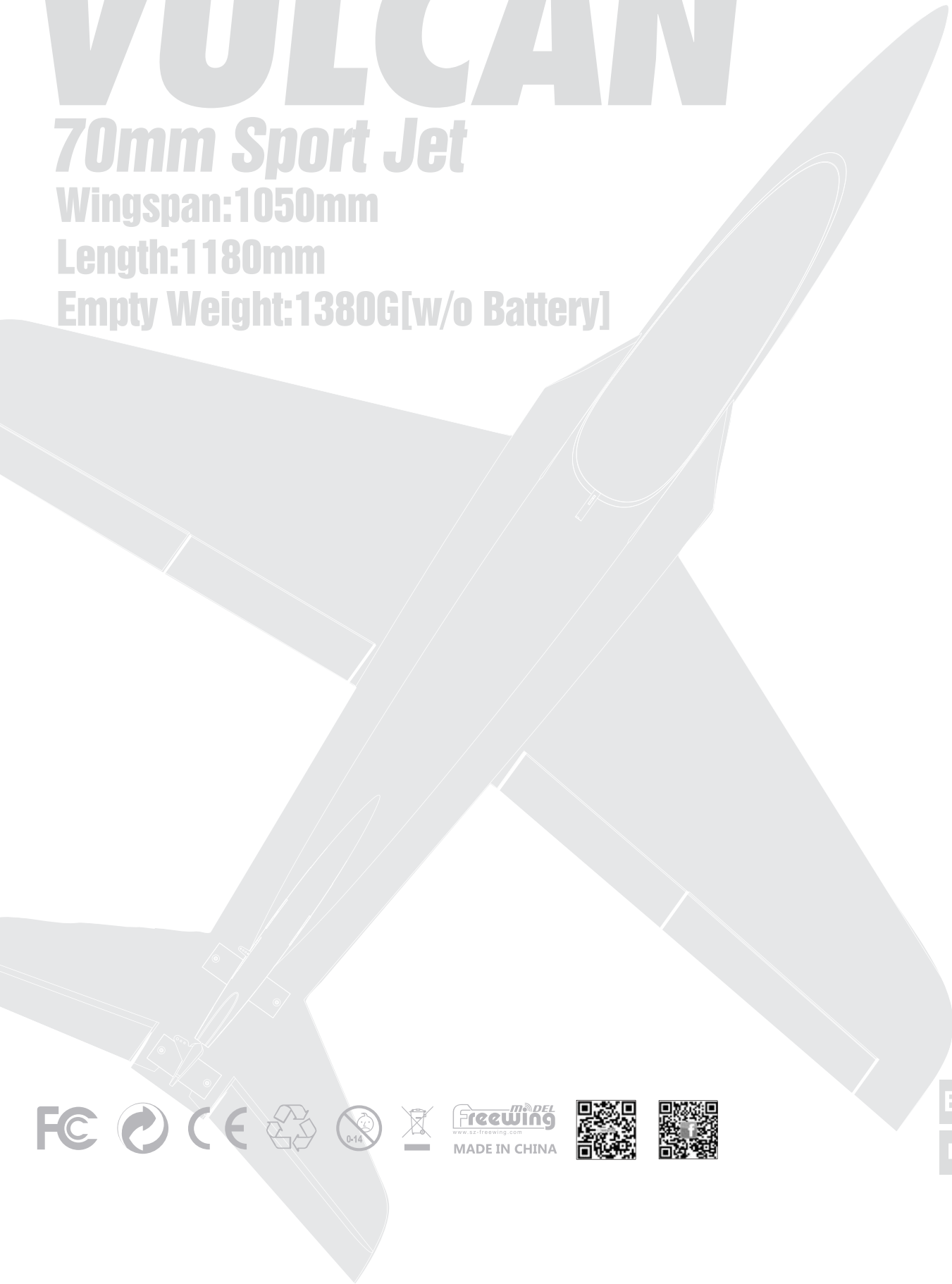
VULCAN

70mm Sport Jet

Wingspan:1050mm

Length:1180mm

Empty Weight:1380G[w/o Battery]



MADE IN CHINA

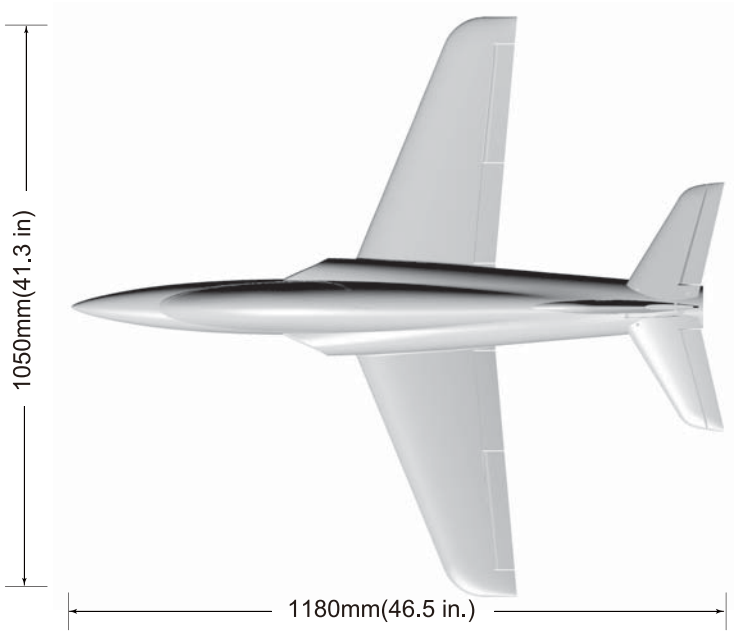
Catalog

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.

⚠ **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.

