

Item No.: F3501

Ultimate 10-300SK

WINGSPAN : 750mm (29-1/2")

Instruction Manual

组装说明书



- The manual suit for every color scheme of Freewing Ultimate 10-300SK.
- 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.: F3501-V01

FC CE  
MADE IN CHINA

Thanks very much for your purchasing our mini sport plane Ultimate 10-300SK. It use EPO and KT Form two materials. KT Form is very light, it can reduce biplane's weight effectively, make the wing loads smaller.

This mini sport airplane have strong power to ensure its high-speed flight, it can simulate kinds of athletic movements. It will bring you a lot of flight fun..

The following is our basic specification.

Specification	
Material	EPO
Fuselage length	820mm (32-1/16")
Wingspan	750mm (29-1/2")
Flight weight	800g (28.21 oz.)
Pull	1550g (54.67 oz.)
Motor size	3040-1400KV
Prop size	2-Bladed 7*6E
Battery	4S 14.8V 1600mAh 20C
ESC	40A ESC
Servo	9g servo (4pcs)
Landing gear	YES
Aileron	YES
Elevator	YES
Rudder	YES
Throttle	YES

According to different demands, we provide RTF, 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 1

No.	Name	Specification	Qty.
1	Screw	PA 2.6*10mm	8
2	Screw	PWA 3*8mm	2
3	Screw	PA 2*11mm	8
4	Screw	PA 1.6*6mm	8
5	Screw	PA 1.7*12mm	2

Spare Parts Bag 2

No.	Name	Specification	Qty.
1	Screw Driver Handle	/	1
2	Screw Driver Head	/	1
3	Screw Driver Head	/	1
4	Y Wire	L=100mm	1
5	Clips	Ø1.2mm	1
6	Clips	Ø1.0mm	1
7	Upper/lower wing moving wire	/	2

Spare Parts Bag 3

No.	Name	Specification	Qty.
1	Lower-wing fixing plastic part (Front)	/	1
2	Lower-wing fixing plastic part (Back)	/	1
3	Tail wing fixing plastic parts	/	1
4	Upper/lower wing fixing plastic parts	/	2

Spare Parts Bag 4

No.	Name	Specification	Qty.
1	Main wing wire rope	L=520mm	2
2	Main wing wire rope	L=1200mm	1
3	Tail wing wire rope	L=310mm	3

(Airframe Only)

Spare Parts Bag 1

No.	Name	Specification	Qty.
1	Screw	PA 2.6*10mm	8
2	Screw	PWA 3*8mm	2
3	Screw	PA 2*11mm	8
4	Screw	PA 1.6*6mm	8
5	Screw	PA 1.7*12mm	2
6	Screw	PA 3*10mm	4
7	Screw	PA 2.3*8mm	2
8	Screw Nut	M 4.0 mm	1
9	Spacer	Ø4.0mm	1

Spare Parts Bag 2

No.	Name	Specification	Qty.
1	Screw Driver Handle	/	1
2	Screw Driver Head	/	1
3	Screw Driver Head	/	1
4	Y Wire	L=100mm	1
5	Clips	Ø1.2mm	1
6	Clips	Ø1.0mm	1
7	Upper/lower wing moving wire	/	2
8	Metal wire for mainwing servo	L=49mm	2

Spare Parts Bag 3

No.	Name	Specification	Qty.
1	Lower-wing fixing plastic part (Front)	/	1
2	Lower-wing fixing plastic part (Back)	/	1
3	Tail wing fixing plastic parts	/	1
4	Upper/lower wing fixing plastic parts	/	2
5	Propeller Spinner	/	1
6	Propeller Fixed Disk	/	1
7	Propeller	7*6E	1

Spare Parts Bag 4

No.	Name	Specification	Qty.
1	Main wing wire rope	L=520mm	2
2	Main wing wire rope	L=1200mm	1
3	Tail wing wire rope	L=310mm	3

Note:

- 1.This is not a toy .It is for experienced modelers only. You are responsible for the safe operation of this model and any damage of harm it may cause.
- 2.Before flying the Ultimate 10-300SK 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. please contact your local hobby shop .flying club or Freewing Model for professional help and advice.

