

Item No.: F3201(Red)
Item No.: F3202(Orange)

MORAY

INSTRUCTION MANUAL

HIGH-SPEED MODEL PLANE

WINGSPAN : 800mm (31-1/2")



- The manual suit for every color scheme of Freewing Moray.
- The manual only choose one color scheme as an example.
- The manual is only for reference. All is according to the actual product .We can't note if any improvement or upgrade.
- Spareparts support , please visit www.sz-freewing.com to search.

Version No.: F3201-V01

FC CE  
MADE IN CHINA

Catalogue

- 1 Product Introduction
- 5 Assemble Instruction
- 9 Operating instruction of Radio Control
- 10 Center of Gravity
- 11 Assemble Structure
- 12 Motor Specification

- 3 产品介绍
- 5 组装说明
- 9 遥控器设定
- 10 飞机重心
- 11 组装结构图
- 12 电机参数

Welcome to purchase our new racer beginner airplane "Moray". Parts of player want to fly high speed racer, but if fly racer directly, it will bring a lot of operating pressure. We designed "Moray", since parts of player requires a high performance ,low cost foam racer as a transition.

The plane use EPO material and add the carbon material to strengthen local part. It can withstand the speed of 95 Mile/h. Moray has good flight characteristics, it's an idea plane for racer beginners.

As a racer beginner airplane, we have simplified the Moray configuration, only reserved the aileron ,elevator, throttle and canceled the rudder. The same as before, fuselage use the modular design ,only few minutes ,you can complete the assembly.

The following is our basic specification.

Specification	
Material	EPO
Fuselage length	670mm (24-1/2")
Wingspan	800mm (32-1/16")
Flight weight	650g (12.16 oz.)
Pull	1400g (20.45 oz.)
Motor size	3040-1400KV
Prop size	2-Bladed 7*6E
Battery	4S 14.8V 1600mAh 20C
ESC	40A ESC
Servo	9g servo (2pcs)
Landing gear	Hand launch, No landing gear
Aileron	YES
Elevator	YES
Rudder	NO
Throttle	YES

According to different demands, we provide RTF(no transmitter and receiver), ARF(no transmitter, receiver ,battery and charger),Airframe only, the three equipment for your choose. Please refer to the following list to take an inventory and make sure it is complete.

Note:1. Picture use ARF version for your reference.

2. ○ refer to RTF version △ refer to ARF version ● refer to Airframe version

EPO Foam Fuselage	○ △ ●
Motor	○ △
ESC	○ △
Servo	○ △
Battery	○
Charger	○
Spare Parts Bag	○ △ ●
Manual	○ △ ●



Accessory Bag Content List

(RTF\ARF)

Spare Parts Bag

No.	Name	Specification	Qty.
1	Screw Driver Handle	/	1
2	Screw Driver Head	/	1
3	Screw Driver Head	/	1
4	Screw	PA3*10mm	3
5	Screw	PWA2.0*8mm	2
6	Clips	∅1.0mm	2
7	Wing fixing plastic part 1	/	1
8	Wing fixing plastic part 2	/	1
9	Velcro	20*60mm	1

(Airframe Only)

Spare Parts Bag 1

No.	Name	Specification	Qty.
1	Screw Driver Handle	/	1
2	Screw Driver Head	/	1
3	Screw Driver Head	/	1
4	Screw	PA3*10mm	7
5	Screw	PWA2.0*8mm	2
6	Screw	PA2.3*8mm	2
7	Clips	∅1.0mm	2
8	Velcro	20*60mm	1
9	Wing servo metal wire	L=32mm ; ∅1.0mm	2

Spare Parts Bag 2

No.	Name	Specification	Qty.
1	Propeller	2-Bladed 7*6E	1
2	Propeller Located Ring	/	1
3	Nose Cone	/	1
4	Propeller Fixed Disk	/	1
5	Wing fixing plastic part 1	/	1
6	Wing fixing plastic part 2	/	1

Note:

- 1.This is not a toy .It is for experienced modelers only. You are responsible for the safeoperation of this model and any damage of harm it may cause.
- 2.Before flying the Moray(海鳗for the first time .Please read through the instructions carefully and make sure that your radio equipment is working properly and has been range tested prior to flight.
- 3.Young people under the age of 14 should only be permitted to operate this model under the instruction and supervision of and adult with modeling experience.
- 4.Please keep these instructions for future reference after completing model assembly.They contain information critical to the safe operation of this model.
- 5.If you have any further questions regarding the safe operation of you RC model.pleasecontact your local hobby shop .flying club or Freewing Model for professional help and advice.

