1/10 SCALE EPO TWIN-ENGINE WARBIRD

F7F TIGERCAT USER MANUAL

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

EN	1~14
中	15~28

Flightline RC

MADE IN CHINA

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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.

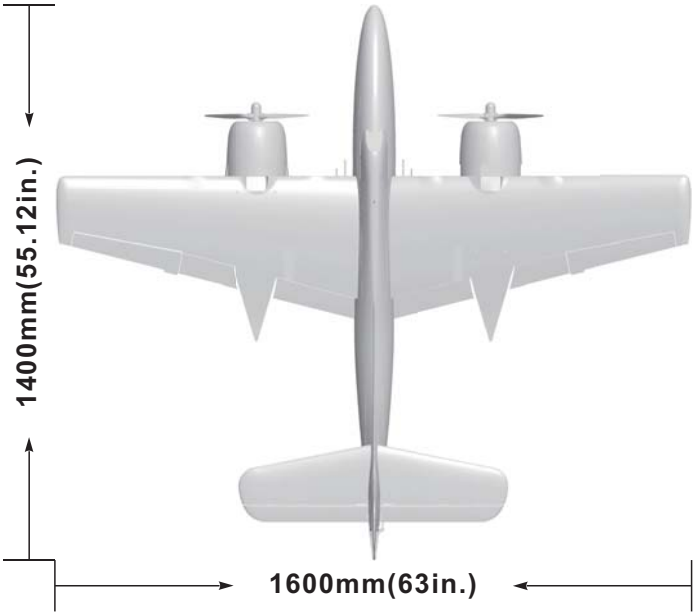
In the air, the FlightLineRC F7F-3 Tigercat exhibits fantastic lateral stability, is very easy to control at a wide speed range, and has a predictable stall with easy recovery. We designed this aircraft to be a wise balance of top speed, vertical performance, flight duration, convenient transport, sport 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! Operators should have some basic experience. Beginners should operate only under the guidance of a professional instructor.
2. Before beginning assembly, please read through the instructions and carefully follow them through the build.
3. Freewing and it's vendors will not be held responsible for any losses due to improper assembly and operation.
4. Model airplane operators must be at least 14 year of age.
5. This airplane is made of EPO foam material, covered with surface spray paint. Don't use chemicals to clean as it may cause damage.
6. You should avoid flying in areas such as public places, areas with high voltage power lines, nearby highways or airports or an other areas where laws and regulations clearly prohibit flight.
7. Do not fly in bad weather conditions, including thunderstorms, snow, etc...
8. Lipo batteries should be properly stored in a fire safe container and be kept at a minimum of 2M distance away from flammable or explosive materials.
9. Damaged or scrap batteries must be properly discharged before disposal or recycling to avoid spontaneous combustion and fire.
10. At the Flying Field, properly dispose of any waste you have created, don't leave or burn your waste.. Ensure that your throttle is in the low position and that your radio is turned on before connecting the Lipo battery.
11. Do no try to catch the airplane when flying low or landing. Wait for the airplane and its propeller to come to a complete stop

Product basic information



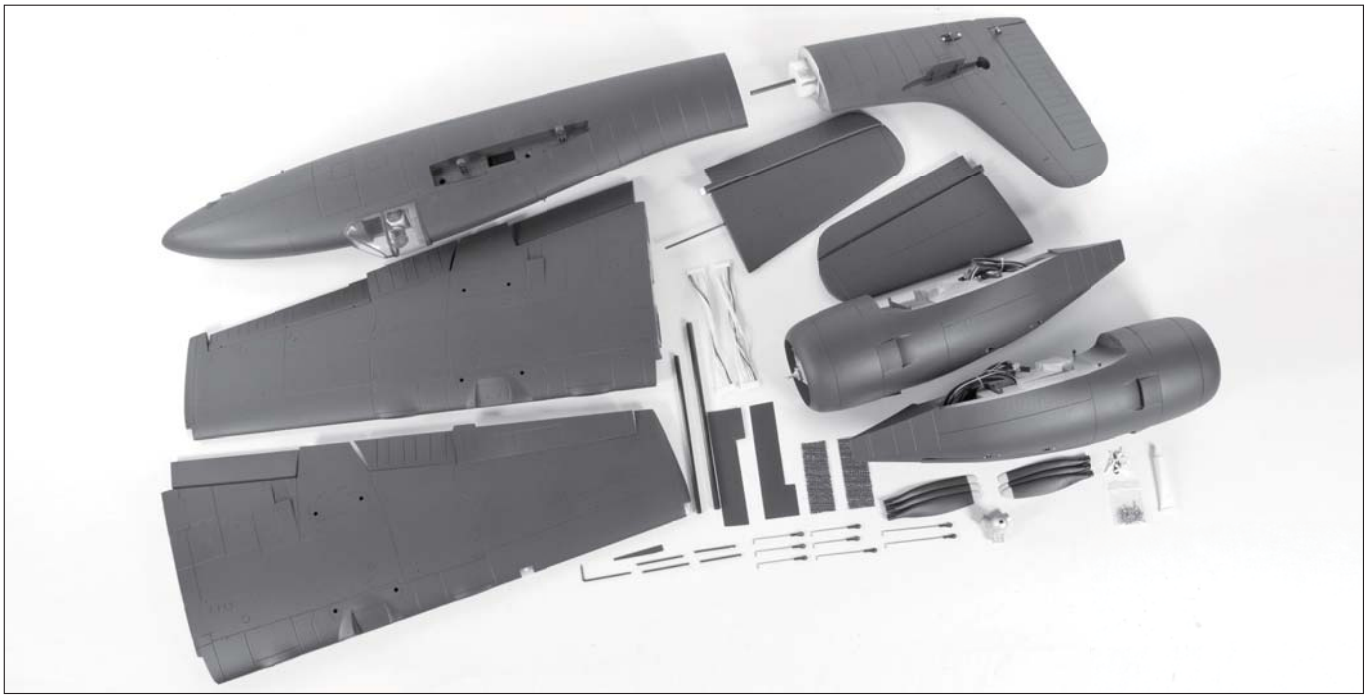
Wing loading：88g/dm²
Motor: 3748-600KV Brushless Motor（2 Pieces)
Propeller : 3-Blade 12x7（2Pieces Standard / Reverse）
ESC : 60A （2 Pieces）
Servo : 9g Digital MG x7, 17g Digital MG x2
Weight : 3200g/112.9 oz. (W/O Battery)

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.

High 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.

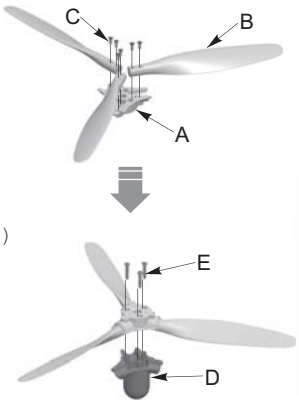
No.	Name	ARF	KIT Plus	Airframe
1	Fuselage	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment
2	Main wing	Pre-installed all electronic parts	Pre-installed servo	No electronic equipment
3	Horizontal tail	√	√	√
4	Vertical tail	Pre-installed all electronic parts	Pre-installed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

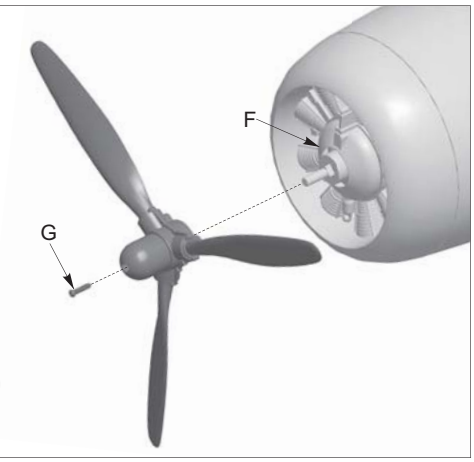
No.	Name	ARF	KIT Plus	Airframe
7	Linkage Set	√	√	√
8	Wire cover	√	√	√
9	Ribbon wire	√	√	√
10	Guns & antenna	√	√	√
11	Carbon tube & Glue	√	√	√
12	Manual & Decals	√	√	√

Install the Propeller

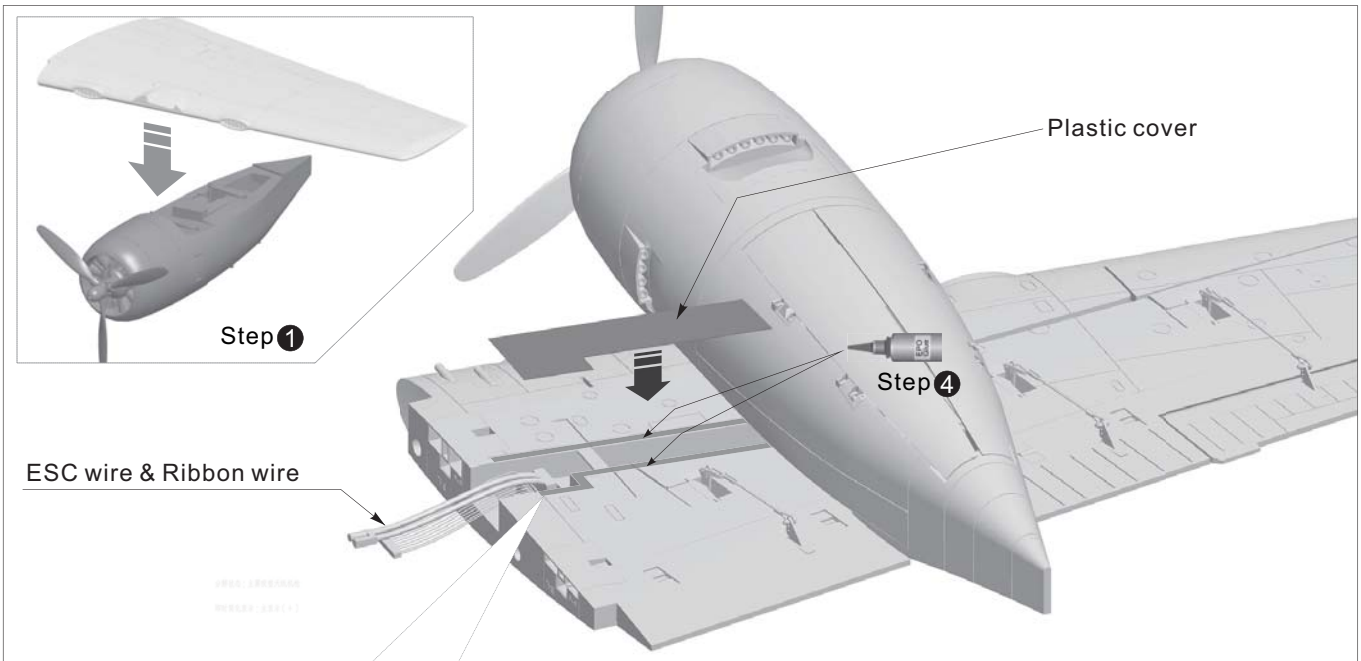
Assemble the standard/reverse 3 blade propellers as shown in the photo on the right and then install them on the motor shafts.

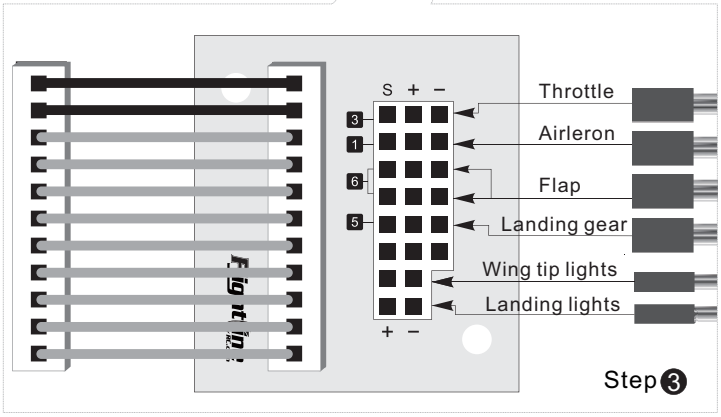
A-Propeller fixing bolt
B-Scale propeller (12x7, 3-blade Standard prop./Reverse prop.)
C-Screw (PA2.3x14mm 6pcs)
D-Spinner
E-Screw (PA2.3x14mm 3pcs)
F-3748-600kv Brushless motor
G-Screw (PM3x10mm)



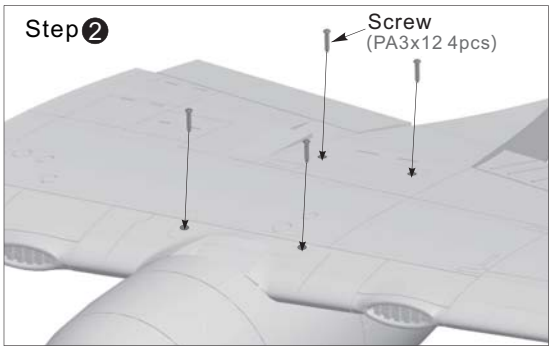


Install the Engine pod



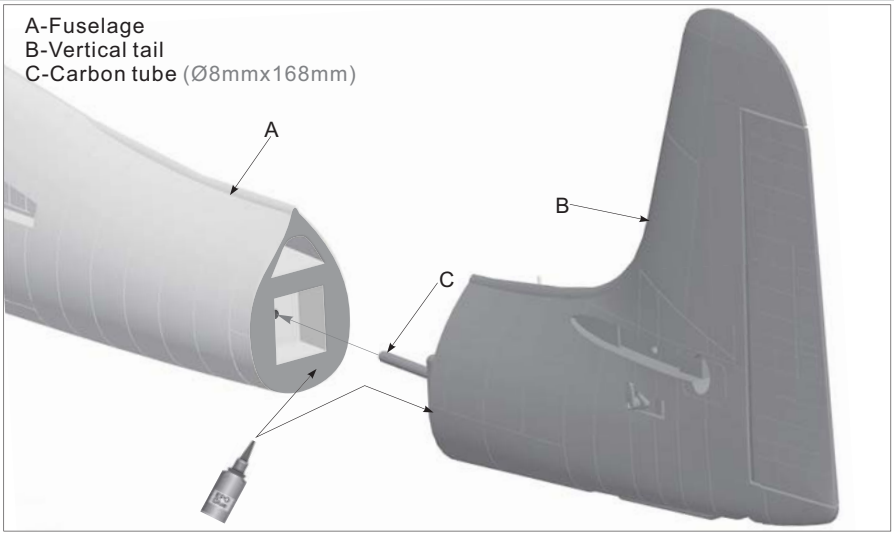


1.Use the screw to install the engine pod on the main wing 2.Put all of the wires in the wire trough
3.As the picture shows, connect all of the servo cables and LED light wires to one side of the main wing control board.
Then, connect the ribbon wire to the other side.
4.Glue the plastic wire cover over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



PNP Install instructions

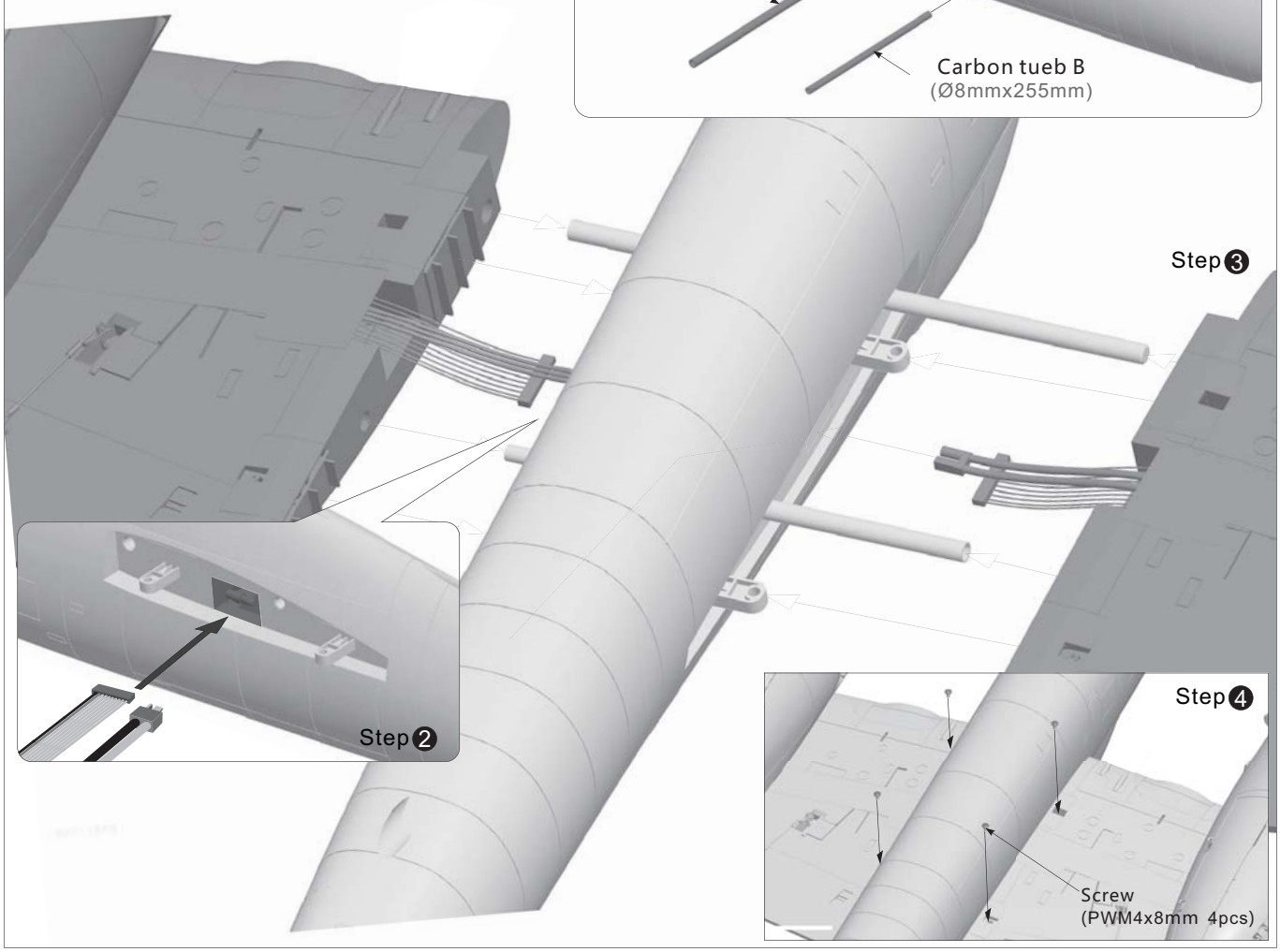
As shown in the right photo, use glue to attach the fuselage and vertical tail.



