

FreeWing M^oDEL

F/A-18C Hornet

FreeWing 1/11.5 Scale EDF Jet

Wingspan:1034mm

Length:1500mm

Empty Weight:2640G[w/o Battery]



MADE IN CHINA



EN 1~8

中 9~16

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Thank you for purchasing our Freewing 80/90mm EDF Super Scale Jet, the F/A-18C Hornet! It is 1500mm in length with a wingspan of 1034mm. This 1/11.5 scale F/A-18C uses EPO material and super scale details such as a scale pilot figure, LED lights, flap hinges, antennas, etc. All control surfaces are easily removable and the MCE-E consolidates wiring for optimal organization. The elevator's control hardware is completely concealed within the fuselage, and the rudder servos are recessed to reduce their observability.

The Freewing F/A-18C can be configured in either 80mm or 90mm power system (Subject to Freewing power system equipment).

The Freewing F/A-18C PNP Version includes a preinstalled 90mm EDF power system comprising a 12-blade EDF impeller, 3668-1960KV In-runner motor, 120A ESC. The recommended battery is a 6S 5000mAh 35C+ battery, providing a top speed in excess of 170KPH / 106.5MPH.

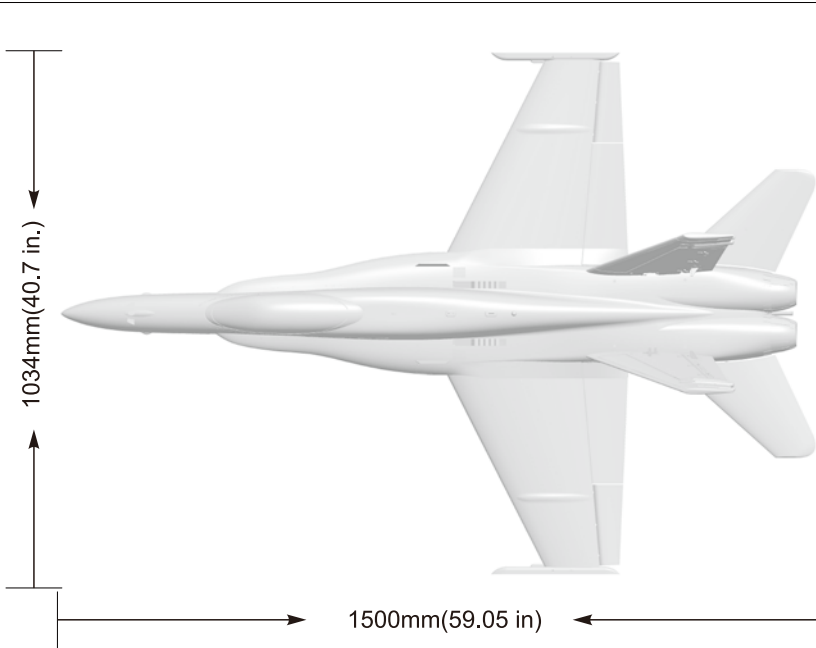
The ARF PLUS Version was specially designed to also be able to accommodate an 80mm EDF power system, if a user decides to install his/her own lighter power system. Two foam "shims" are included in the box to facilitate the narrower 80mm EDF.

When landing, there is no need to intervene too much to maintain the direction, the direction stability is good, and it is not easy to be biased. The shortest takeoff distance is about 25M. The air posture is stable, easy to control, and the action is responsive. It maintains a stable flight attitude at high speeds and low speeds. In the case of a low-altitude, low-speed, large-turn maneuver, maintain adequate throttle to complete the maneuver smoothly. When landing, the flaps decelerate the aircraft significantly, and at the same time, the slight bowing effect caused by the opening of the flaps gives the aircraft a stable and gentle rate of decline, making the landing sequence easier to handle.

⚠ 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! 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.



⚠ 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.