非常高兴您选择我们的入门级竞速机“海鳗 (Moray)”。对于很多第一次想体验高速飞行感觉的玩家来说，直接迈入高速飞行阶段会带来很大的操作压力。我们之所以设计海鳗，因为这部份玩家需要一款性能优异、价格低廉的泡沫飞机做为过渡。

这款飞机模型采用EPO材料制作，同时加入碳纤材料进行局部加强。能够承受150km/h左右的时速。海鳗拥有良好的操控性能，非常适合于竞速机的入门级玩家。

作为一款入门级的竞速机，我们简化了海鳗了的配置，仅保留副翼、升降舵、油门这三个通道，取消方向舵。但这些丝毫不会影响它优秀的飞行性能。机身结构，我们还是一如既往的采取模块化设计。您仅需要花费几分钟，即可完成飞机的组装工作。

以下是这款飞机的一些基本参数：

规格参数	
材料	EPO
机身长度	670mm (24-1/2")
翼展	800mm (32-1/16")
起飞重量	650g (12.16 oz.)
推力	1400g (20.45 oz.)
电机尺寸	3040-1400KV
桨叶尺寸	2-Bladed 7*6E
电池	4S 14.8V 1600mAh 20C
电调	40A ESC
舵机	9g servo (2pcs)
起落架	Hand launch, No landing gear
副翼	YES
平尾	YES
方向	NO
油门	YES

根据每位消费者不同的需求，我们分别提供整机（无发射机、接收机）、ARF（不含发射机、接收机、电池、充电器）、空机二种不同的配置方案供大家选择。请参考下列清配置清单和图片来核对产品的完整性。

注：1. 图片采用ARF配置做为参考。

2. ○符号代表整机配置 △符号代表ARF配置 ●符号代表空机配置

EPO泡沫机身套件	○ △ ●
电机	○ △
电调	○ △
舵机	○ △
电池	○
充电器	○
零件包	○
说明书	○ △ ●



附件包内容列表

附件包(整机、ARF)

零件包

序号	品名	规格	数量
1	螺丝刀手柄	/	1
2	钢丝刀头	/	1
3	钢丝刀头	/	1
4	螺丝	PA3*10mm	3
5	螺丝	PWA2.0*8mm	2
6	夹头	内径 \varnothing 1.0mm	2
7	翼身前锁件	/	1
8	翼身前锁件	/	1
9	魔术贴	20*60mm背胶	1

附件包(空机)

零件包 1

序号	品名	规格	数量
1	螺丝刀手柄	/	1
2	钢丝刀头	/	1
3	钢丝刀头	/	1
4	螺丝	PA3*10mm	7
5	螺丝	PWA2.0*8mm	2
6	螺丝	PA2.3*8mm	2
7	夹头	内径 \varnothing 1.0mm	2
8	魔术贴	20*60mm背胶	1
9	主翼舵机钢丝	L=32mm; \varnothing 1.0mm	2

零件包 2

序号	品名	规格	数量
1	螺旋桨	二叶桨 7*6E	1
2	螺旋桨定位圈	/	1
3	整流罩	/	1
4	螺旋桨固定盘	/	1
5	翼身前锁件	/	1
6	翼身前锁件	/	1

Install

Note:

1. When install, please read the manual carefully. if you have any questions, kindly contact with your distributor, or contact us on freewing@sz-freewing.com
2. Before install, please refer to P11, check the screw position.
3. Spareparts support, please visit www.sz-freewing.com to search.