非常感谢您购买我们的“Ultimate 10-300SK”迷你运动机模型。这款飞机采用EPO和KT FORM二种材料制作而成。KT FORM非常轻盈，有效的减少了双翼飞机的重量。使得飞机的翼荷载变小。

这款迷你型的小型运动机具有强大的动力来保证高速飞行，更可以模拟各种各样的运动竞技类花式动作。熟练的飞行以后，它会带给前所未有的飞行乐趣。

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	820mm (32-1/16")
翼展	750mm (29-1/2")
起飞重量	800g (28.21 oz.)
推力	1550g (54.67 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 (4pcs)
起落架	YES
副翼	YES
平尾	YES
方向	YES
油门	YES

根据每位消费者不同的需求，我们分别提供整机、ARF(不含发射机、接收机、电池、充电器)、空机三种不同的配置方案以供大家选择。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)

零件包一

序 号	品 名	规 格	数 量
1	螺丝	PA 2.6*10mm	8
2	螺丝	PWA 3*8mm	2
3	螺丝	PA 2*11mm	8
4	螺丝	PA 1.6*6mm	8
5	螺丝	PA 1.7*12mm	2

零件包二

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	Y线	L=100mm	1
5	夹头	内径 Ø1.2mm	1
6	夹头	内径 Ø1.0mm	1
7	上下主翼连动钢丝	/	2

零件包三

序 号	品 名	规 格	数 量
1	下主翼固定塑料件（前）	/	1
2	下主翼固定塑料件（后）	/	1
3	尾翼固定塑料件	/	1
4	上主翼固定塑料件	/	2

零件包四

序 号	品 名	规 格	数 量
1	主翼钢丝绳一	L=520mm	2
2	主翼钢丝绳二	L=1200mm	1
3	尾翼钢丝绳	L=310mm	3

附件包(空机)

零件包一

序 号	品 名	规 格	数 量
1	螺丝	PA 2.6*10mm	8
2	螺丝	PWA 3*8mm	2
3	螺丝	PA 2*11mm	8
4	螺丝	PA 1.6*6mm	8
5	螺丝	PA 1.7*12mm	2
6	螺丝	PA 3*10mm	4
7	螺丝	PA 2.3*8mm	2
8	70涵道螺母	M 4.0 mm	1
9	70涵道垫片	内径 Ø4.0mm	1

零件包二

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	Y线	L=100mm	1
5	夹头	内径 Ø1.2mm	1
6	夹头	内径 Ø1.0mm	1
7	上下主翼连动钢丝	/	2
8	主翼舵机钢丝	L=49mm	2

零件包三

序 号	品 名	规 格	数 量
1	下主翼固定塑料件（前）	/	1
2	下主翼固定塑料件（后）	/	1
3	尾翼固定塑料件	/	1
4	上主翼固定塑料件	/	2
5	螺旋桨整流罩	/	1
6	螺旋桨固定盘	/	1
7	螺旋桨	7*6E 二叶桨	1

零件包四

序 号	品 名	规 格	数 量
1	主翼钢丝绳一	L=520mm	2
2	主翼钢丝绳二	L=1200mm	1
3	尾翼钢丝绳	L=310mm	3

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 P13 ,check the screw position.
3. Spareparts support , please visit www.sz-freewing.com to search.

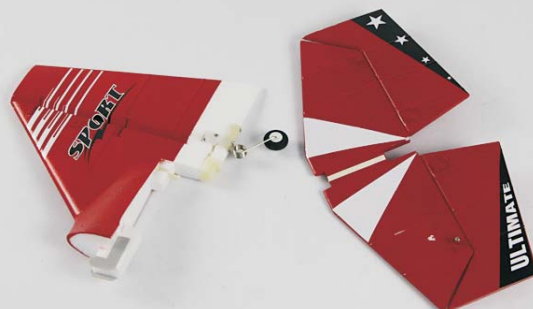
组装部份

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13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 tail wing set as the right photo shown.

-如右图所示, 准备安装尾翼。



-Tear the twin adhesive and stick the rudder on the elevator.

-撕开平尾上粘住的双面胶纸, 然后将垂直尾翼粘在平尾上。



-As the right photo shown ,install the tail wing on the fuselage.