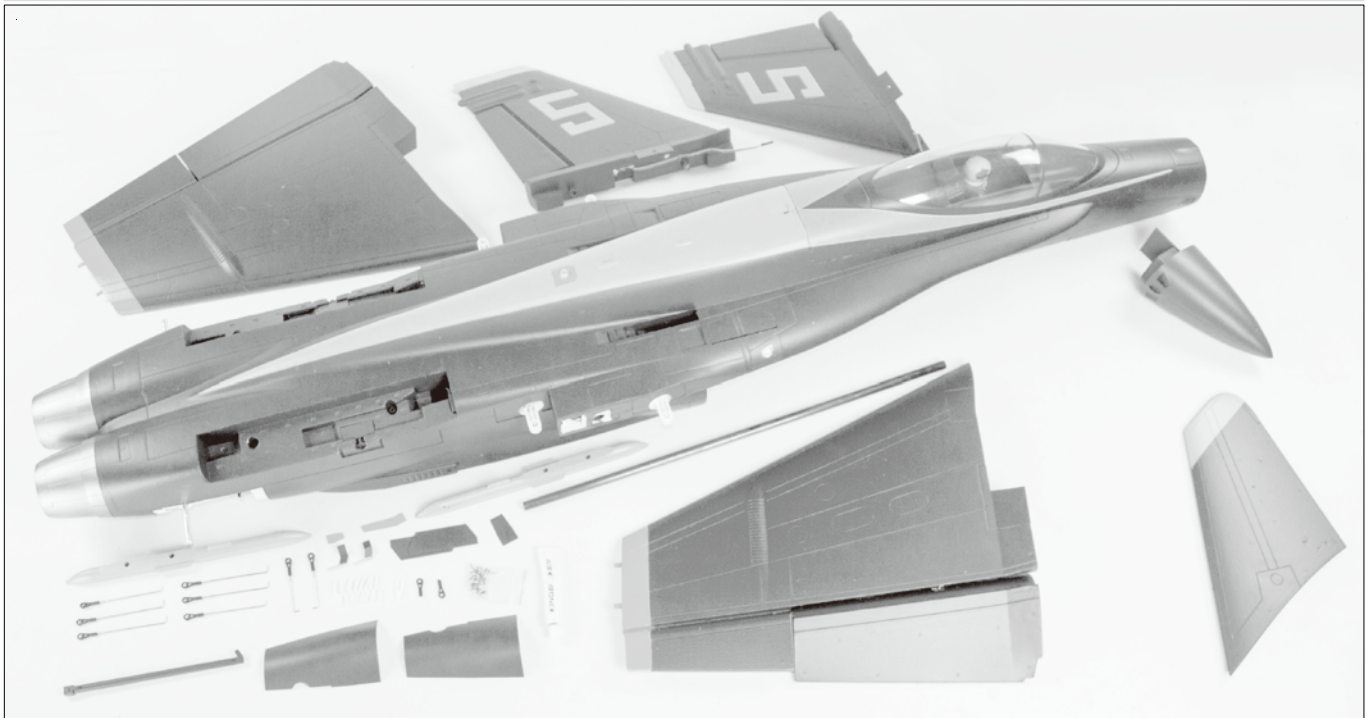
Standard Version

Wingload: 150g/dm²
 Wing Area: 22 dm²
 Motor: 3668-1960KV In-runner
 Servo: 9g MG Digital servo (2pcs)
 9g Hybrid Digital servo (5pcs)
 23g MG Digital servo (2pcs)
 ESC: 120A with 8A UBEC
 (Thrust Reverse Function)
 Ducted fan: 90mm 12-blade fan
 Weight: 2640g (w/o Battery)
 Thrust: 4200g

Other features

Material: EPO
 Aileron: Yes Split Flaps: Yes
 Elevator: Yes Rudder: Yes
 Landing gear: Retract landing gear
 controlled by electric worm
 Cabin door: nose gear electric cabin door
 Scale LED lights
 Scale Pilot figure (1pcs)
 LiPo Battery: 6S 4500-5500mAh (1pcs)

Package list



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

No.	Name	PNP	ARF Plus	Airframe	No.	Name	PNP	ARF Plus	Airframe
1	Fuselage	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment	6	Carbon tube	✓	✓	✓
2	Main wing	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment	7	Pushrod instructions	✓	✓	✓
3	Horizontal tail	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment	8	Non-slip mat & Glue	✓	✓	✓
4	Vertical tail	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment	9	Manual	✓	✓	✓
5	Drop tank	✓	✓	✓	10	Screw	✓	✓	✓