Note Glue is supplied with the kit, apply it to one side and wait for 60 seconds before joining the two pieces. Pull the pieces apart, allowing the glue to get stringy, then do the final assembly, this will give you the best results with this glue.

Install Main wing

1. As shown in the picture, install the carbon rods through the fuselage, then slide the wings over the rods. Use 4 screws to secure the wings to the fuselage



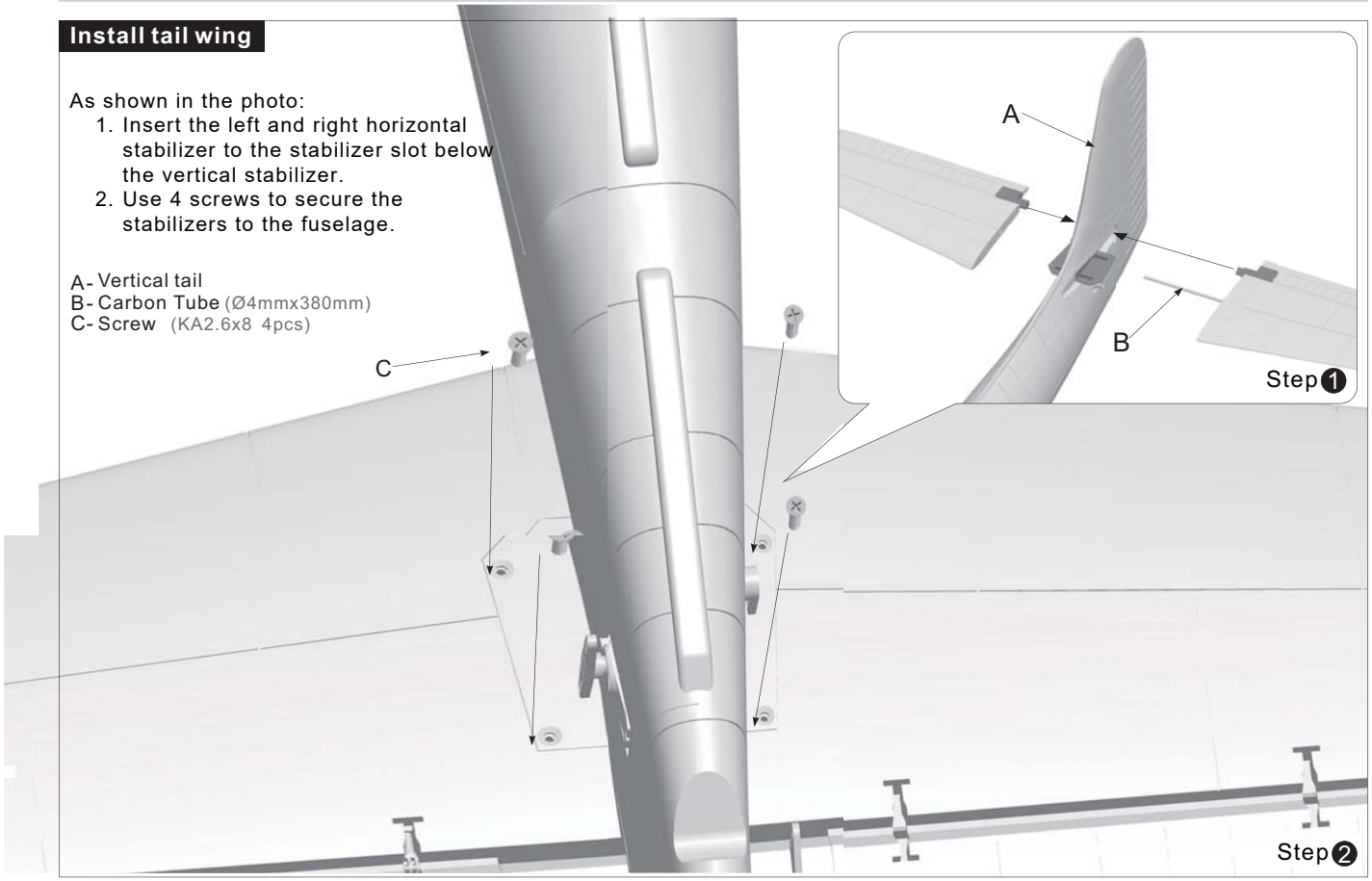
PNP Install instructions

Install tail wing

As shown in the photo:

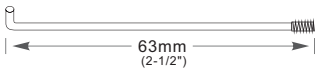
1. Insert the left and right horizontal stabilizer to the stabilizer slot below the vertical stabilizer.
2. Use 4 screws to secure the stabilizers to the fuselage.

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



Pushrod instructions

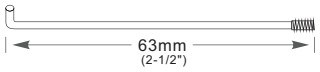
Flap pushrod size (Out Side)



Pushrod diameter Ø1. 5mm

Flap pushrod mounting hole (Out Side)

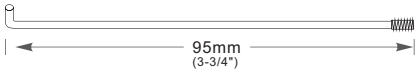
Flap pushrod size (In Side)



Pushrod diameter Ø1. 5mm

Flap pushrod mounting hole (In Side)

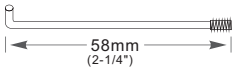
Aileron pushrod size



Pushrod diameter Ø1. 5mm

Aileron pushrod mounting hole

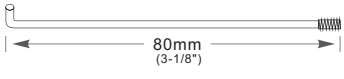
Elevator pushrod size



Pushrod diameter Ø1. 5mm

Elevator pushrod mounting hole

Rudder pushrod size



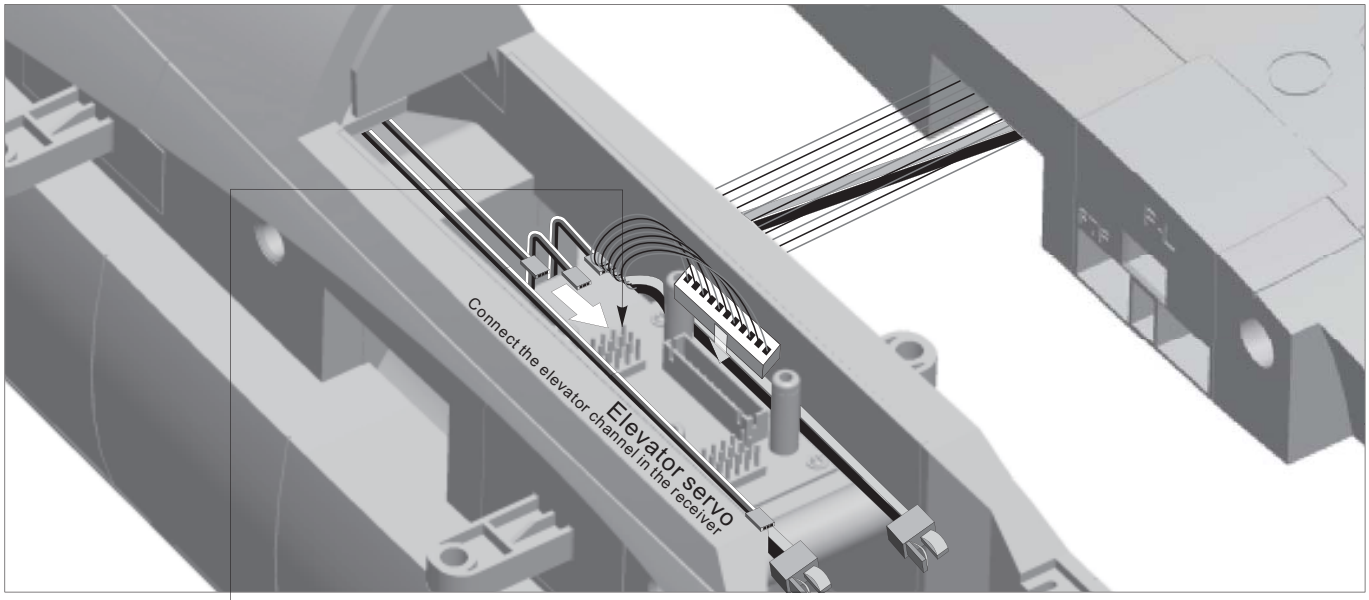
Pushrod diameter Ø1. 5mm

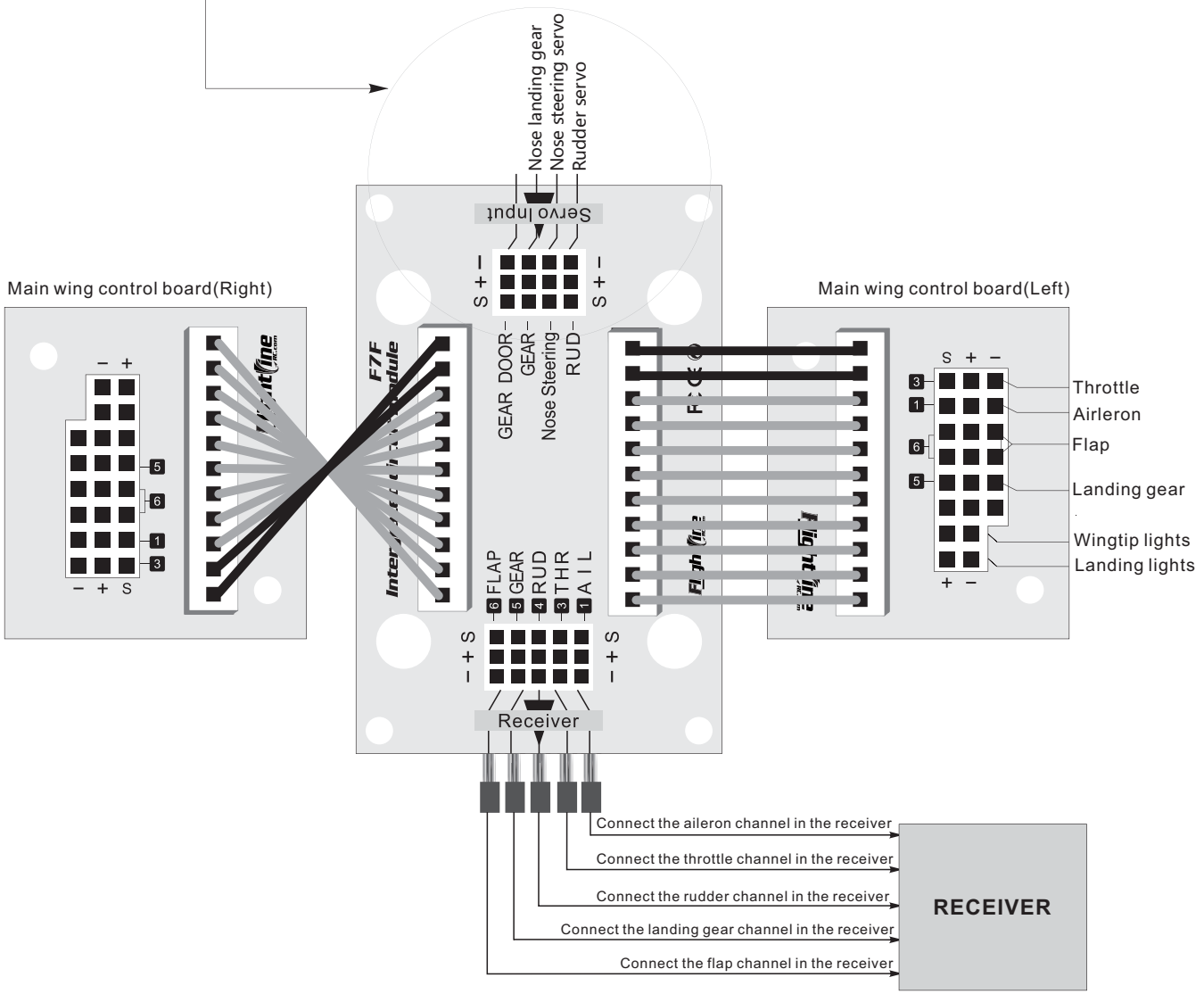
Rudder pushrod mounting hole

PNP Install instructions

Connecting Wire

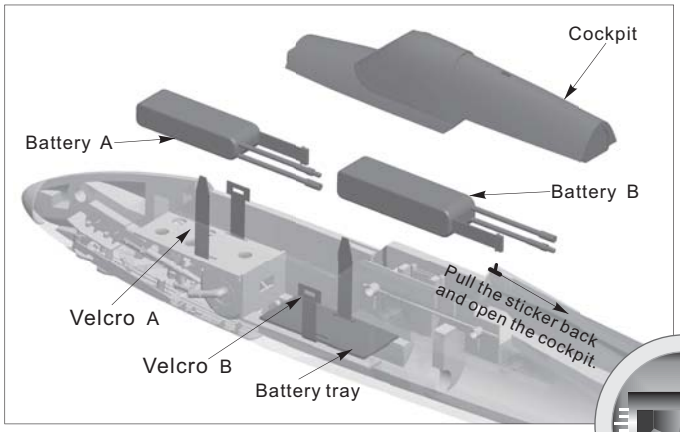
F7F model uses a ribbon wire for more convenient assembly. Follow the guide below for proper wire installation.

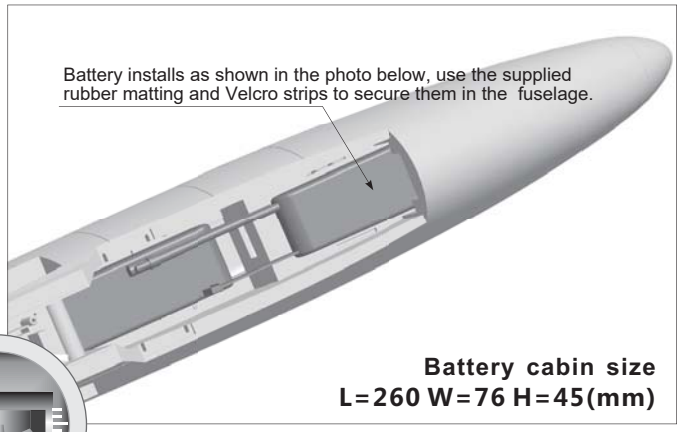




PNP Install instructions

Battery size





Before connecting the battery to the ESC's , 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 as follows:

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 center of gravity. Achieve the correct CG by sliding the batteries. If. by doing so, you cannot achieve the correct CG, use a lead weight strip or another acceptable form of weight to help achieve it.

PNP Install instructions

Control direction test

After completing assembly, using two fully charged batteries, connect them to the ESC and bind the airplane to the radio, making certain that the throttle is in the low position. Once bound, check the control throw directions as shown in the diagrams below, adjust as necessary to achieve the correct direction.

