

F-16 FIGHTING FALCON V3 USER MANUAL

Wingspan:878mm

Item No.: FJ211

Version No.: FJ211-V02



Freewing m^oDEL[®]

www.sz-freewing.com

  
MADE IN CHINA



The F-16C "Fighting Falcon" is a single-engine multirole fighter aircraft originally developed for the United States Air Force (USAF). Designed as an air superiority day fighter, it evolved into a successful all-weather multirole aircraft. The F-16C features an internal M61 Vulcan cannon and multiple locations for mounting weapons and other mission equipment. Operating in nearly 30 countries to this day, the F-16 has distinguished its place in aviation history.

Freewing has modeled this brilliant aircraft in EPO foam with a 70mm electric ducted fan (EDF) powerplant. With a 1306mm length and 878mm wingspan, this 1/12 scale flying replica includes many exciting features! An accurate scale outline with sharp surface details and panel lines make this model stand out at your airfield. Removable main wings and a magnetic nose cone make transport very convenient. The cockpit battery bay cover is secured with a sliding latch to prevent separation during flight, and the entire aircraft is reinforced with strategic placement of carbon tubes to withstand vigorous flying maneuvers.

Our Freewing 70mm F-16C V2 model jet uses electric retractable landing gear for lower drag and better scale appearance during flight. These powerplants achieve a maximum flying speed of 165kph, respectively. The aircraft is designed for stability, strong climbing performance, and short takeoff distance, suitable for all levels of jet pilots. The aircraft can also maintain a high alpha of 30 degrees to demonstrate its superior low speed stability.

We feature this exciting aircraft in the modern three tone gray US Air Force base colors, and three decal sets are included for you to choose from to customize your model from various actual Air Force squadrons.

⚠ 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:

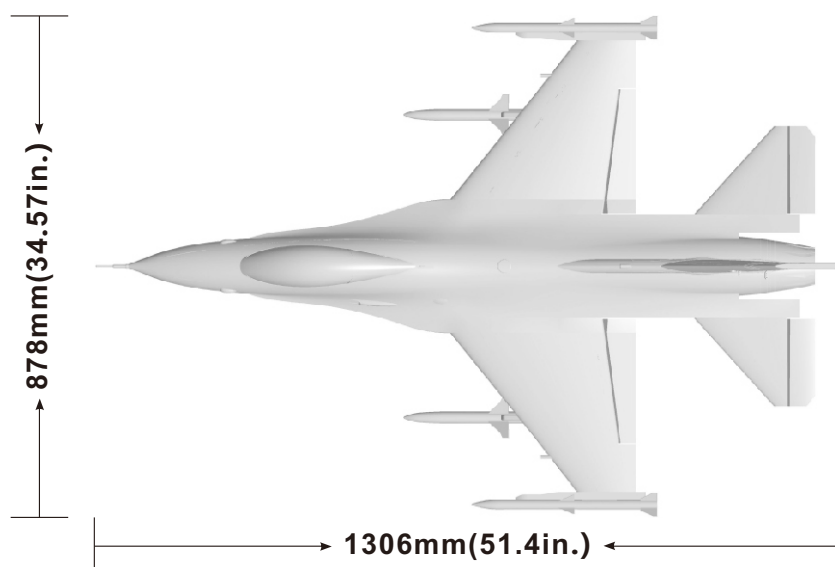
1. This is not a toy! Operator should have a certain experience, beginners should operate under the guidance of professional players.
2. Before install, please read through the instructions carefully and operate strictly under instructions.
3. Cause of wrong operation, Freewing and its vendors will not 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.

Catalog

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Product basic parameters

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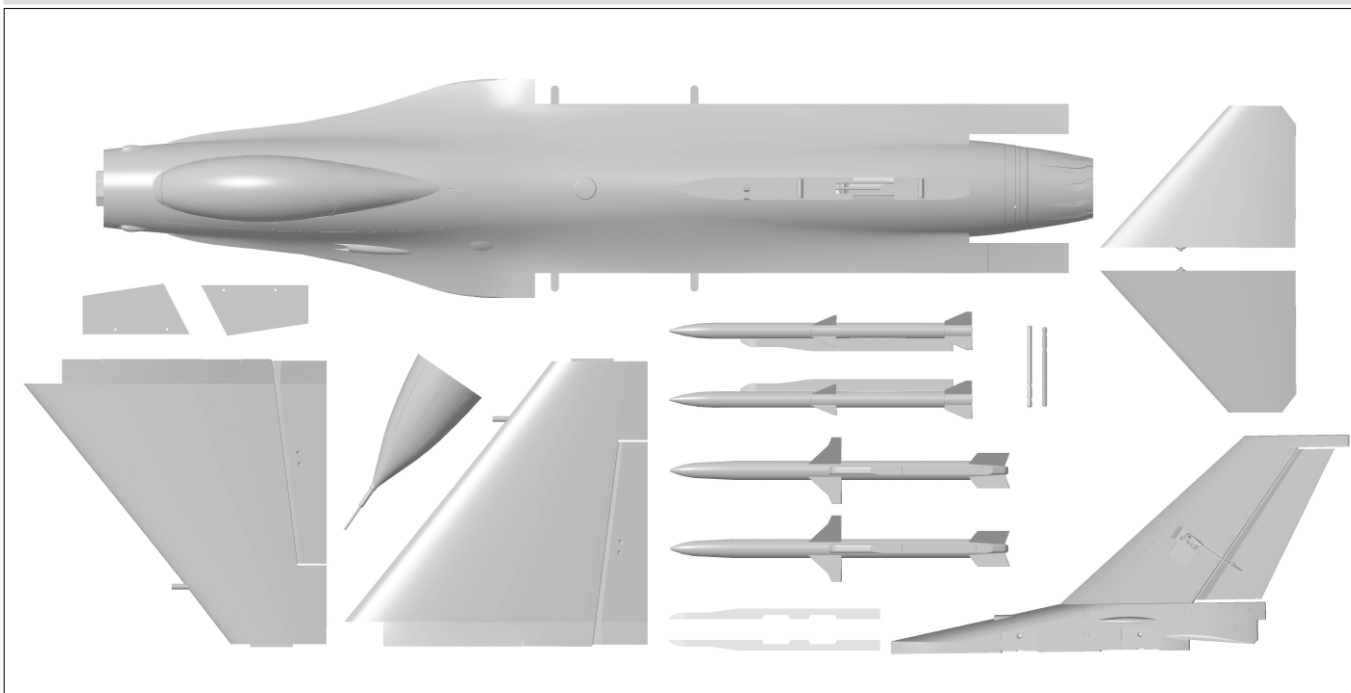


Standard version

Wing loading: 145g/dm²
 Motor: 2957-2210KV I/R Motor
 Ducted fan: 70mm 12-blade ducted fan
 Flight speed: 165km/h
 ESC: 80A brushless ESC
 Servo: 9g Hybrid digital servo (6pcs)
 Weight: 1550g (without battery)
 Thrust: 2400g
 Battery advise: 6S 3500-4500mAh

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 missiles and pylons, if you need, please contact your local dealer.

