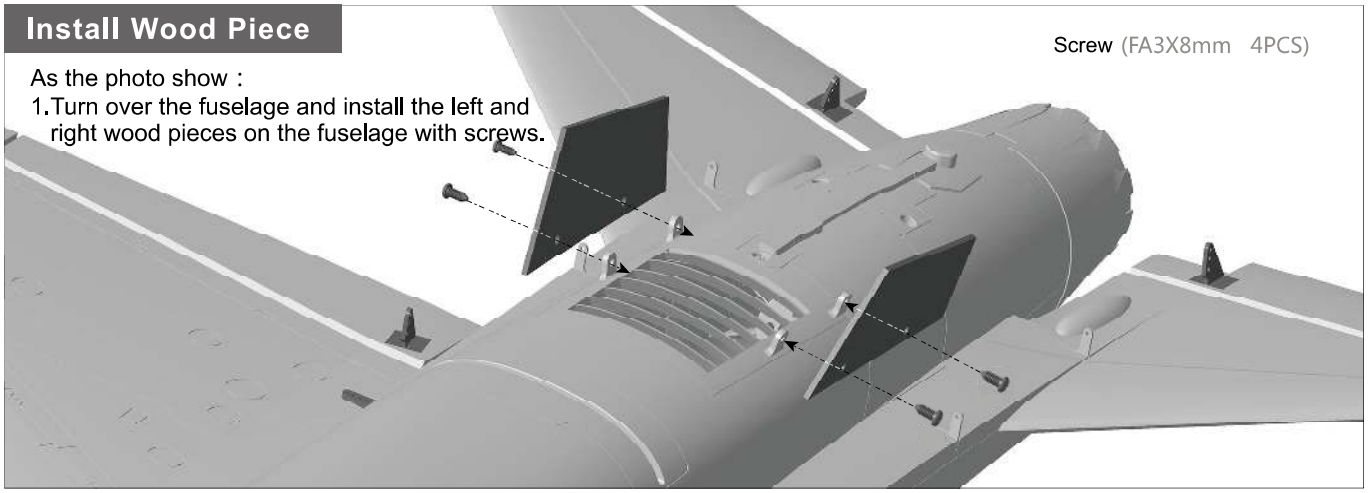
As the photo show :
1.Insert the traction steel wire from the battery compartment to the tail.
2.Use the traction steel wire to pull the servo cable back,
and apply glue to fix the vertical stabilizer on the fuselage tail。



Install Wood Piece

Screw (FA3X8mm 4PCS)

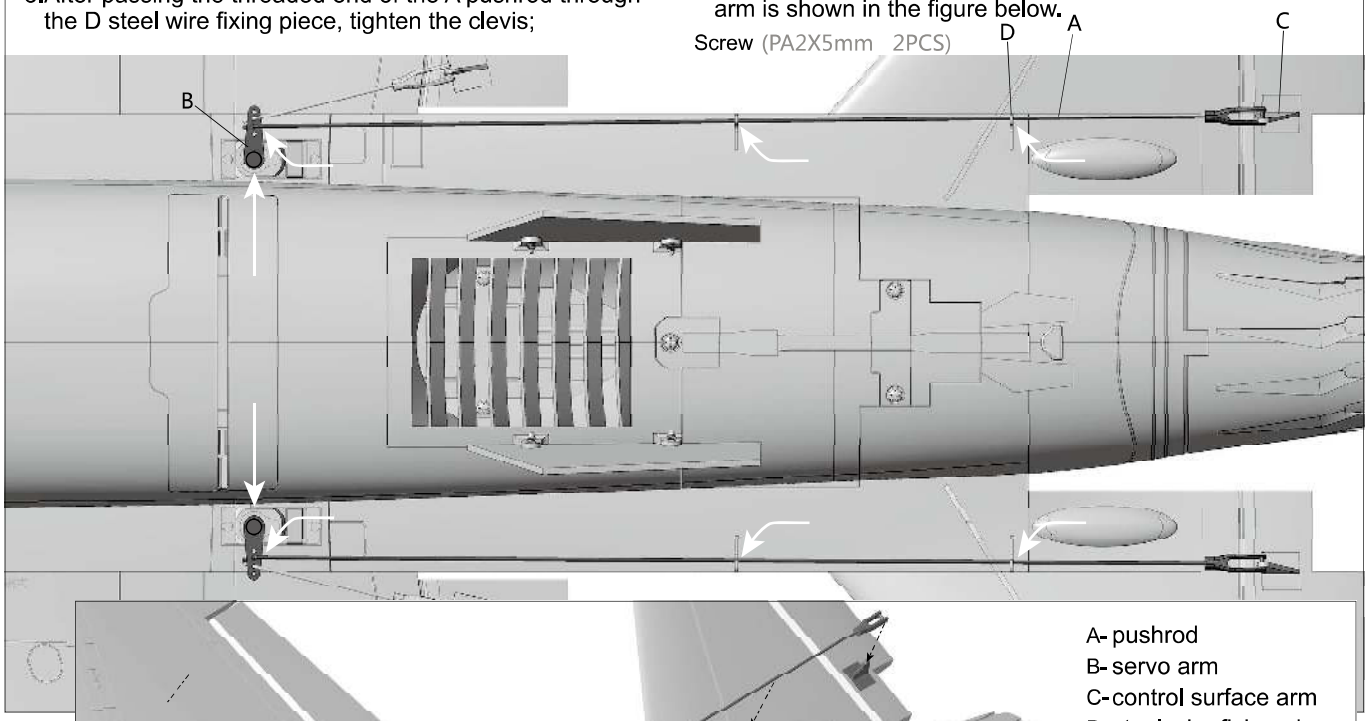
As the photo show :
1.Turn over the fuselage and install the left and right wood pieces on the fuselage with screws.