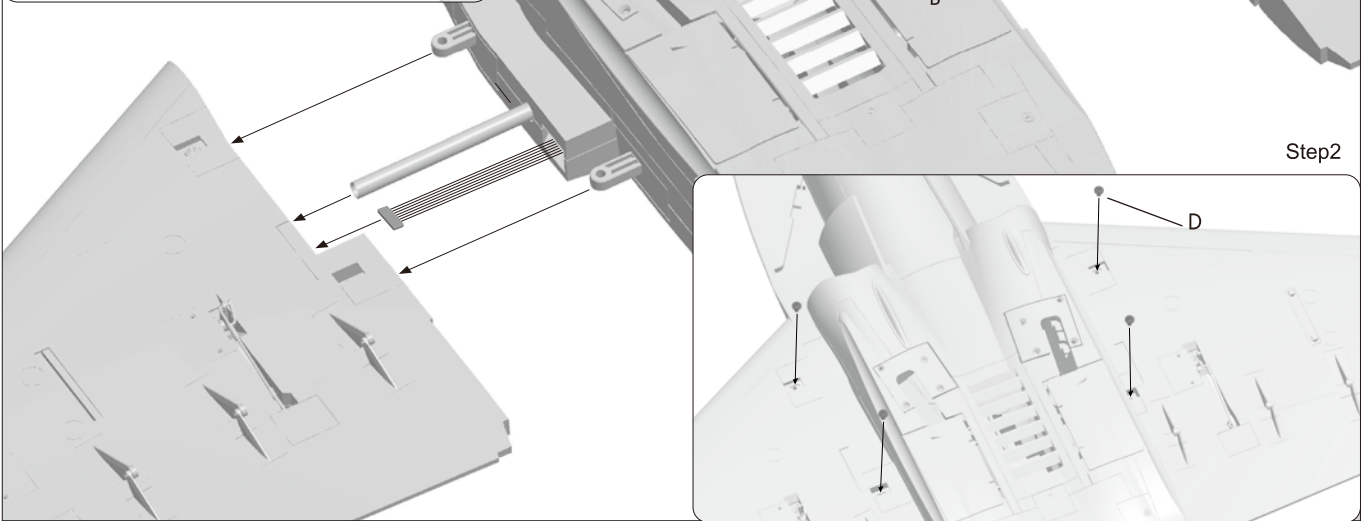
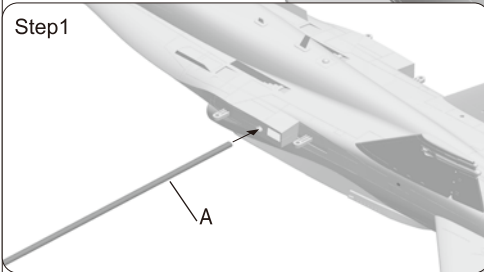
Install Main wing

As the photo show:

1. Insert the carbon tube to the fuselage.
2. Insert the ribbon wire to the main wing control board and install left/right wing on the fuselage.
3. Use screws to fix the main wing.

- A-Carbon tube (Ø10x480mm 1pcs)
- B-Ribbon wire
- C-Controller Module
- D-Screw (PWM3x6mm 4pcs)

Step1



Step2

Install Horizontal Stabilizer

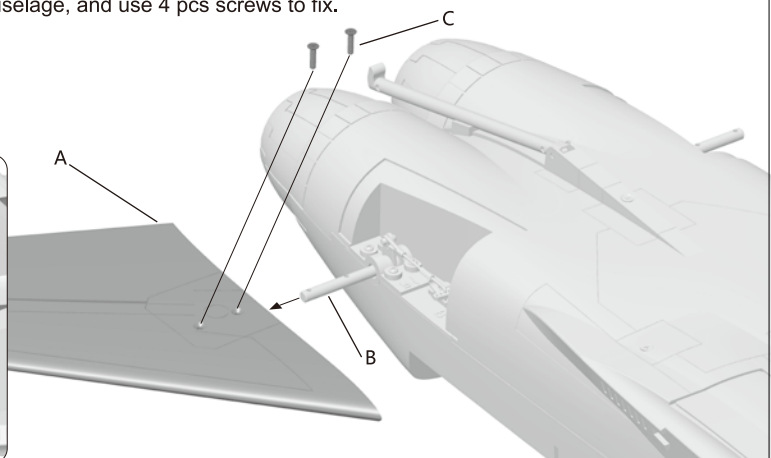
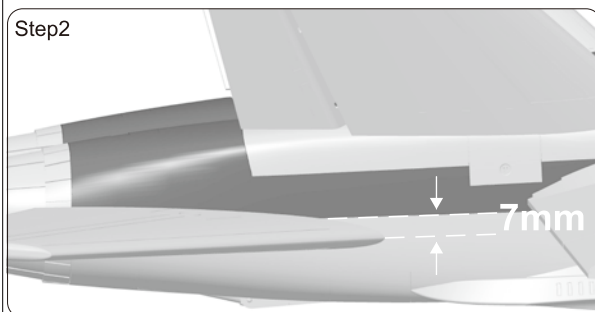
Step1

As the photo show:

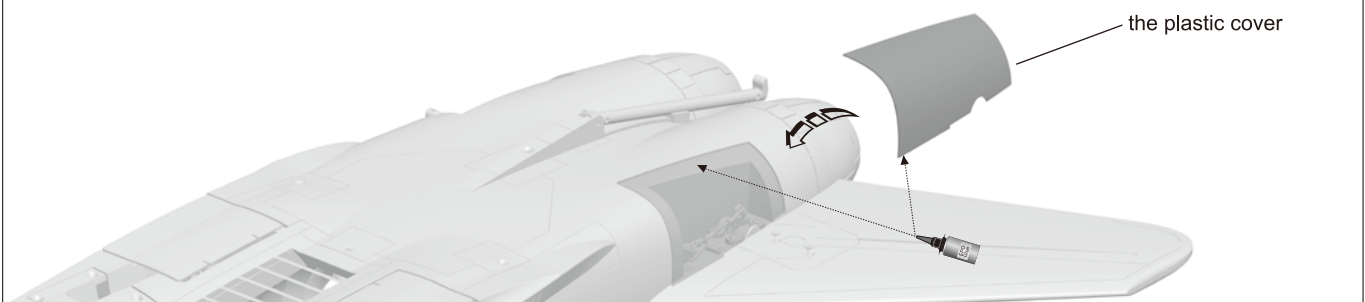
1. Insert the left/right horizontal stabilizer to the shaft of tail fuselage, and use 4 pcs screws to fix.
2. Adjust the pushrod length to the correct position.

