1/10 SCALE EPO TWIN-ENGINE WARBIRD

F7F TIGERCAT USER MANUAL

WINGSPAN:1600MM
LENGTH:1400MM
WEIGHT:3200G (W/O BATTERY)

Flightline RC

MADE IN CHINA

Catalog

EN

Introduction

The Grumman F7F Tigercat is a twin piston engine aircraft developed during World War II. Originally envisioned as a carrier-based naval fighter, the Tigercat underwent several iterations and was later optimized for ground-based operations. Although World War II ended before it become fully combat operational, many variants of the Tigercat went on to serve in other conflicts such as the Korean War and in other capacities including as a night fighter, ground attack platform, and a dependable reconnaissance platform. Today, the Tigercat's renown as one of the highest performing piston driven aircraft in aviation history continues in peacetime at air races, air shows, and commemorative events celebrating the men and women who served with these aircraft.

Honoring this famed aircraft, we proudly introduce the FlightLineRC F7F-3 Tigercat, which is the world's first mass production foam electric RC Tigercat. The F7F-3 Tigercat's 1600mm wingspan and 1/10 sport scale matches our popular P-38 Lightning, and the two look excellent in flight formation together! Meticulously designed to incorporate EPO foam, wood, plastic, and carbon reinforcements, our design is easy to assemble and maintain, and delivers the strength and power to satisfy any RC airplane pilot. The main wing halves, horizontal stabilizer, and two engine nacelles each install with four screws. A new pliable ribbon wiring harness simplifies each wing connection to one instead of five, so the wing can be attached in less than one minute. The antenna and gun barrels are also designed to easily slide out to prevent damage during transport.

The generously sized battery bay can accommodate your batteries, receiver, and optional gyro in a cleanly organized layout. The full coverage plastic cabin doors are spring-hinged for simple and reliable operation and plastic radial engine details add realism to your model. To ensure a secure fit, the cockpit of this FlightLineRC F7F-3 Tigercat is held on by magnets and a sliding latch.

As with other FlightLineRC warbirds, the F7F-3 Tigercat arrives expertly painted and ready to customize. Four sets of decals are included in the box. Choose from these decals or recreate your own historic livery as you wish!

The FlightLineRC F7F-3 Tighercat arrives with dependable electronics pre-installed, using seven 9g and two 17g Metal Gear Digital servos to control the steering, rudder, elevator, ailerons and flaps. The aircraft uses our DayBright 3W LEDs for visibility. Static wingtip lights remain on, and the single landing light turns on only when the landing gear is down, for ultimate scale realism. For thrilling and efficient power, the aircraft features a pair of 3748-600KV brushless motors, 3-Blade 12*7 propellers (standard / reverse), and 60A ESCs. The model's top speed is 125KPH/78MPH, and comfortable flight duration ranges between 5 and 7 minutes on either a pair of 4s 3000mAh or 4000mAh LiPo batteries, respectively. For even faster speeds approaching 155KPH/97MPH and extended vertical performance, an optional Sport Power System utilizing 3648-880KV motors and 2-Blade 12*8 propellers is available for separate purchase.

The F7F-3's generous wing area allows a minimum distance take-off length of 15-20 meters, and its 70mm diameter nose wheel and 80mm diameter main wheels and thick steel struts are excellent for operating on grass airfields. An optional compression strut upgrade is available for extreme grass or rougher conditions. Tricycle landing gear reduces the risk of tipping forward after landing, and makes taxing on the ground very stable. Four flaps slow the aircraft for controlled landings at speeds around 25KPH/15.6MPH. We recommend an Down Elevator MIX to correspond with flap deployment.

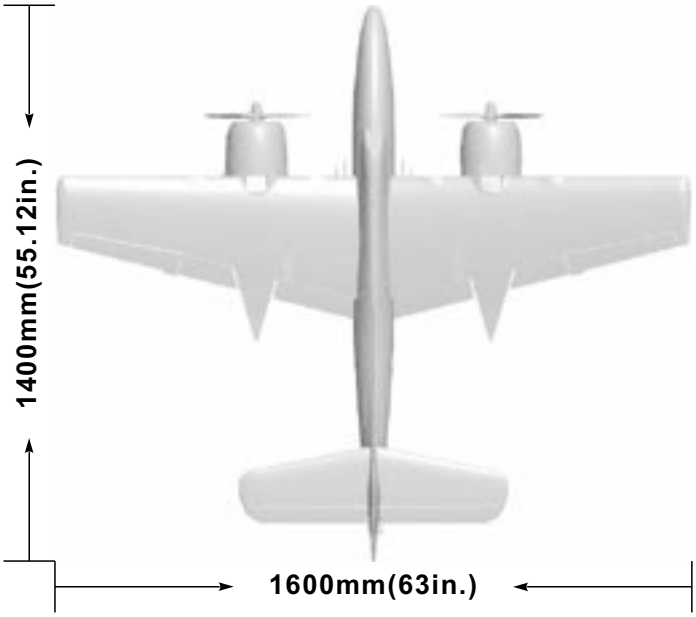
In the air, the FlightLineRC F7F-3 Tigercat exhibits fantastic lateral stability, is very easy to control at a wide speed range, and has a predictable stall with easy recovery. We designed this aircraft to be a wise balance of top speed, vertical performance, flight duration, convenient transport, sport scale realism, and overall scale presentation. This is our seventh FlightLineRC warbird and it continues to innovate and raise the value bar for its owners. Own the first mass production foam electric F7F-3 Tigercat in the world, and set yourself apart at your flying field today!

⚠ **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



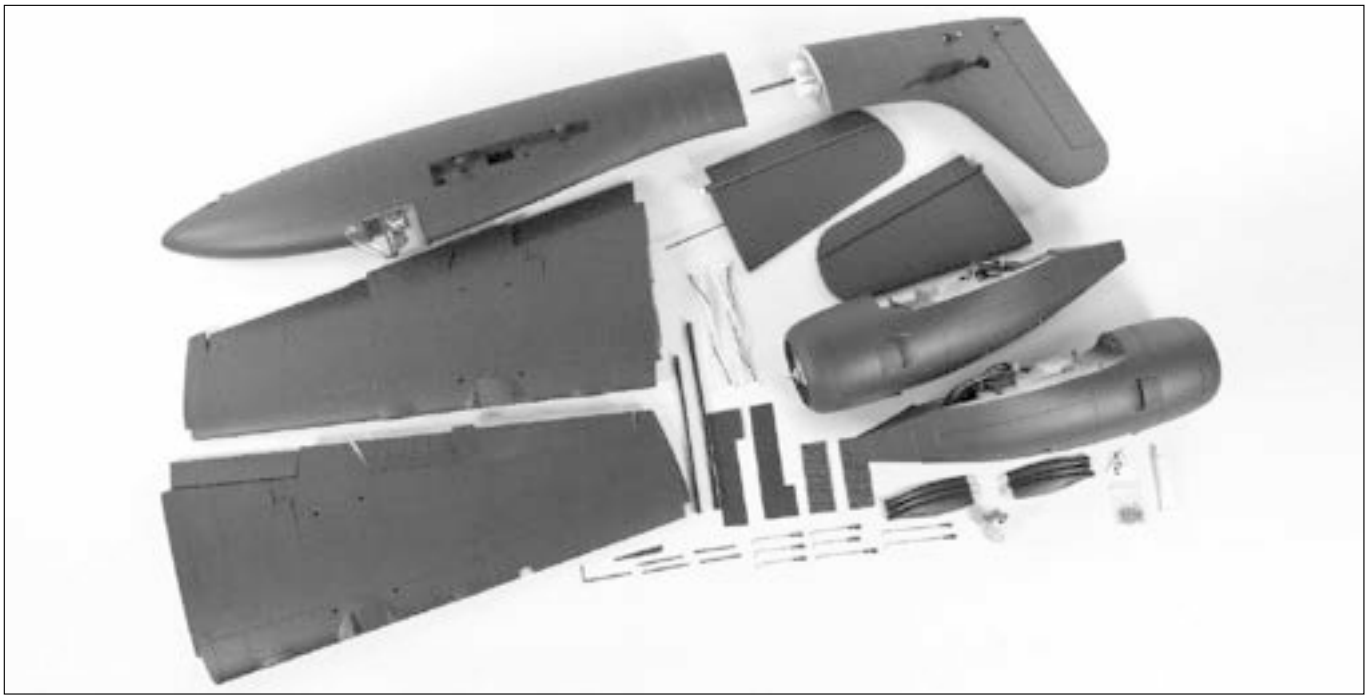
Wing loding：88g/dm²
Motor: 3748-600KV Brushless Motor（2 Pieces)
Propeller : 3-Blade 12x7（2Pieces Standard / Reverse）
ESC : 60A （2 Pieces）
Servo : 9g Digital MG x7, 17g Digital MG x2
Weight : 3200g/112.9 oz.（W/O Battery)

Material: EPO
Aileron：Yes
Elevator：Yes
Rudder：Yes
Flap：Yes
Landing gear：Retract landing gear
Nose / Rear cabin door
Scale LED lights
Scale Pilot figure

⚠ 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.