Product Basic information



⚠ Note: The parameters in here are derived from test result using our accessories. If use other accessories, the test result will be different. Any problem since of using other accessories, we are not able to provide technical support.

Standard Version

6S Version

Wingload：100g/dm²
Wing Area: 20 dm2
Servo: 9g digital hybrid servo (8pcs)
Motor: 2957-2210KV I/R Motor
Ducted fan: 70mm 12-blade fan
ESC: 80A with 5A BEC (1pcs)
Weight: 1550g (w/o Battery)
Li-Po Battery: 6S 3300-4000mAh (1pcs)

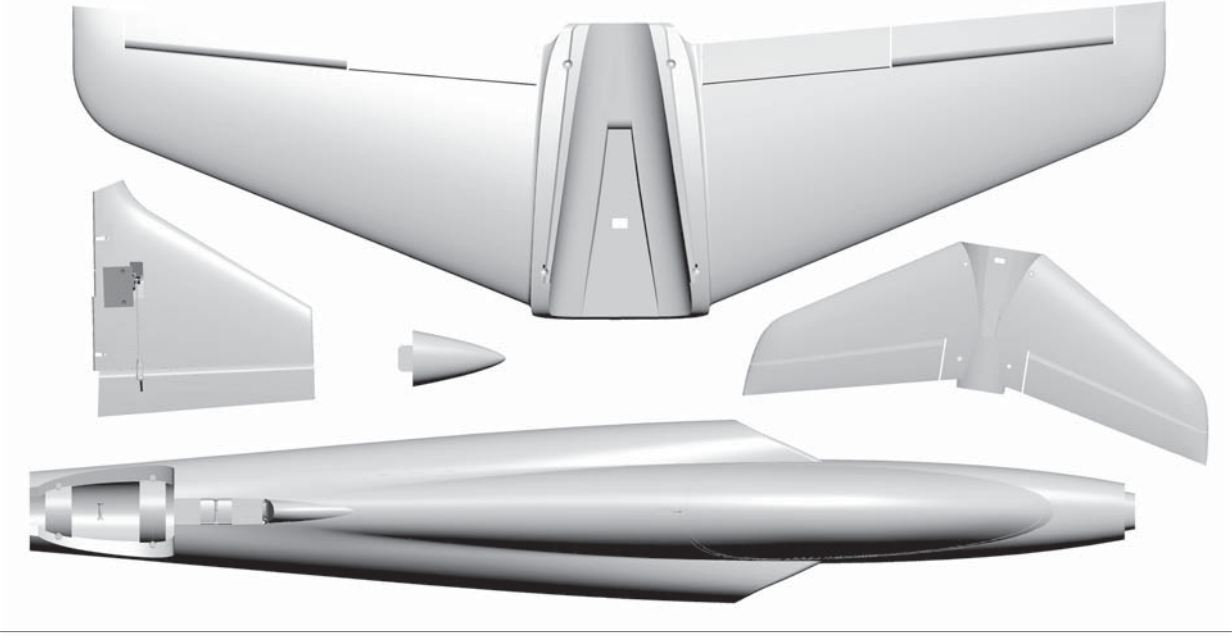
4S Version

Wingload：88g/dm²
Wing Area: 20 dm2
Servo: 9g digital plastic servo (8pcs)
Motor: 2849-2550KV O/R Motor
Ducted fan: 70mm 12-blade fan
ESC: 60A with 5A BEC (1pcs)
Weight: 1380g (w/o Battery)
Li-Po Battery: 4S 3300-4000mAh (1pcs)

Other features

Material：EPO、ABS
Aileron: Yes Flaps: Yes
Elevator: Yes Rudder: Yes
Landing gear: Electric Landing Gear

Package List



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

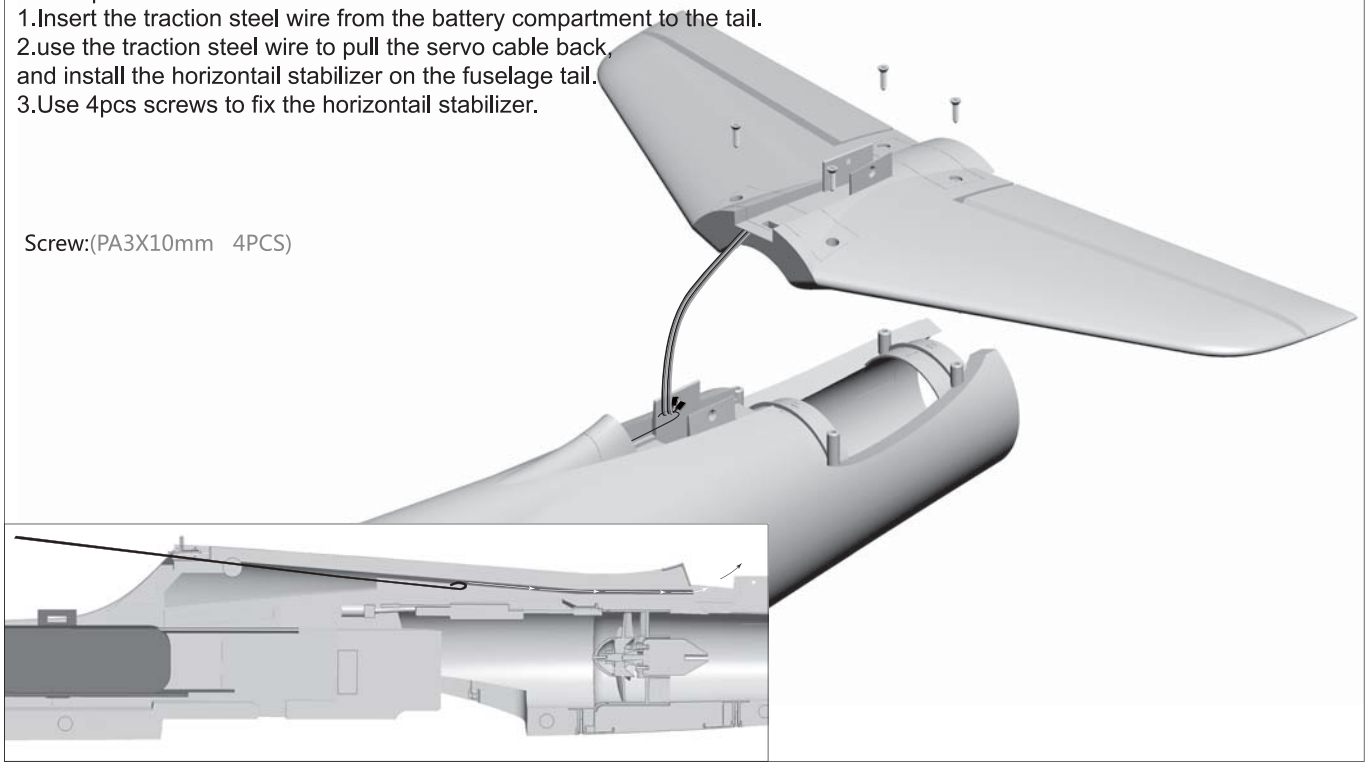
No.	Name	PNP	ARF Plus
1	Fuselage	Pre-installed all electronic parts	Pre-installed servo
2	Main wing	Pre-installed all electronic parts	Pre-installed servo
3	Horizontal tail	Pre-installed all electronic parts	Pre-installed servo
4	Vertical tail	Pre-installed all electronic parts	Pre-installed servo
5	Nose cone	√	√