- A-Horizontal Stabilizer
- B-horizontal tail shaft
- C-Screw (KM3x8mm 4pcs)

Step2



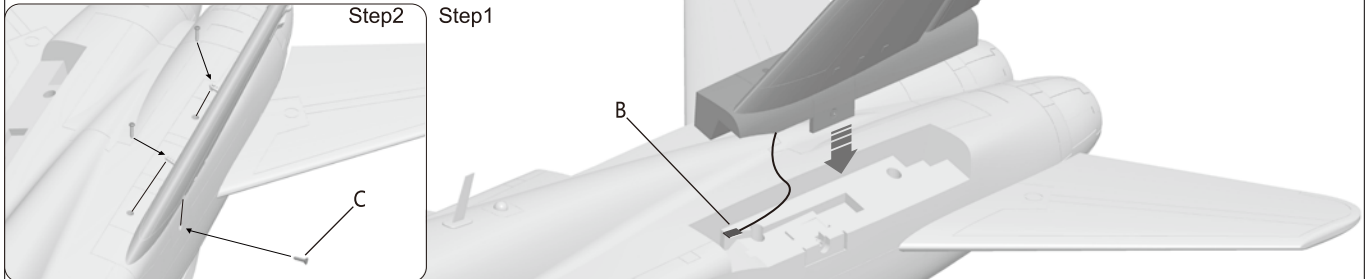
As the photo show: Use glue to attach the plastic cover on the indicated position.



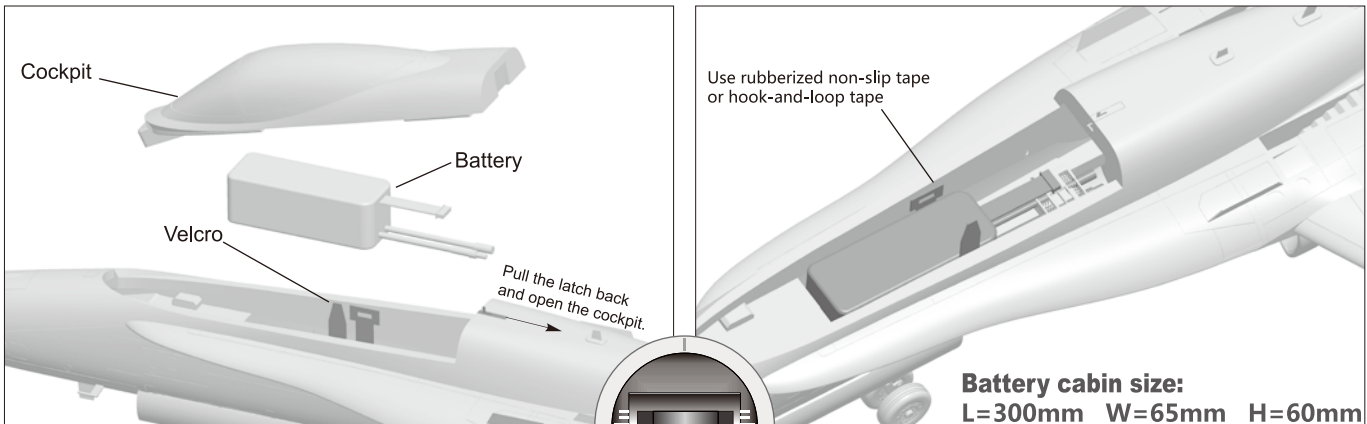
Install Vertical Stabilizer

As the photo show:
 1. Pull the rudder servo cable along the slot into the battery compartment and install the vertical tail.
 2. Use 6pcs screws to fix the vertical tail to prevent loosening.