Hign Speed Spare parts list
(Sold Separately)
2-Blade 12 x 8 propeller (Standard / Reverse)
3648-880KV Brushless Motor

Package list



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

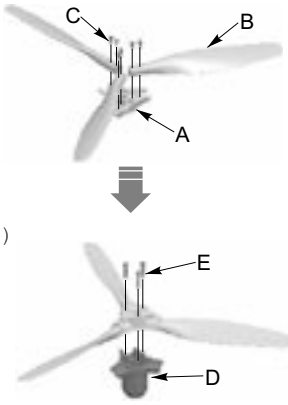
No.	Name	ARF	KIT Plus	Airframe
1	Fuselage	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment
2	Main wing	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment
3	Horizontal tail	√	√	√
4	Vertical tail	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment
5	Engine Pod	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment
6	Propeller / Spinner	√	√	√

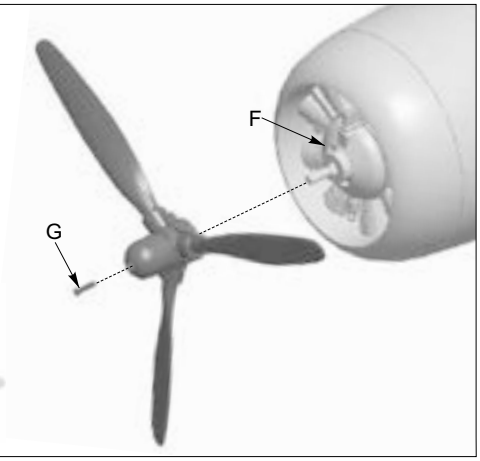
No.	Name	ARF	KIT Plus	Airframe
7	Linkage Set	√	√	√
8	Wire cover	√	√	√
9	Ribbon wire	√	√	√
10	Guns & antenna	√	√	√
11	Carbon tube & Glue	√	√	√
12	Manual & Decals	√	√	√

PNP Install instructions

Install the Propeller

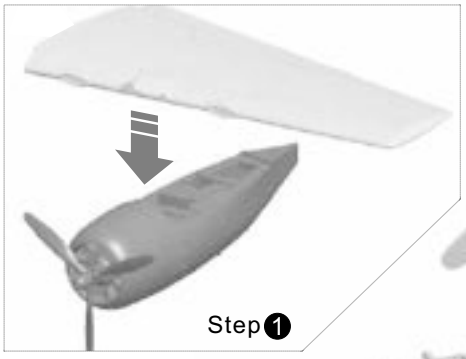
At first, as the right photo shown, installed the standard/reverse 3-blade propellers, and fixed them on the motor.

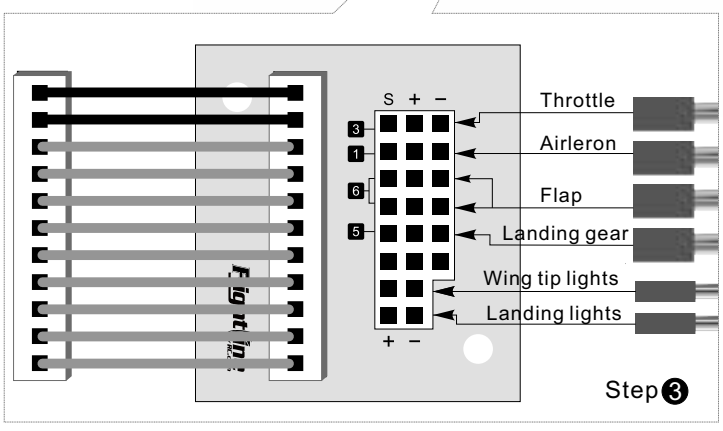




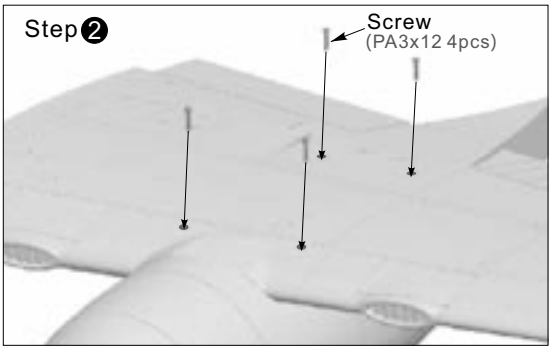
A-Propeller fixing bolt
B-Scale propeller (12x7, 3-blade Standard prop./Reverse prop.)
C-Screw (PA2.3x14mm 6pcs)
D-Spinner
E-Screw (PA2.3x14mm 3pcs)
F-3748-600kv Brushless motor
G-Screw (PM3x10mm)

Install the Engine pod





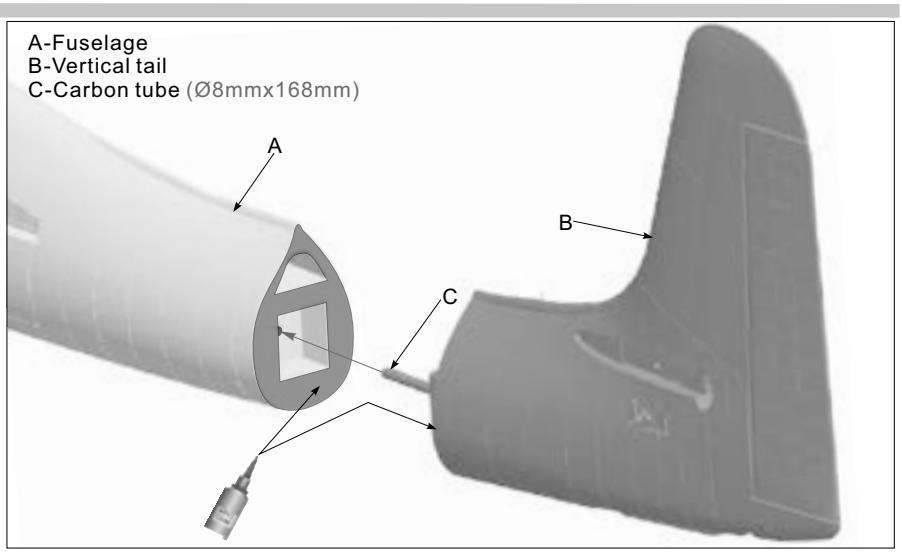
1.Use the screw to install the engine pod on the main wing
2.Put all of the wires in the wire trough
3.As the picture show , connect all of the servo cables and LED light wires to one side of the main wing control board.
Then, connect the ribbon wire to the other side.
4.Glue the plastic wire cover on the wire trough.



PNP Install instructions

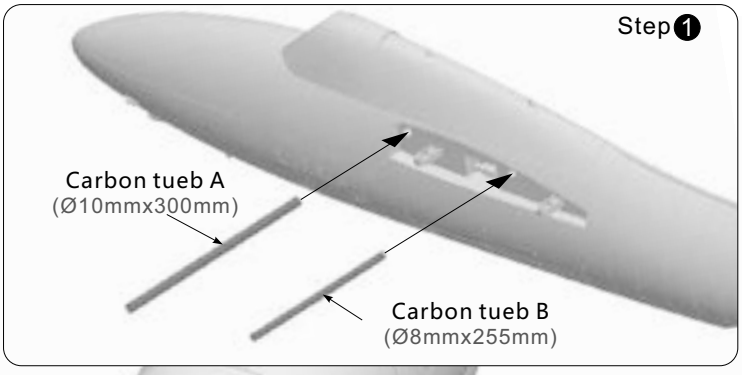
As the right photo show, Use glue to attach fuselage and vertical tail.

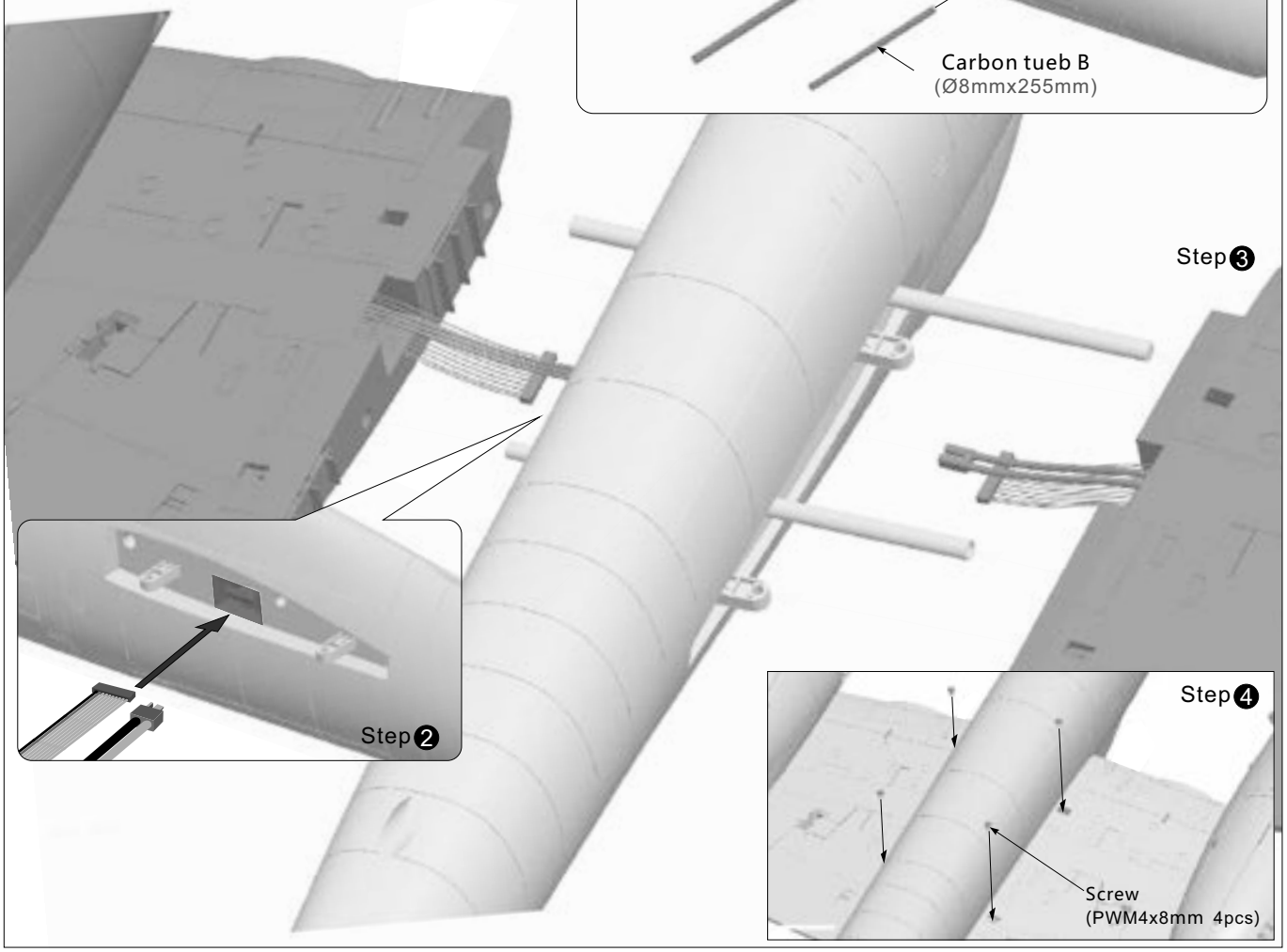
Note: There is a EPO glue on package, Please use it to glue.Glue should be spread evenly and wait for 60 seconds.Then install on, its best glue condition.