-如右图所示, 将组装好的尾翼套件安装在机身上。






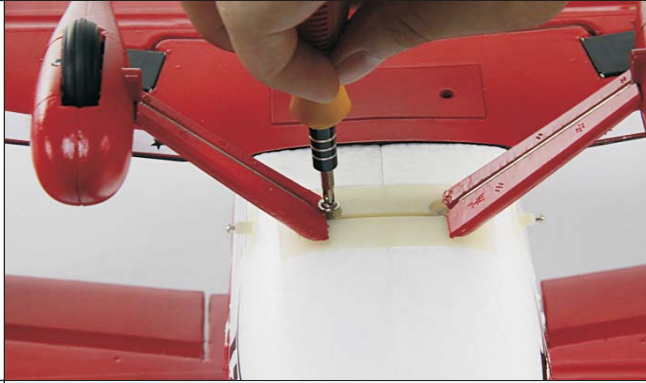
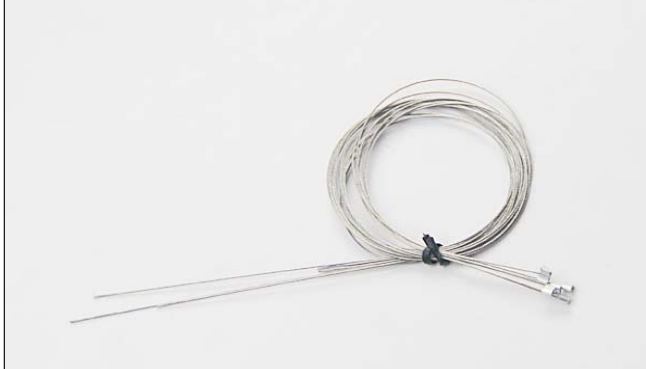
-Finish to install as the right photo shown.

-安装完成后效果如右图所示。



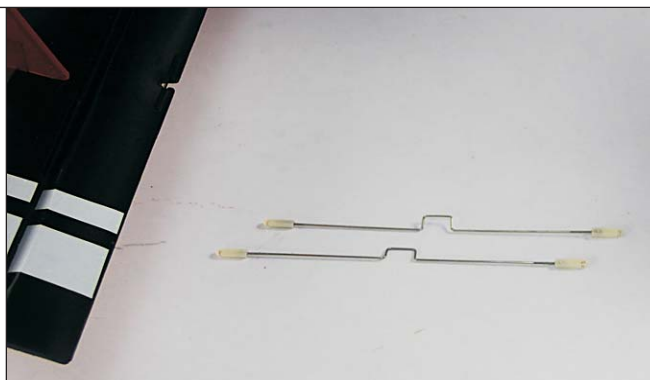
<p>-Fix tail wing set by “tail fixing parts”.</p> <p>-使用“尾翼固定件”固定尾翼套件。</p>	
<p>-Fixed by screws.</p> <p>-使用螺丝固定。</p>	
<p>-Finish to install the tail wing as the right photo shown.</p> <p>-尾翼套件安装完成后如右图所示。</p>	
<p>-As the right photo shown, prepare the lower-wing and connect the left/right servo wire by Y wire.</p> <p>-如右图所示，装备好下主翼，同时用“Y”线连接左、右舵机线。</p>	
<p>-Insert the “main wing supporting piece.”</p> <p>-插入“主翼支撑片”。</p>	

<p>-Turn over the fuselage, install the lower-wing on the fuselage.</p> <p>-翻转机身，将下主翼安装到机腹上。</p>	
<p>-Insert the "lower-wing fixing parts."</p> <p>-插入“下主翼固定件”。</p>	
<p>-Fixed the wing and fuselage by screws.</p> <p>-最后用螺丝固定主翼到机身。</p>	
<p>-As the right photo shown, install on the upper-wing.</p> <p>-如右图所示，安装上主翼。</p>	
<p>-Fix the upper-wing on the fuselage by screws.</p> <p>-用螺丝固定上主翼到面身上。</p>	

<p>-Finish to install the main wing as the right photo shown.</p> <p>-主翼安装完成效果如右图所示。</p>	
<p>-Prepare to install the landing gear.</p> <p>-准备安装起落架。</p>	
<p>-As the right photo shown, insert the landing gear into the fuselage indicated position. Pay attention of the install direction.</p> <p>-如右图所示。将起落架插入到机腹图示位置。注意安装方向。</p>	
<p>-Fixed the landing gear by screws.</p> <p>-用螺丝固定起落架。</p>	
<p>-Install the reinforce-wire. Please refer to P11 "reinforce-wire install".</p> <p>PS: Install the wire, we ensure every wire is straight, no loosening, avoid large effort to pull the wire, it will cause the main wing bending.</p> <p>-安装加固钢丝。请参考P11页“钢丝绳安装”，进行安装。</p> <p>Ps: 安装钢丝时，我们只需要保证每根钢丝绳崩直、无松动即可。切忌较大力气拉扯钢丝，造成一端主翼弯曲。</p>	

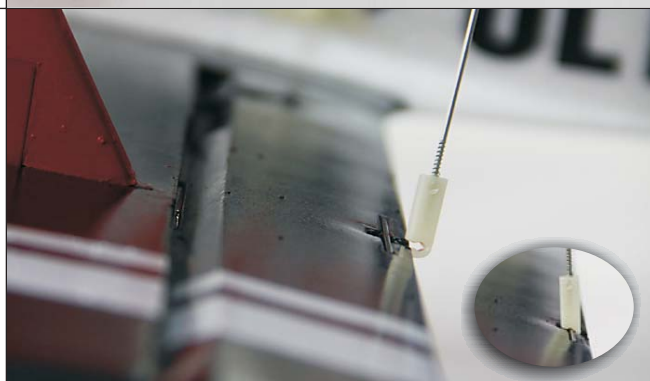
-Install “main wing moving wire.”