Packing list



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

NO.	Parts Name	PNP	KIT Plus	Airframe	NO.	Parts Name	PNP	KIT Plus	Airframe
1	Fuselage	Pre-install power system and servos	Pre-installed servo	No electronic equipment	6	Missiles and pylons	Optional part, purchase separately	Optional part, purchase separately	Optional part, purchase separately
2	Main wing	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment	7	Pushrod	✓	✓	✓
3	Vertical tail	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment	8	Carbon tube	✓	✓	✓
4	Horizontal tail	✓	✓	✓	9	Glue/Decals	✓	✓	✓
5	Nose cone, FIn	✓	✓	✓	10	Manual	✓	✓	✓

Install main wing

1. Insert the carbon tube into fuselage.

Carbon tube (Ø6x500mm)

2. Connect the main wing servo cable and fuselage extension cable, then install left/right main wing.

main wing trough port

3. Use 4pcs screws to fix the main wing.

Screw (KA3x10 4pcs)

Install Fuselage

1. Use glue to attach the left/right tail fuselage pieces onto the fuselage.

Install Horizontal Stabilizer

1. First, lock the screw into the fixing ring to half the depth.
2. Place the fixing ring into the horizontal tail groove.
3. Insert the rotating shaft into the horizontal tail, adjust the position of the fixing ring, and finally

Screw (KA3x10mm 4pcs)



When fixing the horizontal tail rotating shaft, make sure the screw is aligned with the anti-loosening groove on the rotating shaft.

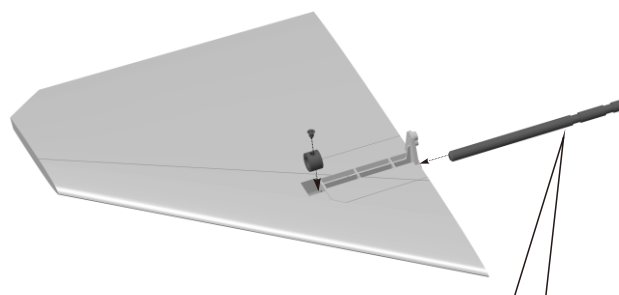
tighten the screw.

4. Follow the above steps to install the other side horizontal tail.

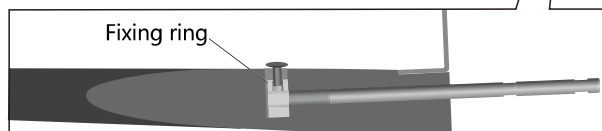
step ①

1. Insert the rotating shaft into the fixing hole and tighten it with screws.
2. Insert the rotating shaft into the horizontal tail, and fix it with a fixing ring.
3. Follow the above steps to install the other side horizontal tail.

Screw (HM2x4mm 1pcs)