Install Main wing

1.As the picture show, Install the main wing to the fuselage.
2.Use 4 screws fixing the main wing.



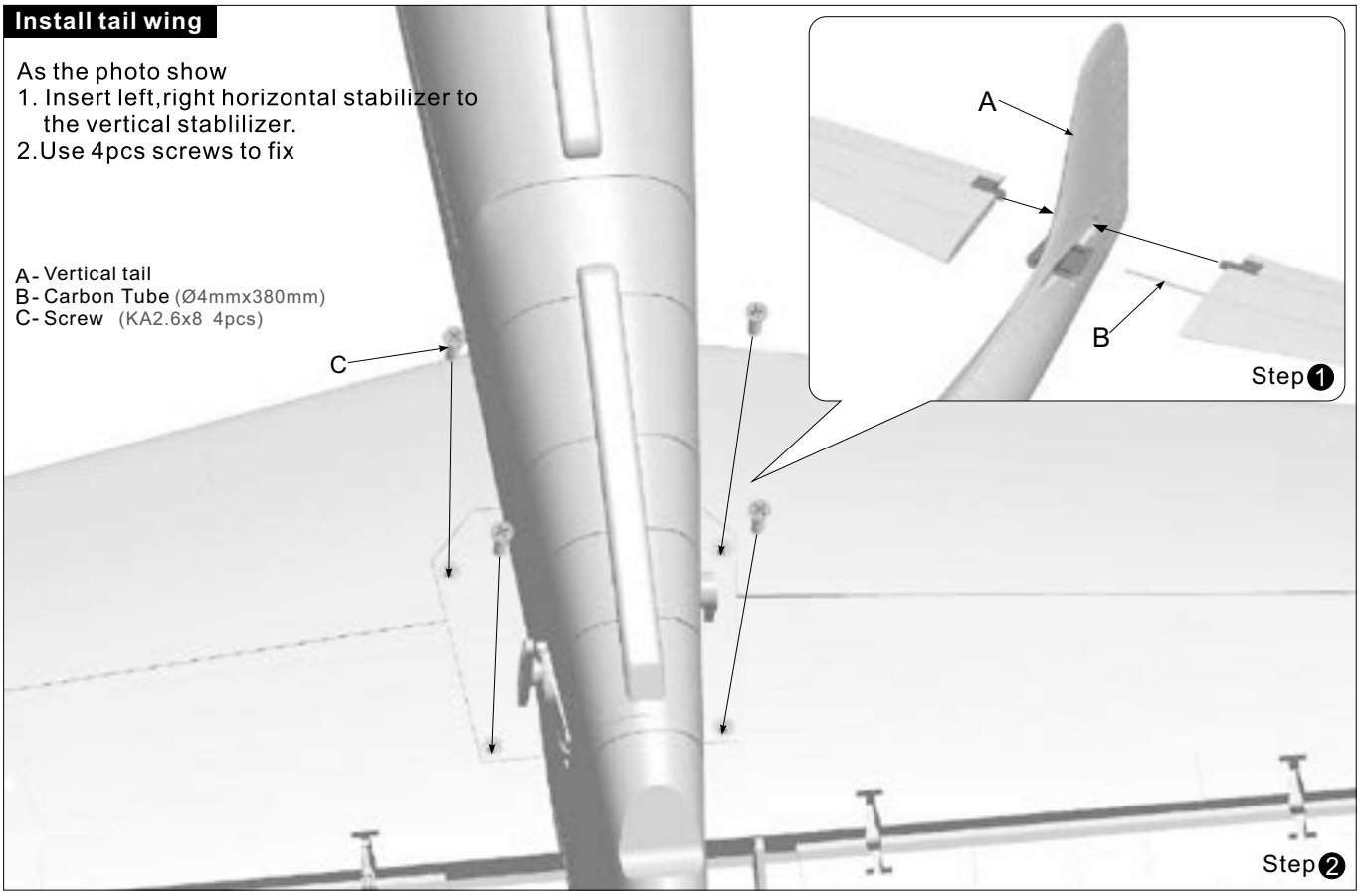


PNP Install instructions

Install tail wing

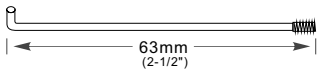
As the photo show
1. Insert left,right horizontal stabilizer to the vertical stablilizer.
2.Use 4pcs screws to fix

A- Vertical tail
B- Carbon Tube (Ø4mmx380mm)
C- Screw (KA2.6x8 4pcs)



Pushrod instructions

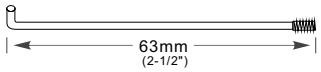
Flap pushrod size (Out Side)



Pushrod diameter Ø1. 5mm

Flap pushrod mounting hole (Out Side)

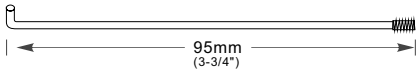
Flap pushrod size (In Side)



Pushrod diameter Ø1. 5mm

Flap pushrod mounting hole (In Side)