组装部份

提示:

1. 组装过程中, 请仔细对照说明书, 如有任何疑问, 可以联系您购买产品的经销商, 或者联系我们公司邮箱 freewing@sz-freewing.com 来寻求帮助。
2. 组装过程中, 请参考第11页, 查看螺丝正确的应用位置。
3. 配件支持, 请登陆我们公司的网址 www.sz-freewing.com 进行查询。

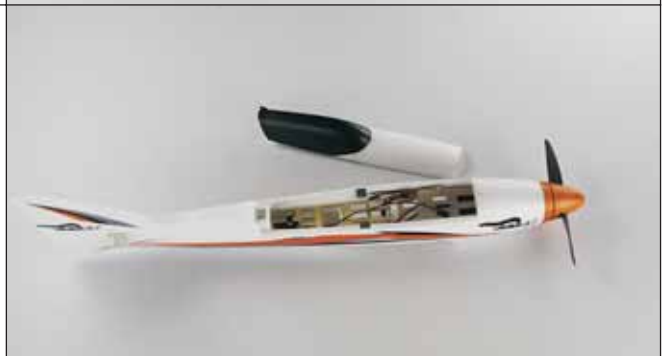
-Prepare to install main wing as the right photo shown.

-如右图所示, 准备安装主翼.



-Remove canopy.

-取下座舱罩.



-Press the main wing on the fuselage, and put the wires in order.

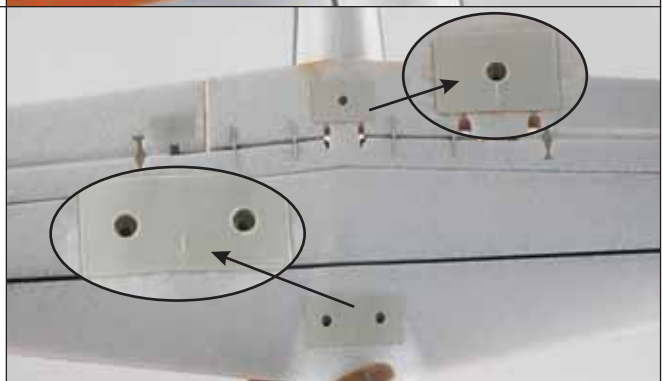
-将主翼扣在机身上. 并整理好副翼舵机线.