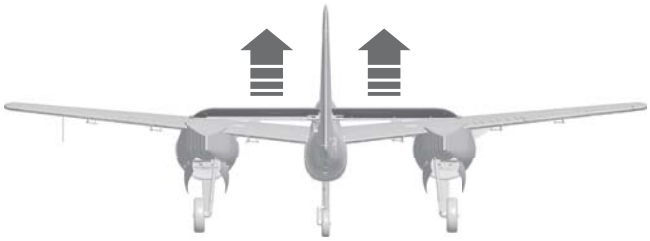
Aileron

Stick Left

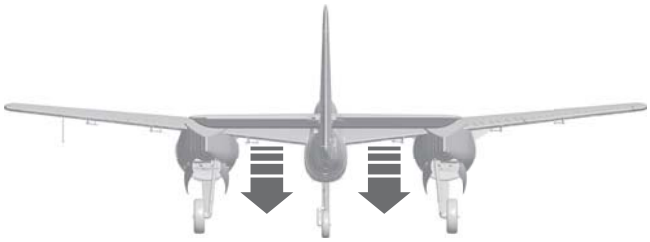
Stick Right

Elevator

Up Elevator

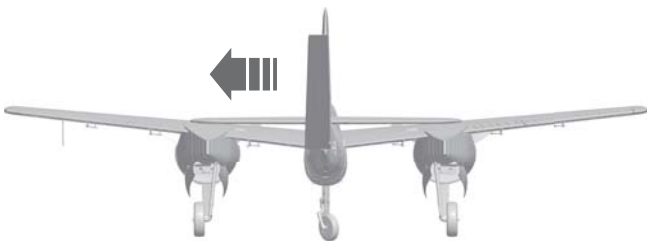


Down Elevator

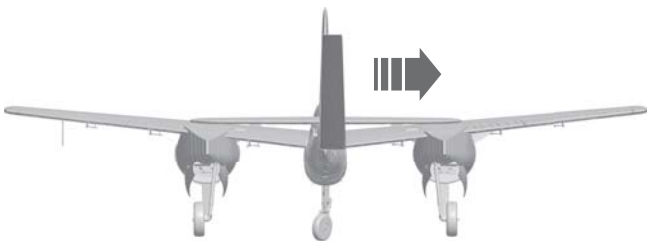


Rudder

Stick Left

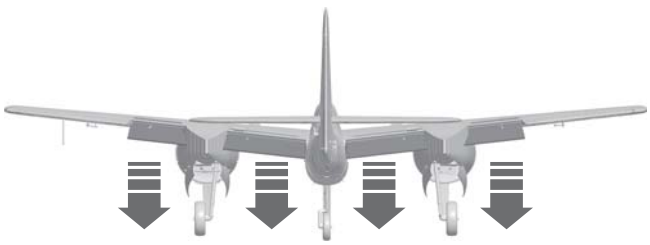


Stick Right



Optional Flaps

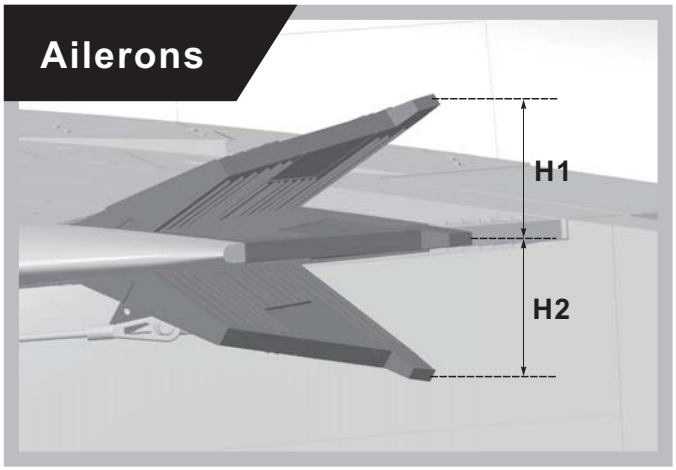
Flaps down



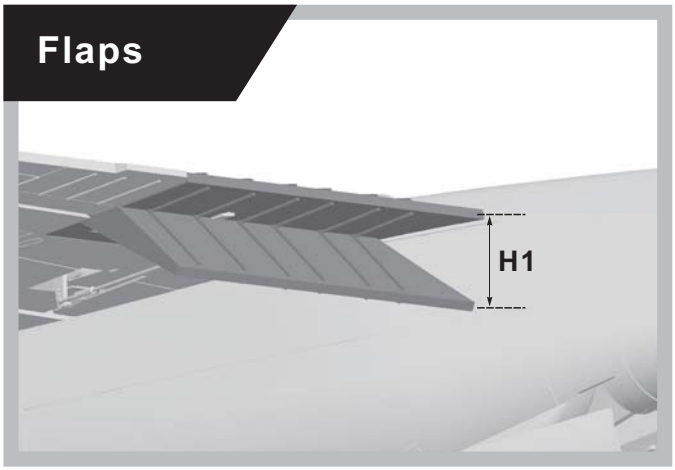
Dual Rates and Flight setting

From information gathered through testing, we suggest the following control throws be used. High rates are good for experienced pilots. Low rates for initial flights, once familiar with the airplane, adjust the throws to suit your comfort/skill level.

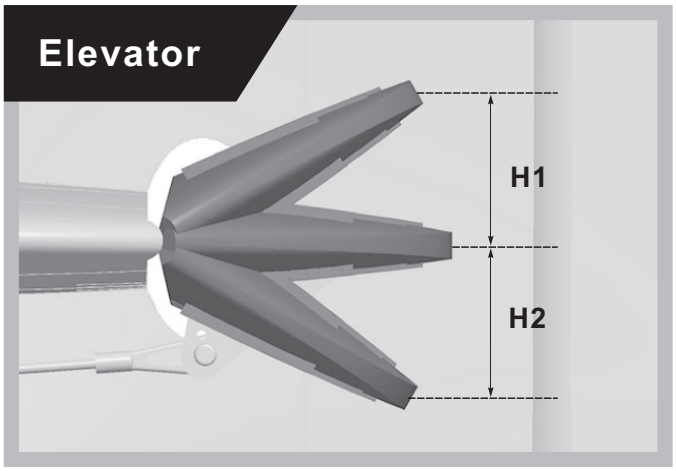
Ailerons



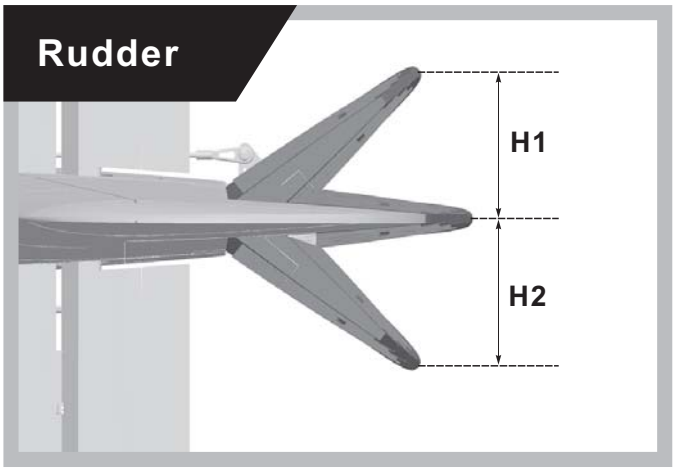
Flaps



Elevator



Rudder

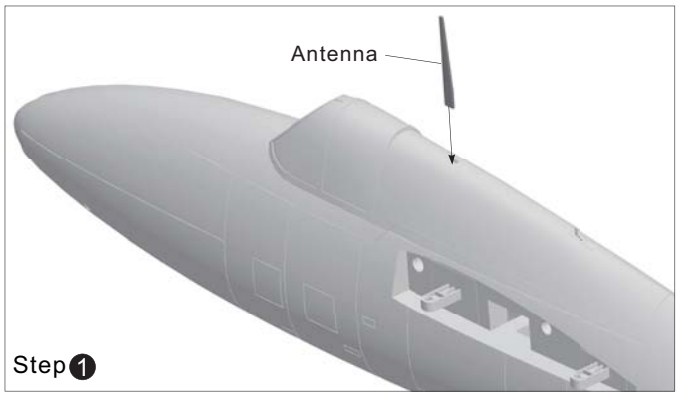


	Ailerons	Elevator	Rudder	Flaps
Low Rate	H1/H2 26mm/26mm D/R Rate：80%	H1/H2 20mm/20mm D/R Rate：100%	H1/H2 27mm/27mm D/R Rate：85%	H1 29mm
High Rate	H1/H2 31mm/31mm D/R Rate：100%	H1/H2 20mm/20mm D/R Rate：100%	H1/H2 34mm/34mm D/R Rate：100%	H1 44mm

⚠ **CAUTION:** If the flaps are in the down position, the nose will pitch up. We recommend a Flap /Elevator mix. Use 14% (3.5mm) down elevator mix at the half flap position, use 24%（5.5mm) down elevator mix at the full flap position.

PNP Install instructions

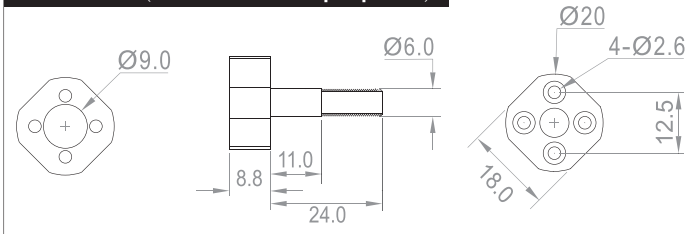
Install guns and antenna



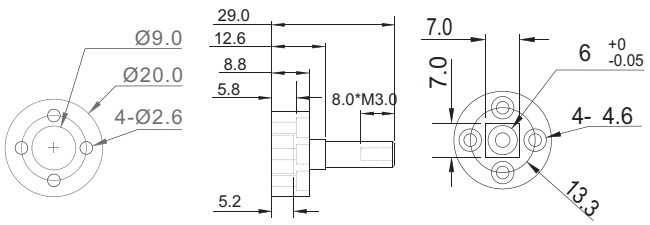
Electronic equipment Introduction and Installation

Parameter of motor

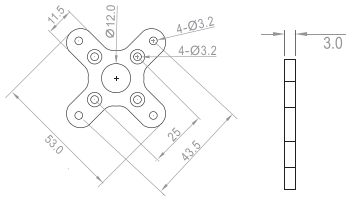
Motor shaft (use for 2-Blade propeller)



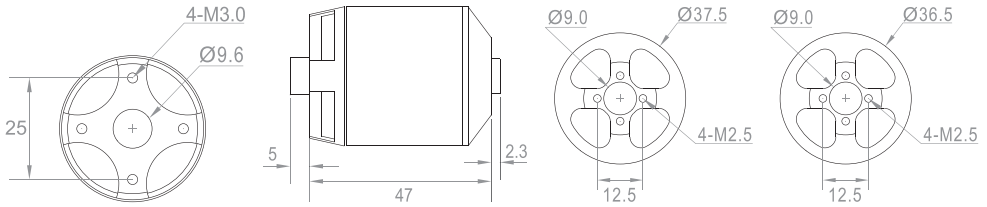
Motor shaft (use for 3-Blade propeller) Units :mm



X-fixed base



Motor size Units :mm

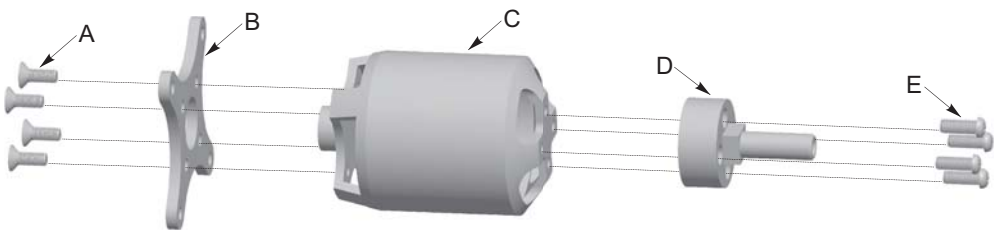


3748-600KV / 3648-880KV **3748-600KV** **3648-880KV**

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

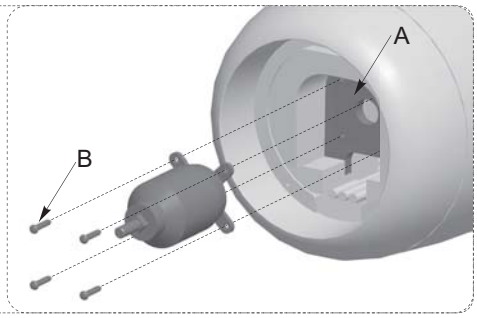
Install the Motor

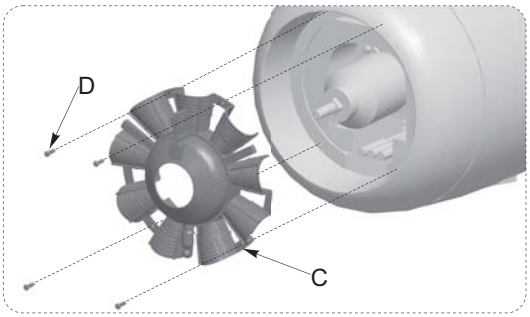
A-Screw (KM3×5mm 4pcs)
B-Motor X-fixed base
C-3748-600KV out-runner motor
D-Propeller folder
E-Screw (HM2.5×10mm 4pcs)



Electronic equipment Introduction and Installation

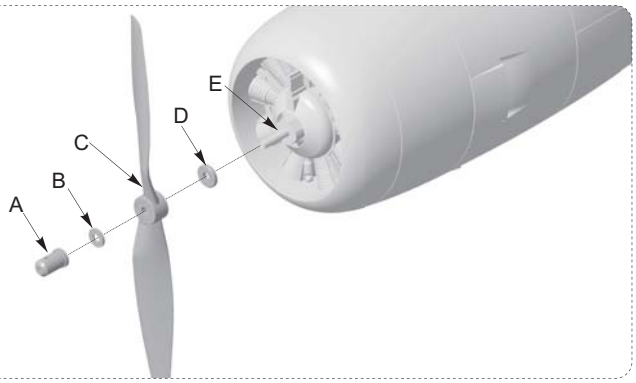
A-Motor fixed mount
B-Screw (PA3×12mm 4pcs)
C-Engine cowl
D-Screw (PWA2.3x8mm 4pcs)



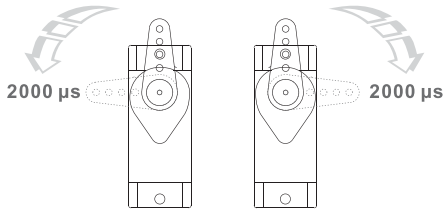


Install 2-blade sport propeller

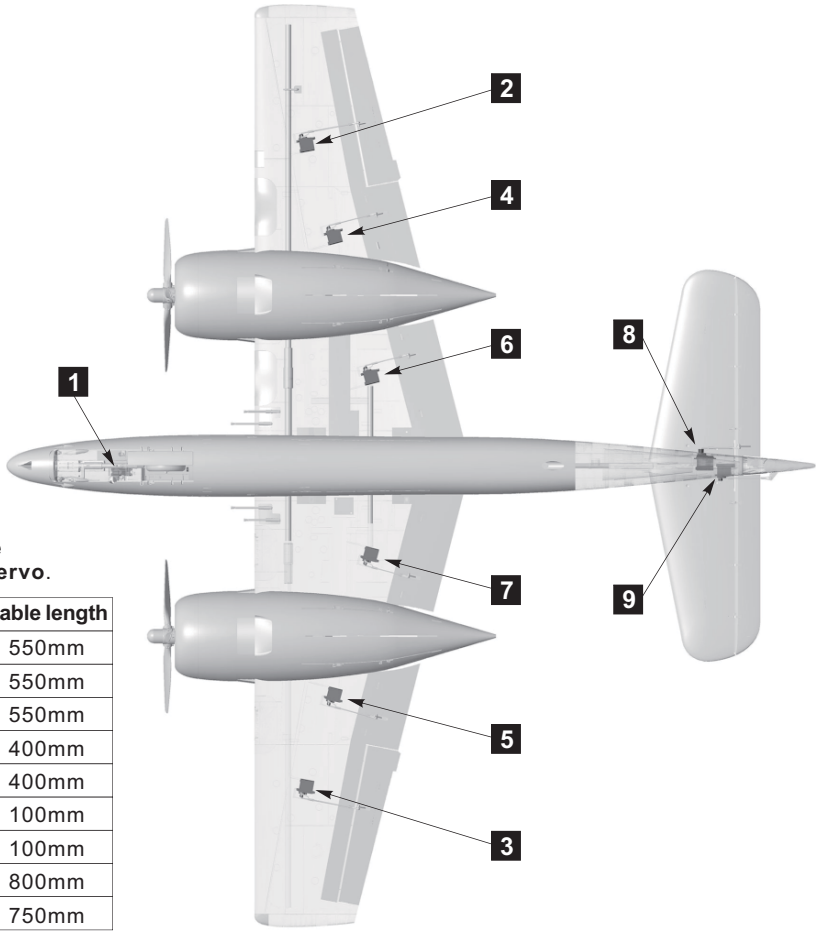
A - Propeller fixing bolt
B - Washer
C - 2-Blade propeller (12×8 Standard prop./Reverse prop.)
D - Washer
E - 3648-880KV Brushless motor



Servos Introductions



When the servo input signal is changed from 1000μs to 2000μs and the servo arm rotates in a clockwise direction, it is a positive servo. If it rotates in a counter clockwise direction, it is a reversed servo.