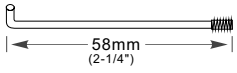
Aileron pushrod size



Pushrod diameter Ø1. 5mm

Aileron pushrod mounting hole

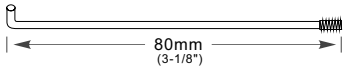
Elevator pushrod size



Pushrod diameter Ø1. 5mm

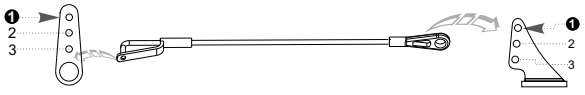
Elevator pushrod mounting hole

Rudder pushrod size



Pushrod diameter Ø1. 5mm

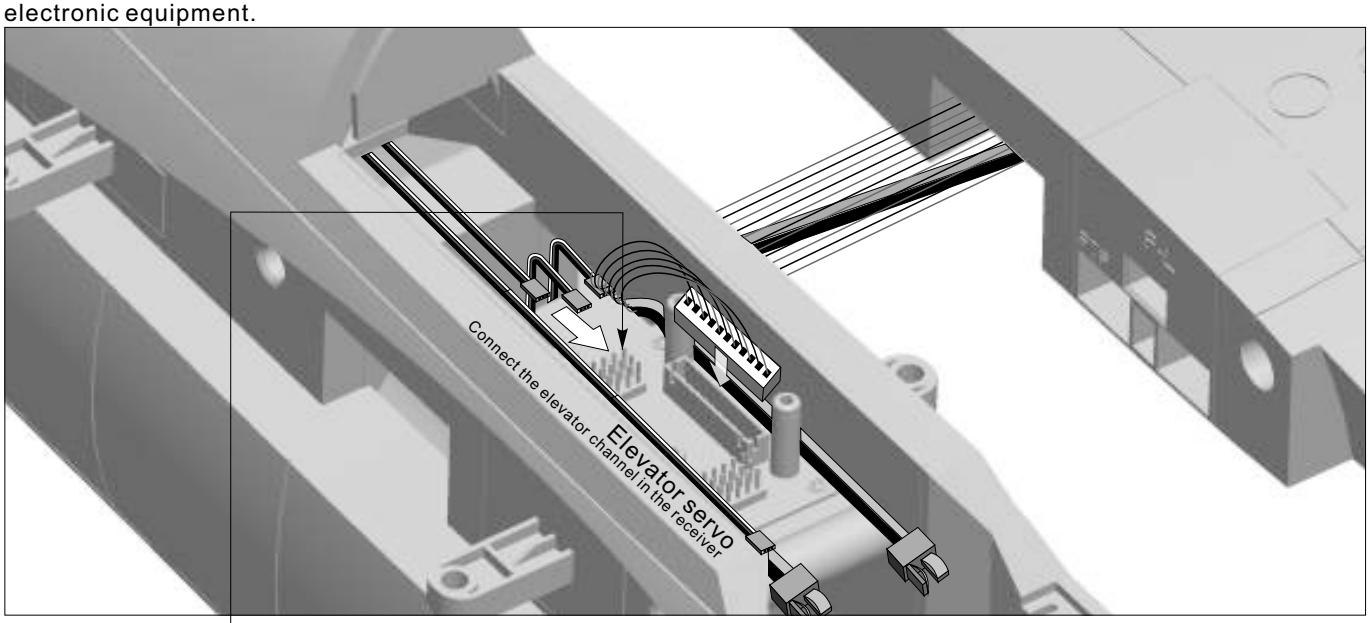
Rudder pushrod mounting hole

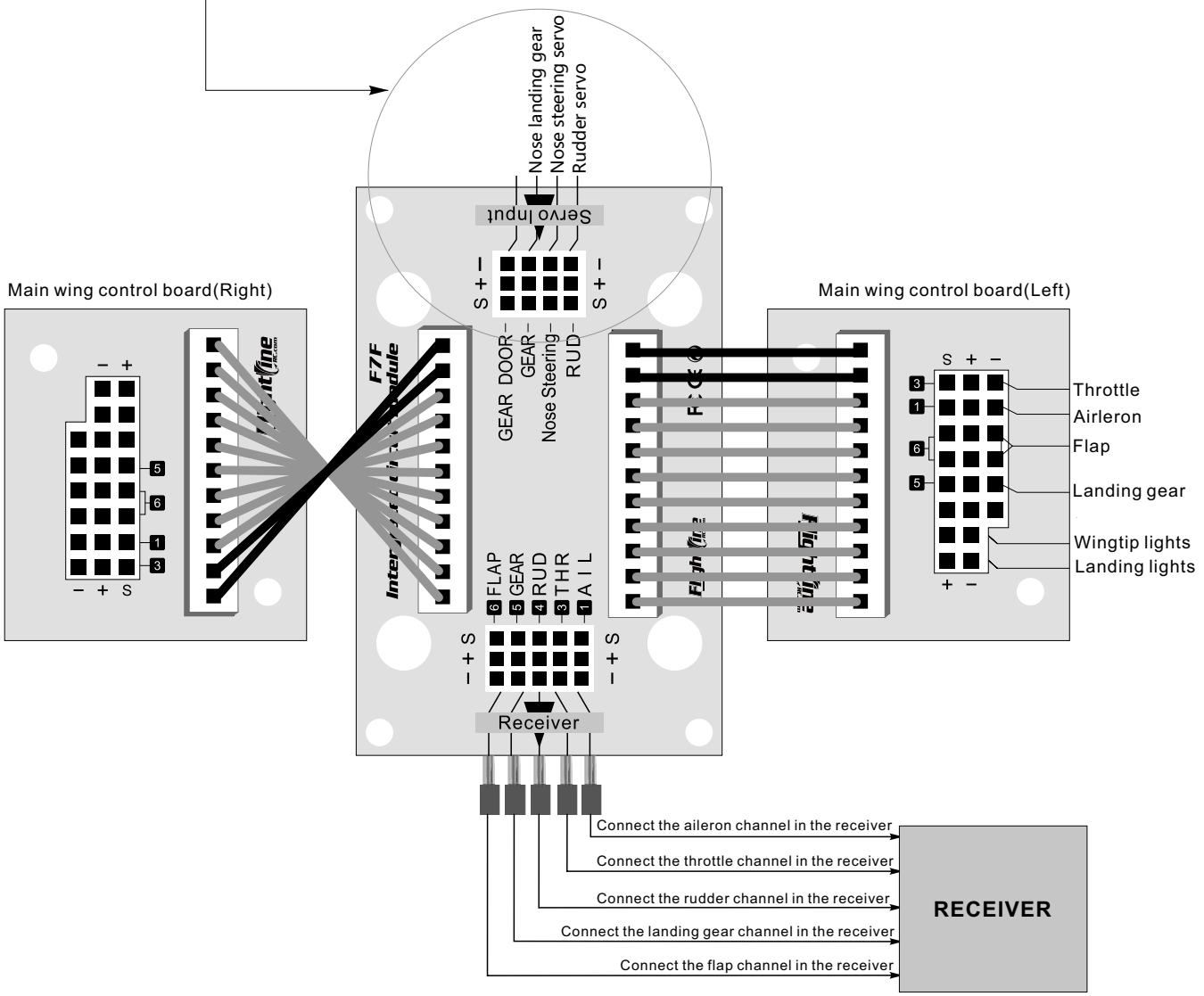


PNP Install instructions

Connecting Wire

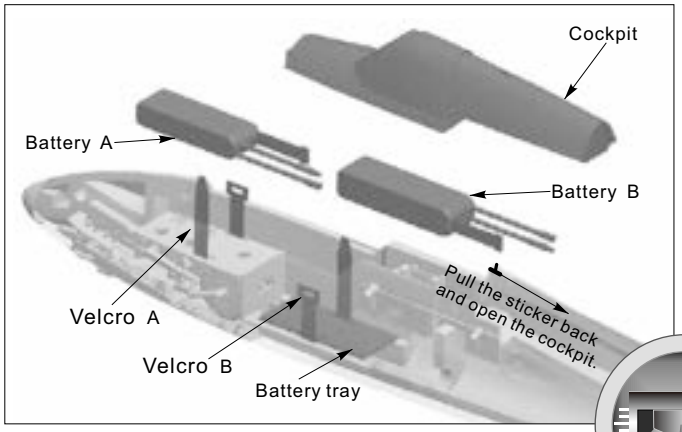
F7F model plane used the ribbon wire, in order to use more convenient. Please refer to the following photo, connect the electronic equipment.

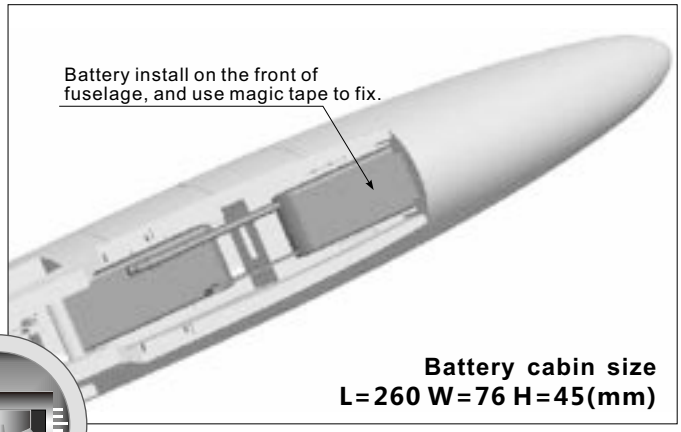




PNP Install instructions

Battery size





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

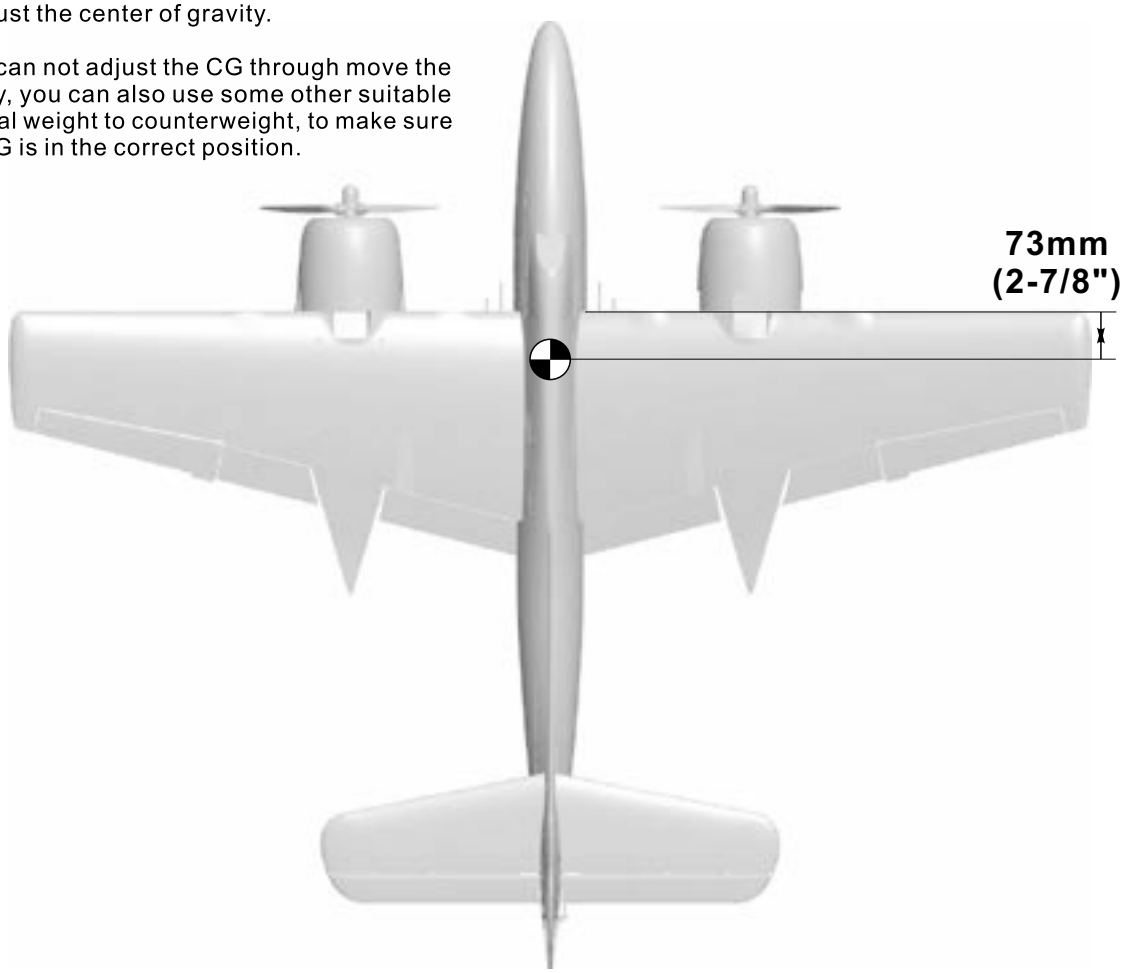
The battery capacity and discharge rate we advise is in the following:
4S14.8V **3000**mAh ~**4S 14.8V 4000mAh (2pcs)**
Discharge rate of C ≥ 30C

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.