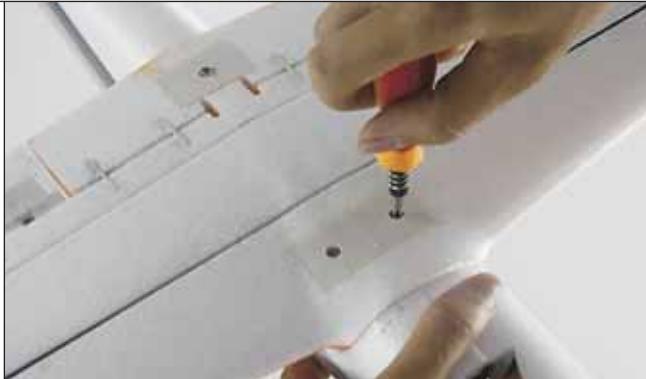

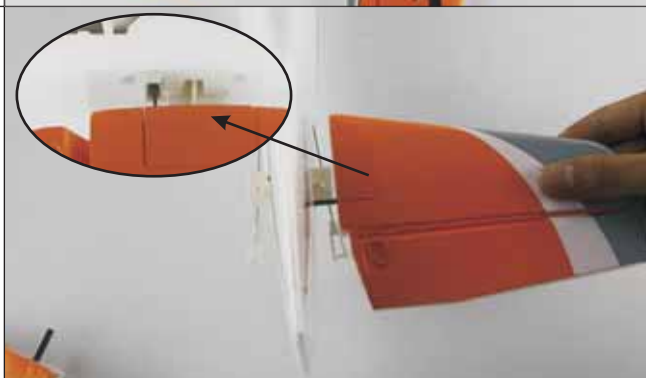
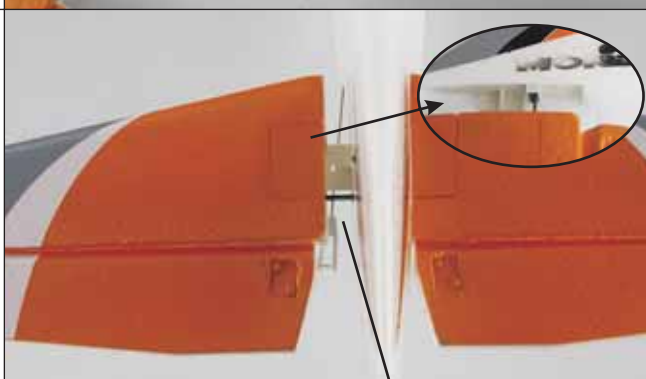
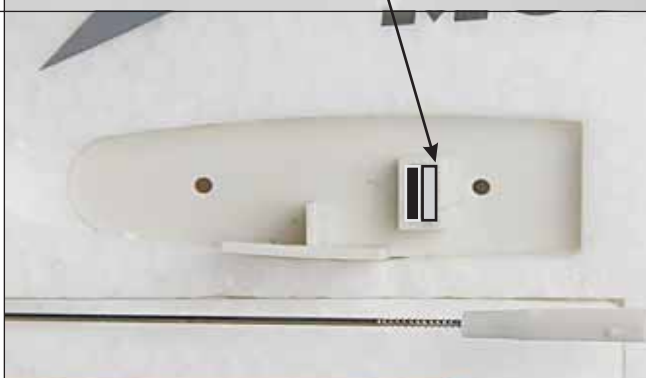




-Wing fixing plastic part.

Attention: Make sure the install direction, arrow direction is nose direction.

-安装翼身锁件.
注意: 安装时确认好方向, 箭头方向为机头方向.



<p>-Fix the main wing by screws.</p> <p>-用螺丝固定主翼.</p>	
<p>-Prepare to install elevator as the right photo shown.</p> <p>-如右图所示,准备安装平尾.</p>	
<p>-Press the right elevator on the rudder.</p> <p>-首先将右平尾插入垂尾中.</p>	
<p>-Press the left elevator on the rudder as the right photo shown.</p> <p>-如右图所示,然后将左平尾插入到垂尾中.</p>	
<p>-When insert to left elevator, left elevator carbon piece should be on the back of right-elevator carbon piece.</p> <p>-当插入左平尾时,左平尾碳纤维片应处于右平尾碳纤维片后面.</p>	

<p>-Fix the right/left elevator by screws.</p> <p>-然后用螺丝固定左右平尾.</p>	
<p>-Install well as the right photo shown.</p> <p>-安装完后效果如右图所示.</p>	
<p>-Finish to install, prepare to trim the plane.</p> <p>-到此为止, 飞机组装完成. 准备调试飞机.</p>	
<p>-Insert the three channels to receiver and power on.</p> <p>-将各个通道插入接收机, 并通电.</p>	
<p>-Adjust the elevator metal wire by screw.</p> <p>-通过此处紧固螺丝调节平尾钢丝.</p>	

-Make sure the elevator centered, fastening screws and press the chuck on the elevator arm.

-确认平尾居中情况下的钢丝长度后, 紧固螺丝, 将钢丝夹头扣入舵面遥臂内。



-At the same time, we adjust the metal wire to center the aileron.

-同样, 我们通过调节钢丝, 调平主翼副翼。



-Before fly, battery and receiver position is as the right photo shown. Meanwhile, we must adjust Center of Gravity according to the P10 CG photo.