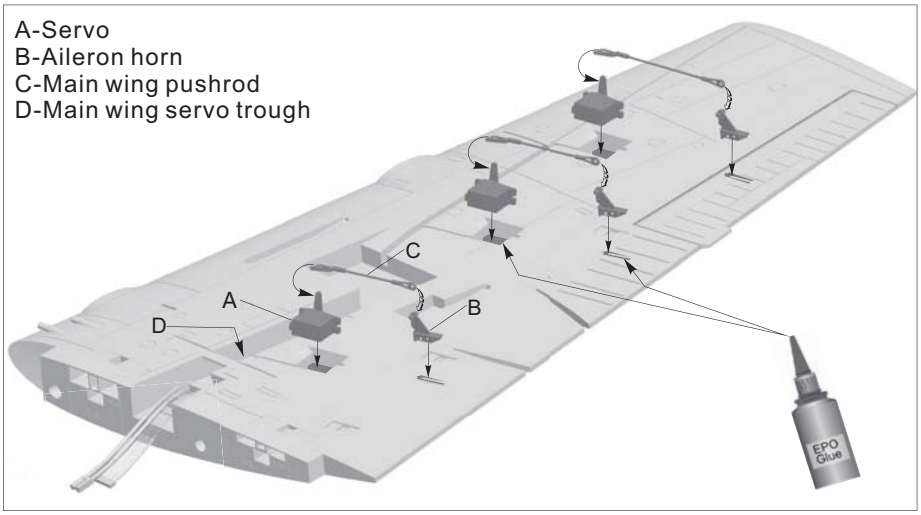


If you need to purchase other brand servo, please refer to the following list to choose correct size servo.

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

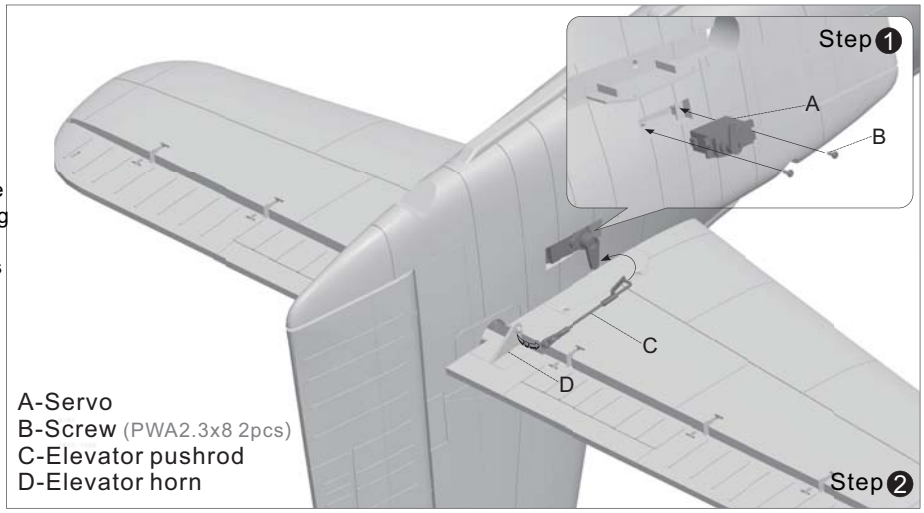
Install main wing servos

1. Use a servo tester or radio to center the servo.
2. Use glue to install the servo and hold it in place.
3. Run the servo cables through the wire trough. After all the servos have been installed and the wires run, apply the decal over the trough.
4. Insert the open end of the pushrod into the servo arm and adjust the length by twisting the clevis until the control surface is at the neutral position.
5. Repeat the above four steps for the other wing half.



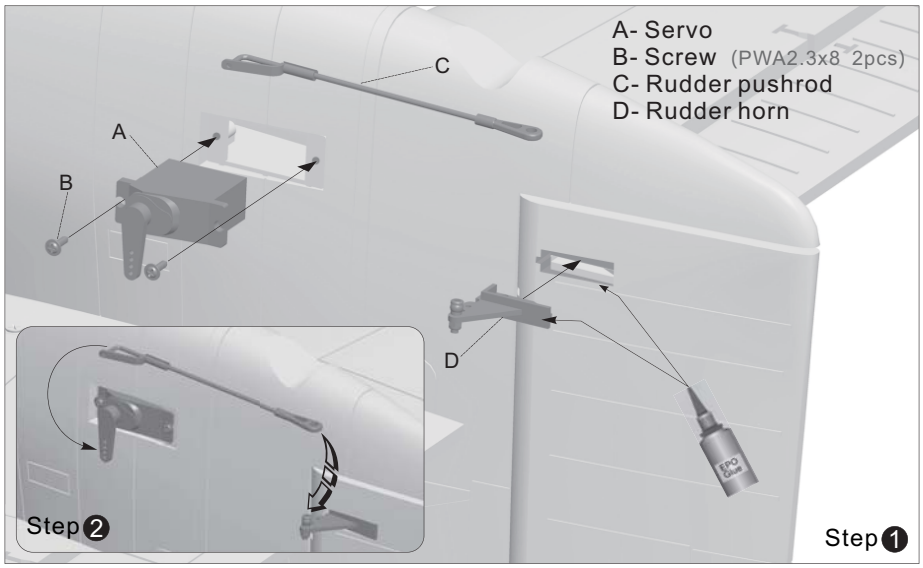
Install elevator servos

1. Use a servo tester or radio to center the servo.
2. Use 2 screws to attach the servo to the elevator servo mount
3. Insert the open end of the pushrod to the servo arm and adjust its length by twisting the clevis. Attach to the aileron control horn and check that the control surface is in the neutral position, adjust as necessary.
4. Repeat the above four steps for the second elevator servo on the opposite side.



Install rudder servo

1. Use a servo tester or radio to center the servo.
2. Use 2 screws to attach the servo to the rudder servo position on the fuslage. Glue the control horn to the rudder control horn position.
3. Press the servo wire into the servo wire trough.
4. When the glue has dried, connect the open end of the rudder pushrod to the servo arm, then adjust the clevis by twisting it to achieve a neutral position when attached to the rudder, adjust as necessary until the rudder is at neutral when the clevis is installed on the rudder control arm

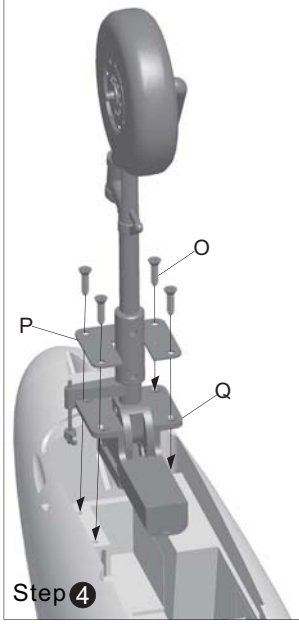


Landing Gear Assemble

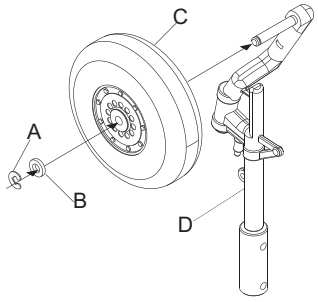
Please assemble/ disassemble the nose landing gear according to the following photo.

Accessories name and specification

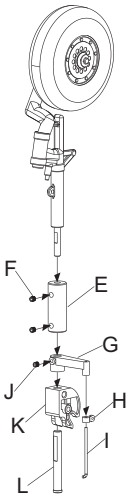
A- C-Buckle (M3)
B- Washer (Ø8xØ4.2x1mm)
C- Nose wheel (Ø70x20mm)
D- Nose gear strut
E- Metal pillar
F- JIMI Screw (M4x4mm)
G- L-shape rotating arm
H- O-shape ring
I - Pushrod
J - JIMI Screw (M3x3mm)
K - Rotating arm
L - Nose metal wire
M- Screw (PA1.7x10mm 4pcs)
N- Screw (PA1.4x12mm 2pcs)
O- Screw (PWA3x12mm 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



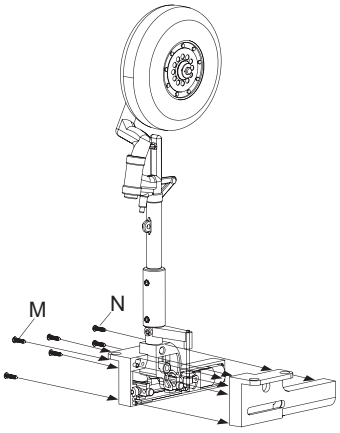
Step 4



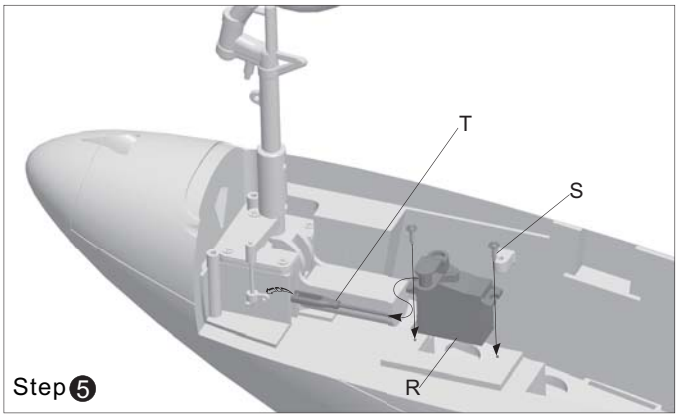
Step 1



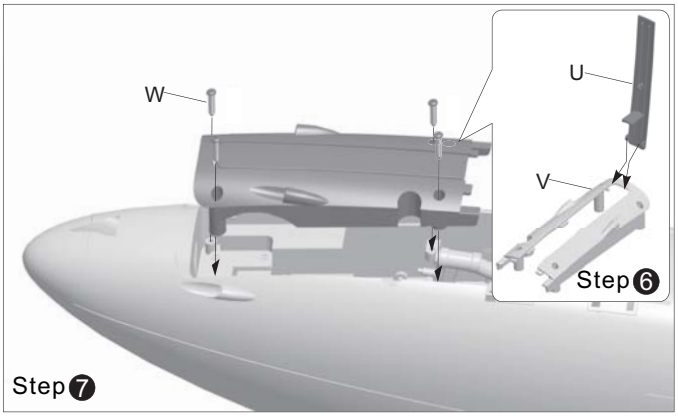
Step 2



Step 3



Step 5



Step 7

Step 8

Nose steering pushrod size

Pushrod diameter Ø1. 5mm

Servo pushrod installing hole

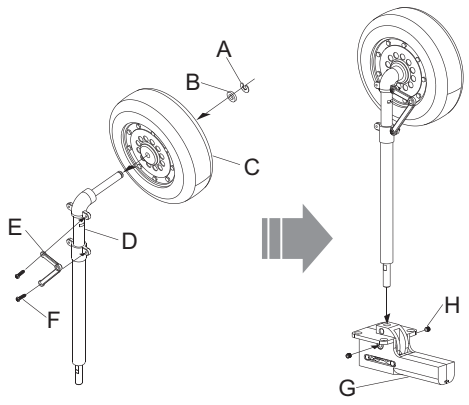
⚠Note : When installing,please check the flat position of spareparts,when screw to fix,the flat position must face to the screw hole, just like this, it can fix successfully, the spareparts don't rotate and fall off.

Main landing gear

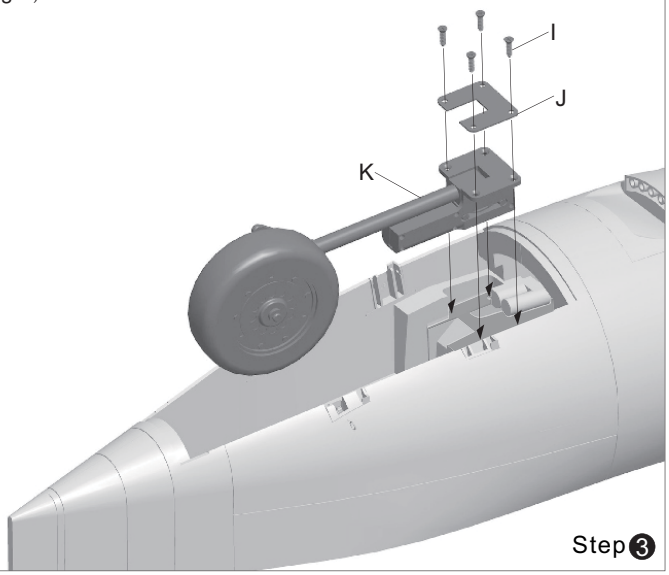
Please assemble/ disassemble the rear landing gear according to the following photo.

Accessories name and specification

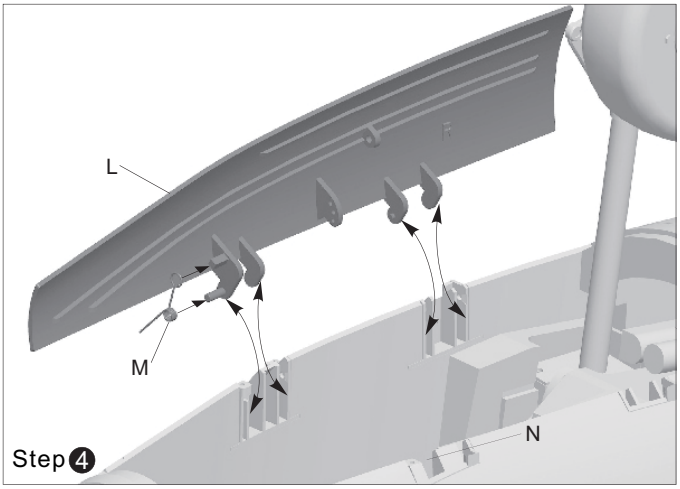
A - C - Buckle (M4)
B - Washer (Ø10xØ5.2x1mm)
C - Main wheel (Ø85x26mm)
D - Main gear strut
E - Main gear plastic parts
F - Screw (PWA1.7x5mm)
G - Electronic retract
H - JIMI Screw (M4x3mm)
I - Screw (PWA3x12mm)
J - Retract reinforcement plate
K - Main landing gear
L - Main landing gear door
M - Torsional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



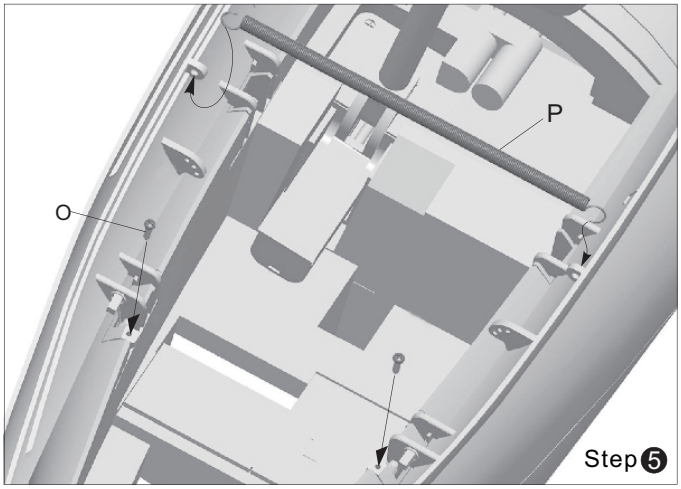
Step 1 Step 2



Step 3



Step 4



Step 5

前　言

F7F Tiger是美国著名的飞机制造商格鲁曼公司设计并批量的最后一款超级活塞战斗机，拥有强劲的动力和武器配备。“虎猫”同时也是一款优秀的夜间战斗机，在朝鲜战争期间被称为“战骑士”，1950年 11 月，当陆战 1 师和其他陆军部队在长津湖地区陷入志愿军重围时，542 中队的“虎猫”执行了大量的对地支援任务，有力地帮助了陆战 1 师主力最终撤出了地狱般的长津湖地区，这对“虎猫”来说，是一个值得骄傲的战绩。虽然“虎猫”具备了出类拔萃的飞行性能，但是，喷气时代的来临，仅仅装备了500架左右后，在60年代就已经全部退役。

这款1/10比例的F7F-3 “虎猫”双引擎战斗机模型，翼展1600mm，机长1400mm，机体外形轮廓精准，细节逼真。在设计上，我们运用了大量的塑料部件和碳纤材料加强机体并优化拼装结构。主翼、平尾、发动机舱均采用了快速、便捷的螺丝固定结构，而各种天线及机枪，则采用了即插即用的快捷安装方式，飞行结束后，可快速取下，单独保存，避免了运输过程中的碰损现象。主翼与机身使用了集线板设计，通过一根排线连接，可以非常方便、迅速的安装或者分离主翼，易于携带。精心优化设计的设备舱，充分利用了机体内部狭窄地空间，变得充裕和整洁，易于操作。使用弹簧控制全套塑料舱门，工作稳定，可有效减小飞行阻力。这款F7F-3 “虎猫“的座舱综合使用了插销和磁石吸附二种固定方式，更加可靠却不影响分离操作。

与其它FlightLineRC “飞行线”产品一样，产品在出厂时，已喷好油漆。在包装盒内，提供了四套不同编号的贴纸，你可以根据自己的喜好，选择其中一套贴于飞机表面。