PNP Install instructions

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.

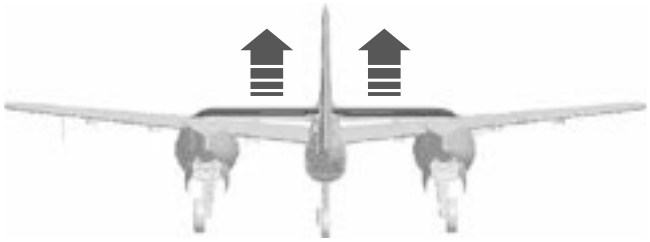
Aileron

Stick Left

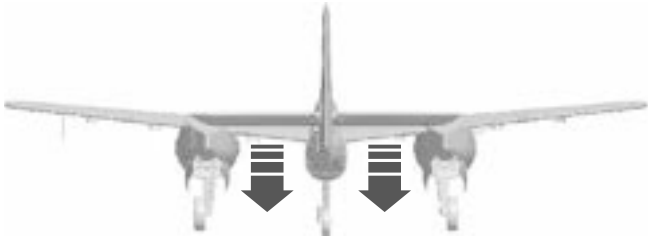
Stick Right

Elevator

Up Elevator

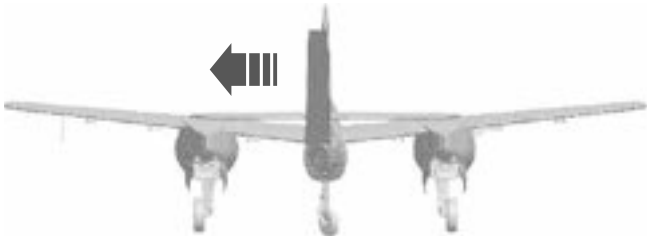


Down Elevator

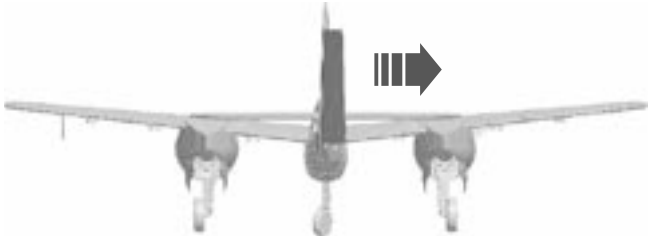


Rudder

Stick Left

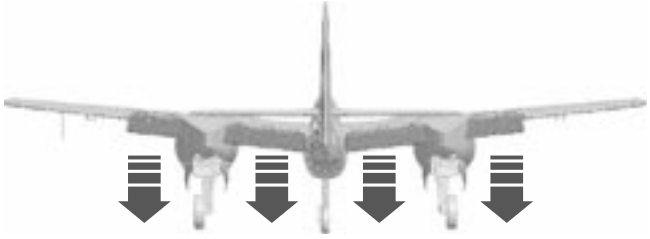


Stick Right



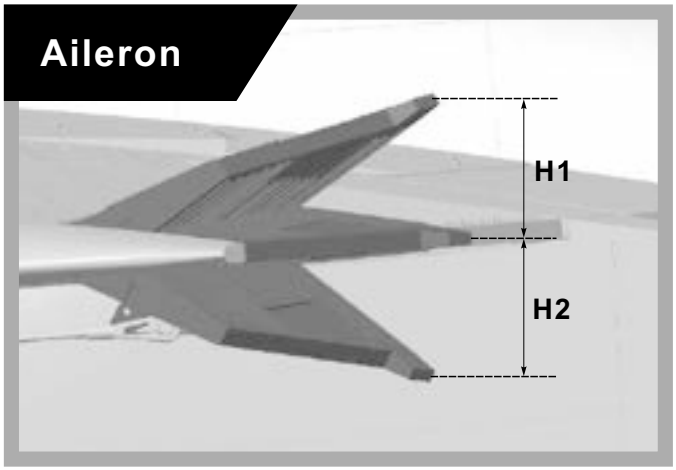
Optional Flaps

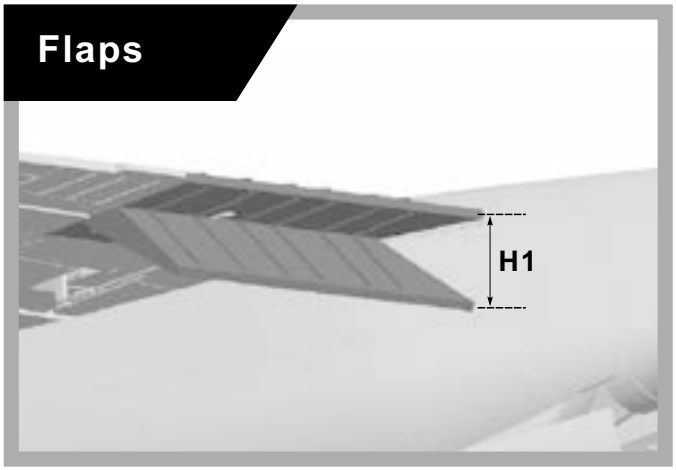
Flaps down

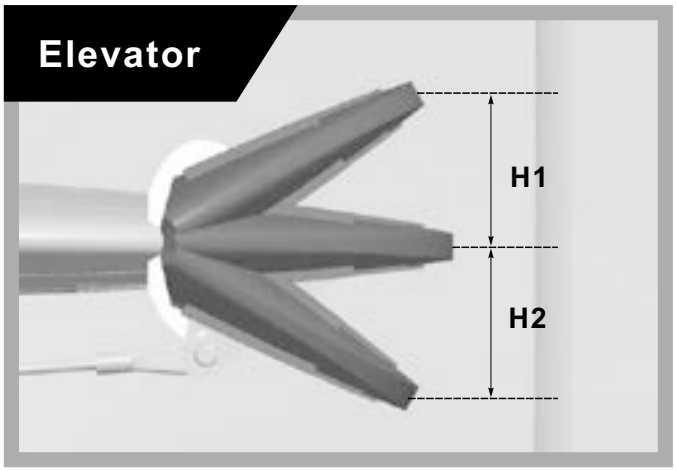


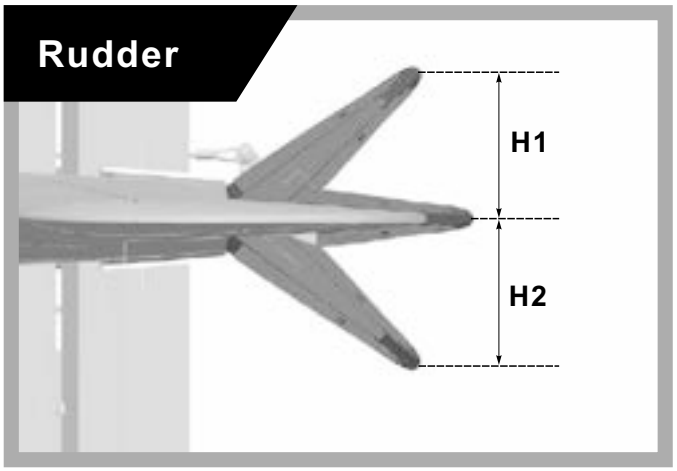
Dual Rates and Flight setting

According to our testing experience, according to the following parameters to set the aileron/elevator rate, it will be useful for flight. In low rate, its good for flight control and its suitable for the initial flight or less skilled players. According to your own circumstance, choose one rate in flight.