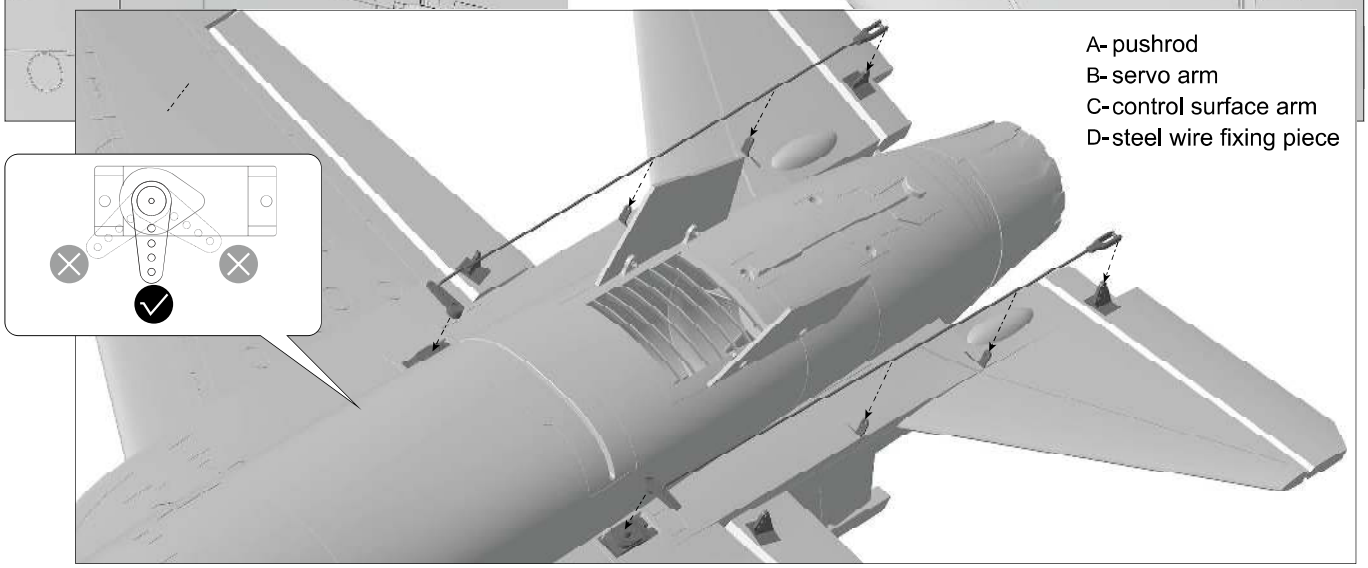


Install Elevator Pushrod

As the photo show:
1.Correct the servo arm to the center position through the servo tester or remote control;
2.Remove the B servo arm;
3.After passing the threaded end of the A pushrod through the D steel wire fixing piece, tighten the clevis;
4.Insert the other end of the A pushrod into the B servo arm, adjust the length of the wire, and lock the B servo arm with PA2x5 screws while keeping it centered;
5.Repeat the above three steps to install the elevator pushrod on the other side;
6.Note, the hole where the pushrod is installed on the servo arm is shown in the figure below.

Screw (PA2X5mm 2PCS)