No.	Name	PNP	ARF Plus
6	Pushrod	√	√
7	Screw bag	√	√
8	Manual	√	√

Install Horizontal Stabilizer

As the photo show :
1.Insert the traction steel wire from the battery compartment to the tail.
2.use the traction steel wire to pull the servo cable back, and install the horizontail stabilizer on the fuselage tail.
3.Use 4pcs screws to fix the horizontail stabilizer.

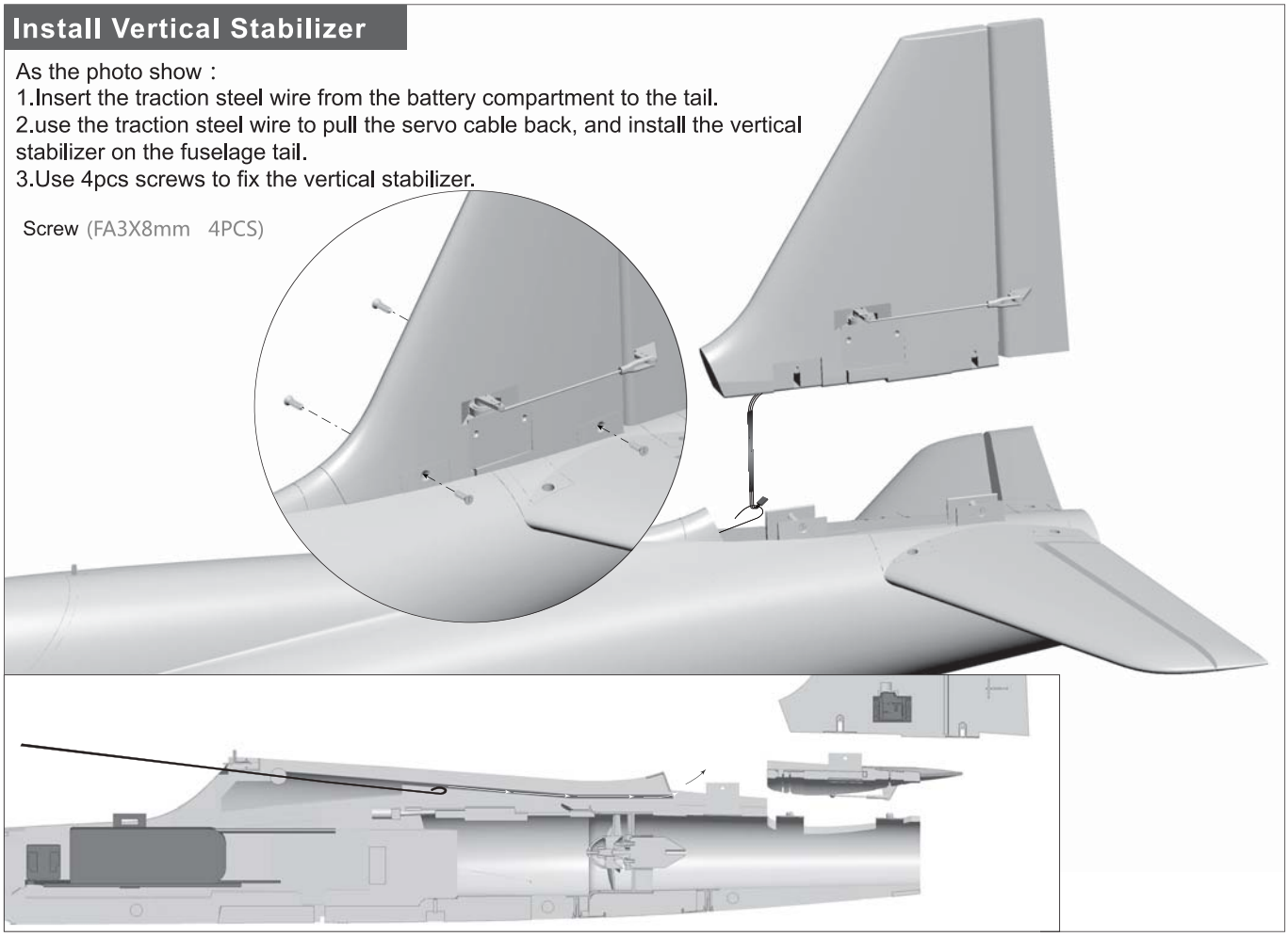
Screw:(PA3X10mm 4PCS)



Install Vertical Stabilizer

As the photo show :
1.Insert the traction steel wire from the battery compartment to the tail.
2.use the traction steel wire to pull the servo cable back, and install the vertical stabilizer on the fuselage tail.
3.Use 4pcs screws to fix the vertical stabilizer.

