



000003

## INSTRUCTION MANUAL

### Spceification:

length: 650mm  
Height : 230mm  
Main blade diameter: 680mm  
Tail blade diameter: 130mm  
Motor gear: 10T  
Main driven gear: 140T  
Tail driven gear: 110T  
Gear rate: 14:1:5  
Weight: About670g(Including Battery)

### Asscmlage component:

Motor: 450 brushless motor  
ESC: 25A  
Gyro : head lock gyro  
Servo: digital servo\*4Pcs  
Transmitter: 6-channel or above 6channel(helicopter system)  
Rcceiver: 6-channel or above 6channel  
Battery: Li-poly Battery 1800mAH,11.1V,20C

### 规格参数:

机身长: 650mm  
机身高: 230mm  
主旋翼直径: 680mm  
尾旋翼直径: 130mm  
马达齿轮: 10T  
主齿传动轮: 140T  
尾驱动主齿: 110T  
传动比: 14:1:5  
整机重: 约670(含1800mAH,11.1V锂电)

### 配备及规格:

马达: 450无刷马达  
电子调速器: 25A  
陀螺仪: 锁尾式陀螺仪  
伺服器: 数字伺服器\*4  
发射机: 6通道或6通道以上(直升机系统)  
接收机: 6通道或6通道以上  
电池: 11.1V锂电池,1800mAh,20C放电

# 目录 Catalogue

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1. 目录 Catalogue.....	2
2. 简介 Brief introduction.....	3
3. 安全注意事项 safety precautions.....	3
4. 警告 warning.....	4-5
5. 内容物检查 Part check.....	6
6. 电池的充电方式 Charging The Battery.....	7
7. 充电注意事项 Charging precautions.....	8
8. 发射机介绍 Introduction of Transmitter.....	9
9. 特技开关功能 IDEL UP Switch.....	10
10. 电子配件与连接方式 Electronic components connection.....	11
11. 起飞步骤Fly process.....	12
12. 结束飞行注意事项Safty notes end of flight.....	13
13. 直升机双桨的调整Blade tacking adjustment.....	14
14. 陀螺仪的调整Gyro adjustment.....	15
15. 尾伺服器的调整Adjustment of tail servo.....	16
16. 皮带松紧调整Belt tightness adjustment.....	17
17. 直升机的基本知识Basic knowledge of helicopter.....	18-20
18. 舵面检查：油门 Throttle Checking.....	21
19. 舵面检查：升降舵 Elevator Checking .....	22
20. 舵面检查：螺距 Cycle pitch Checking.....	22
21. 舵面检查：副翼 Aileron Checking.....	23
22. 舵面检查：方向舵 Rudder Checking.....	23
23. 主旋翼头组装步骤Assembly process of main rotor blade.....	24-25
24. 桨夹头组装步骤Assembly process clamp.....	26
25. 稳定翼组装步骤Assembly process of paddles.....	27
26. 机架组组装步骤Assembly process of main frame set.....	28
27. 伺服器组装步骤Assembly of servo.....	29
28. 主齿轮组装步骤Assembly of main gear set.....	30
29. 尾旋组组装步骤Assembly process of tail boom set.....	31
30. 尾旋翼组装步骤Assembly process of tail rotor blades.....	32-33
31. 动力系统组装步骤Assembly process of power system.....	34
32. 分解图Explosion picture.....	35
33. 零件清单Part list.....	36
34. 配件图Spare parts part list.....	37-40



## 简介 Brief introduction

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感谢您选择ESKY产品，为了您更好的了解和使用这款直升机，请您仔细阅读说明书，然后再进行组装和操作这款直升机。并请您妥善的保存好说明书，为以后对直升机进行调整或维修作参考。这款直升机是由ESKY自行研发的RC产品，无论您是初学者还是飞行高手都将是您的最佳选择。

Thank you for choosing TWF products. Please read the manual carefully before assembling and operating the helicopter. Be sure to keep the manual properly for future reference of adjustment or maintenance. This helicopter is a new product designed and developed by ESKY. It would be your best choice, no matter you