-安装“主翼连动钢丝”



- As the right photo shown, install the plastic hook on the main wing.

-如右图所示，将钢丝末端的塑料钩，钩住主翼。



-Finish to install as the right photo shown.

-安装完成后效果如右图所示。



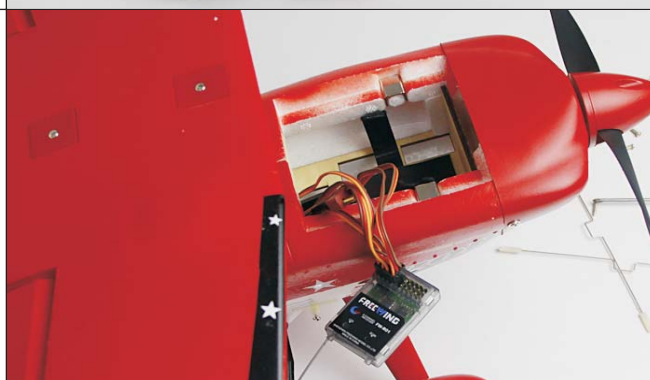
-After finish to install, prepare to adjust the plane.

-安装完成后、准备调试飞机。



-Remove the battery cabin cover from nose fuselage and connect kinds of channels to receiver.

-在机头位置，取下“电池舱盖”。将各通道连接到接收机。



-Install 8pcs 5# AAA battery into the transmitter.
Switch on the transmitter.

-Connect Li-po battery and fix it by velcro.

PS:Please make sure the battery is full power.

-安装8只5号3A电池到遥控器内，给遥控器供电。同时打开遥控器电源开关。

-连接飞机电池。并用魔术贴扎带固定电池。

PS:使用飞机电池时,确保充电已达饱和状态.



-Under power-on condition, make sure every wing surface is in the center. Test throttle and every channels also, make sure every part work normally.

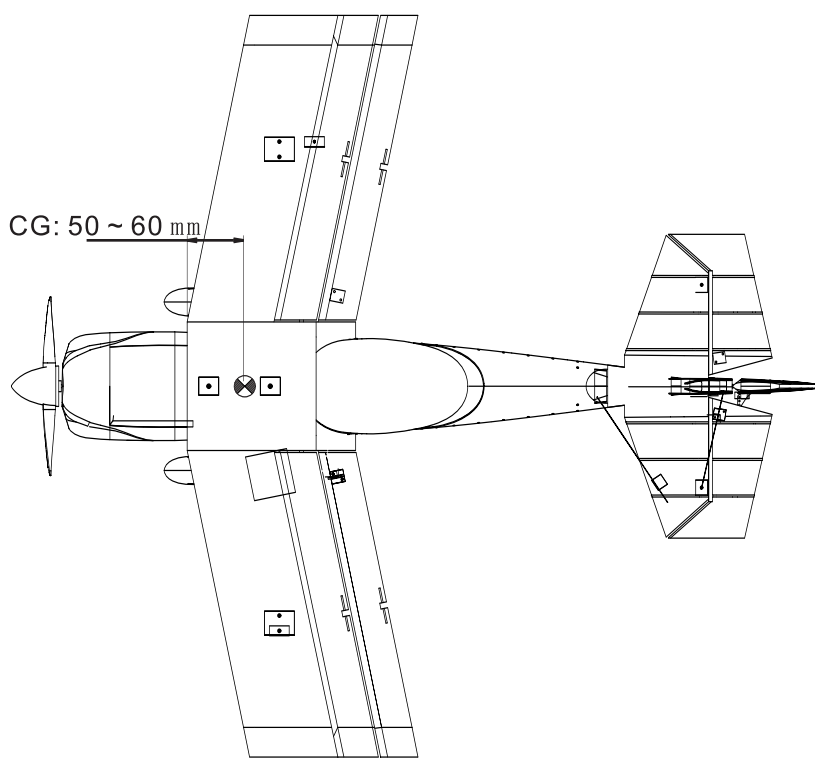
-在通电状态下，居中飞机的所有翼面。同时测试油门及各通道动作。确保所有部件工作正常。