A- pushrod
B- servo arm
C- control surface arm
D- steel wire fixing piece

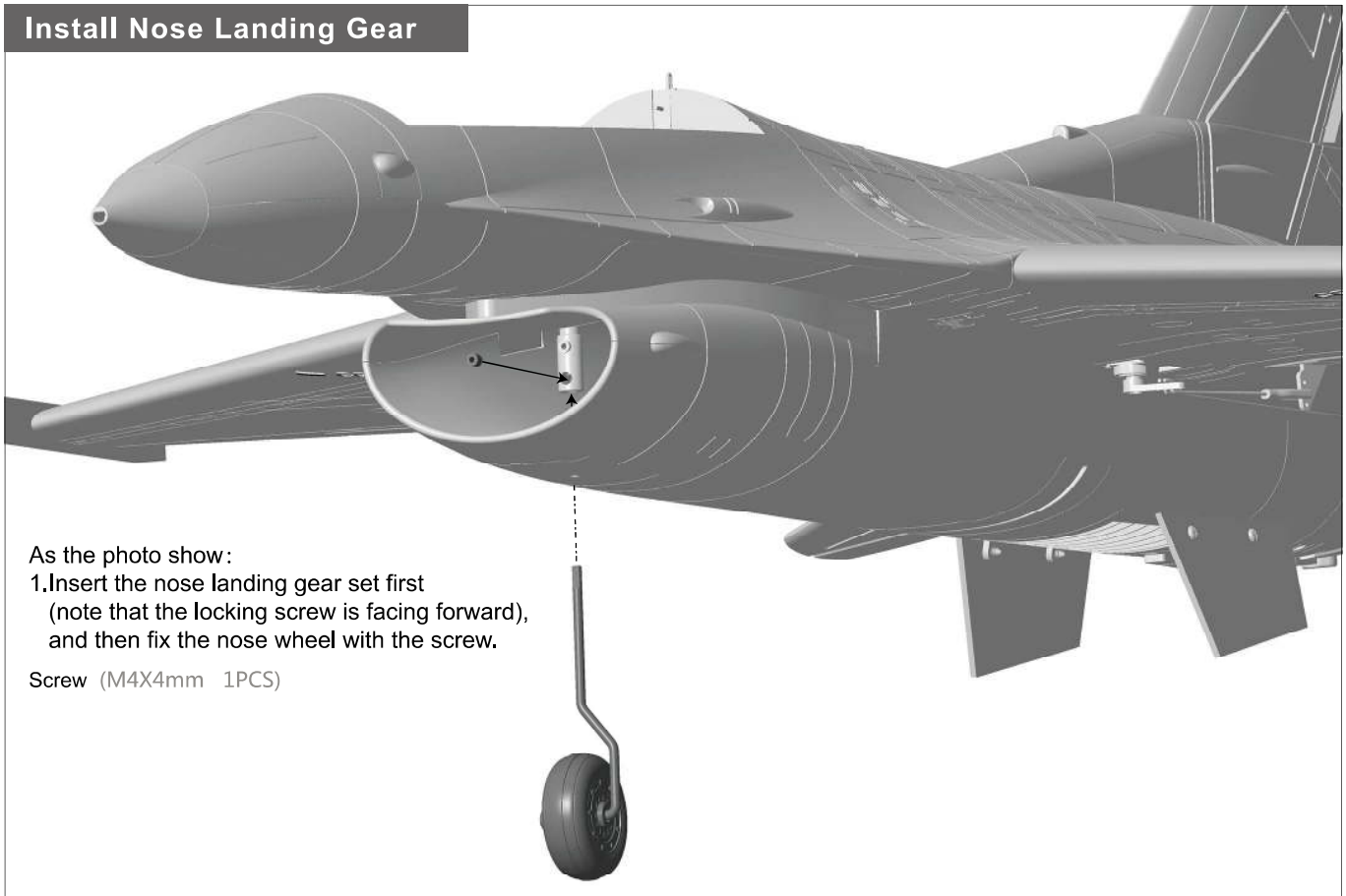
Install Aileron Pushrod

As the photo show:

1.Correct the servo arm to the center position through the servo tester or remote control;
2.After one side of pushrod is penetrated into the servo arm, adjust the pushrod length, and under the condition of keeping the control surface in the center, fasten the clevis into the control surface arm;
3.Repeat the above two steps to install the other side aileron pushrod;
4.Note, the hole where the pushrod is installed on the servo arm is shown in the below.