-飞行前, 座舱内电池, 接收机位置如右图所示。

注意:
我们必须根据第10页重心位置图调整飞机的重心。

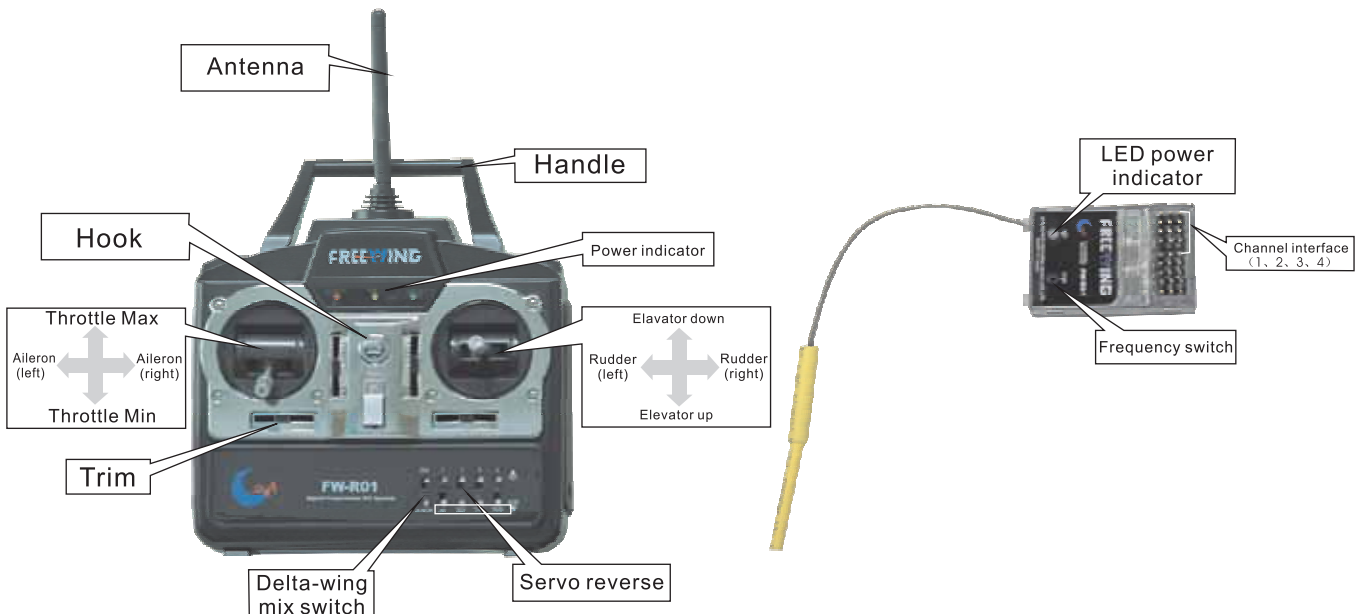


Operating instruction of Radio Control

1. Radio control include the transmitter and receiver.



2. Radio control function introduction.



3.2.4G Radio control frequency method.