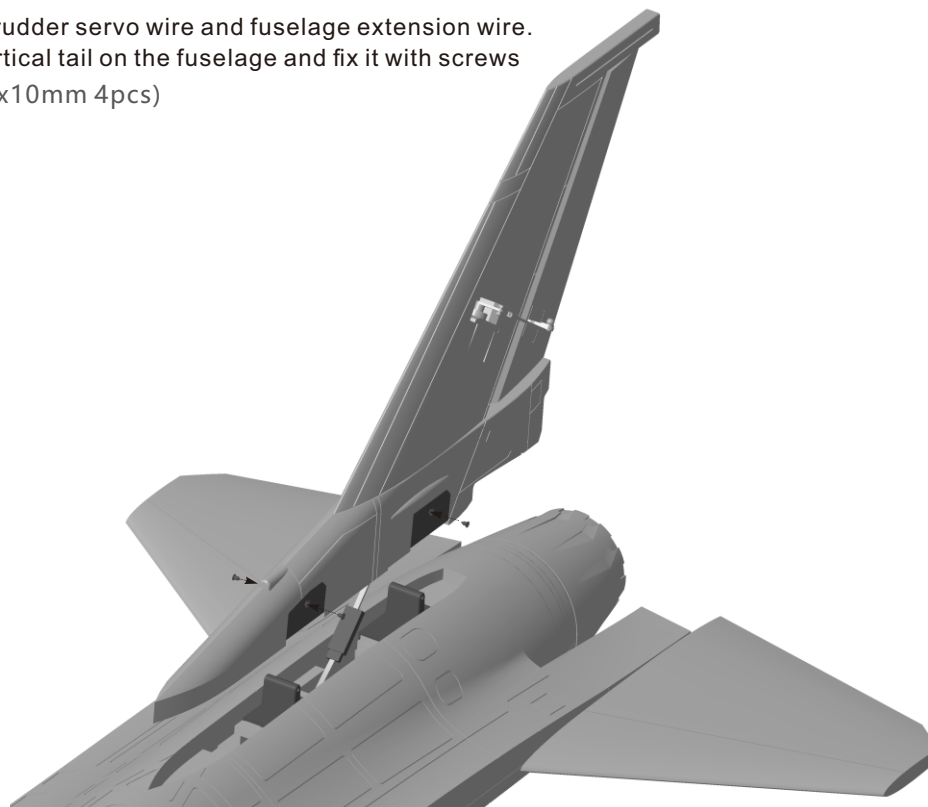
Fixing ring



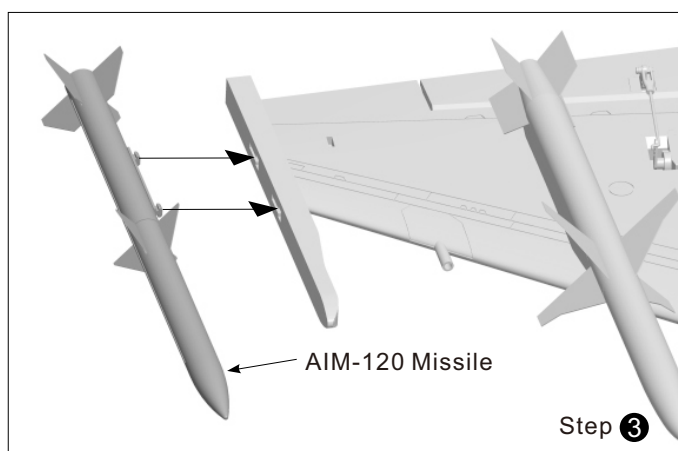
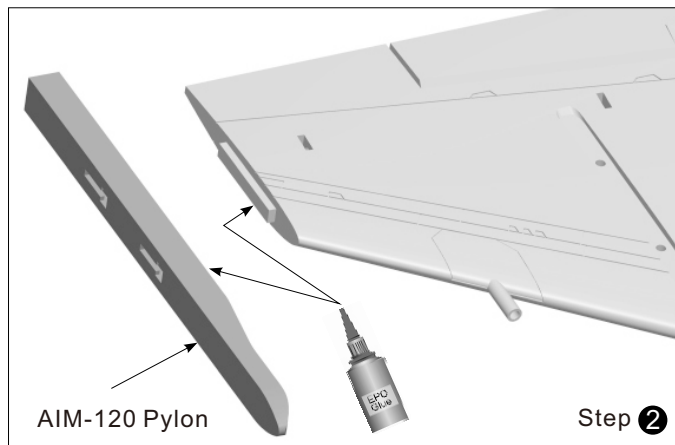
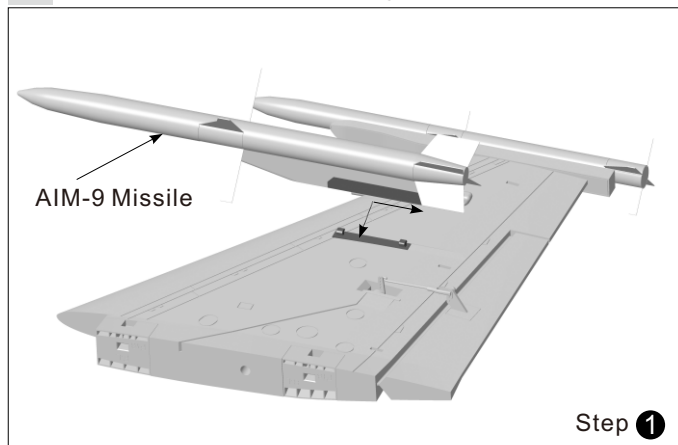
Install Vertical Stabilizer

1. Connect the rudder servo wire and fuselage extension wire.
2. Install the vertical tail on the fuselage and fix it with screws

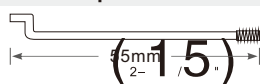
Screw (KA3x10mm 4pcs)



Install missiles and pylons (Note: The package don't include the missiles and pylons, if you need, please contact your local dealer.)



Aileron pushrod size

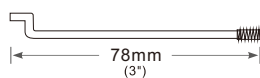


Pushrod diameter Ø1.2mm

Aileron pushrod mounting hole



Elevator pushrod size



Pushrod diameter Ø1.5mm

Elevator pushrod mounting hole

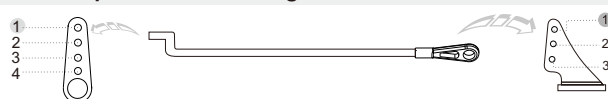


Rudder pushrod size



Pushrod diameter Ø1.2mm

Rudder pushrod mounting hole



Landing gear Installation Instructions

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Install nose landing gear

Please refer to the following photo, assemble, replace, revise the nose landing gear

sparepart name and parameters

A- Jimi screws (M3x3 1pcs)

B- Wheel chock

C- Wheel

D- Nose gear main strut

E- L-Shape arm

F- Jimi screw (M3x3)

G- Nose gear steering ring

H- Nose gear steering rod

I - Metal shaft

J- Buckle (Ø2.0mm 1pcs)

K- Nose gear plastic cover(left)

L- Nose gear plastic cover(right)

M- Screw (PA1.7x8 2pcs)

M1- Screw (PB1.0x10 3pcs)

N- Screw (KA2.6x12 4pcs)