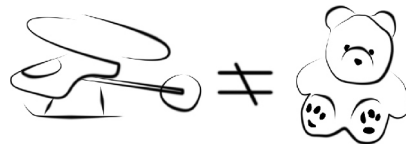
## 安全注意事项 safety notes

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### 遥控模型不是玩具！！

旋转中的螺旋桨、马达、齿轮具有一定的危险性，若操作不慎或者使用不当都将可能造成严重的伤害，请务必仔细阅读本说明书的安全注意事项，并确保自身与他人的安全！

It' s not a toy!



本产品出厂时已经组装、调整完成，除非您具有一定的遥控直升机操作、调整经验，否则请勿任意拆卸直升机上的零件，本公司无法针对操作失误或者组装不当产生的异常损耗所造成的意外负任何责任。

模型产品包含部分消耗性零件，反复的拆装、长时间飞行、坠毁，都可能会造成部分零件损耗，这属于正常损耗范围，请定期更换损耗零件以确保飞行安全，如出现上述损耗严重导致机件故障或坠毁，本公司将无法针对上述情况进行退货或更换新品。

R/C helicopters, including the ESKY Helicopter are not toys. R/C helicopters utilize various high-tech products and technologies to provide superior performance. The rotating blades on the model spin at high speed and can cause potential risk or injury if used improperly. It is mandatory that you observe all R/C safety rules and adhere to local laws as applicable. We recommend that you contact your local hobby store and inquire about safety rules, regulations and local laws and statutes regarding R/C model operation in your area. Please make sure to be conscious of your own personal safety and the safety of others and your environment when operating all ESKY products. When used properly, ESKY R/C products will provide years of R/C entertainment.

We recommend that you obtain the assistance of an experienced pilot before attempting to fly our products for the first time. A local expert is the best way to properly assemble ,set up, and fly your model for first time.The HONEYBEE KING3 requires a certain degree of skill to operate, and is a consumer item. Any damage or dissatisfaction as a result of accidents of modifications are not covered by any warrantee and can not be returned for repair or replacement. Please contact our distributors for free technical consultation and parts at discounted rates when you experience problems during operation or maintenance. It is not the policy or practice of ESKY HOBBY to exchange or return parts after the package has been opened. In case you discover any parts that might be defective or missing, please contact the retailer who sold you the product. Get their signature on your Customer's Card and contact ESKY HOBBY with a description of the problem parts.

# 警告 warning

 **警告**  
**Warning**

此符号表示若疏忽警告说明，将可能带来自身或他人以及财物的损坏！  
The sign indicates the important matter that you and others should pay attention to specially, for avoiding any of accident and damage.

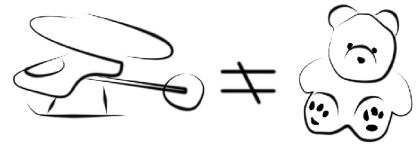
 **禁止**  
**Prohibition**

此符号表示在任何情况、环境之下，绝对禁止任何遥控模型操作行为！  
The sign indicates the unallowed actions that may cause incident or damage.

 **警告**  
**Warning**

**遥控模型不是玩具！**  
**RC Model are not toys!**

It's not a toy!



遥控模型不是玩具，它是精密的运转机械，使用上具有某程度危险性，适合14岁以上青年操作，14岁以下孩童需有成人协助操作！

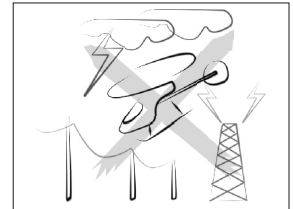
Incorrect operation may cause serious injury or damage! Not suitable for the player under 14 years. The helicopter should not be operated by Children.