Install Nose Landing Gear

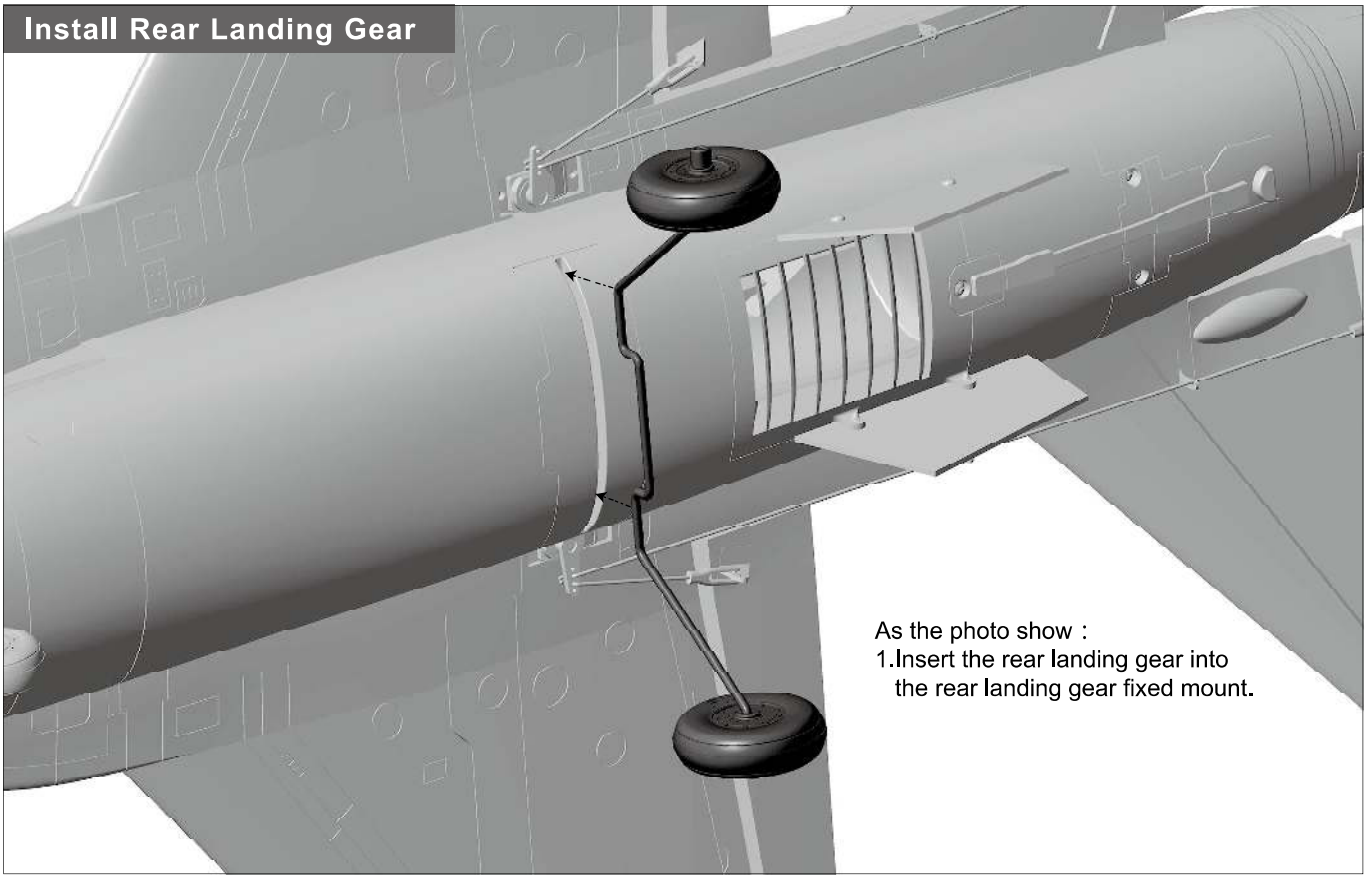


As the photo show:

1.Insert the nose landing gear set first (note that the locking screw is facing forward), and then fix the nose wheel with the screw.

Screw (M4X4mm 1PCS)

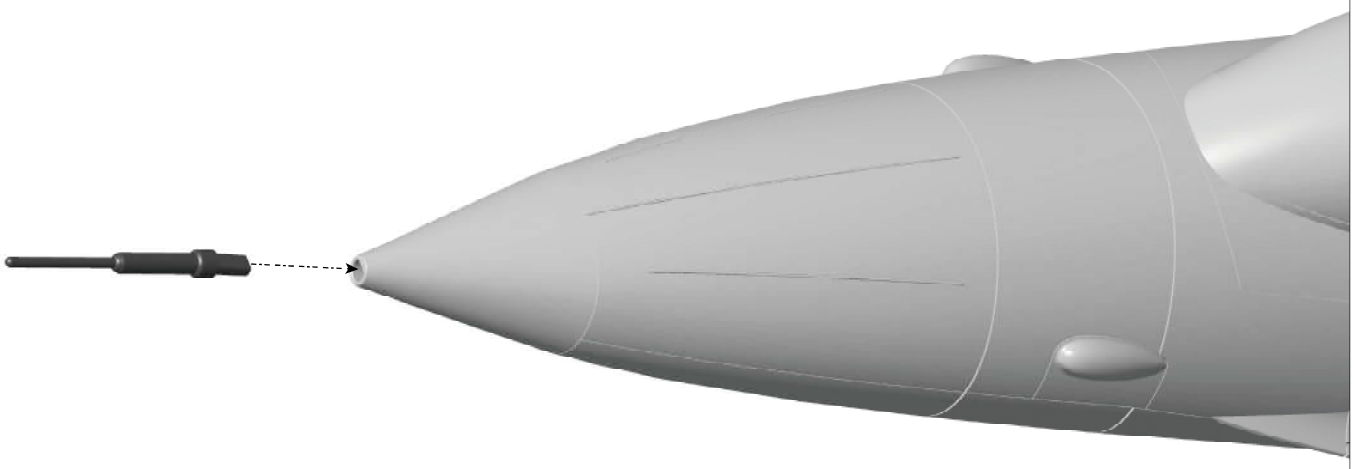
Install Rear Landing Gear



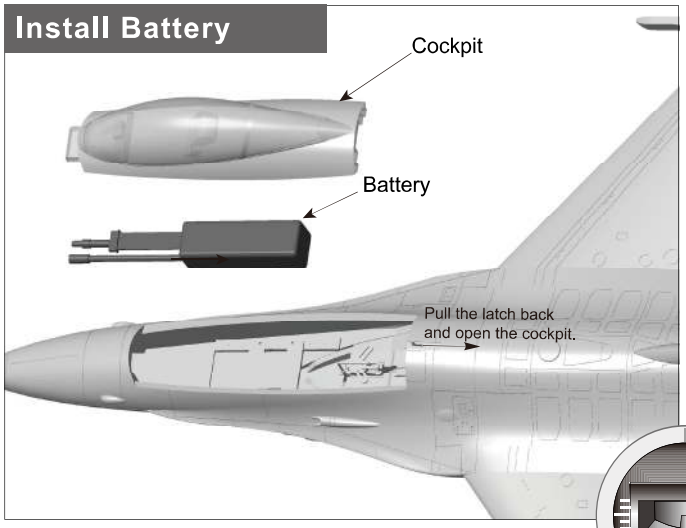
As the photo show :
1.Insert the rear landing gear into the rear landing gear fixed mount.