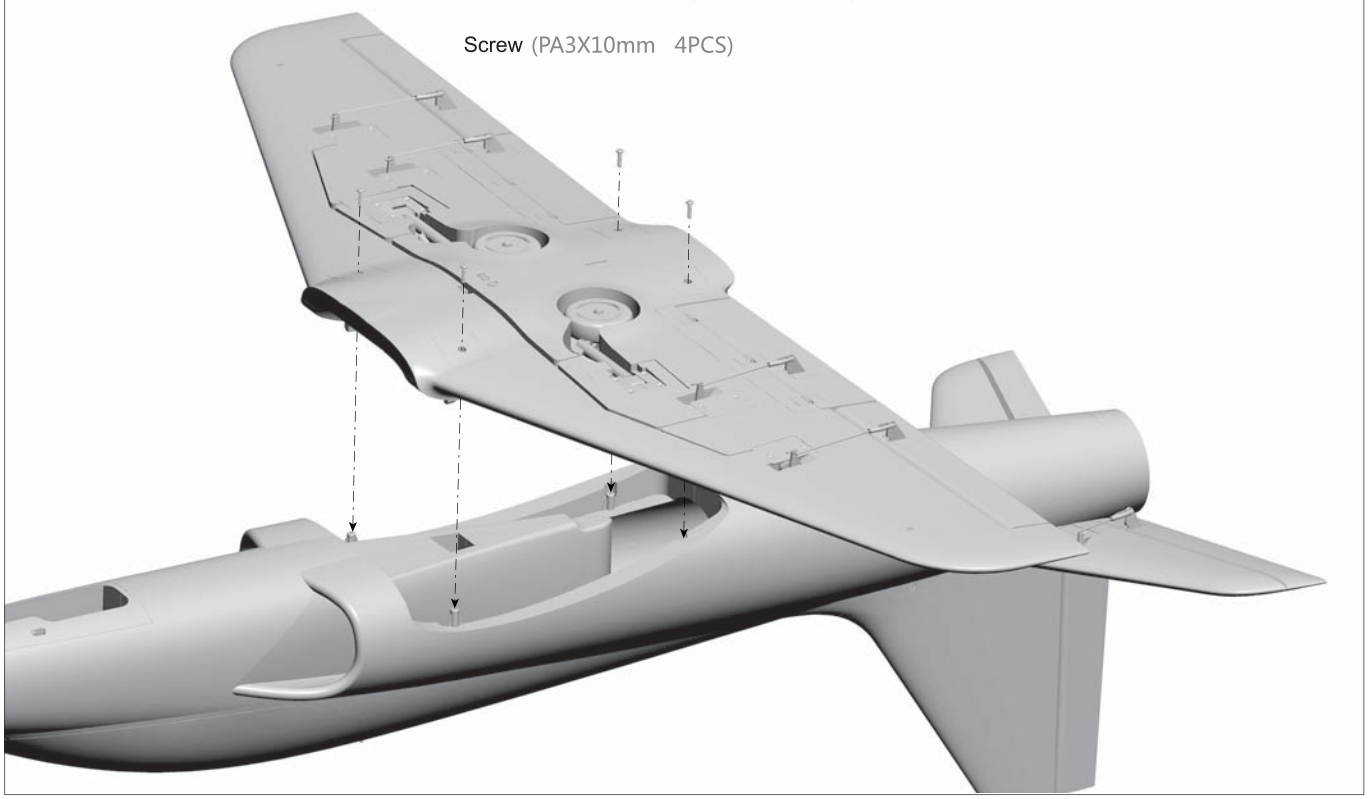
Screw (FA3X8mm 4PCS)