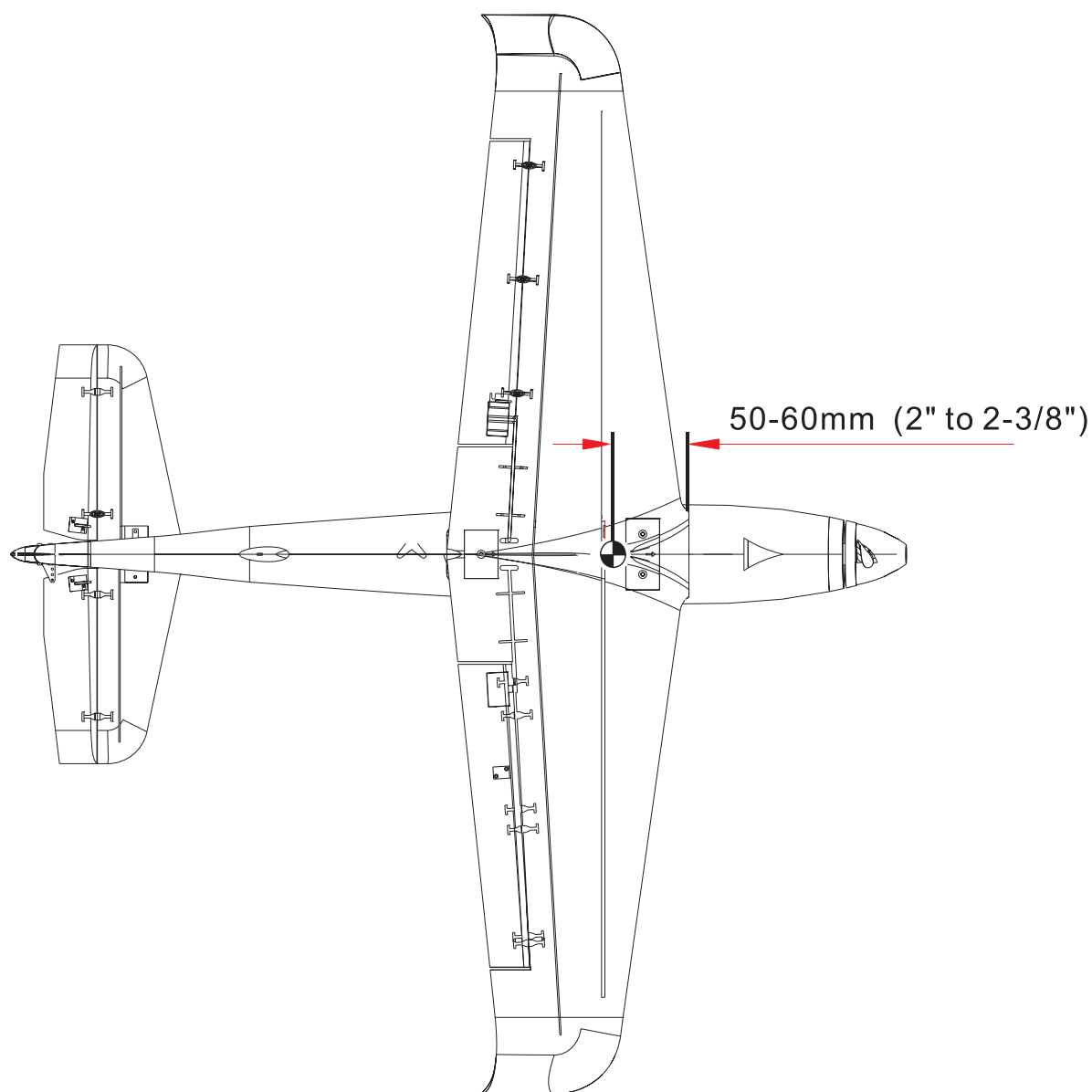
Note: the radio control has been established on the frequency treatment in factory, could use directly. In exceptional case, it need re-adjust frequency, please set as following:

- Press on the receiver frequency switch,
- While press on the receiver frequency switch, the receiver power on.
(Now, the receiver frequency signal light should be continue flashing.)
- Turn on the transmitter power switch
(Now, in transmitter panel, red light, yellow light, green light will be continue flashing)
- Stop to press on the receiver frequency switch
- After the success of the frequency, the receiver frequency signal light is on, not flashing.
The transmitter signal light is on, not flashing, it transformed to battery signal light