- A-Rudder
- B-Rudder servo cable
- C-Screw (FA3x10mm 6pcs)



Battery Size



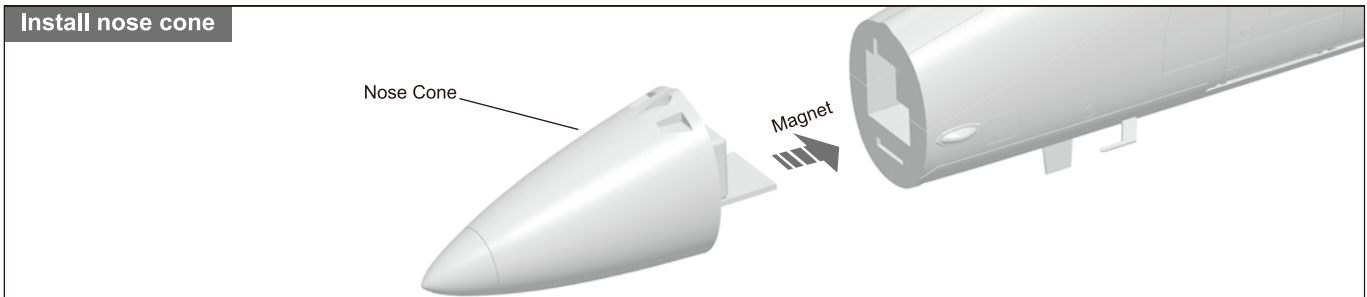
Battery cabin size:
 L=300mm W=65mm H=60mm

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.

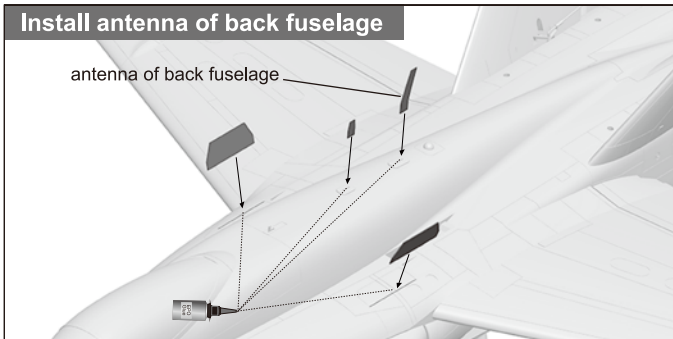
We recommend the following LiPo battery:
6S22.2V 4500mAh~6S22.2V 5500mAh
 Discharge rate of C ≥ 35C