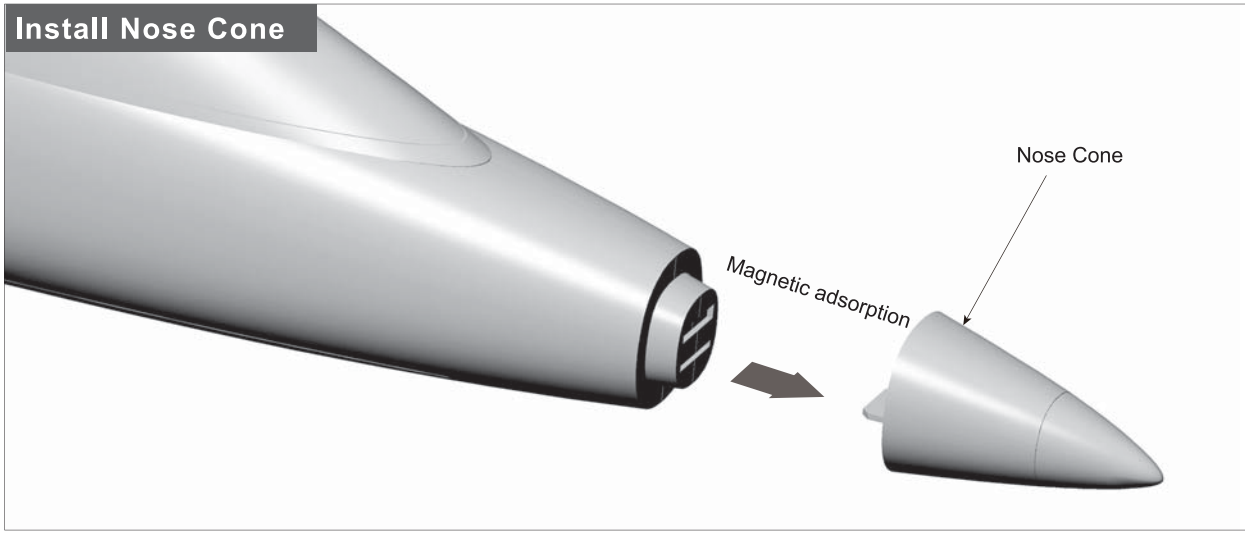
Install Main wing

As the photo show：
1.Install the main wing on the fuselage and use 4pcs screws to fix。

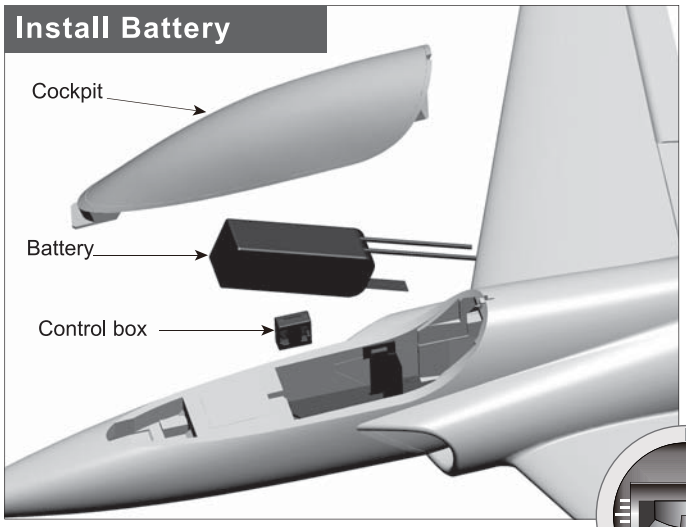
Screw (PA3X10mm 4PCS)

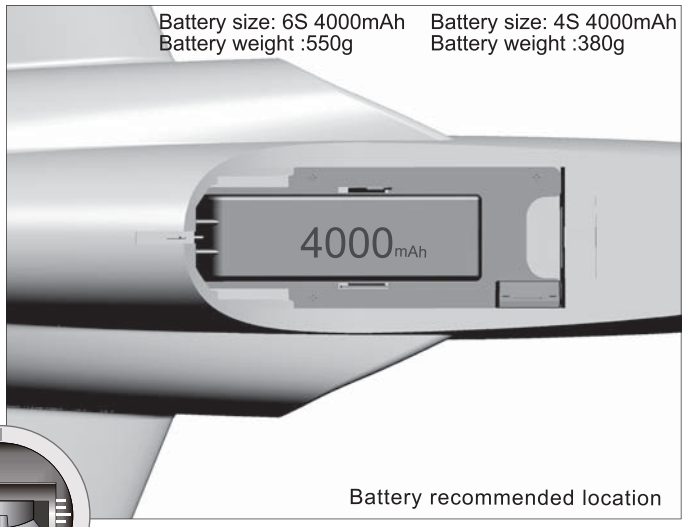


Install Nose Cone



Install Battery





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

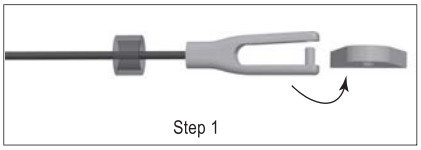
We recommend the following LiPo battery:
4S 14.8V 3300mAh~4S 14.8V 4000mAh
Discharge rate of C ≥ **35C**
6S 22.2V 3300mAh~6S 22.2V 4000mAh
Discharge rate of C ≥ **35C**

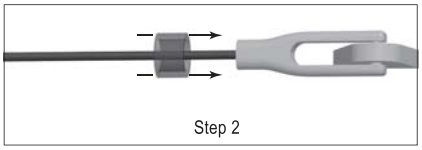
Pushrod instructions

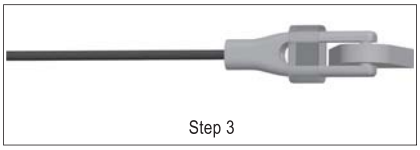
Nose gear steering pushrod length		**Nose gear steering pushrod mounting hole**
55mm (2–3/16″)	Pushrod diameter Ø1.2mm	
Rudder pushrod length		**Rudder pushrod mounting hole**
90mm (3–9/16″)	Pushrod diameter Ø1.2mm	
Aileron pushrod length		**Aileron pushrod mounting hole**
78mm (3″)	Pushrod diameter Ø1.2mm	
Flap pushrod length		**Flap pushrod mounting hole**
67.8mm (2–11/16″)	Pushrod diameter Ø1.2mm	
Elevator pushrod length		**Elevator pushrod mounting hole**
49mm (1–15/16″)	Pushrod diameter Ø1.2mm	

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.