Center of Gravity

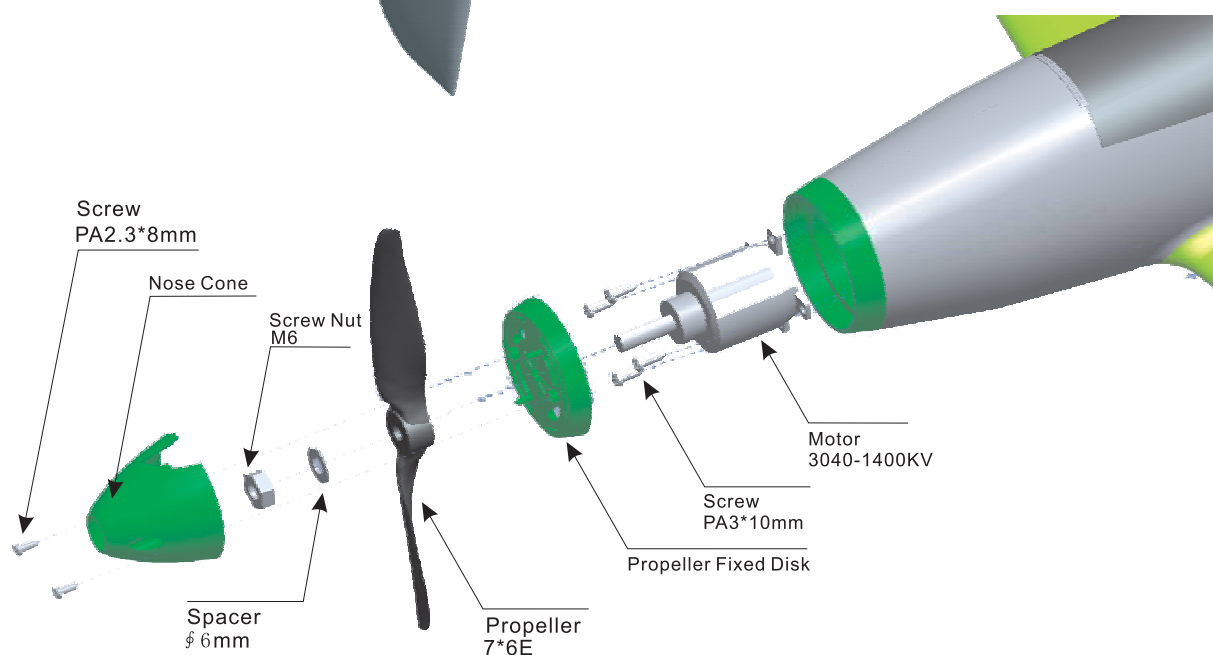
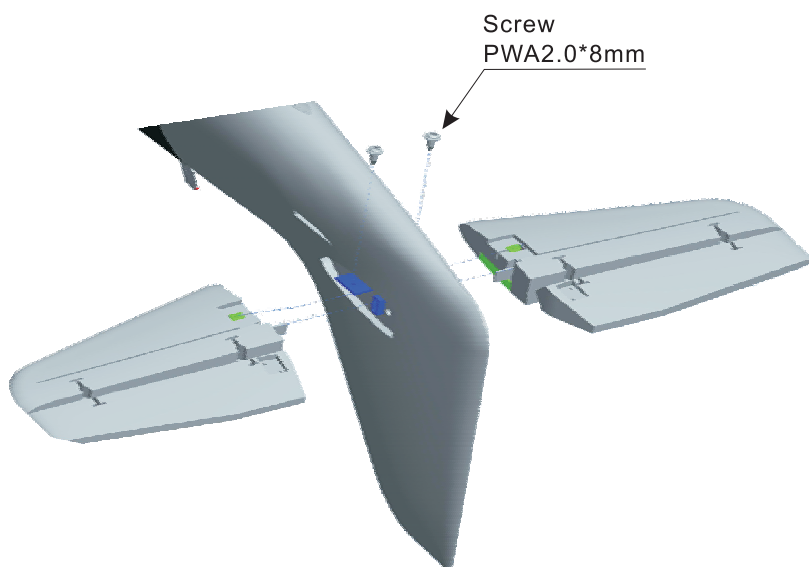
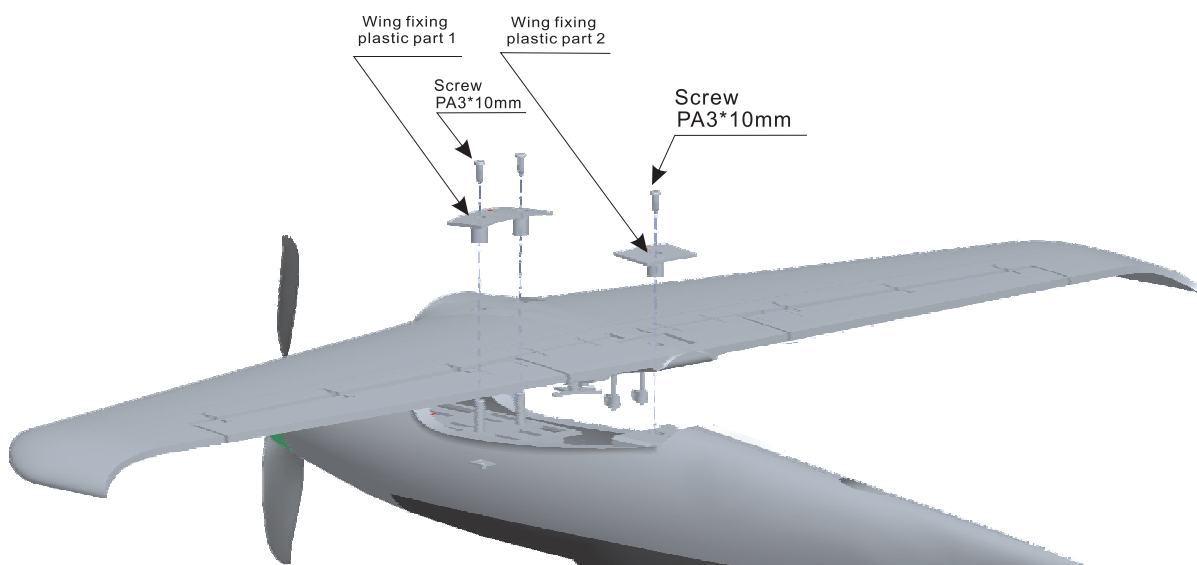
Check the aircraft center of gravity ,wrong center of gravity will lead to failure fly.
(Please refer to the following photo to check CG.)