Install Other Accessories

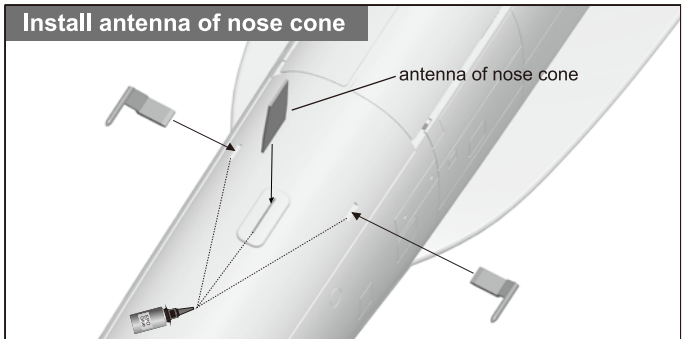
Install nose cone



Install antenna of back fuselage

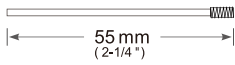


Install antenna of nose cone



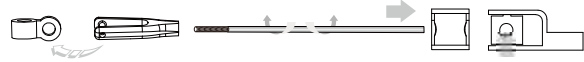
Pushrod instructions

Nose gear steering pushrod length

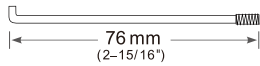


Pushrod diameter $\varnothing 1.2\text{ mm}$

Nose gear steering pushrod mounting hole



Rudder pushrod length

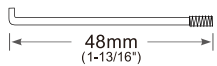


Pushrod diameter $\varnothing 1.5\text{ mm}$

Rudder pushrod mounting hole

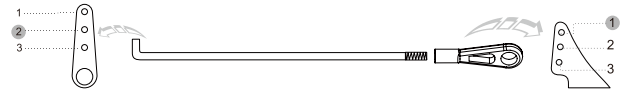


Elevator pushrod length

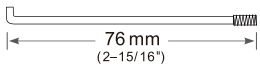


Pushrod diameter $\varnothing 1.5\text{ mm}$

Elevator pushrod mounting hole



Aileron pushrod length

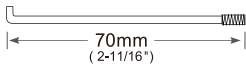


Pushrod diameter $\varnothing 1.5\text{ mm}$

Aileron pushrod mounting hole



Flap pushrod length



Pushrod diameter $\varnothing 1.5\text{ mm}$

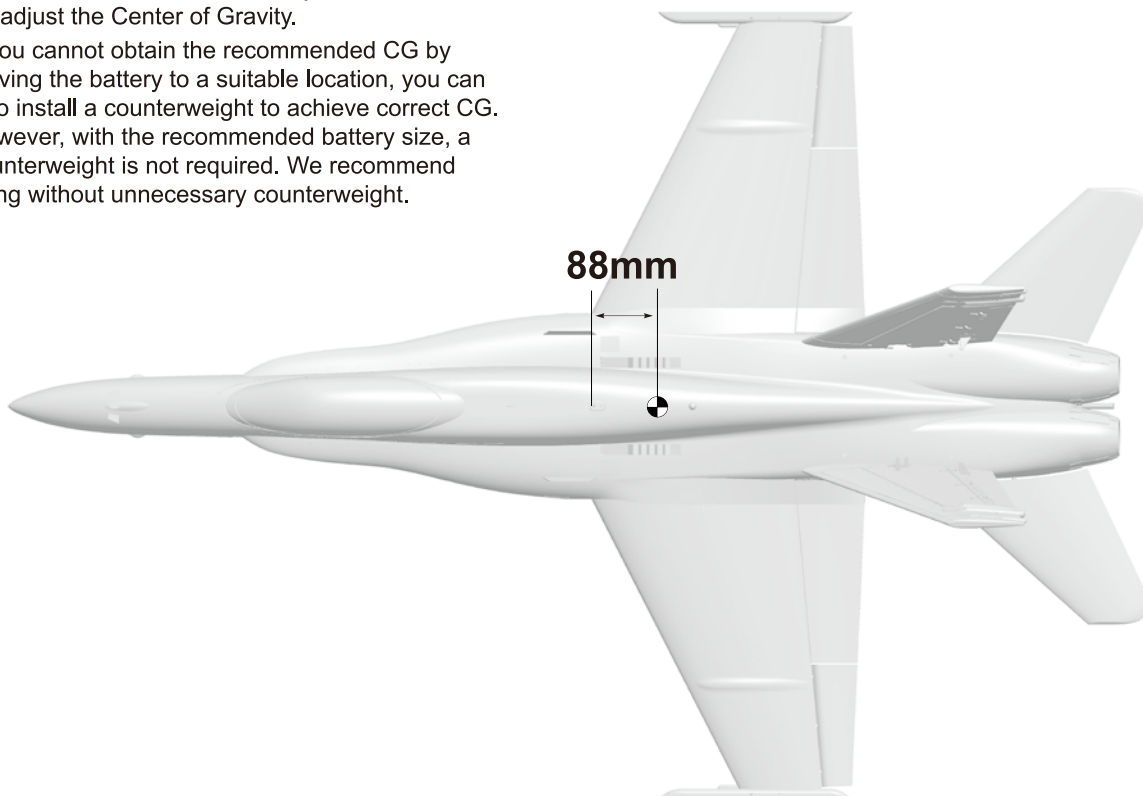
Flap pushrod mounting hole



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 chosen 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

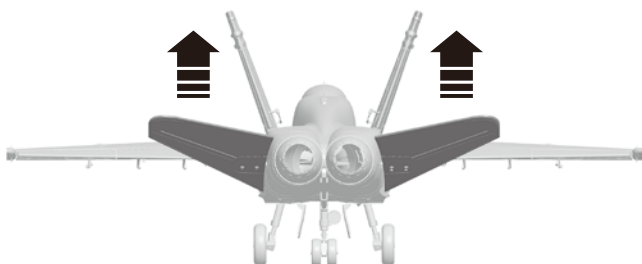


Stick Right



Elevator

Stick Up



Stick down



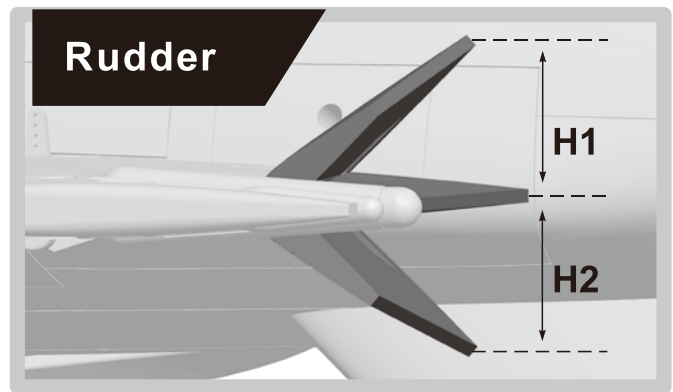
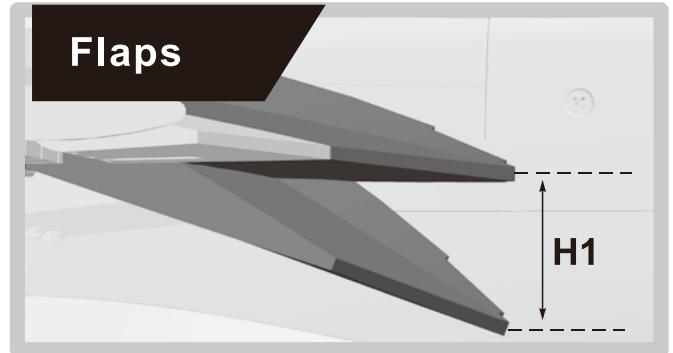
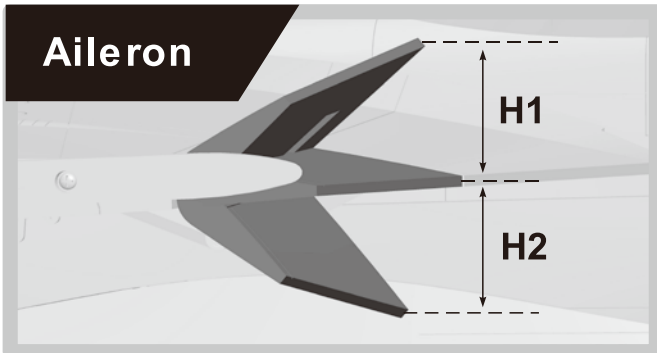
Flaps