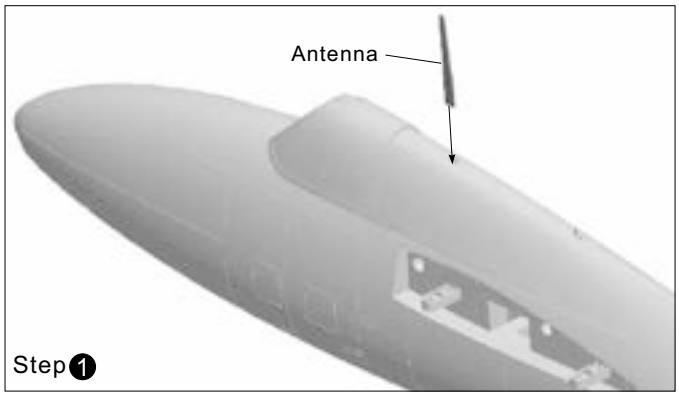


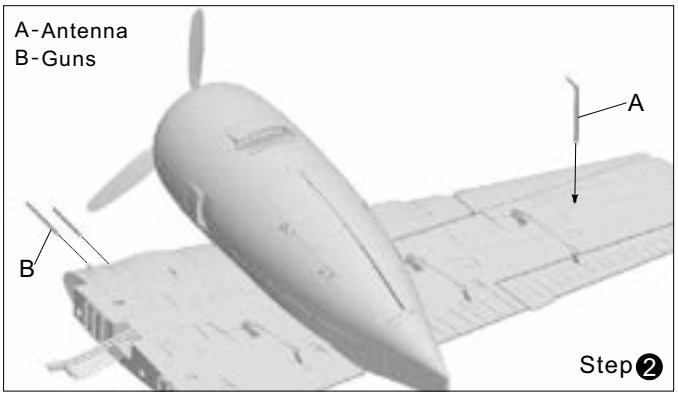
	Aileron	Elevator	Rudder	Flaps
Low Rate	H1/H2 26mm/26mm D/R Rate：80%	H1/H2 20mm/20mm D/R Rate：100%	H1/H2 27mm/27mm D/R Rate：85%	H1 29mm
High Rate	H1/H2 31mm/31mm D/R Rate：100%	H1/H2 20mm/20mm D/R Rate：100%	H1/H2 34mm/34mm D/R Rate：100%	H1 44mm

⚠ **Flight attention:** If down the flap, the nose will be up, it need the down elevator to match. we recommend an Down Elevator Mix to correspond: use 14% (3.5mm) to correspond if small flap, use 24%（5.5mm）to correspind if big flap.

PNP Install instructions

Install guns and antenna

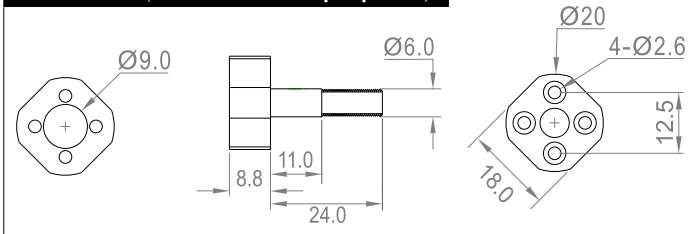




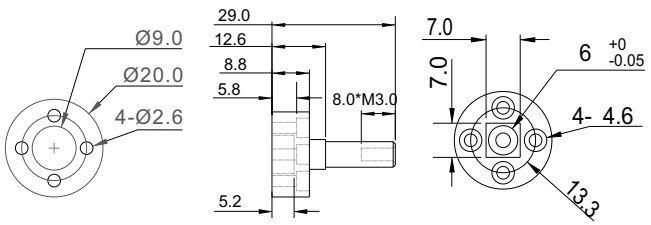
Electronic equipment Introduction and Installation

Parameter of motor

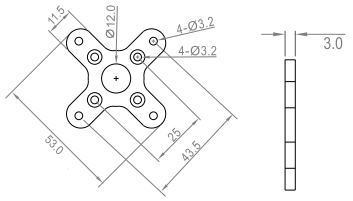
Motor shaft (use for 2-Blade propeller)



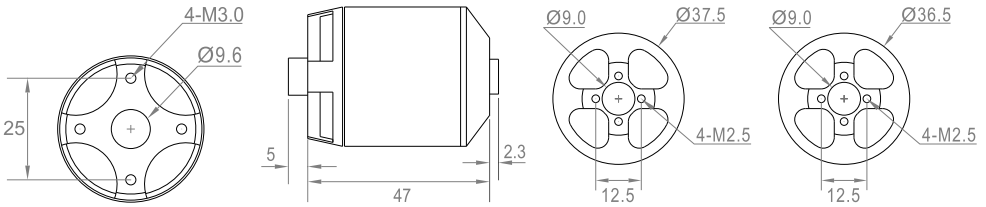
Motor shaft (use for 3-Blade propeller) Units :mm



X-fixed base



Motor size Units :mm

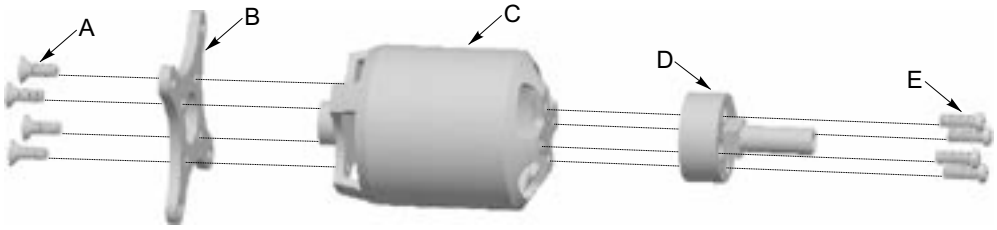


3748-600KV / 3648-880KV **3748-600KV** **3648-880KV**

Item No.	KV Value	Volate (V)	Current (A)	Pull (g)	Motor Resistance	Weight (g)	No Load Current	Propeller	ESC
MO137482	600RPM/V	14.8	40	2500	0.02 Ω	170	2.3A/10V	4-Blade12×7	⩾60A
MO136484	880RPM/V	14.8	53	2600	0.02 Ω	165	2.3A/10V	2-Blade12×8	⩾60A

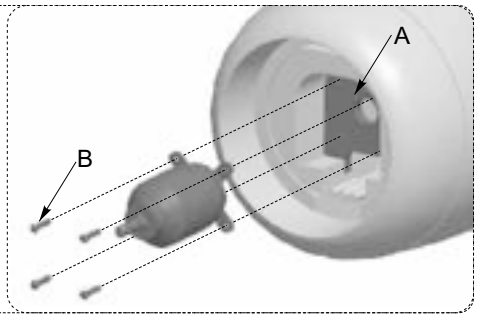
Install the Motor

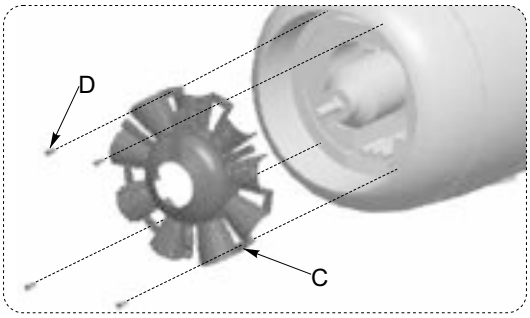
A-Screw (KM3×5mm 4pcs)
B-Motor X-fixed base
C-3748-600KV out-runner motor
D-Propeller folder
E-Screw (HM2.5×10mm 4pcs)



Electronic equipment Introduction and Installation

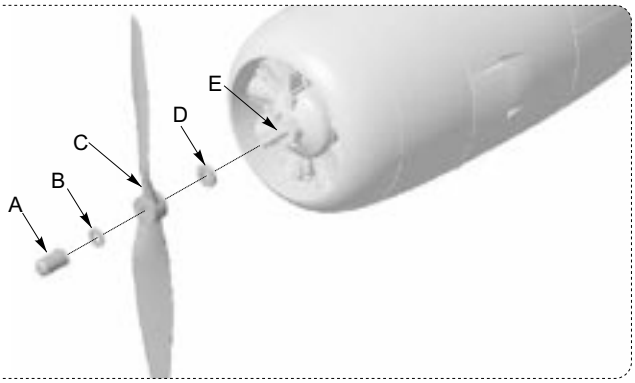
A-Motor fixed mount
B-Screw (PA3×12mm 4pcs)
C-Engine cowl
D-Screw (PWA2.3x8mm 4pcs)