Step 1

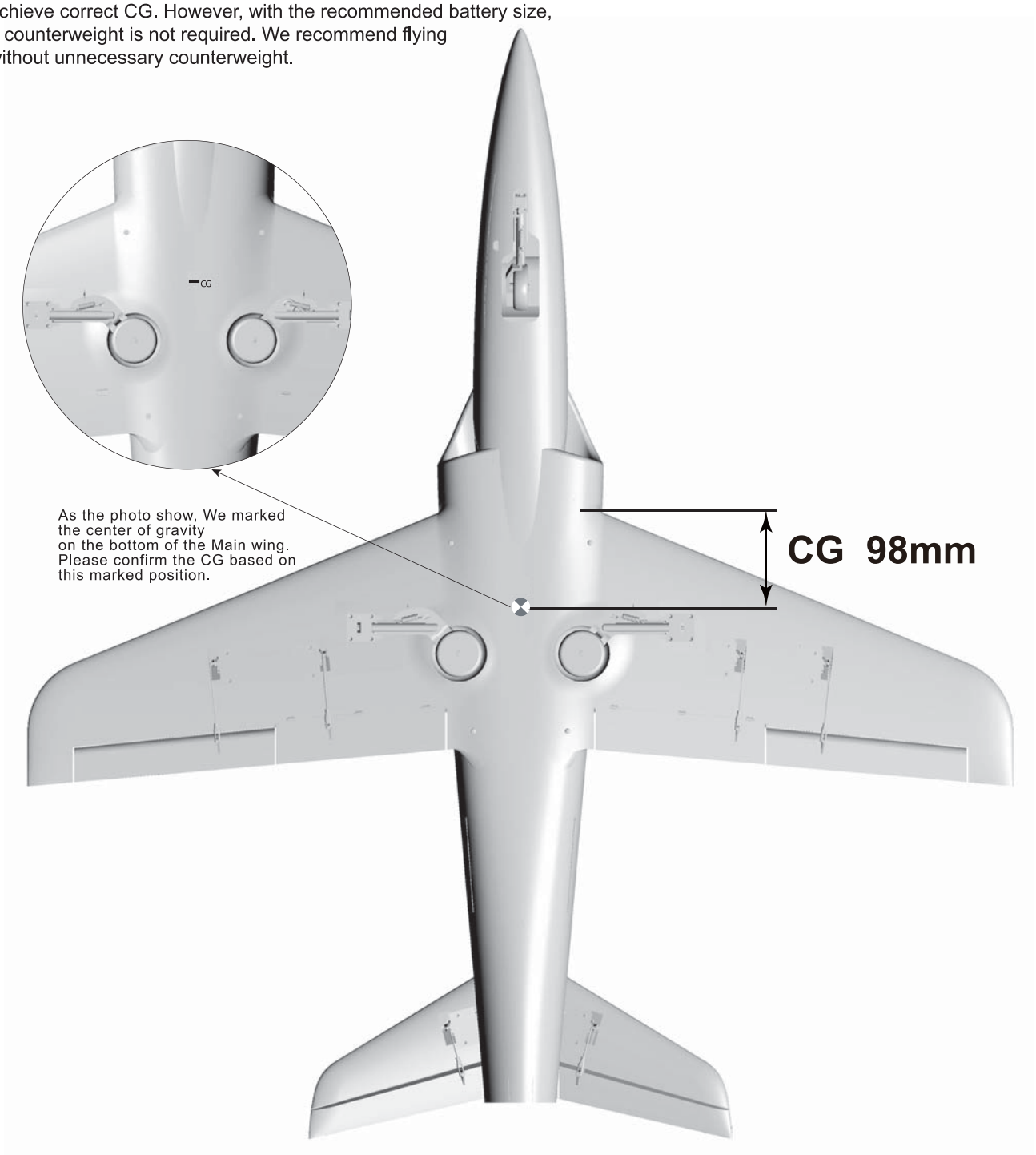

Step 2


Step 3

Center of Gravity

Correct Center of Gravity (”CG”) is critical for enabling safe aircraft stability and responsive control. Please refer to the following CG diagram to adjust your aircraft’s Center of Gravity.

- Depending on the capacity and weight of your choosen flight batteries, move the battery forward or backward to adjust the Center of Gravity.
- If you cannot obtain the recommended CG by moving the battery to a suitable location, you can also install a counterweight to achieve correct CG. However, with the recommended battery size, a counterweight is not required. We recommend flying without unnecessary counterweight.