FlightLineRC “飞行线”F7F-3 “虎猫”使用了7个9g金属数字舵机和2个17g金属舵机分别控制前轮转向、方向舵、升降舵、副翼和襟翼。参考真实飞机，这款模型飞机的左、右翼尖各使用一颗3W高亮LED灯（红/蓝），左主翼前缘中间部位，安装了一颗3W高亮LED滑行灯（起落架放下时点亮）。采用双组高功率3748-600KV无刷电机、3叶12*7螺旋桨（正、反）、60A电调的动力配备，可达125KPH/78.1MPH的时速，在使用2组4S 2600mAh或者2组4S 4000mAh电池飞行时，飞行时长分别为4.5分钟/6.5分钟。更换升级动力组（3648-880KV无刷电机、12*8二叶桨）后，时速可达155KPH/97MPH）。

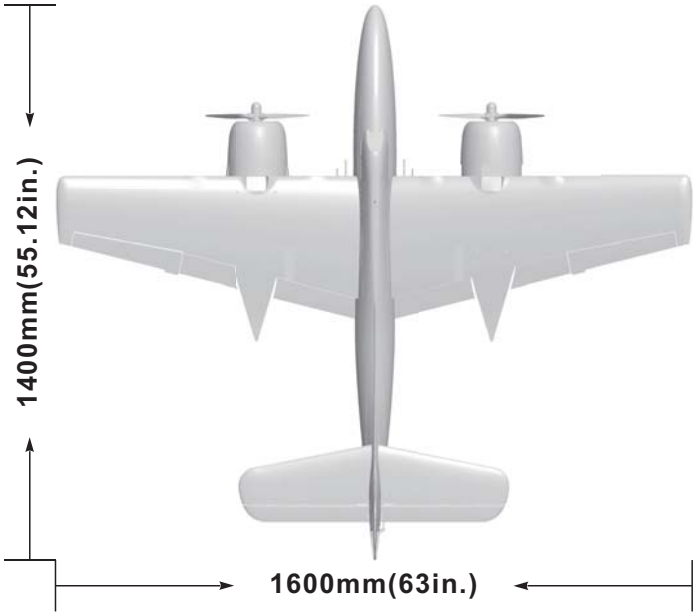
F7F-3 “虎猫”双引擎战斗机模型最小起飞距离约15米，安全距离为20米，85mm/70mm直径的主轮/前轮，可以适用于大部份的草地起降条件。飞行过程中，横向安定性较好，易于操控。充足的动力，可以轻松完成各种仿真空战机动动作。打开襟翼降落时，减速明显，可以保持最低25KPH/15.6MPH的低速轻柔接地。（注意：开启襟翼时，模型飞机会有抬头现象，按照说明书提供的参数设定好襟翼-升降混控后，此现象可消失。）这款前三点的F7F-3 “虎猫”双引擎战斗机模型，优秀稳定的飞行品质，适合于热爱仿真螺旋桨飞机的爱好者及进阶大尺寸仿真模型飞机的爱好者使用。

⚠ **注意：**模型产品是具一定危险性的产品，请禁止14岁以下的儿童玩耍，14 岁以上的儿童，请在有飞行经验的成人指导下使用，无飞行经验的购买者，应当在具有一定电动涵道飞机飞行经验的成人指导下使用！ 组装模型前，请仔细阅读说明书，按照说明书的要求进行安装. 进行调试和飞行时，请根据说明书指示的参数进行调整。

重 要 提 示

1.模型飞机不是玩具,操作者需要具备一定的经验;没有经验的初学者,必须在有丰富经验的专业人士指引下,逐步学习!
2.在组装之前,必须认真阅读产品说明书,严格按照说明书指示操作。
3.飞翼模型及其销售商，对于违反说明书的要求操作而造成的损失、将不负任何法律责任！
4.模型飞机的使用年龄必须是14岁以上的儿童或者成人。
5.此模型产品使用EPO材料制成，表面喷涂油漆，不可随意使用化学制剂擦拭，否则会损坏模型产品。
6.不可以在公共场合、高压线密集区、高速公路附近、机场附近或者其它法律法规明确禁止飞行的场合飞行。
7.不可以在雷雨、大风、大雪或者其它恶劣气象环境下飞行。
8.模型飞机的电池产品，不可以随意乱扔，乱放。存放时,必须保证周边2M范围内,无易燃、易爆物体。
9.损坏或者报废处理的模型飞机电池，应妥善回收处理，不准随意抛弃，避免自燃而引发火灾。
10.在飞场飞行时，应做到妥善处理飞行后所产生的垃圾，不可随意抛弃、焚毁模型及其配件。
11.在任何情况下,都必须保证油门杆处于起始位、发射机处于打开状态时，才能连接模型飞机内部的动力电池.
12.无论是模型飞机是在正常飞行过程中,或者是在缓慢降落过程中,都不要尝试用手去回收模型。必须等模型降落停稳以后 ，再进行回收！

产品基本参数



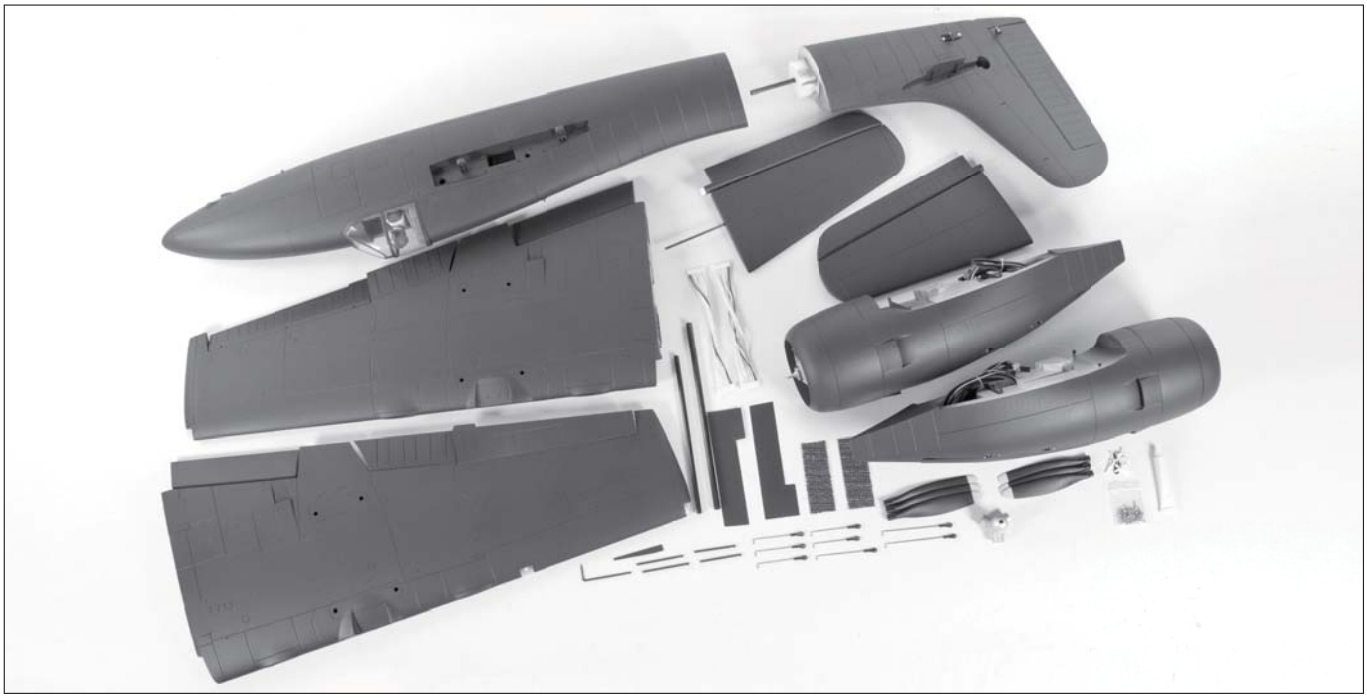
翼载荷：88g/dm²
电机：3748-600KV无刷电机（2pcs）
螺旋桨：3叶 12x7（正反，反向各1PCS）
电调：60A 无刷电调（2pcs）
舵机：9g数码金属x7，17g数码金属x2
重量：3200g（不含电池）

副翼功能：有
平尾功能：有
方 向 舵：有
襟翼功能：有
起落架：电动可收放起落架
舱门：前、后舱门
LED灯：仿真LED灯
飞行员：仿真飞行员
机体材料：EPO

运动版本改装配件
（以下改装配件，请联系经销商单独购买！）
3648-880KV 外转无刷马达
12×8 二叶桨

⚠**注意:** 此处各项参数，均使用本公司配件测试得出，如果使用副厂配件，会有所差异。使用副厂配件时所产生的问题，我们将无法给予技术支持！

产品包装清单



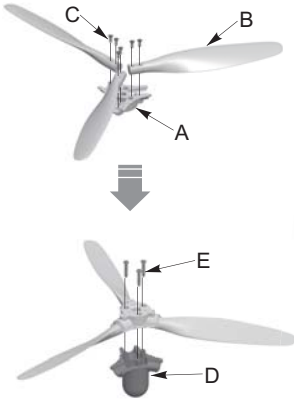
打开产品包装，核对包装清单。（不同配置的版本，包含内容不同！）

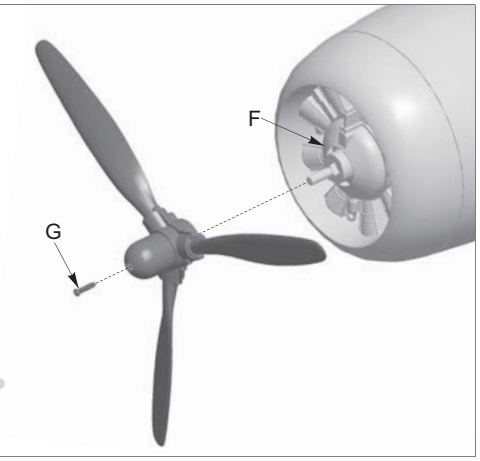
序号	配件名称	PNP	KIT Plus	Airframe
1	机身	预装所有电子设备	预装舵机	不含电子设备
2	主翼	预装所有电子设备	预装舵机	不含电子设备
3	水平尾翼	√	√	√
4	垂直尾翼	预装所有电子设备	预装舵机	不含电子设备
5	发动机吊舱	预装所有电子设备	预装舵机	不含电子设备
6	螺旋桨及桨罩	√	√	√

序号	配件名称	PNP	KIT Plus	Airframe
7	舵面控制钢丝	√	√	√
8	线槽盖	√	√	√
9	排线	√	√	√
10	机枪、天线	√	√	√
11	碳纤管，胶水	√	√	√
12	说明书，贴纸	√	√	√

螺旋桨组装

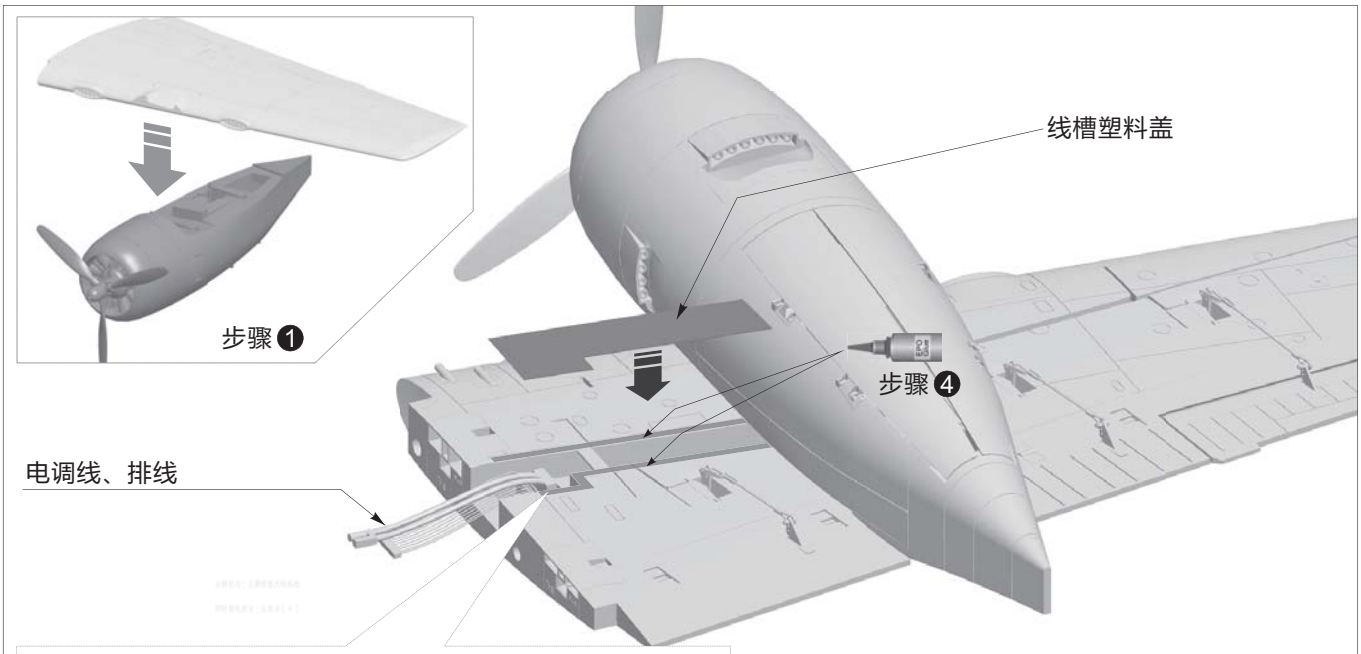
首先，如右图所示，组装好正、反3叶螺旋桨，并将螺旋桨固定在电机上。

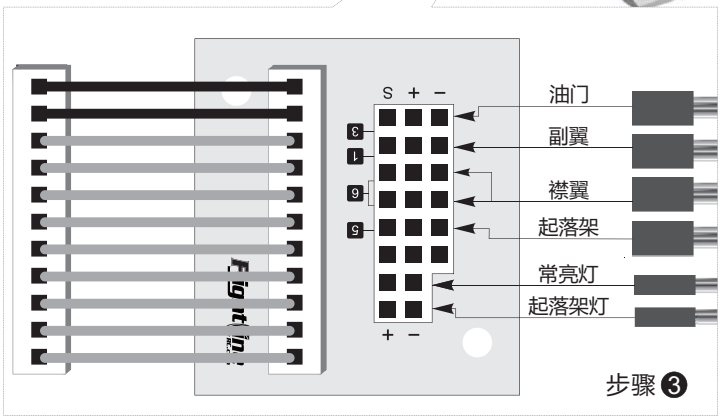




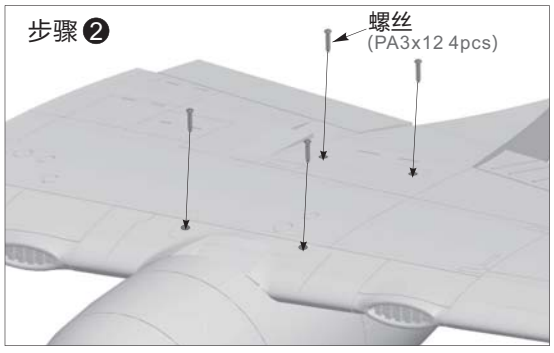
A - 螺旋桨固定盘
B - 仿真螺旋桨 (12x7，三片组合)
C - 螺丝 (PA2.3x14mm 6pcs)
D - 螺旋桨桨罩
E - 螺丝 (PA2.3x14mm 3pcs)
F - 3748-600KV无刷马达
G - 螺丝 (PM3x10mm)

安装吊舱



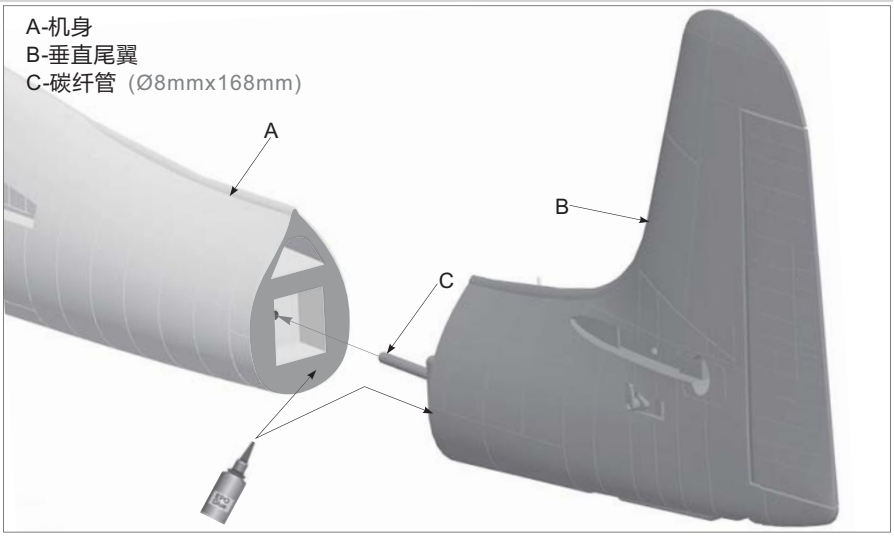


1.用螺丝将吊舱固定到主翼下方.
2.把所有连接线放入主翼下表面线槽中.
3.如图所示,除电调线外,将其它所有线连接到主翼集线板的一端, 另外一端插入排线.
4.用胶水将线槽盖粘到线槽上进行封闭.