O- Nose gear screw fixed part

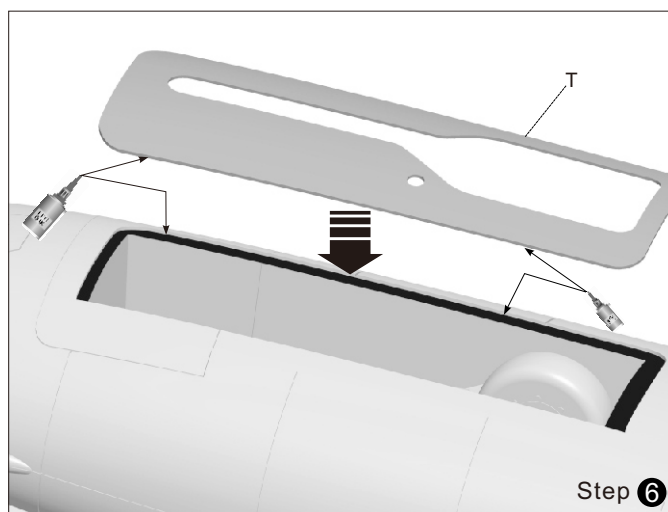
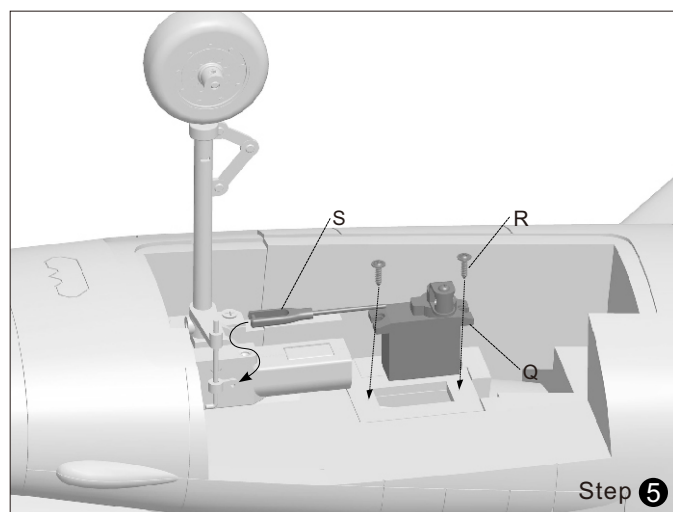
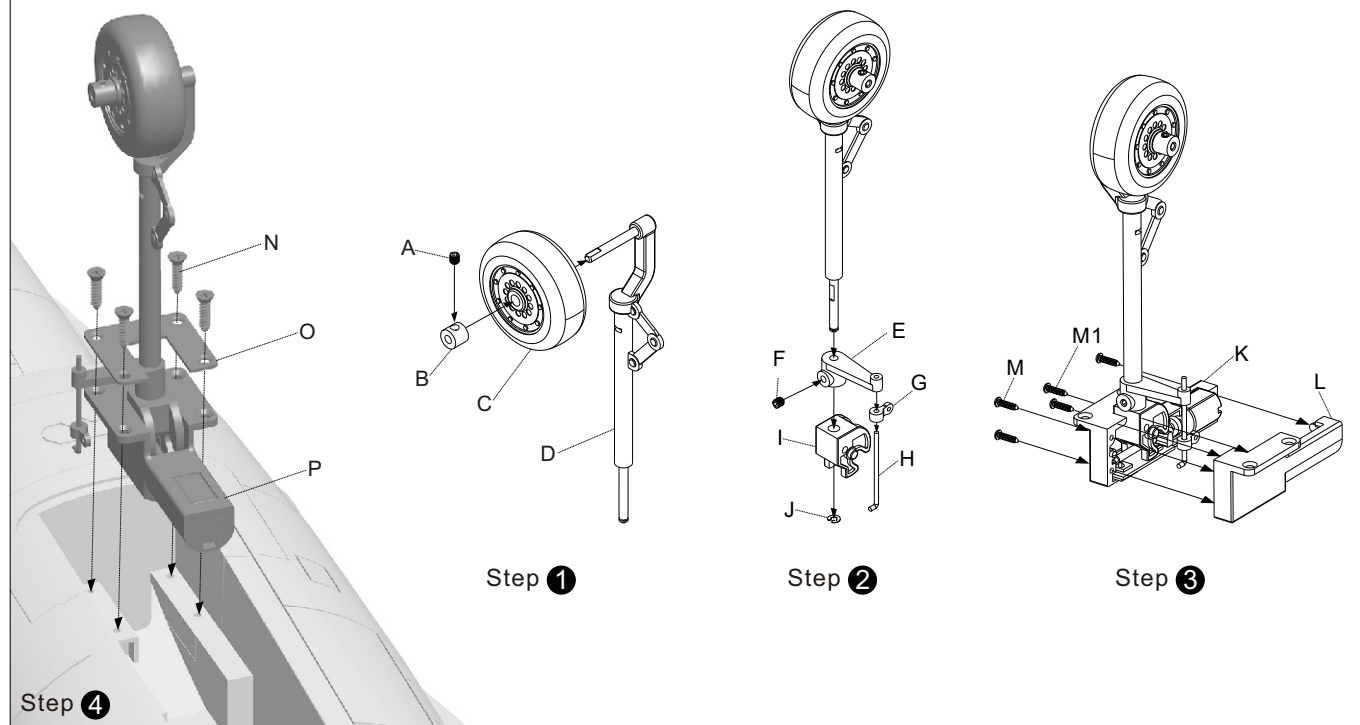
P- Nose gear installed set

Q- Servo

R- Screw (PWA2.0x8 2pcs)

S-Steering pushrod

T- Nose cabin door



Nose steering pushrod size



Pushrod diameter : Ø1.2mm



Note When installing, please check the flat position of spareparts, when screw to fix, the flat position must face to the screw hole, just like this, it can fix successfully, the spareparts don't rotate and fall off.

Landing gear Installation Instructions

EN

Install rear landing gear

Please assemble、disassemble the rear landing gear according to the following photo.

A-Jimi screw (M3x3 1pcs)

B-Wheel chock

C-Wheel

D-Rear gear main strut

E-Electric retractable controller

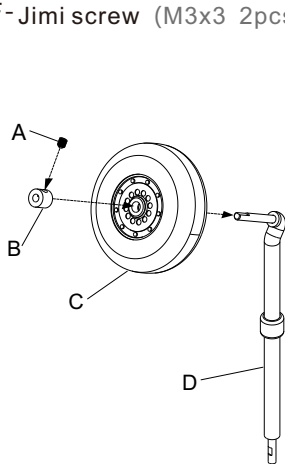
F-Jimi screw (M3x3 2pcs)

G-Rear gear installed set

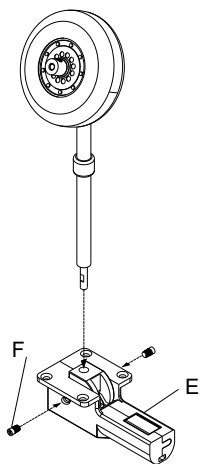
H-Rear gear screw fixed part

I-Screw (KA2.6x12 8pcs)