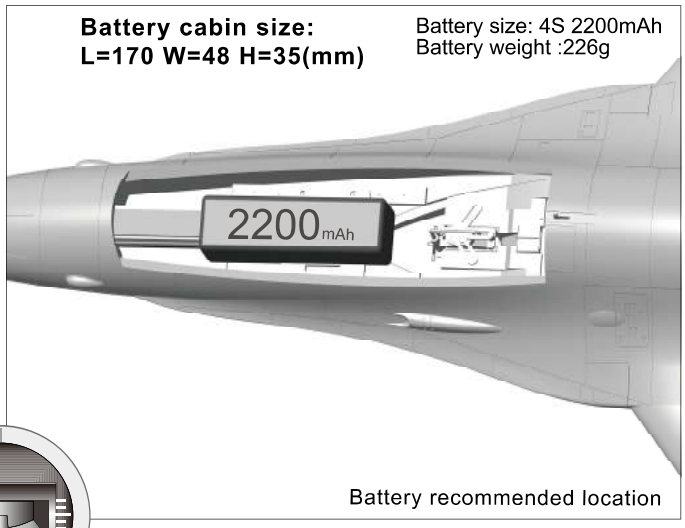
Install Pitot tube

As the photo show :
1.Insert the Pitot tube into the nose cone (plug directly).



Install Battery



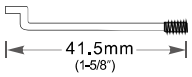


Before connecting the battery and receiver, please switch on the transmitter power and make sure the throttle stick is in the lowest position. Bind your receiver to your transmitter according to your transmitter's instruction manual.

We recommend the following LiPo battery:
4S 14.8V 1600mAh~4S 14.8V 2200mAh
Discharge rate of C ≥ **35C**

Pushrod instructions

Rudder pushrod length

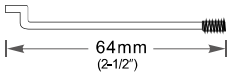


Pushrod diameter Ø1.2mm

Rudder pushrod mounting hole



Main wing pushrod length

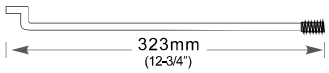


Pushrod diameter Ø1.2mm

Main wing pushrod mounting hole



Elevator pushrod length



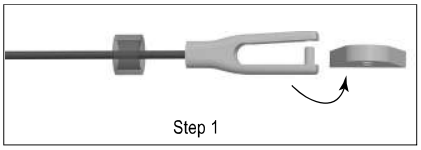
Pushrod diameter Ø1.2mm

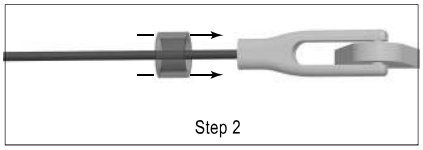
Elevator pushrod mounting hole

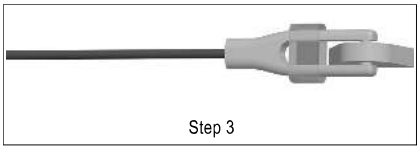


Important additional notes

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.