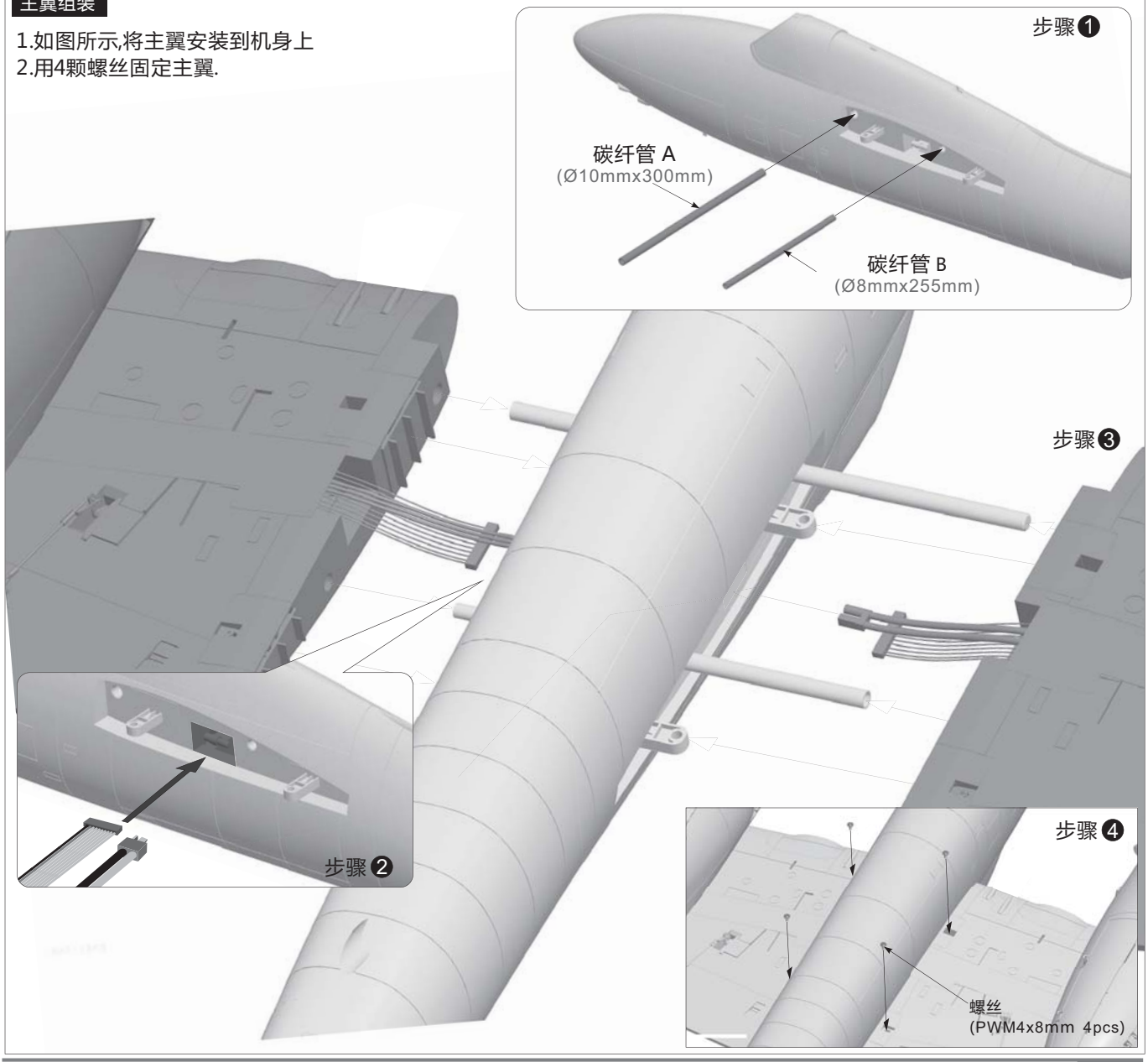
如右图所示：
用胶水把垂直尾翼粘贴在机身上;

注：包装盒内有赠送的EPO胶水，请使用这支赠送的胶水进行粘合作业。涂摸胶水应该均匀。胶水均匀涂摸完毕，不要立即粘合，请等待90秒时间，再进行粘合，效果最佳!



主翼组装

1.如图所示,将主翼安装到机身上
2.用4颗螺丝固定主翼.



尾翼组装

如图所示

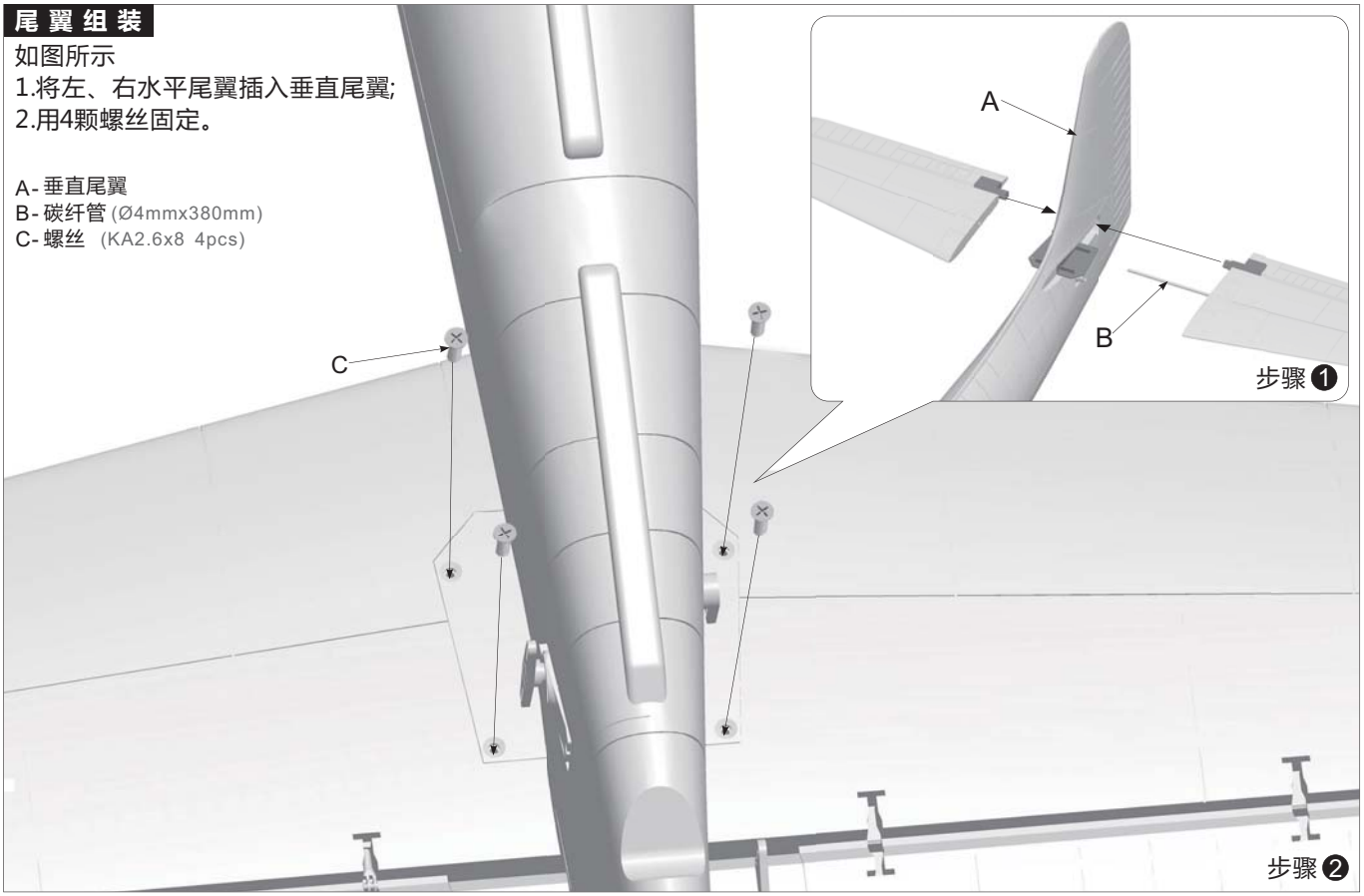
1.将左、右水平尾翼插入垂直尾翼;

2.用4颗螺丝固定。

A- 垂直尾翼

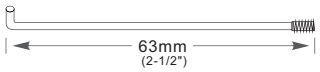
B- 碳纤管 (Ø4mmx380mm)

C- 螺丝 (KA2.6x8 4pcs)



舵面控制钢丝尺寸

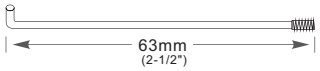
襟翼控制钢丝尺寸（内侧）



钢丝直径 Ø1.5mm

襟翼舵机钢丝安装孔位（内侧）

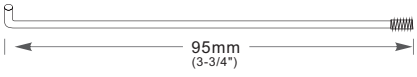
襟翼控制钢丝尺寸（外侧）



钢丝直径 Ø1.5mm

襟翼舵机钢丝安装孔位（外侧）

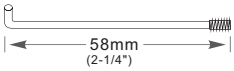
副翼控制钢丝尺寸



钢丝直径 Ø1.5mm

副翼舵机钢丝安装孔位

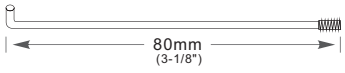
平尾控制钢丝尺寸



钢丝直径 Ø1.5mm

平尾舵机钢丝安装孔位

垂尾控制钢丝尺寸

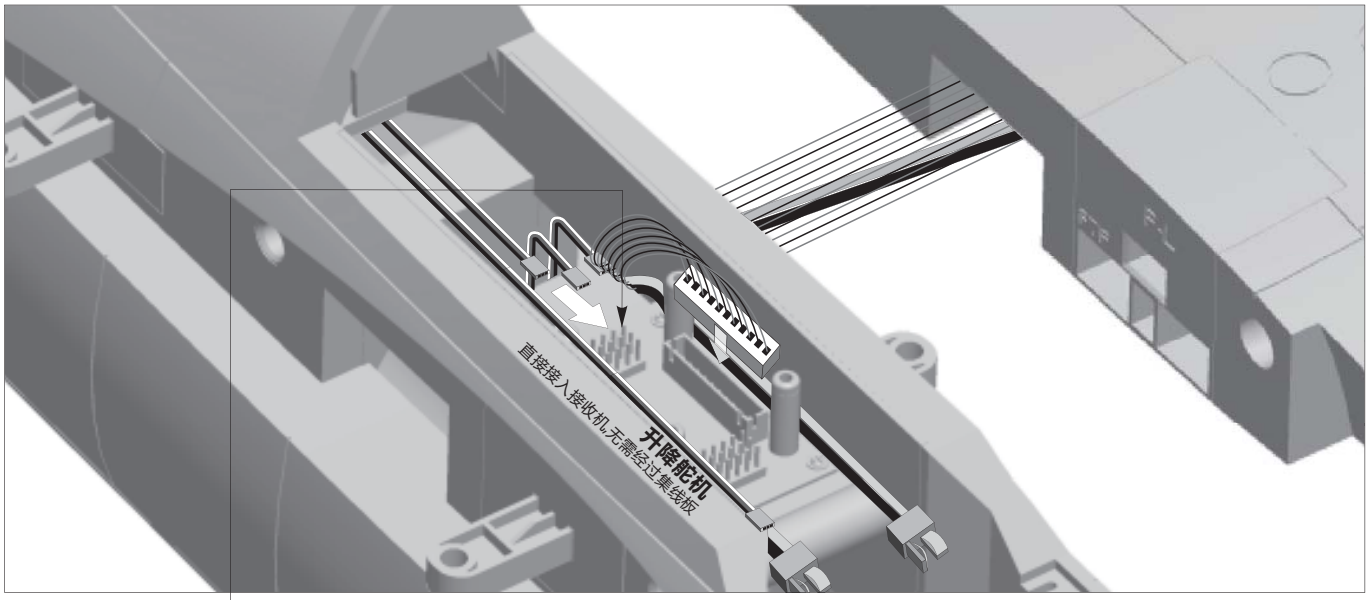


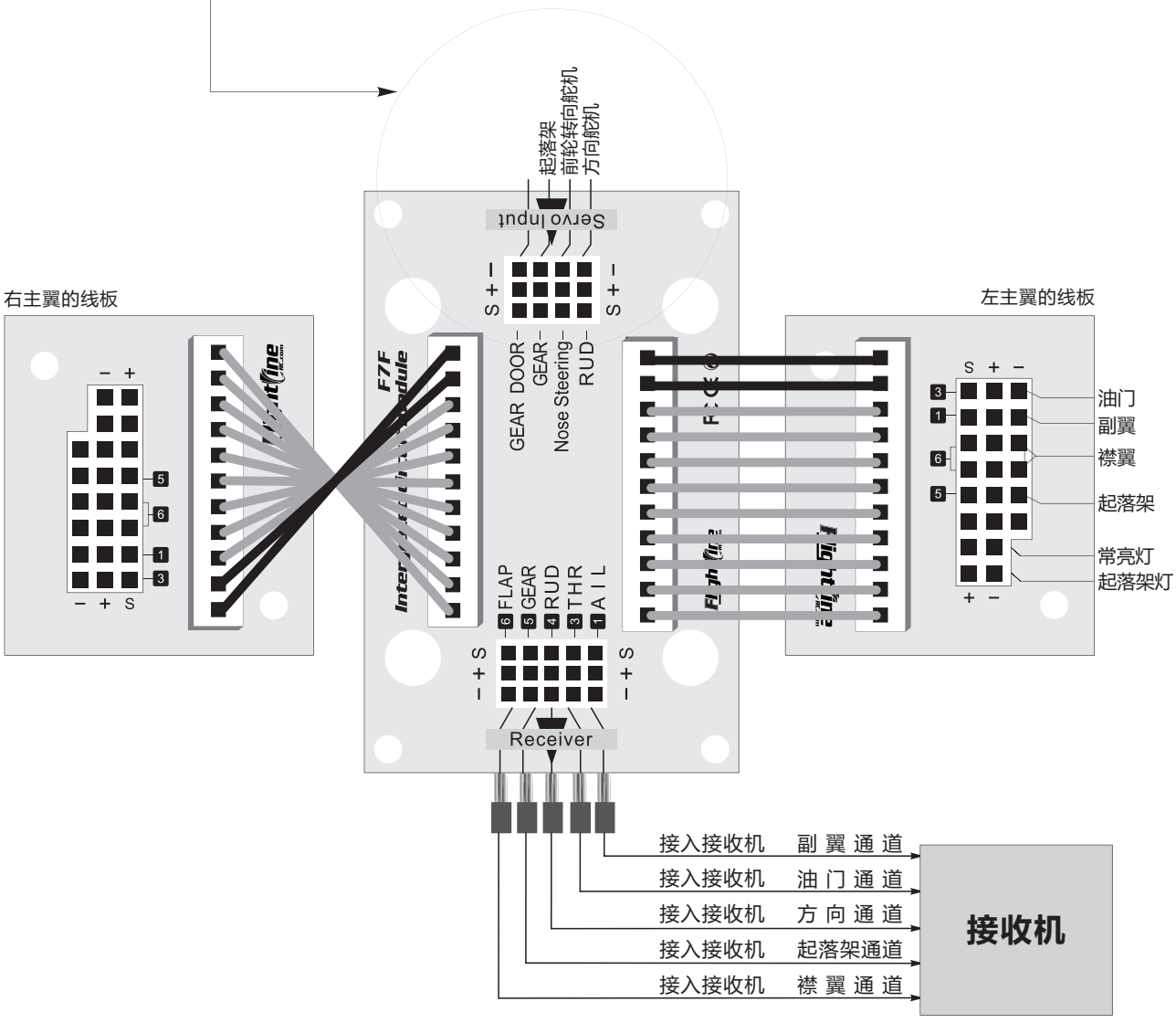
钢丝直径 Ø1.5mm

垂尾舵机钢丝安装孔位

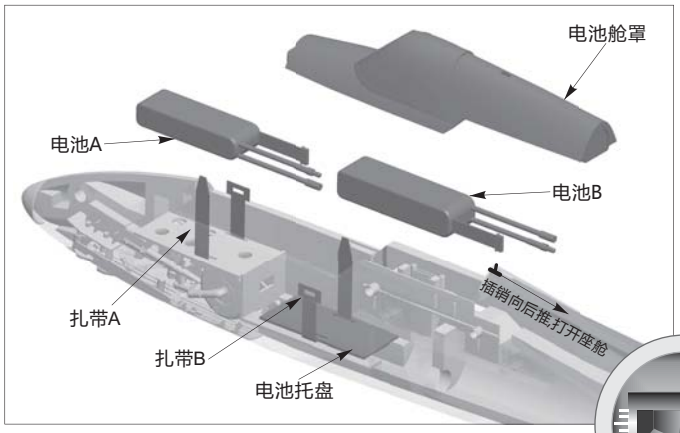
电子设备连接

F7F模型飞机，使用了集线板，以达到后期便捷使用的目的。请参考下图，连接电子设备。





电池安装说明



将电池与接收机连接前，首先请打开发射机电源，确认油门杆处于低位。
安装电池后，启动油门前，请保证没有任何物体在螺旋桨转动直径以内，避免造成事故和人身伤害！

我们建议使用的电池容量和放电倍率如下：
4S 14.8V 3000mAh ~ 4S 14.8V 4000mAh (2pcs)
放电倍率 ≥ **30C**

重心示意图

正确的重心，直接关系到飞行的成功与否，请参考下面的重心标示图，来调整飞机的重心。

-您可以将电池向前，或者向后移动，来调整飞机的重心；
-如果通过电池的移动无法调整到正确的重心位置，您还可以适当的使用一些其它材料来配重，使飞机的重心处于正确的位置！