Control Direction Test

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

Aileron

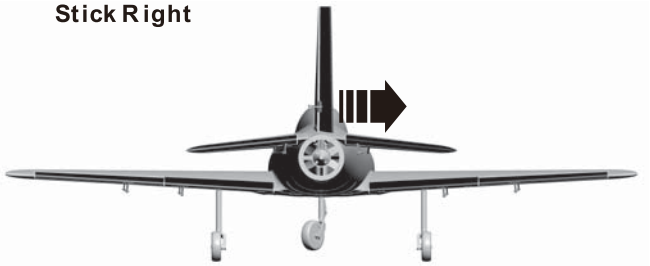
Stick Left

Stick Right

Rudder

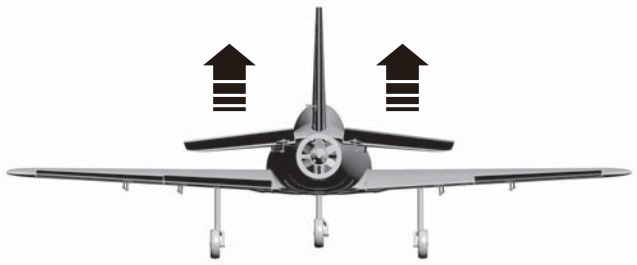
Stick Left

Stick Right

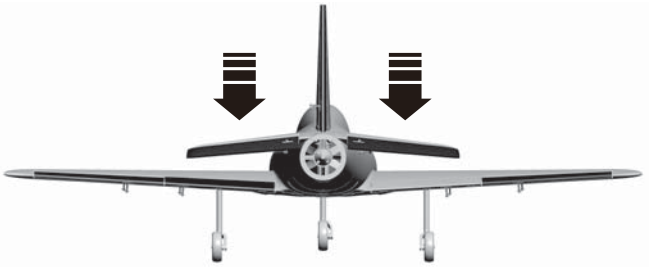


Elevator

Stick down



Stick up

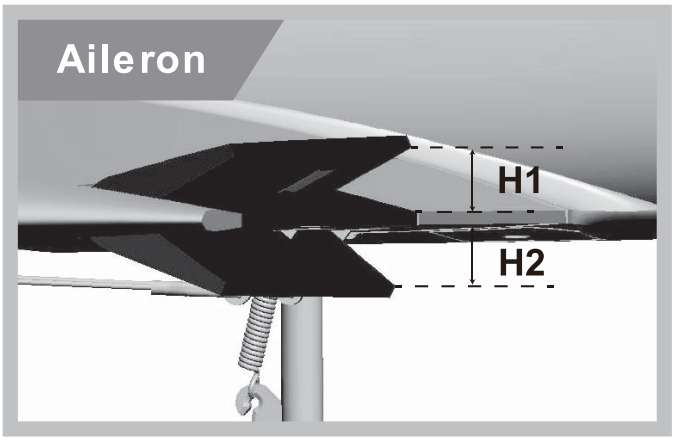


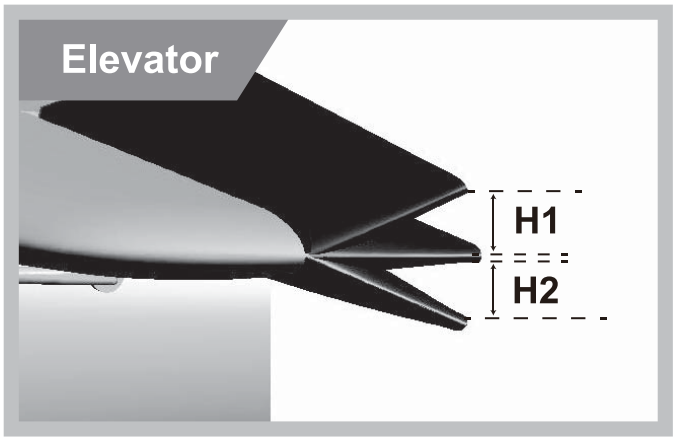
Flaps

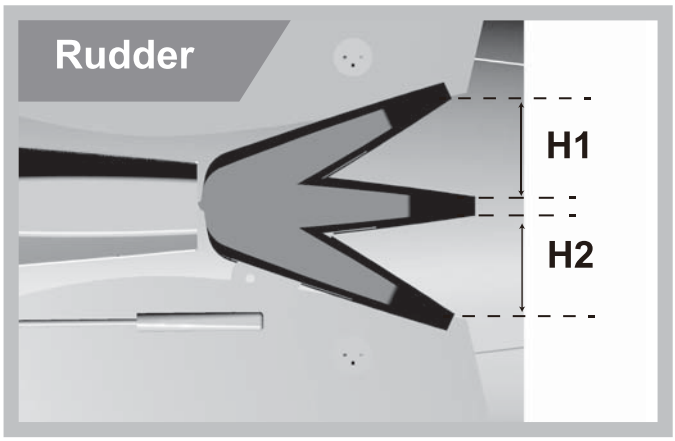
Flaps down

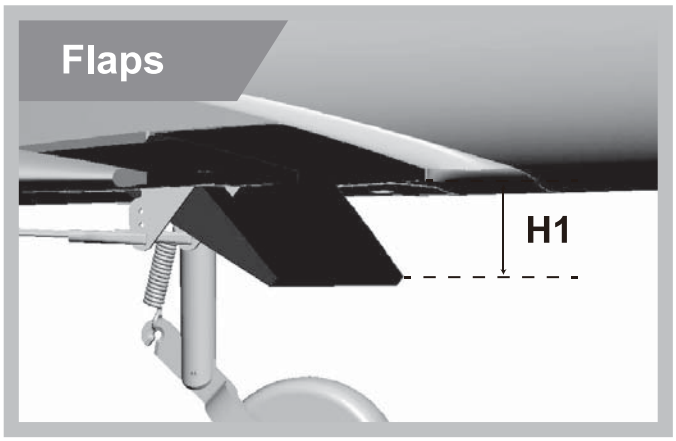
Dual Rates

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









	Aileron (Measured closest to the fuselage)	**Elevator** (Measured closest to the fuselage)	**Rudder** (Measured from the bottom)	**Flaps**
Low Rate	H1/H2 14mm/14mm D/R Rate : 80%	H1/H2 14mm/14mm D/R Rate : 80%	H1/H2 25mm/25mm D/R Rate : 80%	H1 22mm
High Rate	H1/H2 18mm/18mm D/R Rate : 100%	H1/H2 18mm/18mm D/R Rate : 100%	H1/H2 28mm/28mm D/R Rate : 100%	H1 30mm

⚠ Important Flight Notes:

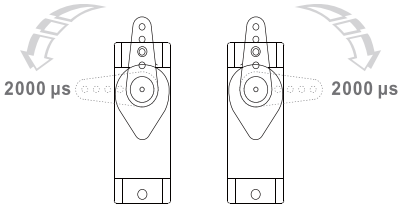
A Flap-to-Elevator Mix is required to maintain level flight when the flaps are deployed.