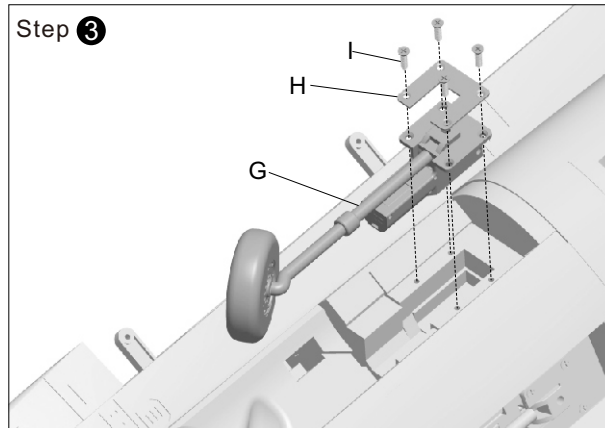
J-Rear cabin door



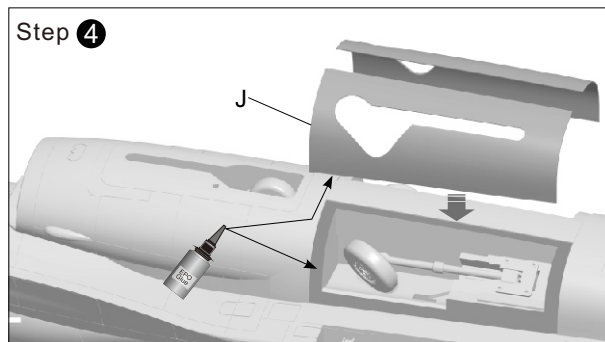
Step 1



Step 2

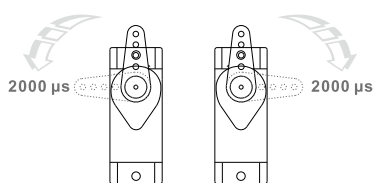


Step 3

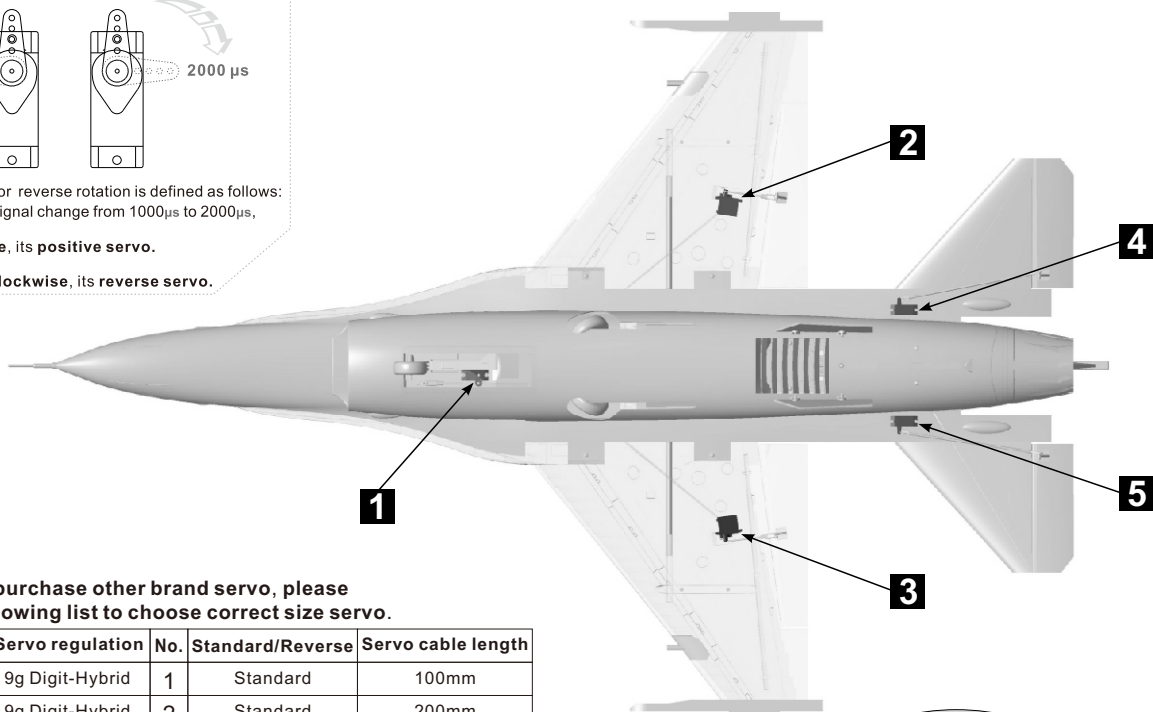


Step 4

Servo parameters

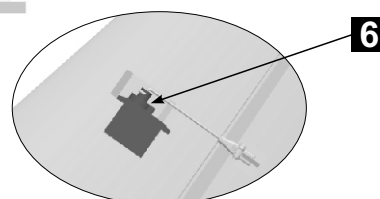


The servo positive or reverse rotation is defined as follows:
When servo input signal change from 1000μs to 2000μs,
The servo arm is
rotated clockwise, its positive servo.
The servo arm is
rotated counterclockwise, its reverse servo.



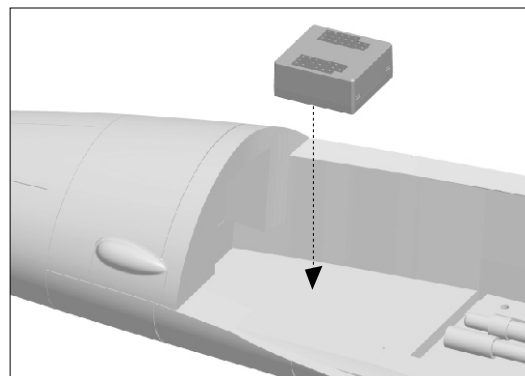
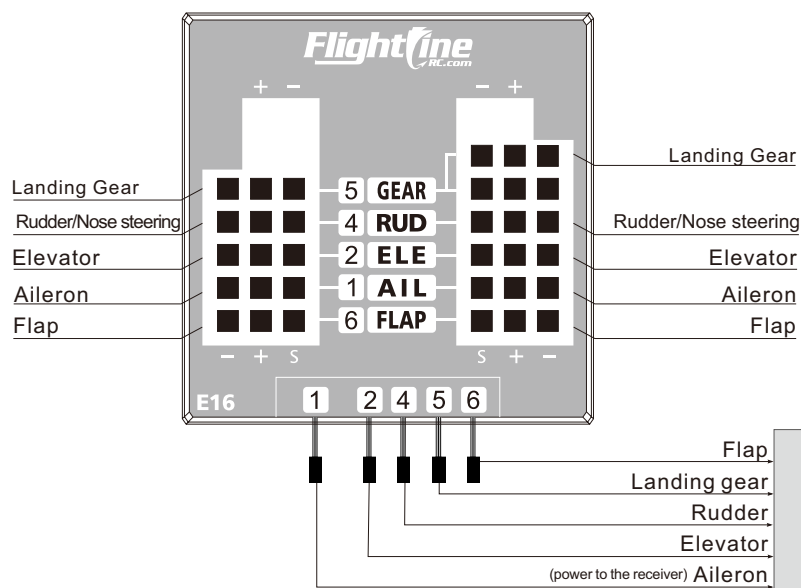
If you need to purchase other brand servo, please refer to the following list to choose correct size servo.