 **禁止**  
**Prohibition**

**远离高压电线！**  
**Keep away from high voltage cable.**

遥控模型太靠近高压电线可能造成无线电的干扰，飞行中也可能撞击空中的高压电线，请远离高压电线、电塔至少300米以上距离！

Do not fly the helicopter near roads, railways or ascetical lines.

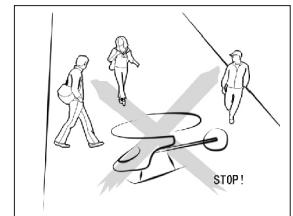


 **禁止**  
**Prohibition**

**远离人群！**  
**Keep away from persons**

在空中飞行的遥控直升机相当引人注目，往往会引来许多围观群众，但群众并不晓得其危险性，很可能发生意外，所以请绝对禁止在人群众多的地区飞行！

During the operation of the helicopter, the main rotor and tail rotor will be spinning at a high rate of speed. The blades are capable of inflicting series bodily injury and damage to environment. Be conscious of your actions, and careful to keep your face, eyes, hands, and loose clothing away from the blades. Always fly the model a safe distance from yourself and others, as well as surrounding objects. Never take your eyes off the model or leave it unattended while it is turned on. Immediately turn off the model and transmitter when you have landed the model.



 **禁止**  
**Prohibition**

**严禁在住宅区或有树木、障碍物处飞行！**  
**Do not fly near house, trees and crowd.**

无论你的飞行技巧在怎么高超，请绝对禁止在住宅区、树木、障碍物附近飞行，将可能造成撞击所产生的生命财产损失的意外！

R/C helicopter fly at high speed. Thus posing a certain degree of potential danger. Choose an appropriate flying site consisting of flat, smooth ground, a clear open field, or a large open room, such as gymnasium or warehouse without obstacles. Do not fly near buildings, high voltage cables, or trees to ensure the safety of yourself, others, and your model.



 **禁止**  
**Prohibition**

**请勿在下雨时飞行 Do not operate or expose to rain or moisture weather.**

遥控直升机的无线电控制系统由精密的电子组件组成，请避免潮湿或在雨天飞行，过度的湿气可能导致无线电系统产生干扰、故障！

R/C models are composed of many precision electrical components it is critical to keep model and associated equipment away from moisture and other contaminants. The introduction or exposure to water or moisture in any foam can cause the model to malfunction resulting in loss of use, or crash..



## 警告 warning



禁止

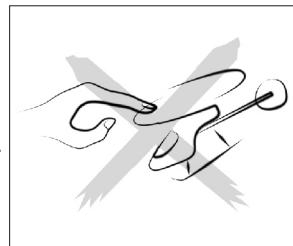
Prohibition

请勿碰触运转中的遥控模型！

Do not touch any parts of helicopter when the main blades on rotating.

当直升机开始运转时，旋转中的主旋翼叶片、尾旋翼叶片、马达、齿轮、皮带具有相当成度的杀伤力，绝对禁止碰触运转中的遥控模型。

During the operation of the helicopter, the main rotor and tail rotor will be spinning at a high rate of speed. The blades are capable of inflicting series bodily injury and damage to environment.



警告

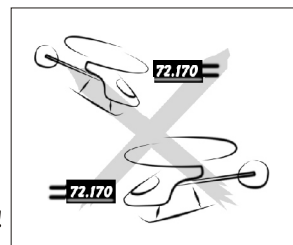
Warning

避免与他人相同频率！

Do not fly the helicopter where there is the possibility of interference on the radio frequency from other model radio.

遥控模型的无线电波有属于自己的频率，在同一个飞行场合中出现相同频率将会造成互相干扰、坠毁等意外，请在确定频率没有与别人重复再飞行！

The radio wave will reach a distance of approximately 1km or more,. It is necessary to confirm that there is nobody else using the same RC equipment within the area.