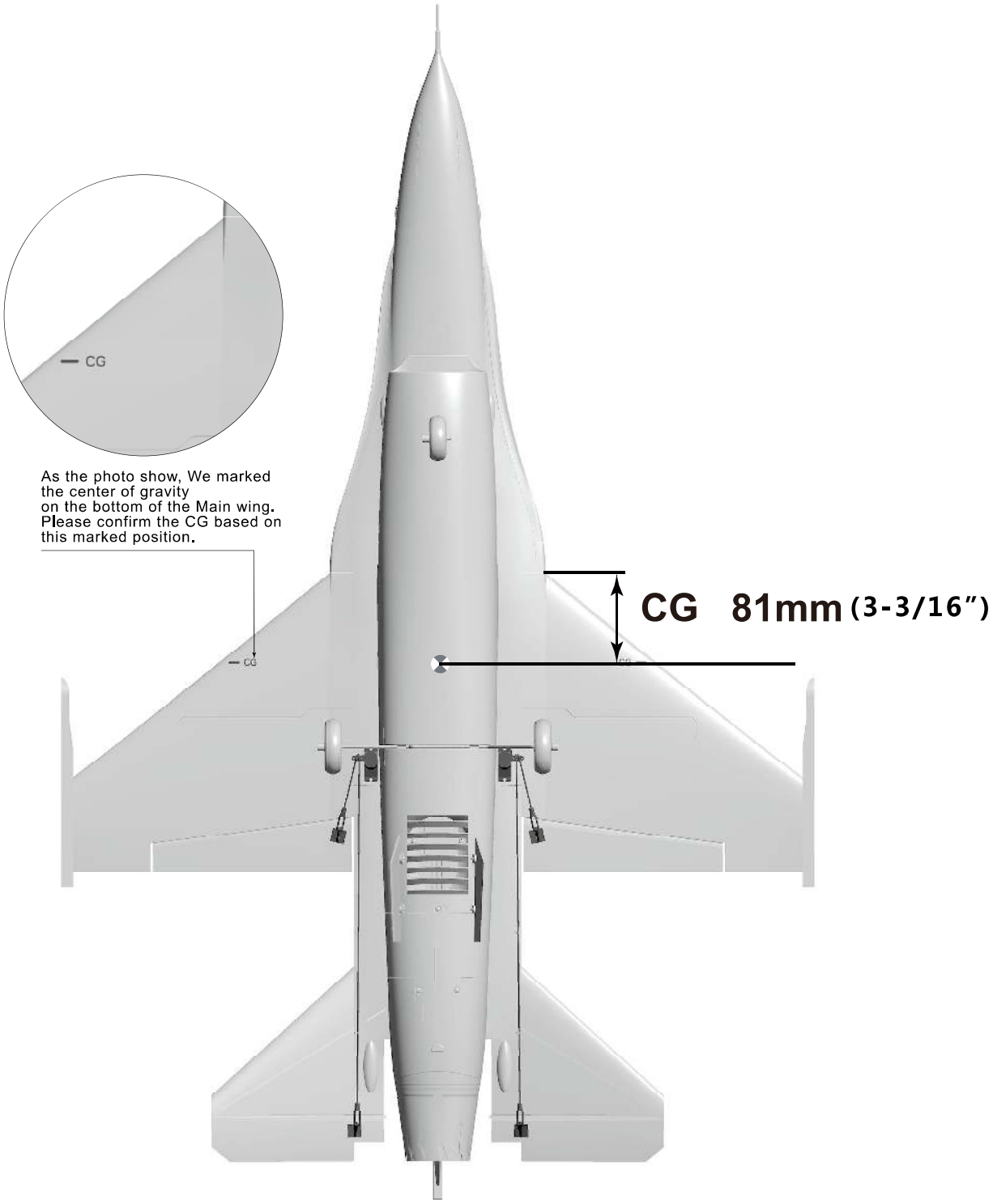




Center of Gravity

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.

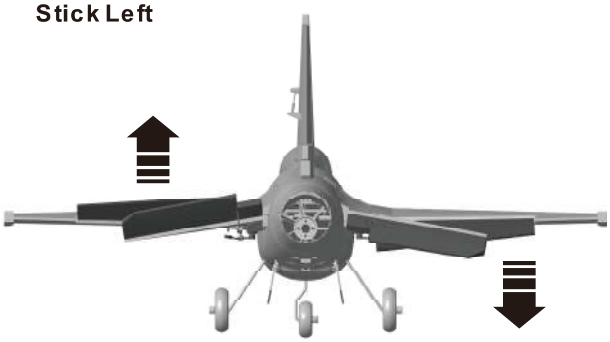


Control Direction Test

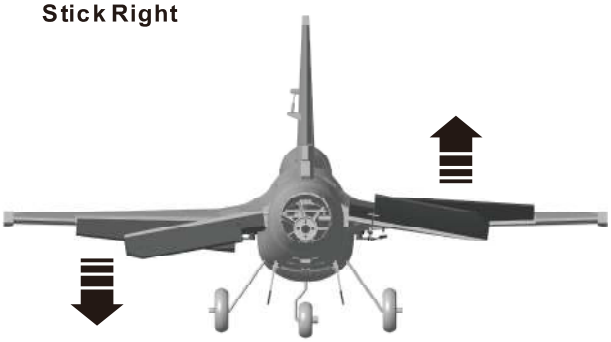
After installed the plane, before flying, we need a fully charged battery and connect to the ESC, then use radio to test and check that every control surface work properly.