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。)

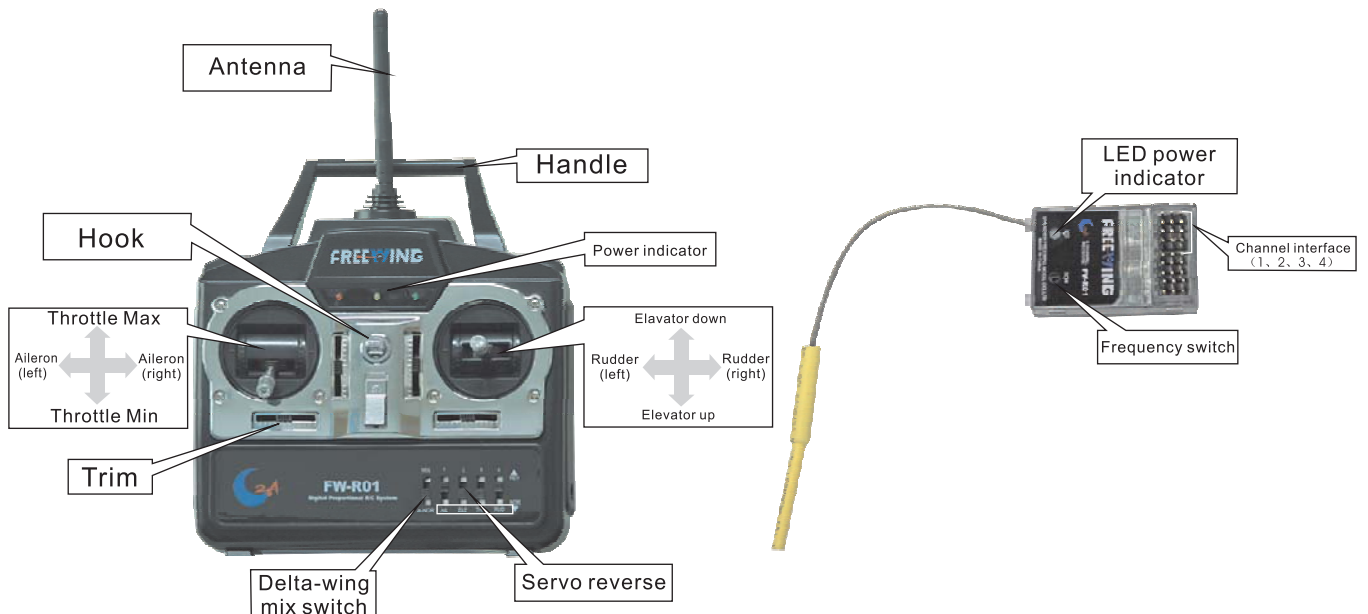


Operating instruction of Radio Control

1. Radio control include the transmitter and receiver.