警告

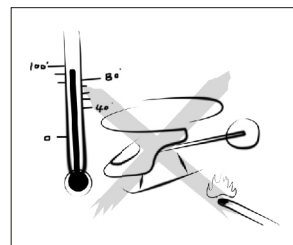
Warning

远离高温环境！

Keep away from heat

遥控模型大多以PVC或聚乙烯为主要材料，要尽量远离热源，避免因高温造成变形或发生熔毁现象！

R/C models are composed of many precision electrical components. And frame made up various forms of plastic. Make sure not store the model near any source of heat such as an oven, or heater. It is best to store the model indoors, in a climate-controlled, room temperature environment.



警告

Warning

请勿独自操控！

Do not fly the helicopter without experienced pilot if you are first time flying model.

遥控模型的操控有一定的难度，独自操控很容易造成损坏，在完全不了解的情况之下，最好请有经验的飞行员在旁指导，可以减少许多不必要的损失！

We recommend that you obtain the assistance of an experienced pilot before attempting to fly our products for the first time. A local expert is the best way to properly assemble ,set up, and fly your model for first time.



警告

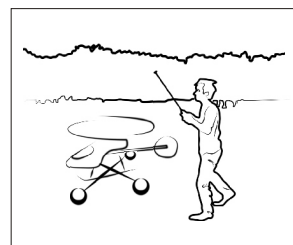
Warning

初学者需由基本飞行练习开始！

Please have more practice with our simulator or training set.

飞行是相当有趣的活动，但在空中自由穿梭需要长时间的练习，初学者需从最基础的停悬开始练习，千万不可心急！初学者可以搭配练习脚架（另购），可减少直升机翻倒的损伤。

In order to prevent the damage of crash, please be sure that you have enough practice and read all cautionary items, and confirm that the model can be operated safety. Please enjoy operating your model responsibly.



## 内容物检查 Part check

打开包装盒后，请先检查内容物是否齐全，若有缺少配件，请向购买的单位反应，或者联系当地的代理商进行处理。

Please confirm that all parts are included as listed on the parts list before starting. In case you discover any parts that might be defective or missing, please contact the retailer who sold you the product

### 000003 内容配件 RTF Contents



1. 直升机本体×1  
Belt-cp×1
2. ESKY新版6通道遥控器×1  
ESKY new version of 6 channel transmitter×1
3. AC110/220V转DC12V变压器×1  
Switching adapter ×1
4. DC12V蓄电池用鳄鱼夹×1  
DC12V crocodile clip of storage battery×1
5. 2&3S锂聚电池专用分压充电器×1  
Balancer charger for 2-3 cells li-poly battery×1

6. 电池绑带×1  
Bettery band
7. 1.5V/AA干电池×8  
1.5V/ "AA" Battery×1
8. 11.1V/1500mAh锂聚合物电池×1  
1500mAh, 3S, 11.1V, 20C Li-poly battery×1
9. 简易工具包×1  
Mounting Accessories, Screwdriver &  
Wrench Set ×1
10. 使用说明手书×1  
Manual ×1