Aileron

Stick Left

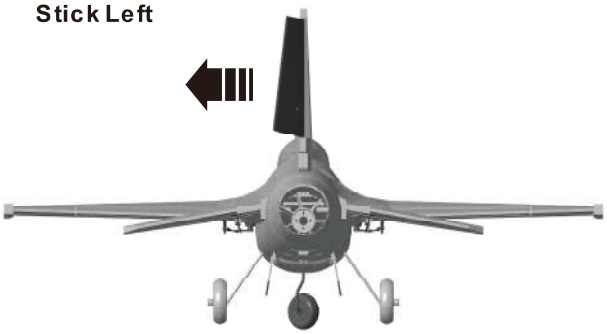


Stick Right

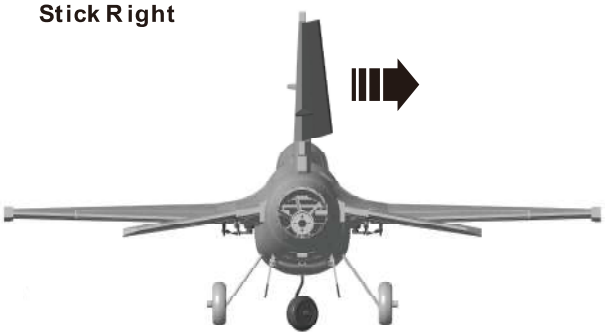


Rudder

Stick Left

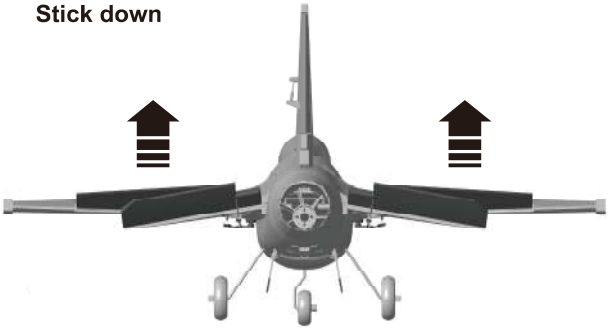


Stick Right

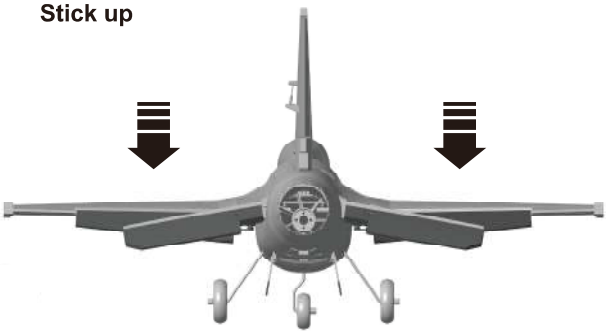


Elevator

Stick down

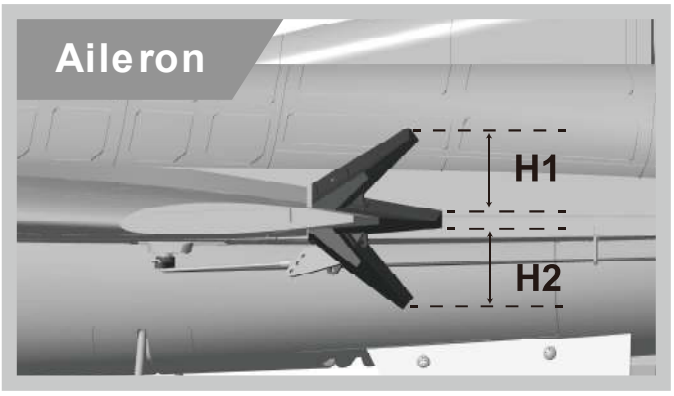


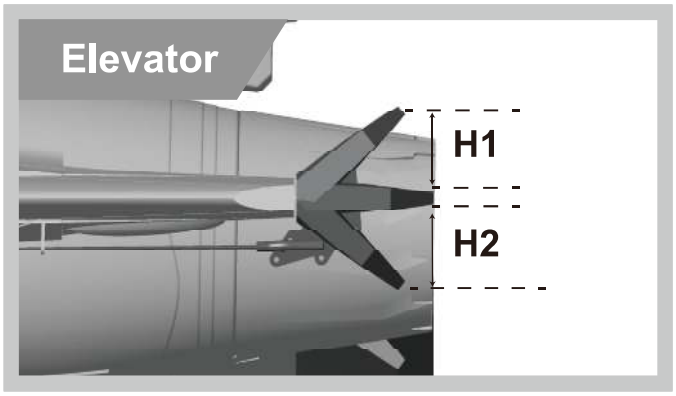
Stick up

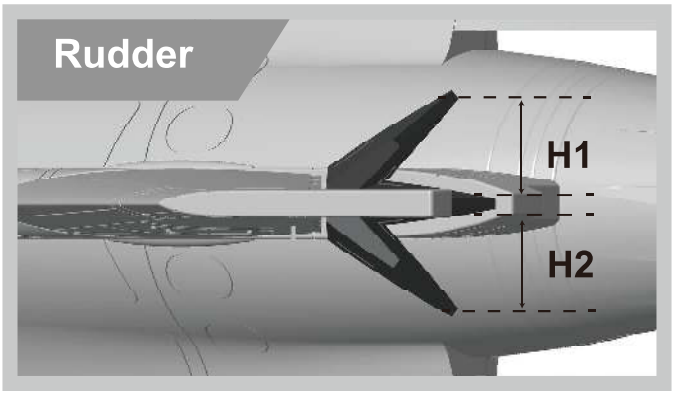


Dual Rates

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.



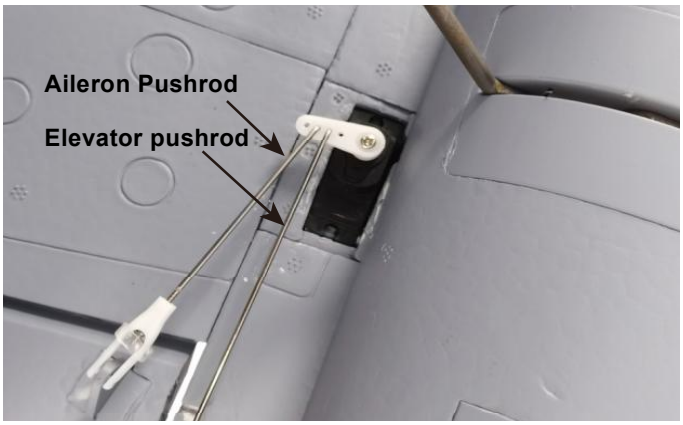




	Aileron (Measured closest to the fuselage)	Elevator (Measured closest to the fuselage)	Rudder (Measured from the bottom)
Low Rate	H1/H2 10mm/10mm D/R Rate : 50%	H1/H2 11mm/11mm D/R Rate : 70%	H1/H2 18mm/18mm D/R Rate : 70%
High Rate	H1/H2 14mm/14mm D/R Rate : 70%	H1/H2 15mm/15mm D/R Rate : 100%	H1/H2 28mm/28mm D/R Rate : 100%