舵面测试

当您按前面的步骤组装好飞机后，在飞行前，我们需要用一块充饱电的电池，连接到电调。用遥控器测试每个舵面的工作情况，检查是否正常！

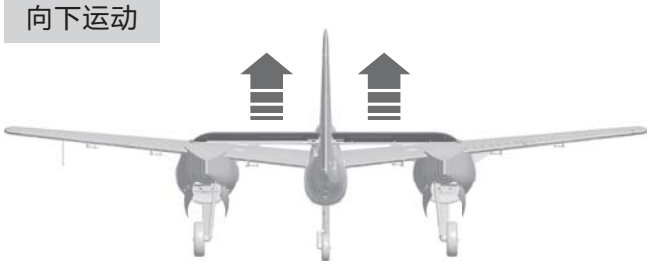
副　翼

副翼摇杆
向左运动

副翼摇杆
向右运动

升降舵

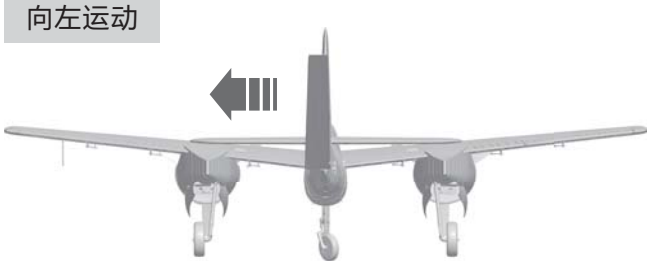
升降摇杆
向下运动



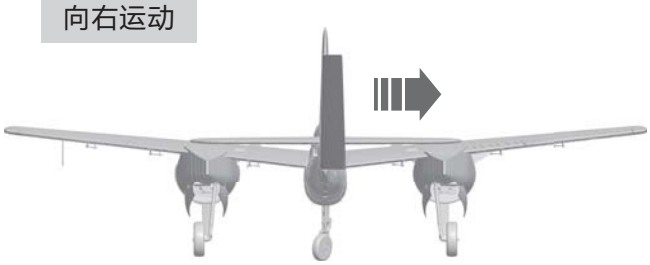
升降摇杆
向上运动

方向舵

方向摇杆
向左运动

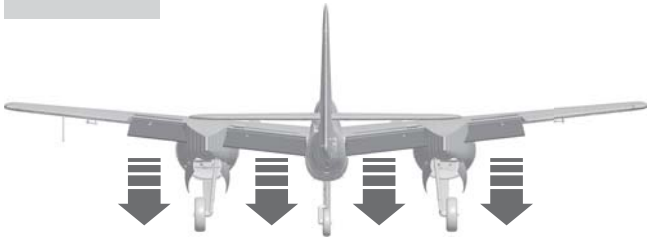


方向摇杆
向右运动



襟　翼

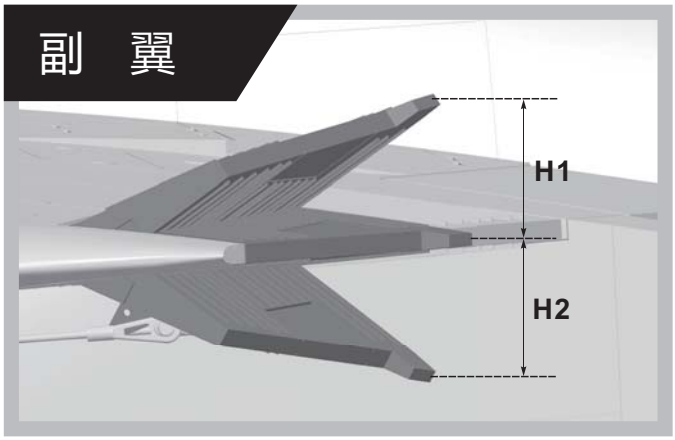
襟翼放下



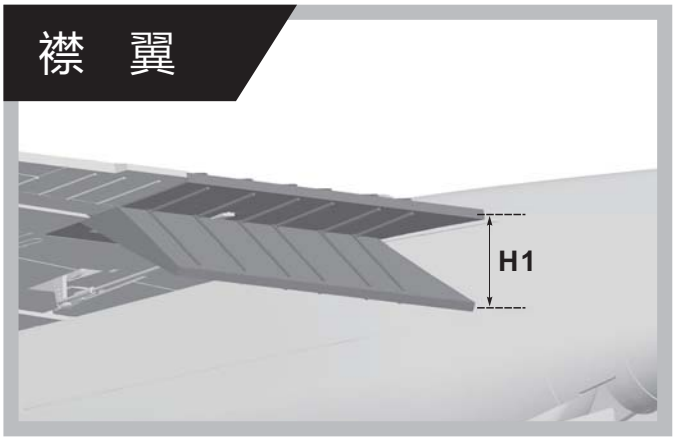
大、小舵参数

根据我们的测试经验，我们认为，按以下参数来设置副翼和升降舵的大、小舵，将有助于飞行。在小舵角的情况下，飞机的可操控性能会好一些，适合初次飞行或者不太熟练的玩家飞行。而大舵角的设置，可以提高动作灵敏度，使用经验丰富的玩家。您可以根据自身的情况，来选择其中一种舵量进行飞行！

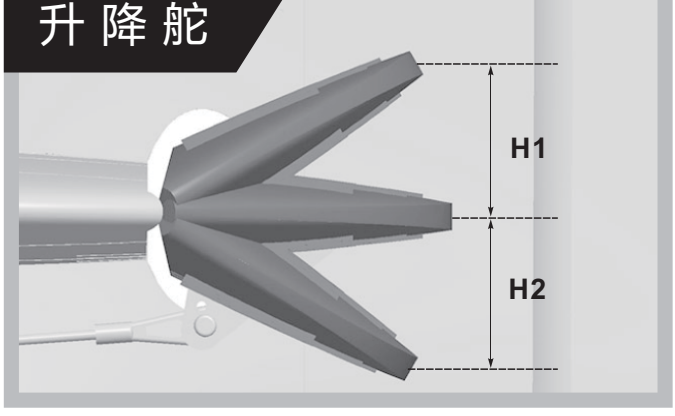
副 翼



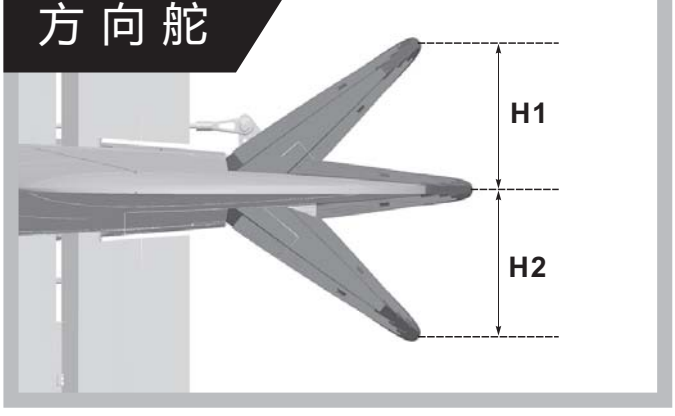
襟 翼



升 降 舵



方 向 舵



	副翼	升降舵	方向舵	襟翼
小舵量	H1/H2 26mm/26mm 舵量比率：80%	H1/H2 20mm/20mm 舵量比率：100%	H1/H2 27mm/27mm 舵量比率：85%	H1 29mm
大舵量	H1/H2 31mm/31mm 舵量比率：100%	H1/H2 20mm/20mm 舵量比率：100%	H1/H2 34mm/34mm 舵量比率：100%	H1 44mm

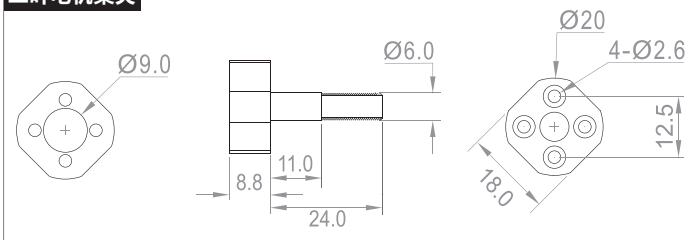
⚠ **飞行注意事项：**放下襟翼飞机会有抬头问题，需要有降舵配平，建议配平的舵量是：小舵量襟翼是14%(3.5mm)的降舵配平，大舵量襟翼是24%（5.5mm）的降舵配平。

天线、机枪安装

电子设备参数介绍及安装

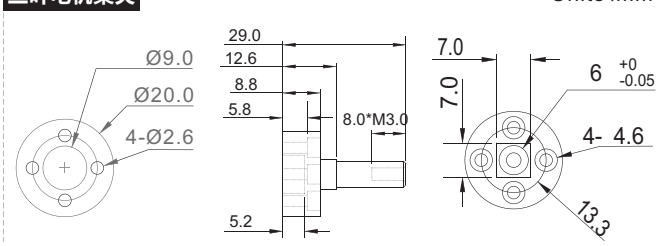
电机参数

二叶电机桨夹

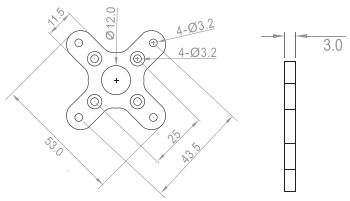


三叶电机桨夹

Units :mm

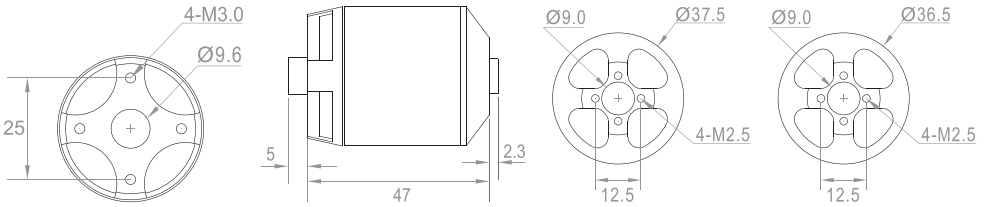


十字架参数



电机参数

Units :mm

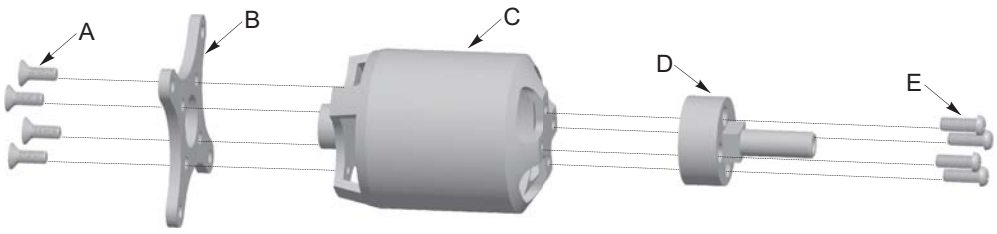


3748-600KV / 3648-880KV **3748-600KV** **3648-880KV**

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	0.02Ω	170	2.3A/10V	4-Blade12×7	⩾60A
MO136484	880RPM/V	14.8	53	2600	0.02Ω	165	2.3A/10V	2-Blade12×8	⩾60A

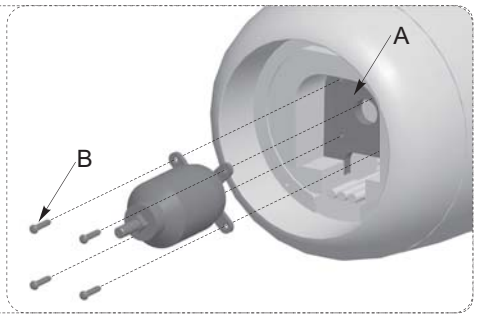
电机安装

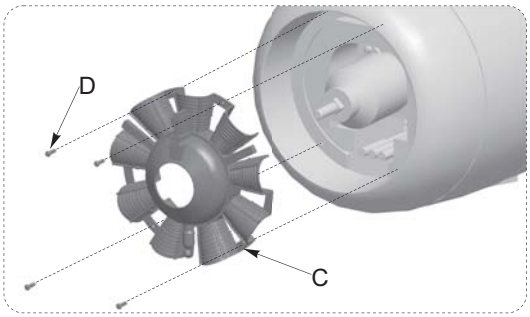
A-螺丝 (KM3x5mm 4pcs)
B-电机固定十字架
C-3748-600KV无刷马达
D-螺旋桨桨夹
E-螺丝 (HM2.5x10mm 4pcs)



电子设备参数介绍及安装

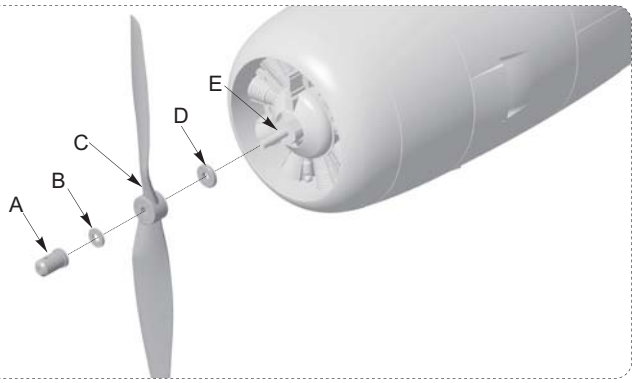
A-电机固定座
B-螺丝 (PA3x12mm 4pcs)
C-仿真引擎塑料件
D-螺丝 (PWA2.3x8mm 4pcs)



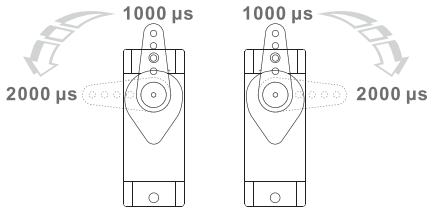


2叶高速版改装套件安装

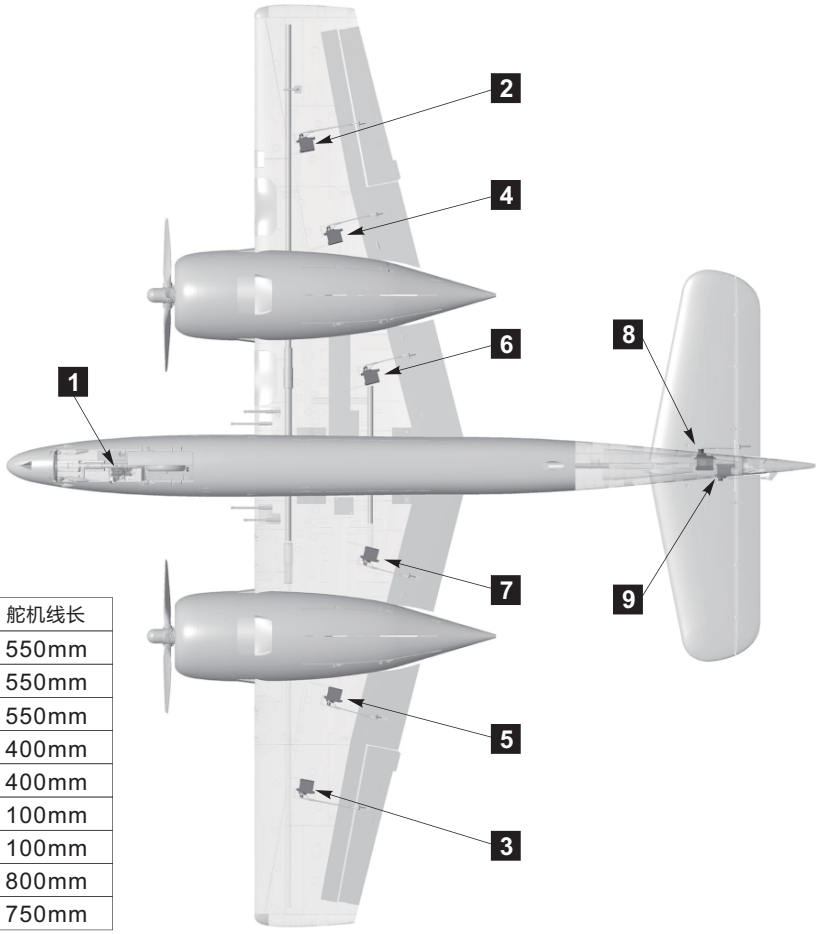
A- 螺旋桨固定栓
B- 垫片
C- 二叶桨 (12x8)
D- 垫片
E- 3648-880KV无刷马达