Servo position	Servo regulation	No.	Standard/Reverse	Servo cable length
Nose steering	9g Digit-Hybrid	1	Standard	100mm
Left aileron	9g Digit-Hybrid	2	Standard	200mm
Right aileron	9g Digit-Hybrid	3	Standard	200mm
Left elevator	9g Digit-Hybrid	4	Standard	900mm
Right elevator	9g Digit-Hybrid	5	Reverse	900mm
Rudder	9g Digit-Hybrid	6	Standard	200mm



Control board instruction

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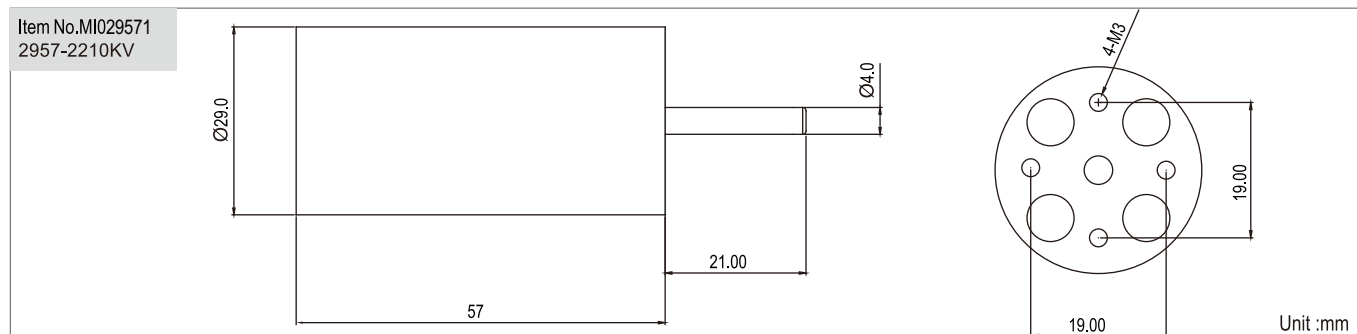
According to the note, connect the related servo cables in the control board.

The control surface is not any note on the control board, connect directly to the receiver.

Motor parameters

Motor Specification

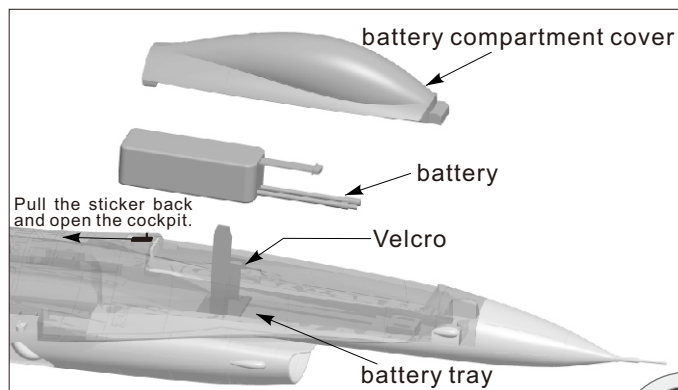
Item No. MI029571
2957-2210KV



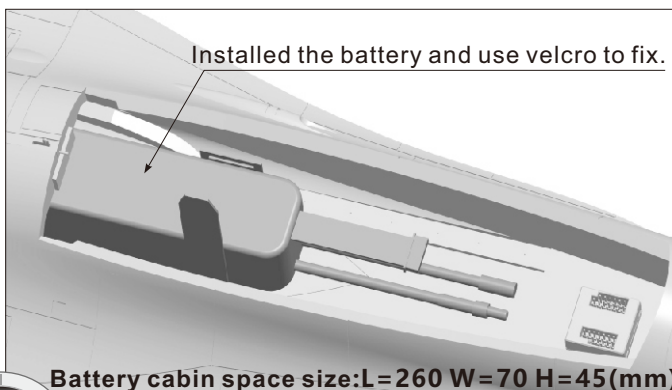
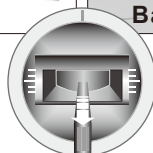
Item No.	Motor size	Motor(KV)	Thrust(g)	Current(A)	Use Voltage (V)	Use ESC (A)	EDF Weight (g)	Max power (W)	Efficiency (g/w)
E7218	2957-2210KV	2210KV	2600	70	22.2 (6S)	80	240	1550	1.68

Install battery

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Before connect the battery and receiver, please switch on the transmitter power and make sure the throttle stick is in the lowest position.



Battery cabin space size: L=260 W=70 H=45(mm)

The battery capacity and discharge rate we advise to use are as follows:

4S 14.8V 2600~4000mAh

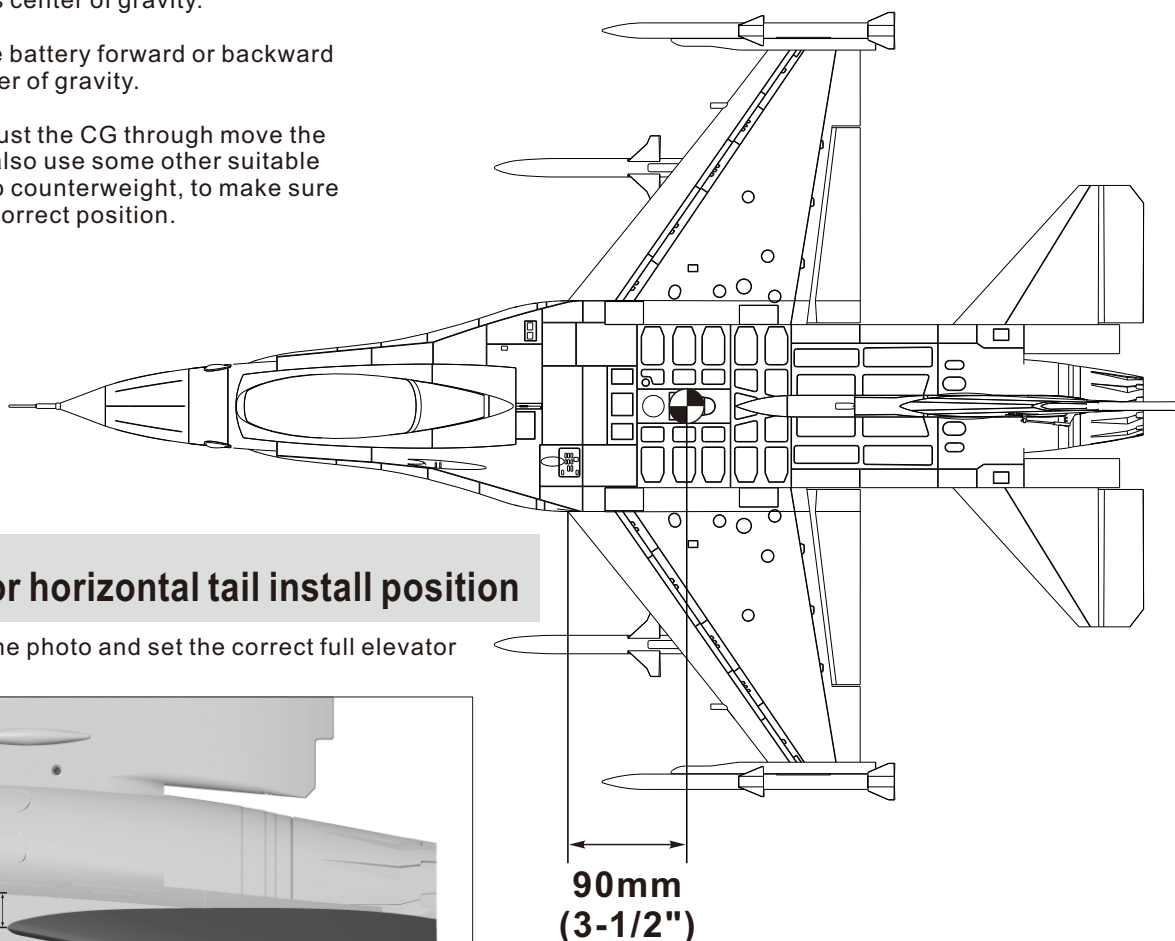
6S 22.2V 2600~4000mAh

discharge rate $\geq 30C$

Center of Gravity

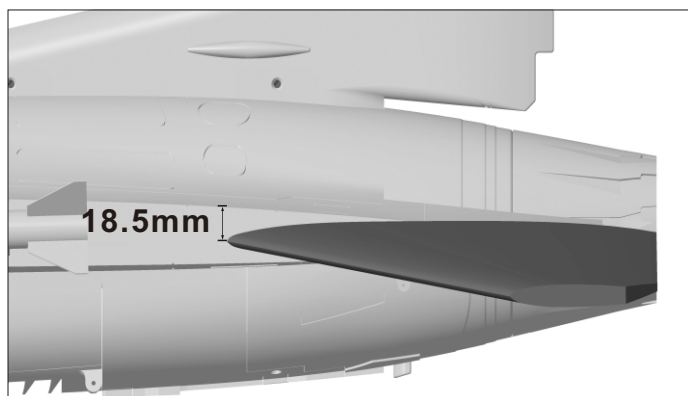
Correct center of gravity is directly related to the success of the flight, please refer to the following CG diagram to adjust your plane's center of gravity.

- You can move the battery forward or backward to adjust the center of gravity.
- If you can not adjust the CG through move the battery, you can also use some other suitable material weight to counterweight, to make sure that CG is in the correct position.



Full-elevator horizontal tail install position

Please refer to the photo and set the correct full elevator center position



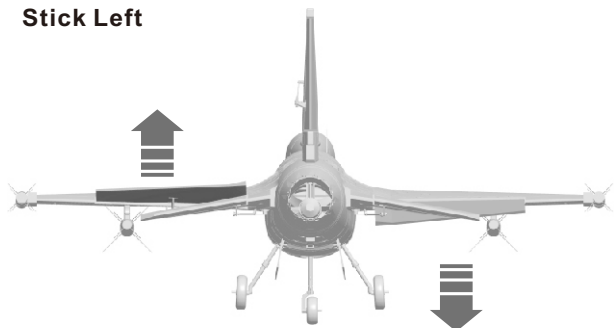
Control direction test

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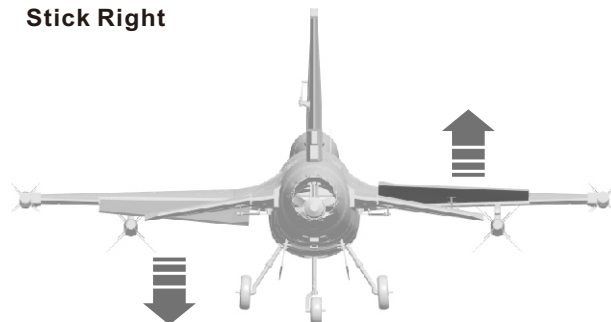
After installed the plane, before flying, we need a fully charged battery and connect to the ESC, then use radio to test and check that every control surface work properly.