2. Radio control function introduction.



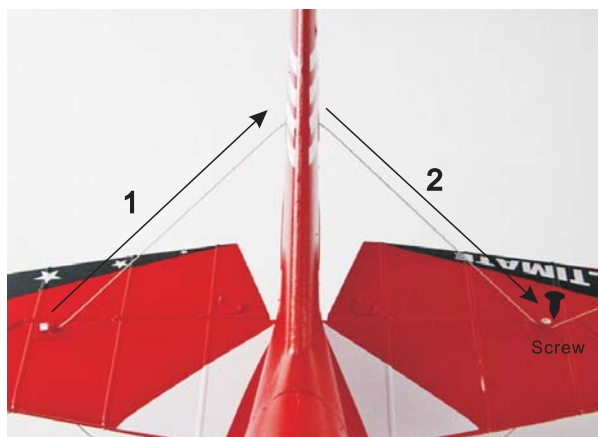
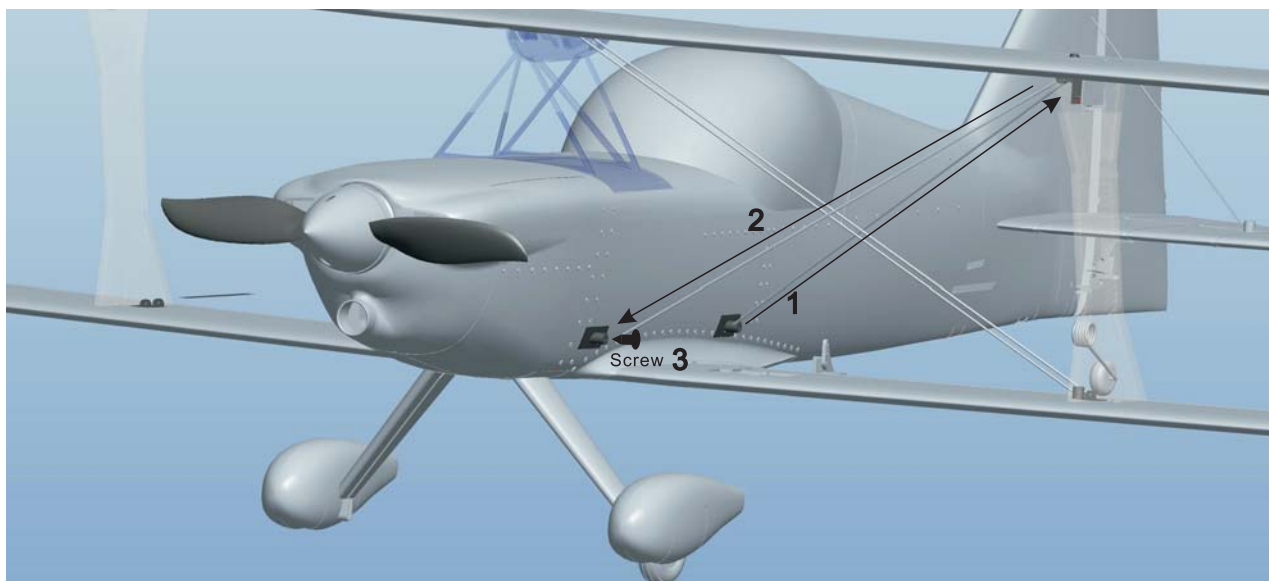
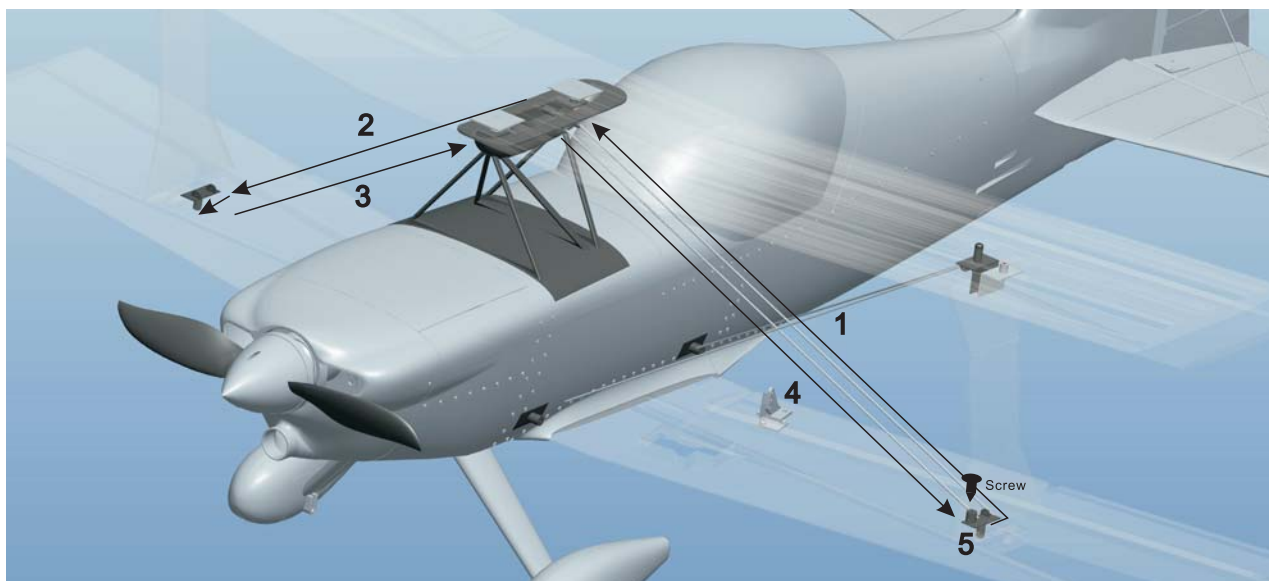
3.2.4G Radio control frequency method.