我们在飞行前需要确认飞机的重心位置，错误的重心位置可能会导致您的飞行失败。
(请参考下列图片所标示的重心位来调整飞机的重心。)



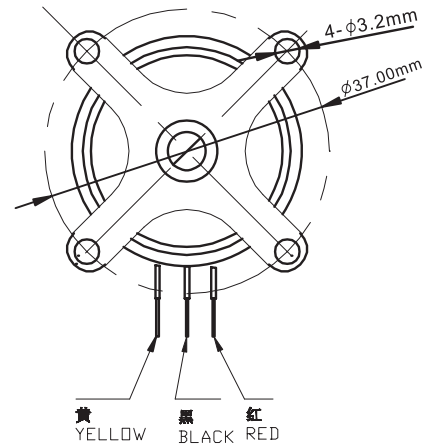
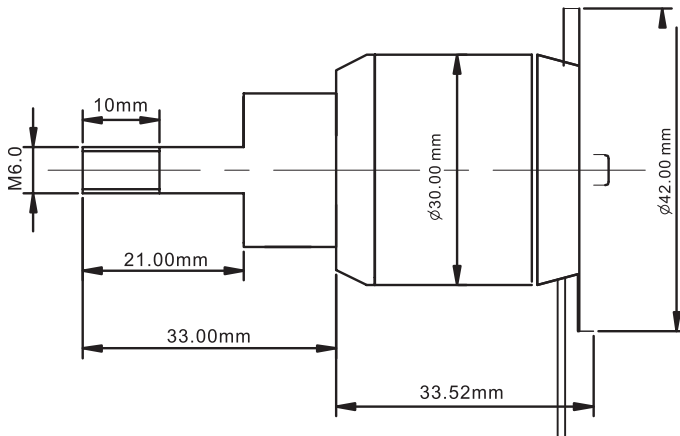
Moray Assemble Photo

“海鳗” 组装图解

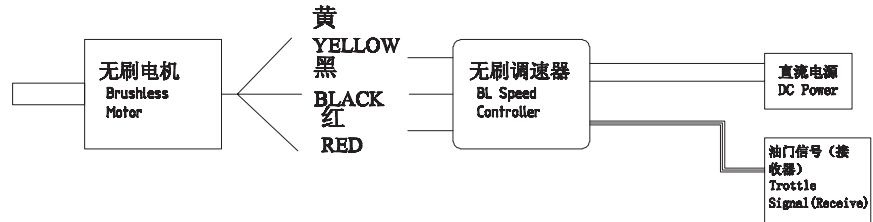


Motor Specification

电机参数



接线示意图:
Sketch Map



Model	KV Value	Volate (V)	Current (A)	Pull (g)	RPM	Weight (g)	G/A	No Load Current	Prop	ESC
3040-1400	1400RPM/V	14.8	30	1400	----	104	53.3	1.5	7*6E	35A



Have Fun!
We hope that you have many pleasant
flights with your Moray !



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