The detail is as below:

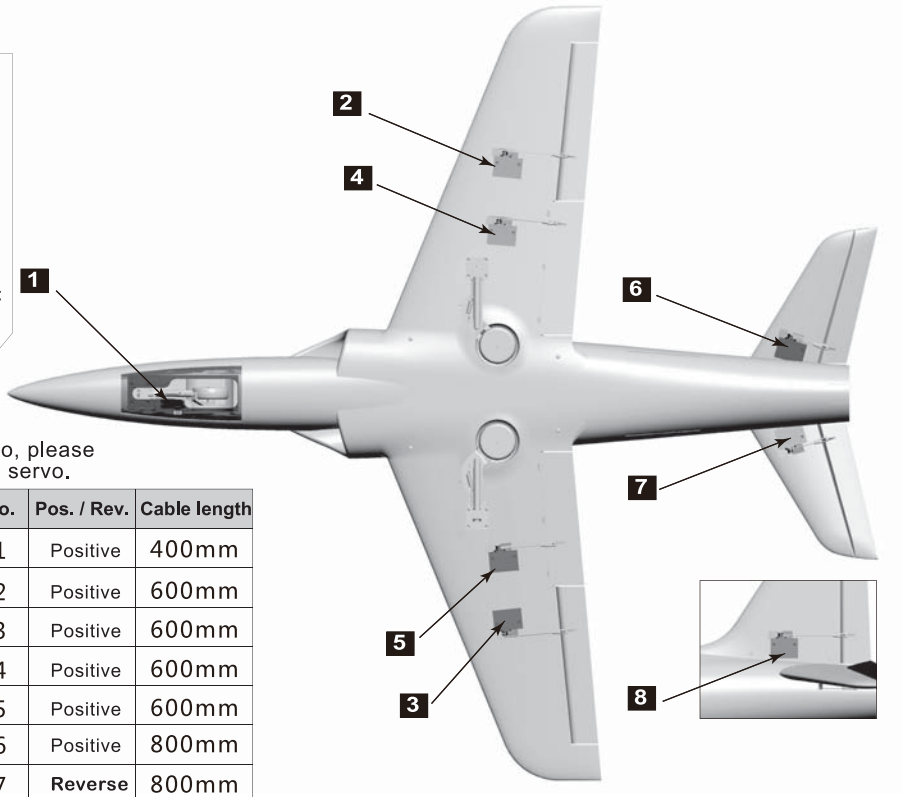
with high rate flaps deployed,mix 2mm of down elevator.
with low rate flaps deployed,mix 1mm of down elevator.

Pre-Installed Component Overview

Servo Direction



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

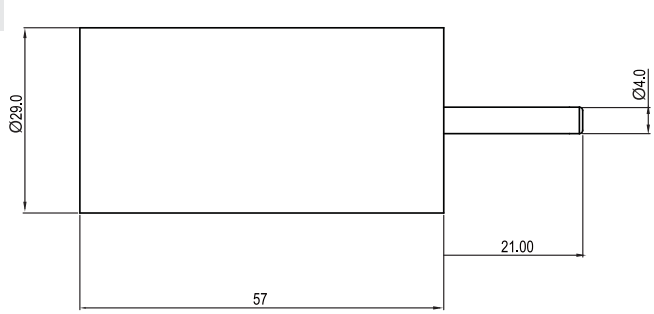


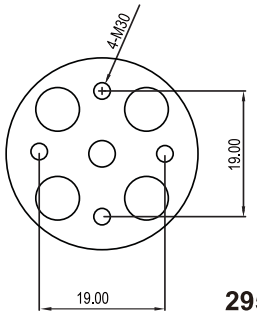
If you need to purchase another brand's servo, please refer to the following list to choose a suitable servo.

Position	Servo regulation	No.	Pos. / Rev.	Cable length
Nose gear steering servo	9g Digital-Hybrid	1	Positive	400mm
Aileron(L)	9g Digital-Hybrid	2	Positive	600mm
Aileron(R)	9g Digital-Hybrid	3	Positive	600mm
Flap(L)	9g Digital-Hybrid	4	Positive	600mm
Flap(R)	9g Digital-Hybrid	5	Positive	600mm
Elevator(L)	9g Digital-Hybrid	6	Positive	800mm
Elevator(R)	9g Digital-Hybrid	7	**Reverse**	800mm
Rudder	9g Digital-Hybrid	8	Positive	600mm

Motor Specification

2957-2210
Item No.:MI029571



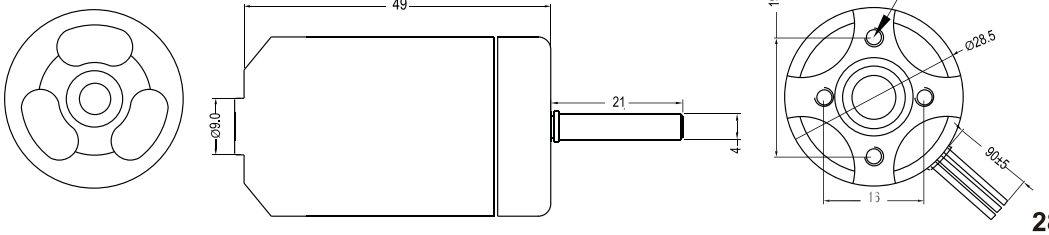


Unit :mm

2957-2210KV

Item No.	EDF Fans	Use voltage (V)	Current(A)	Max power (W)	Thrust(g)	Efficiency (g/w)	Motor(KV)	Use ESC (A)	Weight (g)
E7218	70mm 12-Blade	22.2	70	1550	2600	1.68	2957-2210	80	240

2849-2550
Item No.:MO028493



Unit :mm

2849-2550KV

Item No.	EDF Fans	Use voltage (V)	Current(A)	Max power (W)	Thrust(g)	Efficiency (g/w)	Motor(KV)	Use ESC (A)	Weight (g)
E7215	70mm 12-Blade	14.8	50-55	810	1500-1600	2	2849-2550	60	180

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