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

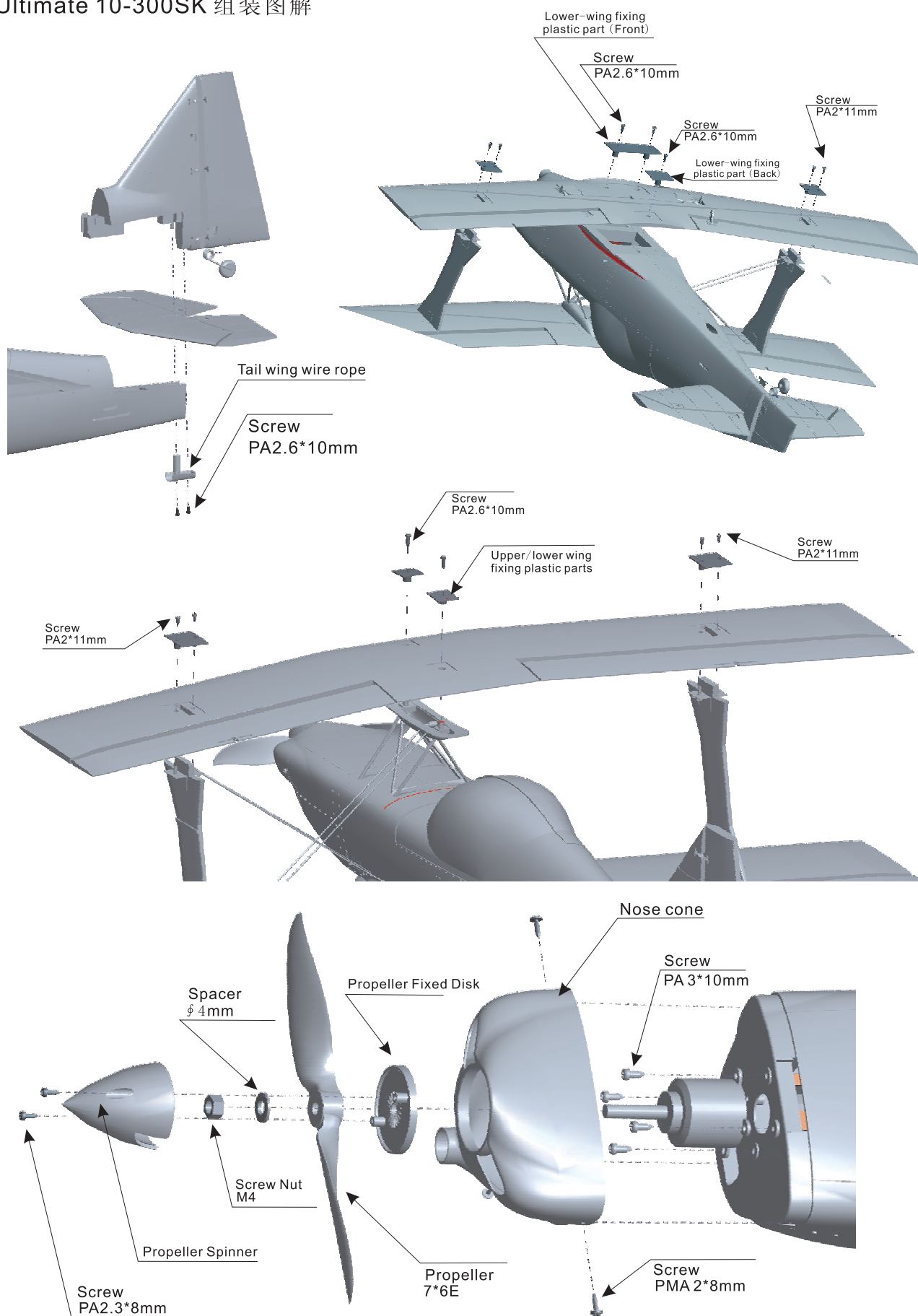
Reinforce-Wire Install

钢丝连接示意图



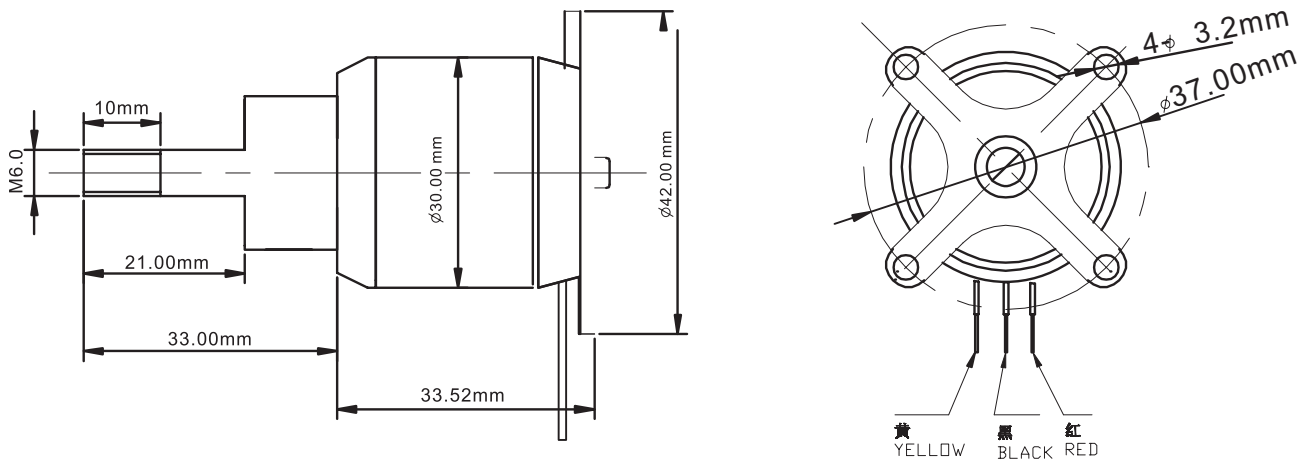
Ultimate 10-300SK Assemble Photo

Ultimate 10-300SK 组装图解

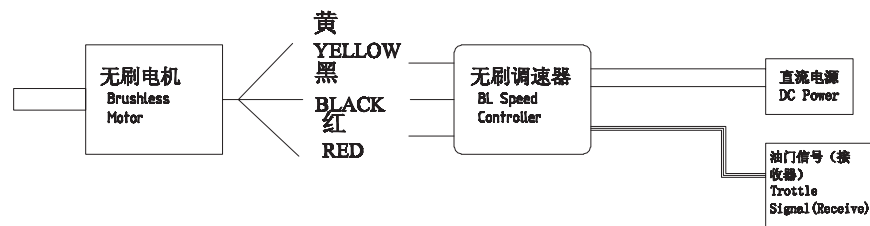


Motor Specification

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

Preflight

After check everything before flight, as a beginner, we should pay attention of following issues, to make sure our flight is successful.

1. When use radio set, make sure switch on the transmitter power firstly, then power on the receiver.
2. Before flight, under power on condition, push up and down the throttle and check the motor/ESC work well.
3. Before flight, check well the plane's center of gravity. Correct CG is the key factor of successful flight. Please refer to P10 to check the center of gravity.
4. No matter take-off on the road or hand launch, we must upwind to take off.
5. After take off, if any unusual flight or hard to control, we should pull high the plane, then trim to adjust according to the actual situation to maintain it level flight.