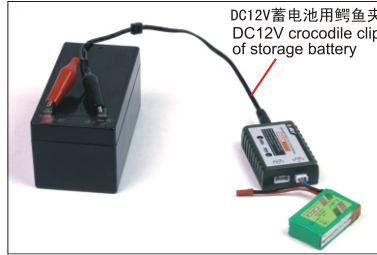


# 电池的充电方式 Charging The Battery

## 1. 选择电源来源方式 Battery charging method



家用AC110/220V插座  
AC110/220V switching adapter



DC12V蓄电池  
DC 12V storage battery



需要另外购买  
extra order is required

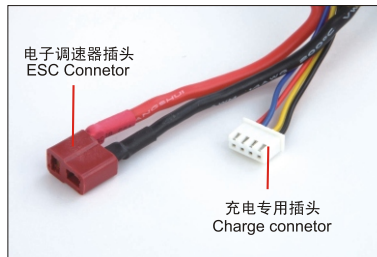
车用DC12V雪茄头插座  
DC 12V USB-CIG

## 2. 锂聚合物电池的充电顺序 The charging step of Li-poly battery



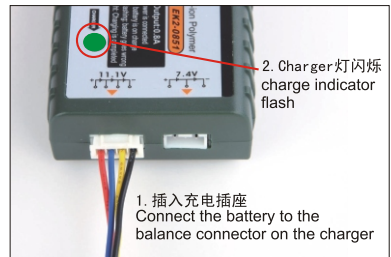
2. Power灯亮起  
Power light

1. 插入DV12V电源  
Connect power supply



电子调速器插头  
ESC Connector

充电专用插头  
Charge connector



2. Charger灯闪烁  
charge indicator flash

1. 插入充电插座  
Connect the battery to the  
balance connector on the charger

1. 将充电器与12V电源连接，Power灯号会亮起红灯，表示电源连接正常。

Connect the charger with power supply, the power light should now be bright red, and the charger indicator light should be off. Which indicates the power connection is correct.

2. 电池接头有两个，充电时必须用充电专用插头。

Always use the charge and balance connector on the battery when charging, do not use the discharge connector to charge the battery!

3. 将插头插入侧面充电孔，绿色Charger灯会开始闪烁，表示开始充电。

Connect the battery to the balance connector on the charger. The charge indicator light will turn to green, indicating that the battery is on charging.

4. 当电池充电完成后，绿色Charger灯会停止闪烁，灯号转为恒亮，表示电池已经充饱。

When the battery is fully charged, the charge indicator light will turn flash to steady. Remove the battery from the charger at this time and disconnect the charger from its power source.