Aileron

Stick Left

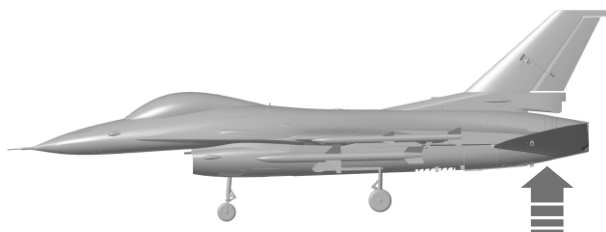


Stick Right

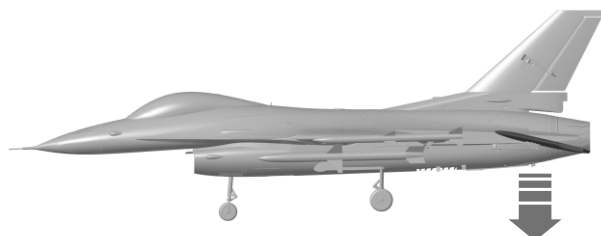


Elevator

Up Elevator

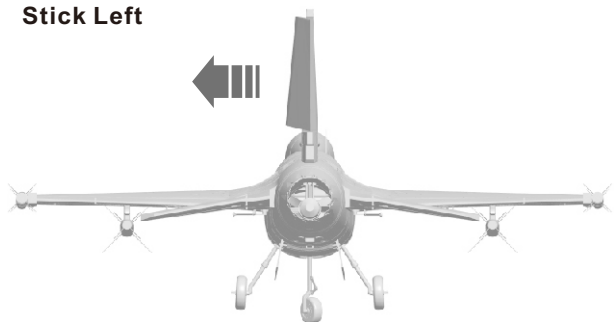


Down Elevator

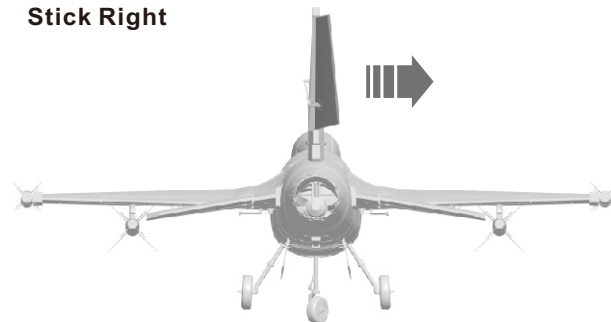


Rudder

Stick Left



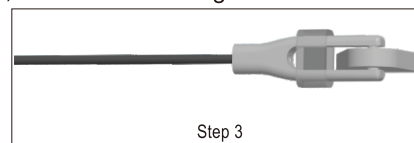
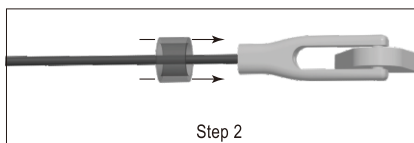
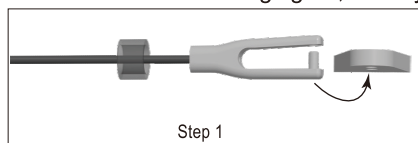
Stick Right



Important additional notes

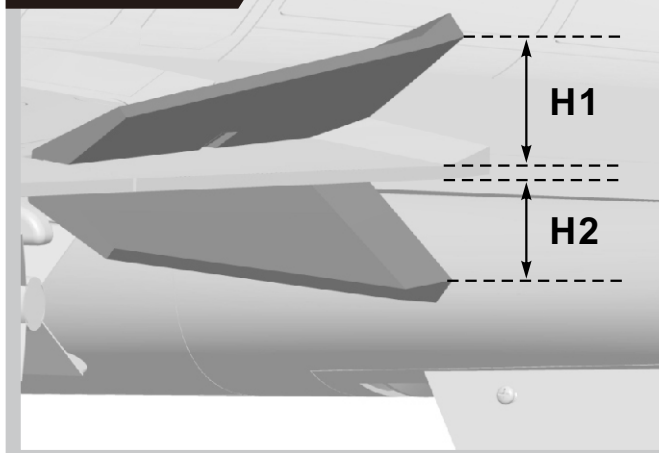
The Y-type clevis used in this product is equipped with a transparent silicone ring for secondary reinforcement, which can effectively prevent the clevis from accidentally loosening.

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

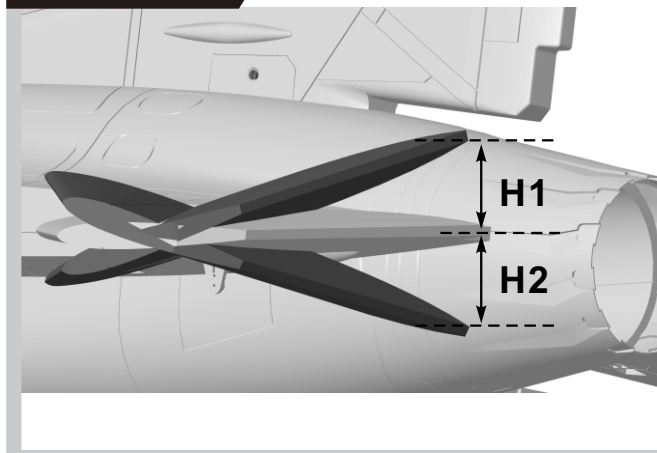


According to our testing experience, use the following parameters to set Aileron/Elevator Rate. Program your preferred Exponential % in your radio transmitter. We recommend using High Rate for the first flight, and switching to Low Rate if you desire a lower sensitivity. On successive flights, adjust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

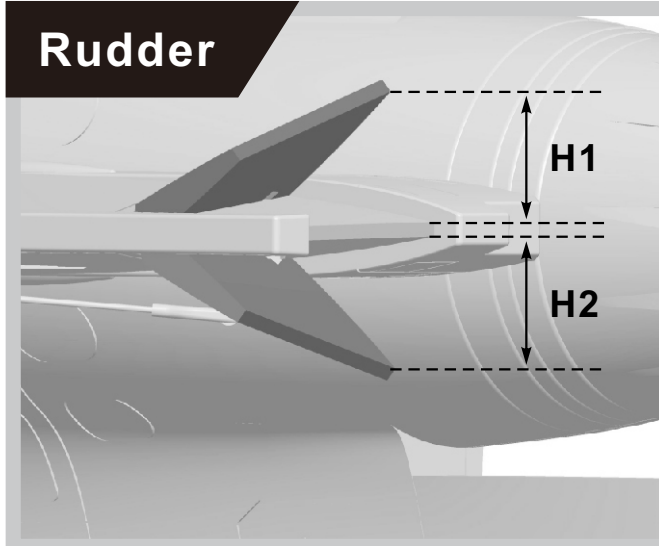
Aileron



Elevator



Rudder



	Aileron	Elevator	Rudder
Low Rate	H1/H2 22mm/22mm D/R Rate: 65%	H1/H2 27mm/27mm D/R Rate: 80%	H1/H2 30mm/30mm D/R Rate: 85%
High Rate	H1/H2 34mm/34mm D/R Rate: 100%	H1/H2 34mm/34mm D/R Rate: 100%	H1/H2 35mm/35mm D/R Rate: 100%



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