⚠ Important Flight Notes:

1.Note, the hole where the aileron/rudder pushrod is installed on the servo arm is shown in the below:



⚠ ESC Instruction

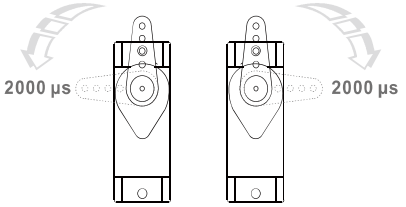
1.This product uses the new 40A V2 ESC, and adds the "Reverse throttle deceleration after landing" function.
2.This ESC has two connecting cables: "Throttle" signal control cable and "Reverse Brake" control cable.
3.Connection Instruction
- "Throttle" signal control cable insert into the throttle channel 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:

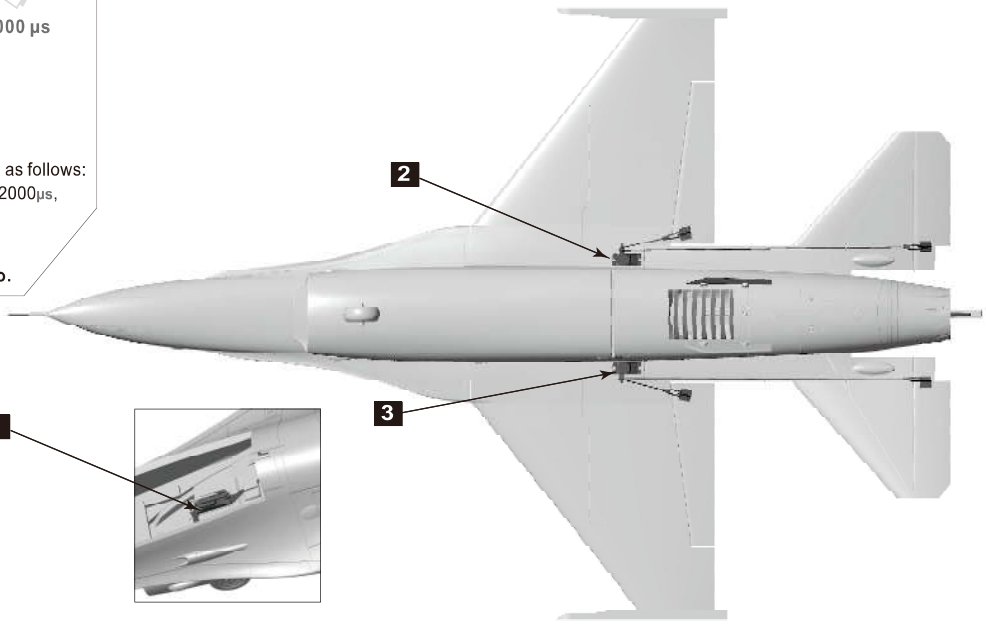
1."Reverse Brake" control cable must insert into the receiver for connection, otherwise the ESC will not start.
2.After the model aircraft is off the ground, during the flight, the "throttle reverse thrust" function cannot turn on, otherwise the forward power will be lost, and resulting in a serious flight accident.

Pre-Installed Component Overview

Servo Direction

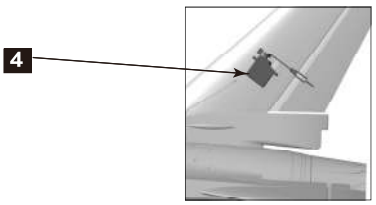


The servo positive or reverse rotation is defined as follows:
When servo input signal change from 1000μs to 2000μs,
The servo arm is **rotated clockwise**, its **positive servo.**
The servo arm is **rotated counterclockwise**, its **reverse servo.**

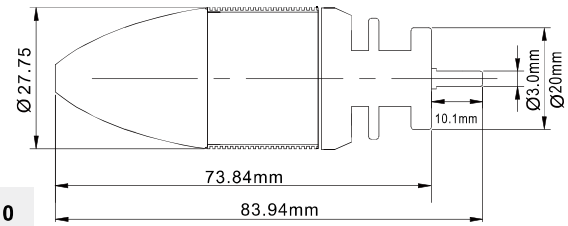


If you need to purchase another brand's servo, please refer to the following list to choose a suitable servo.

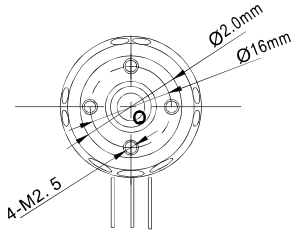
Position	Servo regulation	No.	Pos. / Rev.	Cable length
Nose gear steering servo	9g plastic servo	1	Reverse	100mm
Fuselage(L)	9g plastic servo	2	Positive	100mm
Fuselage(R)	9g plastic servo	3	Positive	100mm
Rudder	9g plastic servo	4	Positive	600mm



Motor Specification



2836-3300



2836-3300KV 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
2836-3300	3300RPM/V	14.8	35	1050	48000	135	2.7A	64mm Ducted Fan	40A

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