Flaps down



Dual Rates

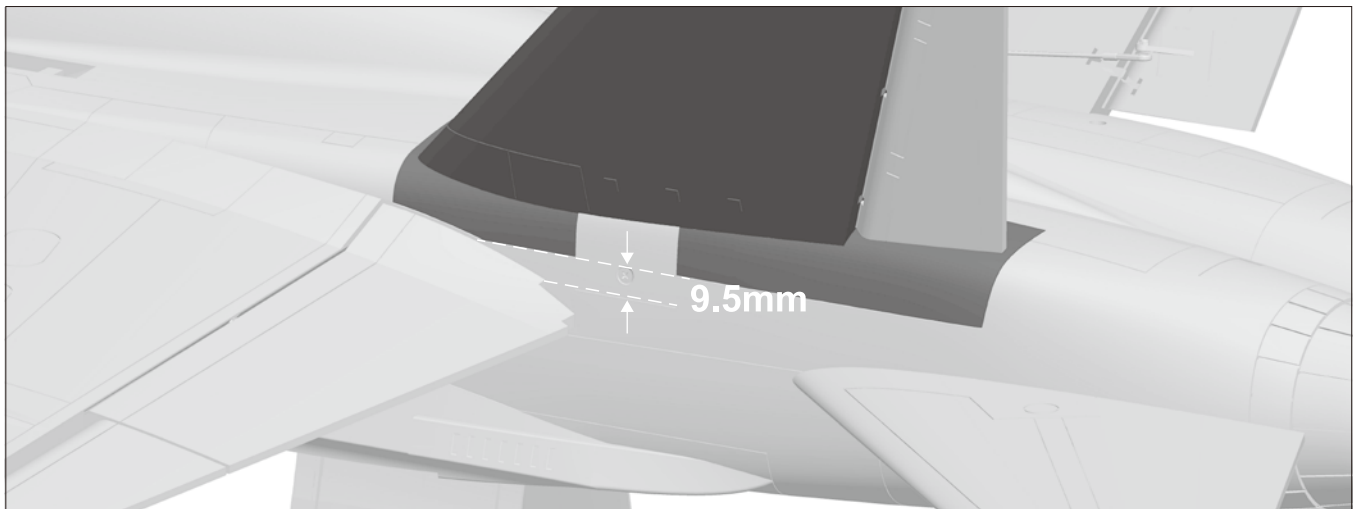
According to our testing experience, use the following parameters to set Aileron/Elevator Rate. Program your preferred Exponential % in your radio transmitter. We recommend using High Rate for the first flight, and switching to Low Rate if you desire a lower sensitivity. On successive flights, adjust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



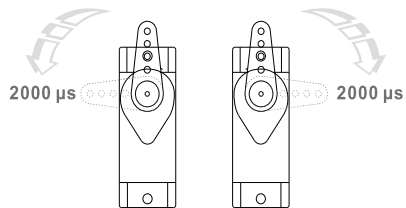
	Aileron(measured closest to the fuselage)	Rudder(Measured from the bottom)	Elevator(measured closest to the fuselage)	Flaps
Low Rate	H1/H2 26mm/ 26mm D/R Rate: 80%	H1/H2 23mm/ 23mm D/R Rate: 80%	H1/H2 30mm/ 30mm D/R Rate: 65%	H1 21mm
High Rate	H1/H2 32mm/ 32mm D/R Rate: 100%	H1/H2 27mm/ 27mm D/R Rate: 100%	H1/H2 36mm/ 36mm D/R Rate: 80%	H1 43mm

⚠ Flight Notes:

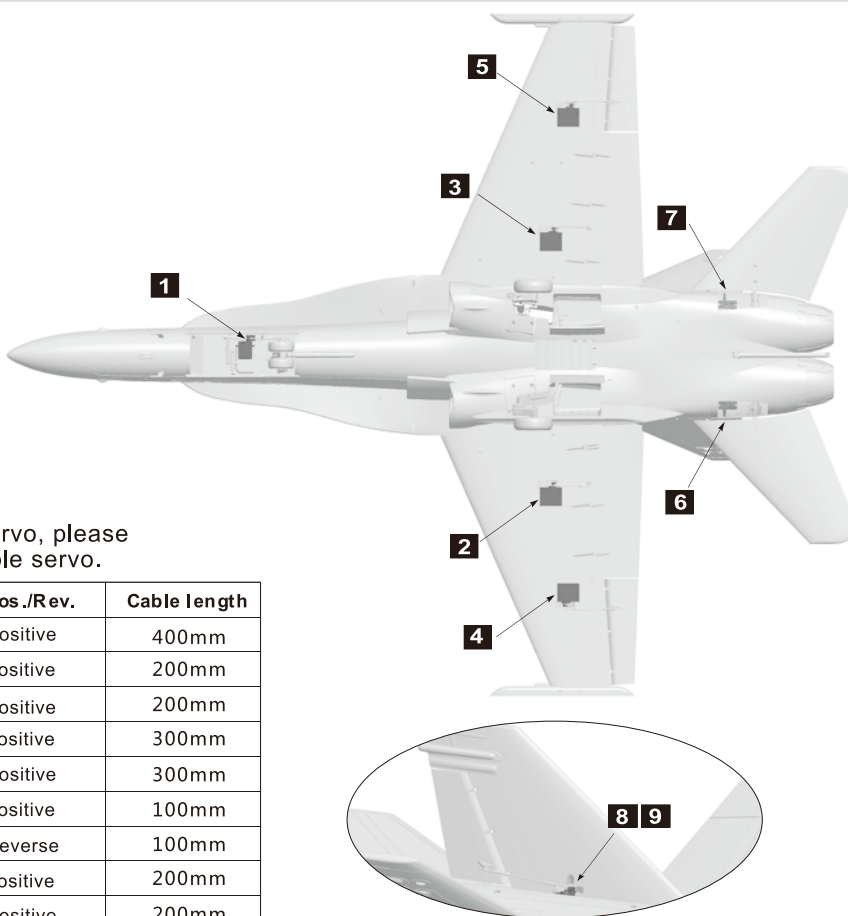
Flap center position, please refer to the following photo:



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**.

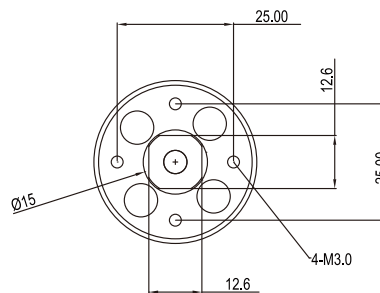
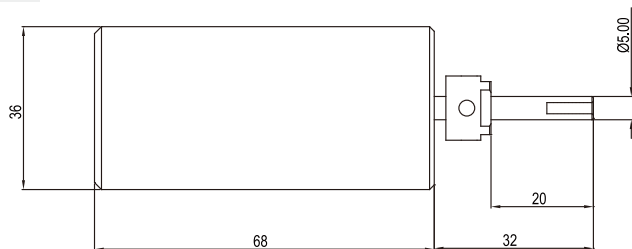


If you need to purchase another brand's servo, please refer to the following list to choose a suitable servo.

Position	Servo regulation	No.	Pos./Rev.	Cable length
Nose gear steering servo	9g Digital-Hybrid	1	Positive	400mm
Flap(R)	9g Digital-MG	2	Positive	200mm
Flap(L)	9g Digital-MG	3	Positive	200mm
Aileron(R)	9g Digital-Hybrid	4	Positive	300mm
Aileron(L)	9g Digital-Hybrid	5	Positive	300mm
Elevator(R)	23g Digital-MG	6	Positive	100mm
Elevator(L)	23g Digital-MG	7	Reverse	100mm
Rudder(R)	9g Digital-Hybrid	8	Positive	200mm
Rudder(L)	9g Digital-Hybrid	9	Positive	200mm

Motor Specification

3668-1960
 Item No.:MI036681



3668-1960KV

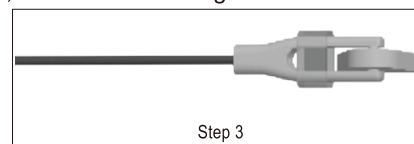
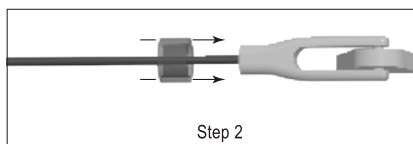
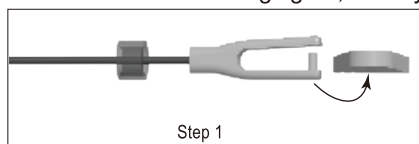
Unit :mm

Item No.	EDF Fans	Use voltage (V)	Current(A)	Max power (W)	Thrust(g)	Efficiency (g/w)	Motor(KV)	Use ESC (A)	Weight (g)
E72216	90mm 12-Blade	22.2	110	2442	4300	1.76	3668-1960	120	400

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.





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