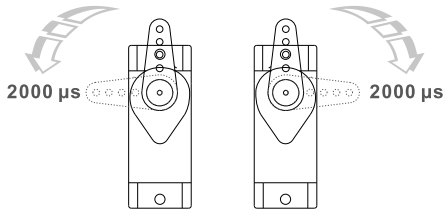


Install 2-blade sport propeller

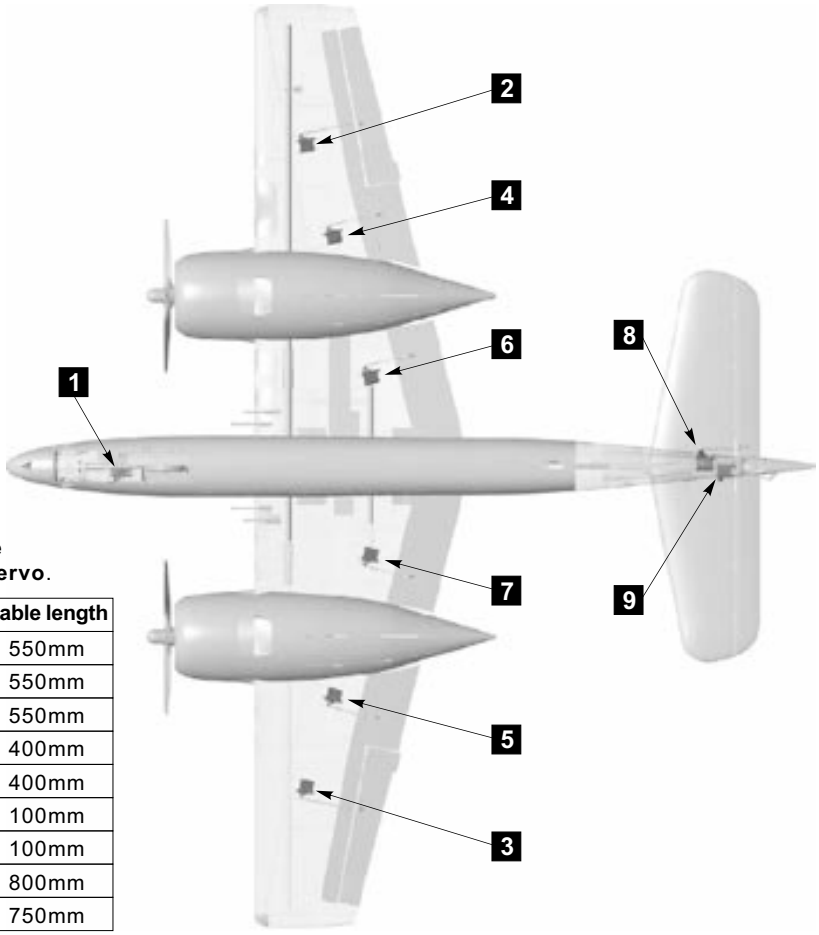
A - Propeller fixing bolt
B - Washer
C - 2-Blade propeller (12×8 Standard prop./Reverse prop.)
D - Washer
E - 3648-880KV Brushless motor



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.**

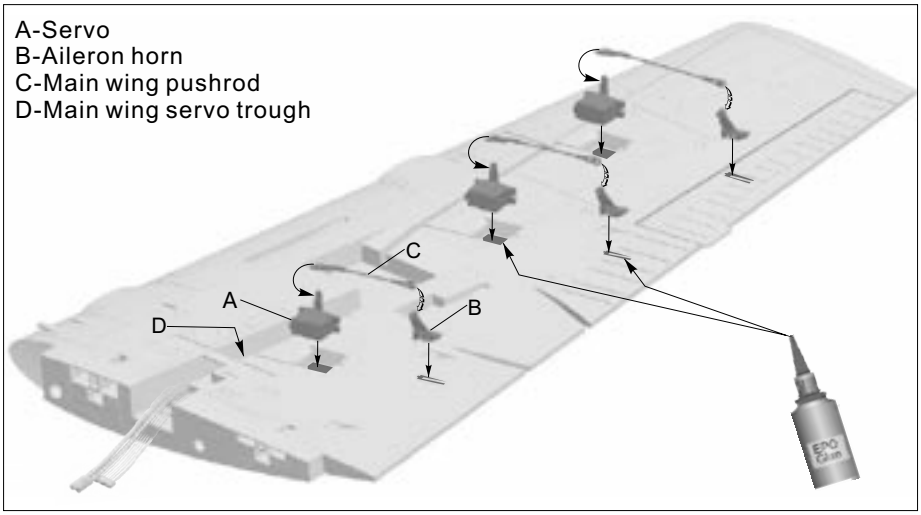


If you need to purchase other brand servo, please refer to the following list to choose correct size servo.

Position	Model	No.	Pos./Rev.	Cable length
Nose gear steering servo	17g Digital MG	1	Positive	550mm
Aileron	9g Digital MG	2	Positive	550mm
Aileron	9g Digital MG	3	Positive	550mm
Flap	9g Digital MG	4	**Reverse**	400mm
Flap	9g Digital MG	5	Positive	400mm
Flap	9g Digital MG	6	**Reverse**	100mm
Flap	9g Digital MG	7	Positive	100mm
Elevator	17g Digital MG	8	Positive	800mm
Rudder	9g Digital MG	9	**Reverse**	750mm

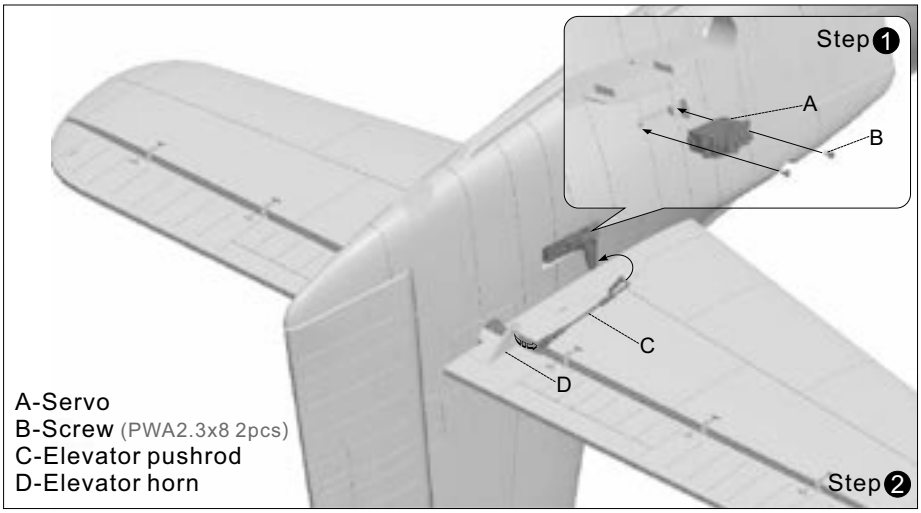
Install main wing servos

1.Use servo tester or radio to center the servo.
2.Use glue to install the servo and aileron horn on the main wing.
3.Buckle the servo cable to the through, after installed all the servos, stick on the decal.
4.One side pushrod insert to the servo arm,adjust its length. And insert the clevis to the aileron horn.
5.Repeat the above four steps, install the other side main wing servo and flap servo.



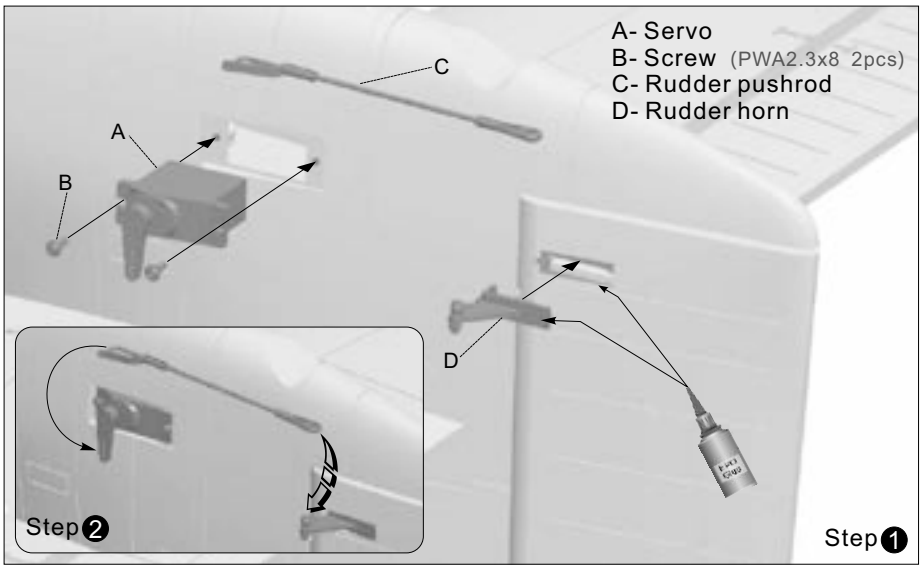
Install elevator servos

1.Use servo tester or radio to center the servo arm.
2.Use 2 screws to fix servo on the elevator servo mount .
3.One side pushrod insert to the servo arm, adjust its length. And insert the clevis to the aileron horn.
4.Repeat the above steps to install on the other side servo.



Install rudder servos

1.Use servo tester or radio to center the servo arm.
2.Use 2 screws to fix the servo and servo arm on the rudder.(Refer to the right photo)
3.Press the servo cable on the servo cable trough.
4.After glue solidify, connect the pushrod to servo and servo arm.

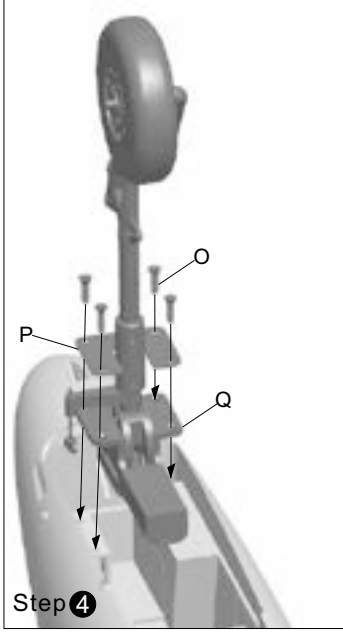


Landing Gear Assemble

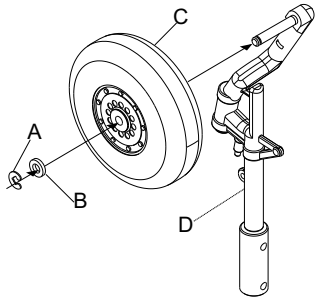
Please assemble、 disassemble the nose landing gear according to the following photo.