6. When the transmitter alarm, you must end your flight as soon as possible and operate to its landing, to avoid the radio will be out of control since of low voltage.
7. If any damage in flight, please purchase the spareparts from your distributor or refer to www.sz-freewing.com to check.

飞行注意事项

在完成飞行前的检查之后, 对于我们初学者, 我们应该在飞行前及飞行中注意下面一些问题. 这样, 会使我们的飞行更加成功.

1. 在正常使用摇控设备时, 必须保证先打开发射机电源, 然后再将接收机通电.
2. 在飞行前, 通电状态下, 应反复上、下推动油门, 检验马达与电子调速器的工作状态是否良好.
3. 飞行前, 必须确认飞机的重心位置. 正确的重心位置是获得成功飞行关键因素. 请参考P10来确认飞机的重心位置.
4. 不管是选择滑跑起飞或者是手掷起飞, 我们都应该迎风起飞.
5. 飞机起飞后, 发现飞行姿态有异常或难以控制时, 我们应当尽量拉高飞机, 然后根据飞机的实际情况, 调整飞机的微调开关. 使飞机可以保持平飞.
6. 当发射机发出报警音后, 应尽快结束飞行, 操纵模型飞机着陆, 避免低电压造成摇控设备失控.
7. 在飞行过程中, 如发生损坏, 请联系您的模型商购买配件. 请参考我们的网站:www.sz-freewing.com查询.



Have Fun!
We hope that you have many pleasant
flights with your Ultimate 10-300SK !



Shenzhen Freewing Model Co.,Ltd
HK Freewing Model International Limited

Add.:FeiYi Building,face to Labor Bureau, Fumin Middle Road, Dalang Town,
Dongguan City, Guangdong Province, China
Web: <http://www.sz-freewing.com>
Email:freewing@sz-freewing.com
Tel: 86-769-82669669 Fax:86-769-82033233