电池充电中  
Battery oh charging

绿色Charger灯闪烁  
charge indicator flash

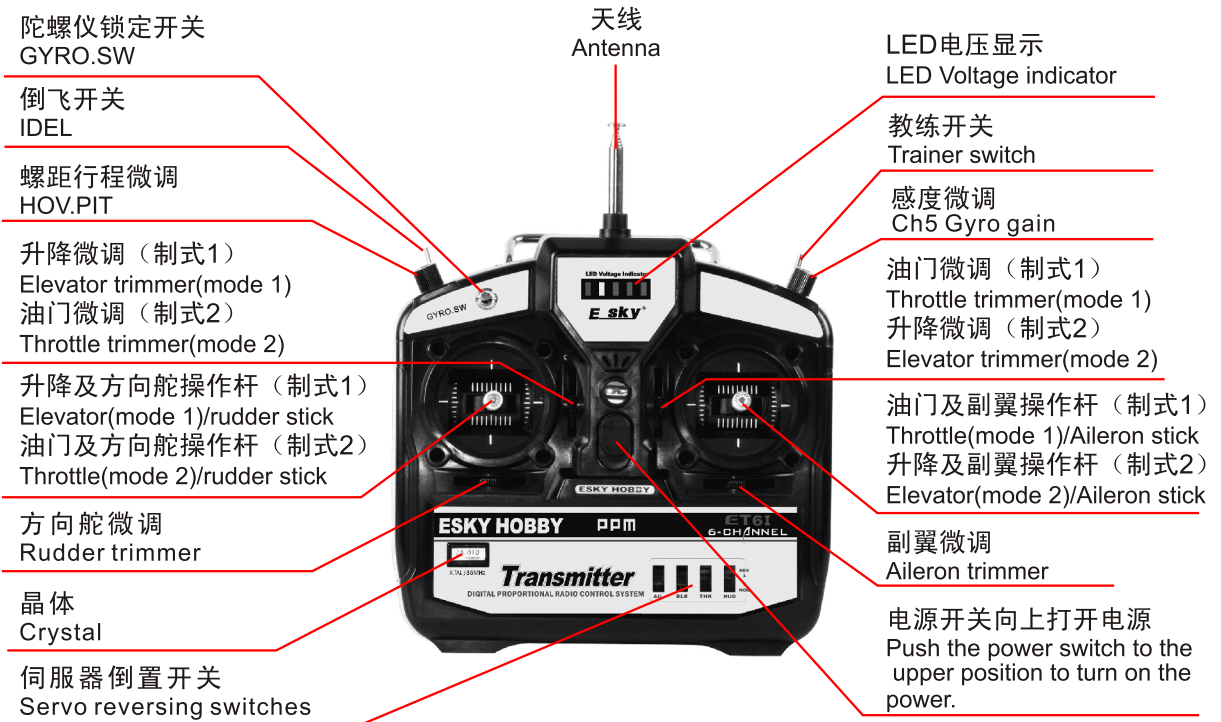
红色Power灯恒亮  
Power light bright steady

## 充电注意事项 Charging precautions

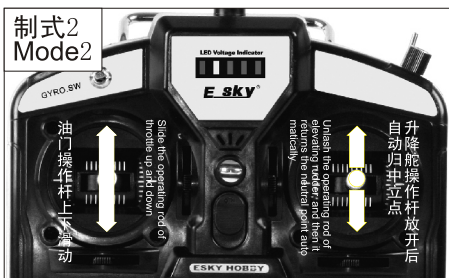
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1. 充电器接通DC12V电源后，红色的Power电源指示灯如果没有亮起，表示连接有误，或者12V电源来源有问题，请重新连接，直到正常为止  
After connected with power supply, then the power light should be bright red, otherwise, it indicates that power connection goes wrong, please reconnected until the power light bright red.
2. 当电池连接充电器后，如果红色的Power指示灯与绿色的Charge指示灯同时闪烁的话，那表示电池本身有问题，请检查电池是否损坏。  
After connected with power supply, if the power light and charge indicator light flash simultaneously. It indicates something wrong with battery, please check the battery's condition.
3. 接上电池后，如果绿色的Charge指示灯不亮，但红色的Power指示灯在闪烁的话，那表示充电器进入保护状态，请拔除DV12V电源约3~5秒后重新连接。  
After connected with power supply, if the charge indicator light off and the power light flashing, it indicates that the charger is under protection process. Please disconnect the DV12V power supply and reconnect again after 3-5 seconds.
4. 充电完成后绿色的Charge灯会恒亮，如果不拔除电池的话，电池本身的特性会自动放电，当电池放电到单节电池电压低于4.15V时，充电器会自动重新给电池充电，直到再一次充满，此过程会反复的进行。  
When the battery is full charged, the charge indicator light will turn steady green. The battery will self discharge if the battery not disconnect from the charger. The charger will restart to charge the battery when the single cell's voltage is lower than 4.15V. this process will repeat and repeat if still connect the battery with charger after its full charged.
5. 请将锂聚合物电池从直升机上拆下后再进行充电，请勿让电池在直升机上直接充电！  
Do not charge on a carpet, cluttered workbench, paper, plastic, vinyl, leather, wood, and inside an R/C model.
6. 充电时请勿让电池与充电器直接照射阳光，远离热源或易燃物品。  
Do not charge the battery under the sunshine, near the heat and combustibles Materials.
7. 为了能更安全快捷的充电，请使用ESKY原厂出品的充电器，使用来路不明的充电器将可能导致电池损坏、膨胀甚至燃烧！  
Only use ESKY original Li-poly charger, never use unknown charger to avoid the damage or burn.
8. 锂聚合物电池充电过程中，必须有人在旁监视，若电池发生膨胀、出现异味，请迅速拔除电源，并将电池连同充电器往屋外移动，若发生燃烧现象，请用灭火器将火源扑灭，并保持屋内通风。  
Do not leave that charger and battery unattended while charging. Disconnect the battery and remove input power from the charger immediately if either becomes hot! And move them to a fireproof location. However it is normal for the charger and battery to get warm.

# 发射机介绍 Introduction of Transmitter



## 制式1、制式2的差异 Mode1 & Mode2 difference



## 特技开关功能 IDEL UP Switch

ESKY 6通道直升机用遥控器内建特技模式曲线，切下开关，螺距与油门会自动变化为适合特技飞行的模式。

The ESKY 6channel transmitter included with your Belt-cp features a Flight Mode switch. This switch allows the pilot to toggle between the "Normal" and "aerobatic /Idle Up" (1) flight modes during flight.