Accessories name and specification

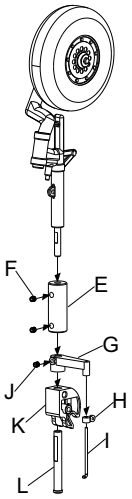
A-C-Buckle (M3)
B-Washer (Ø8xØ4.2x1mm)
C-Nose wheel (Ø70x20mm)
D-Nose gear strut
E-Metal pillar
F-JIMI Screw (M4x4mm)
G-L-shape rotating arm
H-O-shape ring
I -Pushrod
J -JIMI Screw (M3x3mm)
K-Rotating arm
L -Nose metal wire
M-Screw (PA1.7x10mm 4pcs)
N-Screw (PA1.4x12mm 2pcs)
O-Screw (PWA3x12mm 4pcs)
P-Retract Reinforcement Plate
Q-Nose landing gear
R-Servo
S-Screw (PWA2.3x8mm 2pcs)
T-Nose steering pushrod
U-Nose landing gear door type A
V-Nose landing gear door mounts
W-Screw (PA3x8mm 4pcs)
Z-Spring



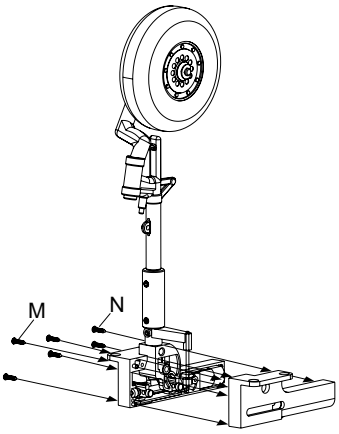
Step❹



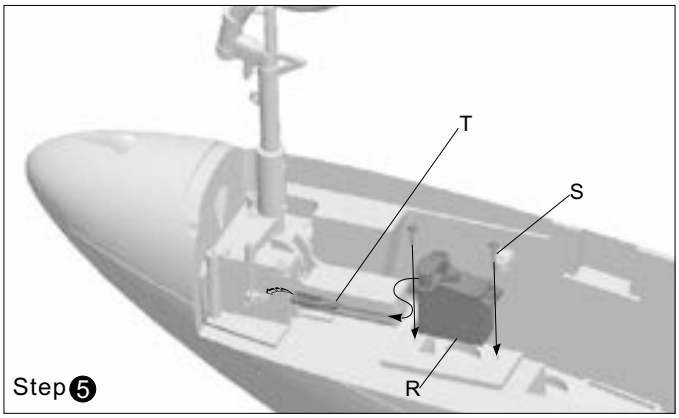
Step❶



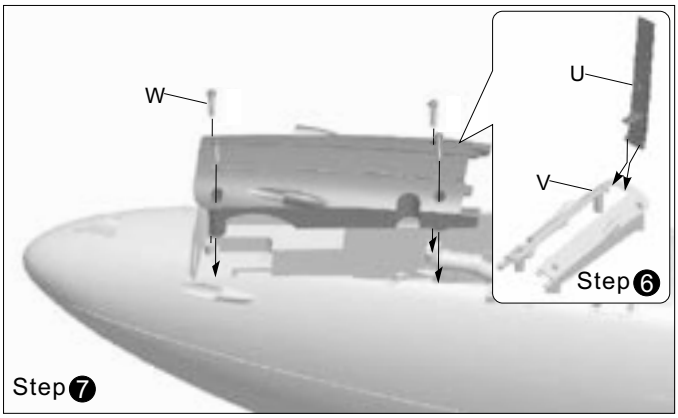
Step❷



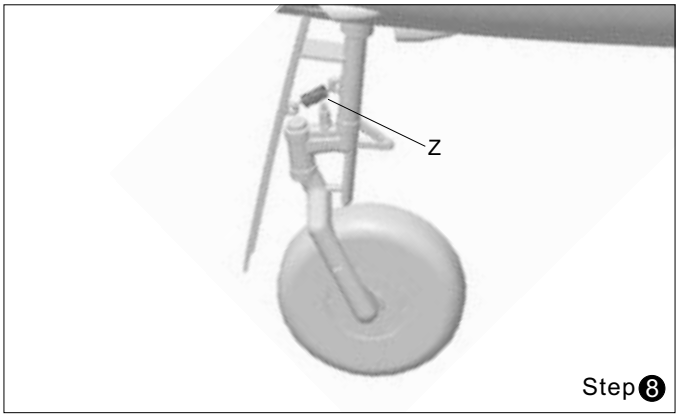
Step❸



Step❺

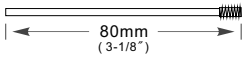


Step❻
Step❼



Step❽

Nose steering pushrod size



Pushrod diameter Ø1. 5mm

Servo pushrod installing hole

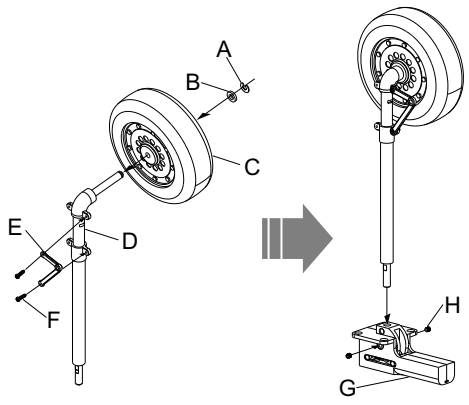
⚠Note：When installing,please check the flat position of spareparts,when screw to fix,the flat position must face to the screw hole, just like this, it can fix successfully, the spareparts don't rotate and fall off.

Ming landing gear

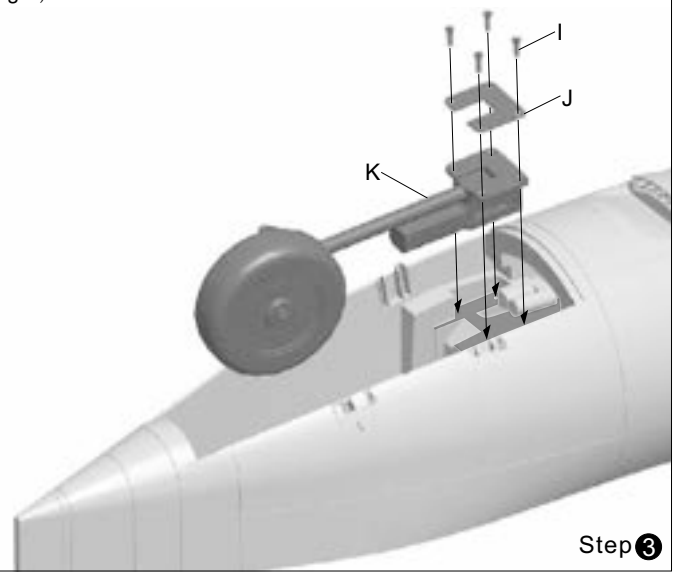
Please assemble、 disassemble the rear landing gear according to the following photo.

Accessories name and specification

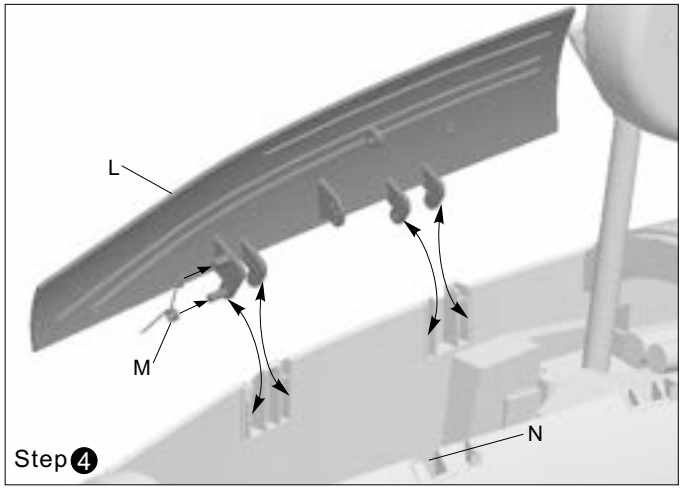
A - C-Buckle (M4)
B - Washer (Ø10xØ5.2x1mm)
C - Main wheel (Ø85x26mm)
D - Main gear strut
E - Main gear plastic parts
F - Screw (PWA1.7x5mm)
G - Electronic retract
H - JIMI Screw (M4x3mm)
I - Screw (PWA3x12mm)
J - Retract reinforcement plate
K - Main landing gear
L - Main landing gear door
M - Torsional spring A (Left)
N - Torsional spring B (Right)
O - Screw (PA2.0x8mm)
P - Spring



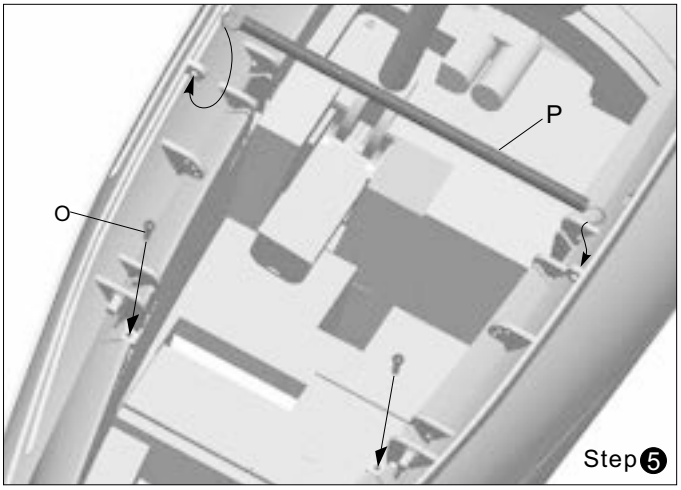
Step 1 Step 2



Step 3



Step 4



Step 5

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