舵机使用说明



我们的舵机正、反向标准是：
当舵机输入信号从**1000µs**到**2000µs**时，
如果舵机摇臂，
顺时针旋转---正向舵机
逆时针旋转---反向舵机



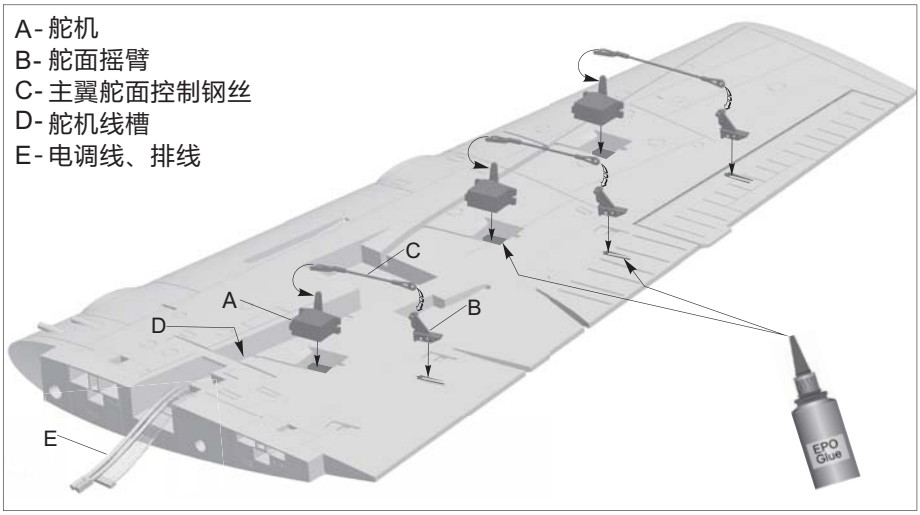
如果您需要选购其它品牌的舵机进行安装，
请参考下面的表格选择正确的舵机

舵机位置	舵机规格	序号	正、反向	舵机线长
前轮转向	17g 数码-金属	1	正向	550mm
副翼	9g 数码-金属	2	正向	550mm
副翼	9g 数码-金属	3	正向	550mm
襟翼	9g 数码-金属	4	**反向**	400mm
襟翼	9g 数码-金属	5	正向	400mm
襟翼	9g 数码-金属	6	**反向**	100mm
襟翼	9g 数码-金属	7	正向	100mm
平尾	17g 数码-金属	8	正向	800mm
垂尾	9g 数码-金属	9	**反向**	750mm

电子设备参数介绍及安装

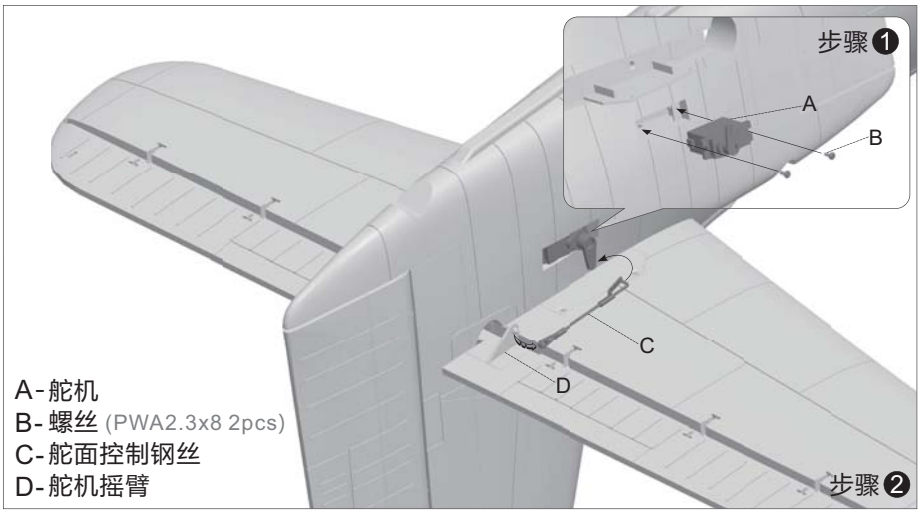
主翼舵机安装

1.通过舵机测试仪或者遥控器，把舵机摇臂校正到居中位置；
2.用胶水分别把舵机和舵面摇臂粘到主翼上；
3.将舵机线卡到舵机线槽内，等所有主翼舵机安装完成，贴上贴纸；
4.钢丝一端穿入到舵机摇臂后，调节钢丝长度，在保持舵面居中的情况下，将夹头扣入舵面摇臂内；
5.重复以上4个步骤，安装襟翼舵机和另外一侧主翼舵机。



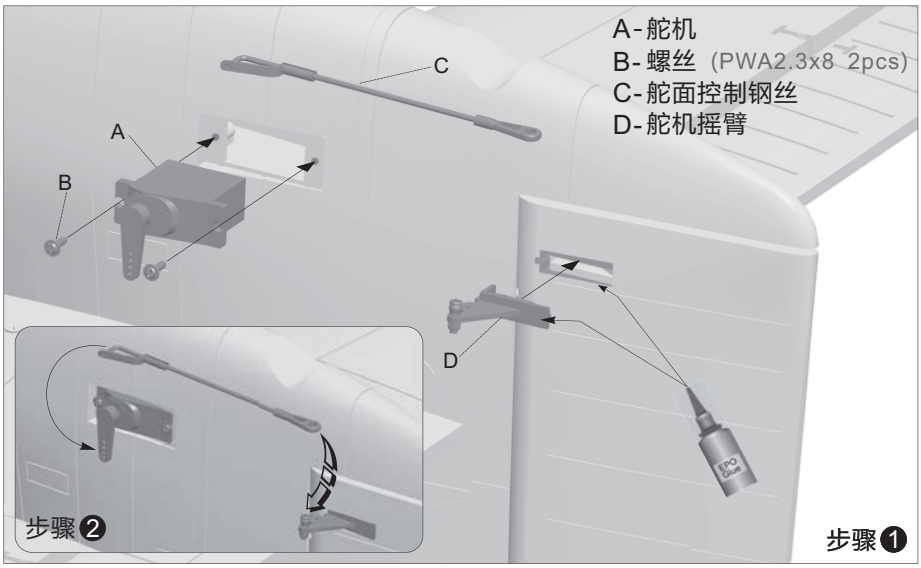
平尾舵机安装

1.通过舵机测试仪或者遥控器，把舵机摇臂校正到居中位置；
2.用2颗螺丝把舵机固定到机身平尾舵机固定座；
3.钢丝一端穿入到舵机摇臂后，调节钢丝长度，在保持舵面居中的情况下，将夹头扣入舵面摇臂内；



垂尾舵机安装

1.通过舵机测试仪或者遥控器，把舵机摇臂校正到居中位置；
2.用2颗螺丝把舵机固定到机身垂尾舵机固定座；
3.将舵面摇臂粘到垂尾上；
4.钢丝一端穿入到舵机摇臂后，调节钢丝长度，在保持舵面居中的情况下，将夹头扣入舵面摇臂内；

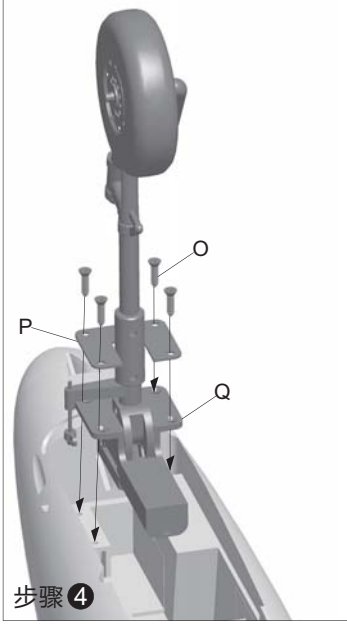


前起落架组装

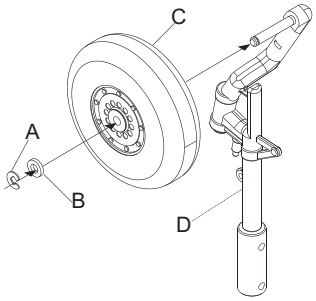
请参考以下图示、组装、更换、维修前起落架

配件名称及规格参数

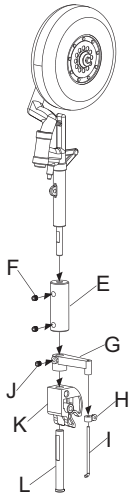
A- E型扣 (M3)
B- 垫片 (Ø8xØ4.2x1mm)
C- 机轮 (Ø68x20mm)
D- 前起落架主撑杆
E- 铝合金转接柱
F- 机米螺丝 (M4x4)
G- L型摇臂
H- 前起落架转向控制环
I - 前起落架转向钢丝
J - 机米螺丝 (M3x3)
K- 金属转轴
L - 前起落架主钢丝
M- 螺丝 (PA1.7x10 4pcs)
N- 螺丝 (PA1.4x12 2pcs)
O- 螺丝 (PWA3x12 4pcs)
P- 起落架加强金属板
Q- 前起落架组件
R- 舵机
S- 螺丝 (PWA2.3x8 2pcs)
T- 前起落架控制钢丝
U- 前起落架随动舱门
V- 随动舱门固定件
W- 螺丝 (PA3x8 4pcs)
Z- 弹簧



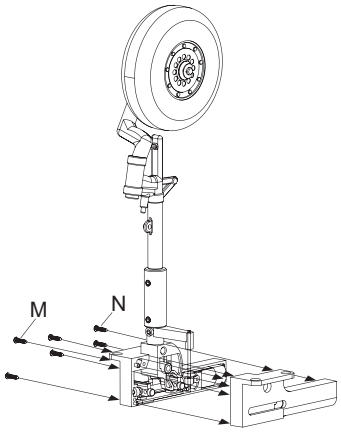
步骤❹



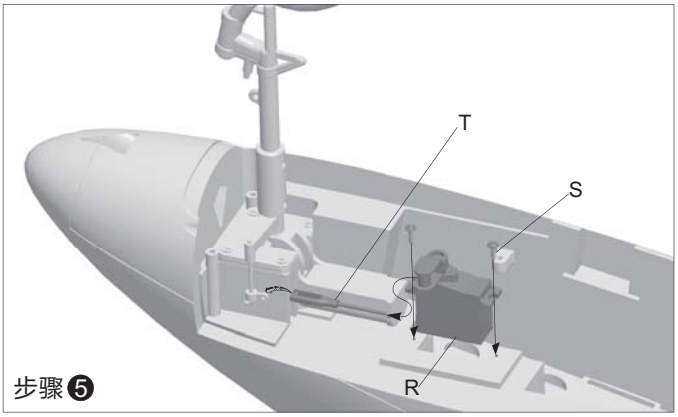
步骤❶



步骤❷



步骤❸



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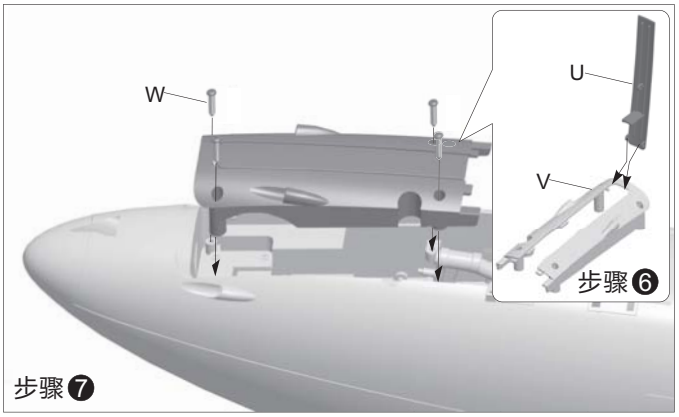


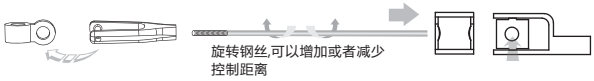
步骤❻
步骤❼

步骤❽

起落架转向控制钢丝尺寸

钢丝直径 Ø1.5mm

转向舵机钢丝安装孔位



⚠ **注意：**在整个起落架组装过程中，所有带扁口的零件，在用螺丝固定时，扁口面必须面向螺丝孔，只有这样，螺丝的固定才是有效的，零件才能不会转动和脱落。

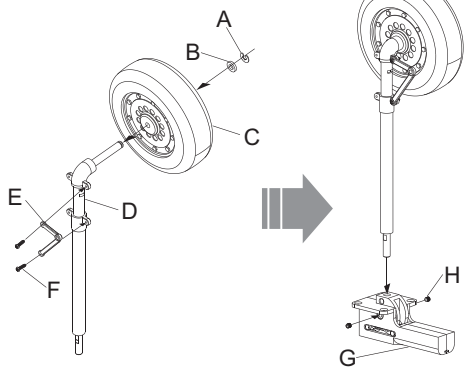
电子设备参数介绍及安装

后起落架组装

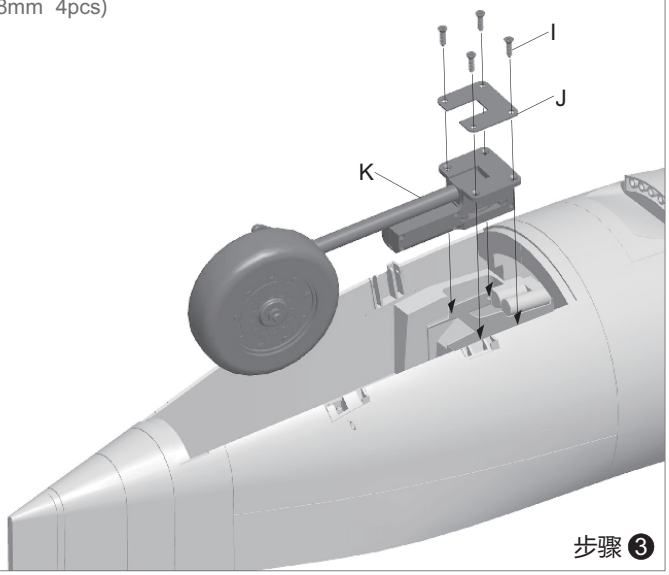
请参考以下图示、组装、更换、维修后起落架

配件名称及规格参数

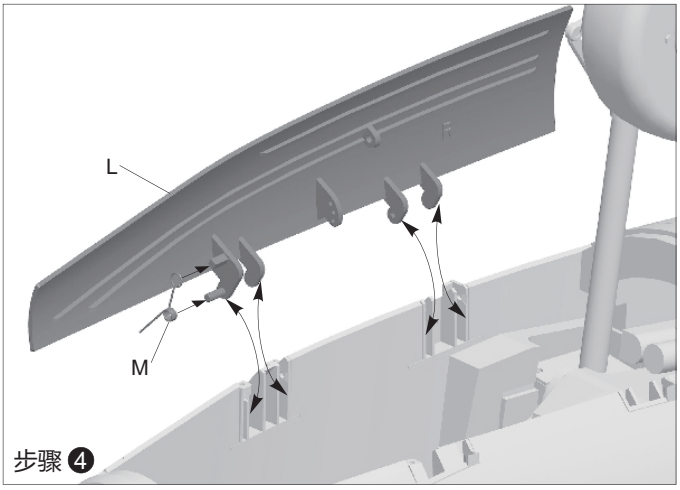
A- E型扣 (M4)
B- 垫片 (Ø10xØ5.2x1mm)
C- 机轮 (Ø85x26mm)
D- 后起落架主撑杆
E- 后起落架装饰件
F- 螺丝 (PWA1.7x5mm 2pcs)
G- 电动起落架控制器
H- 机米螺丝 (M4x3mm 2pcs)
I- 螺丝 (PWA3x12mm 4pcs)
J- 起落架加强金属板
K- 后起落架组件
L- 后起落架舱门
M- 舱门扭簧
N- 螺丝 (PA2.0x8mm 4pcs)
O- 弹簧



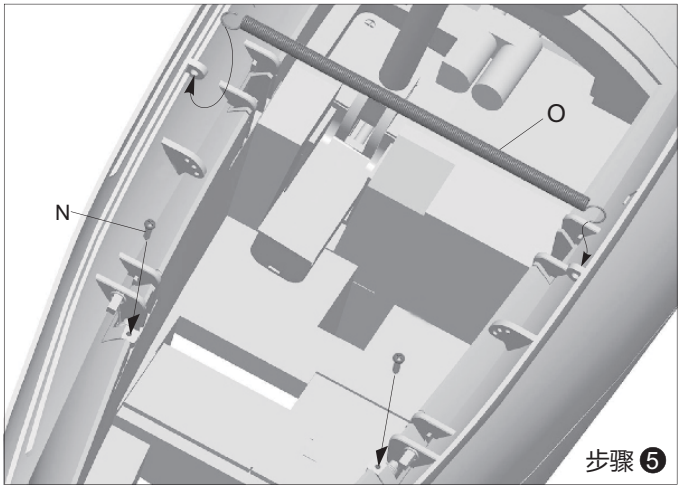
步骤 ❶ 步骤 ❷



步骤 ❸



步骤 ❹



步骤 ❺

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