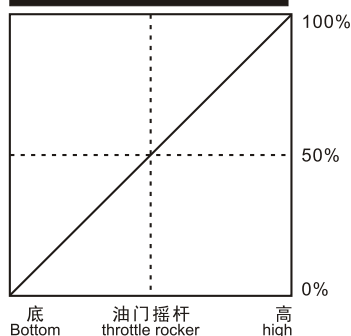


### 一般模式 Normal (IDEL UP / OFF)

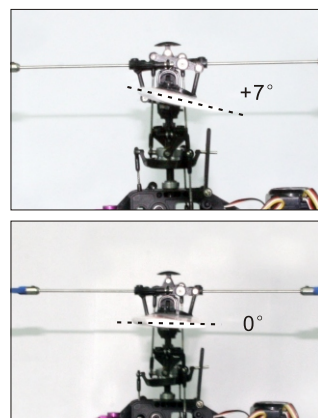
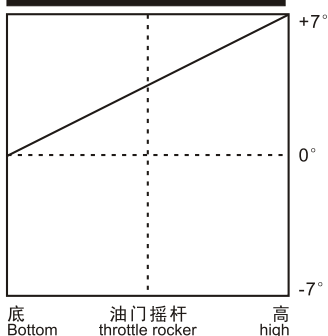
一般模式，油门操作杆由低至高逐渐加速，适合停悬练习。

When the Flight Mode switch is toggled toward the rear of the transmitter (position 0), the Belt-cp will be in the Normal (NORM) flight mode. In this flight mode, the throttle curve is linear from 0% to 100%, with a pitch range of approximately 0 degrees (50%) to +7 degrees (100%). This is the preferred flight mode for general hovering and basic (non-aerobatic) flight.

油门曲线 Throttle Curve



螺距曲线 Pitch Curve

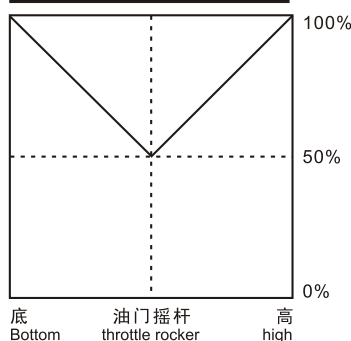


### 特技模式 Normal (IDEL UP / ON)

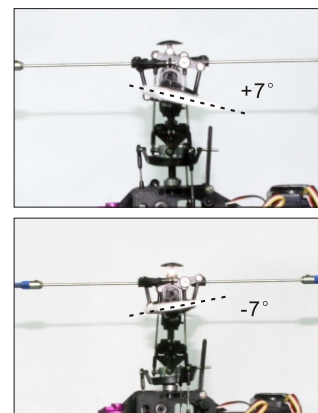
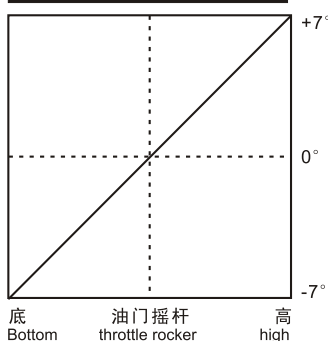
特技模式，油门操作杆最低与高都是100%动力，配合约-7度螺距，可执行倒飞等特技。

When the Flight Mode switch is toggled toward the front of the transmitter, the 3D helicopter will be in the aerobatic /Idle Up (aerobatic) flight mode. In this flight mode, the throttle curve is "V" shaped from 100% to 100% with throttle Stick at bottom-up, with a pitch range of -7 (0%) to +7 degrees(100%). This is the preferred flight mode for most Forward/backward, aerobatic and 3D flying.

油门曲线 Throttle Curve

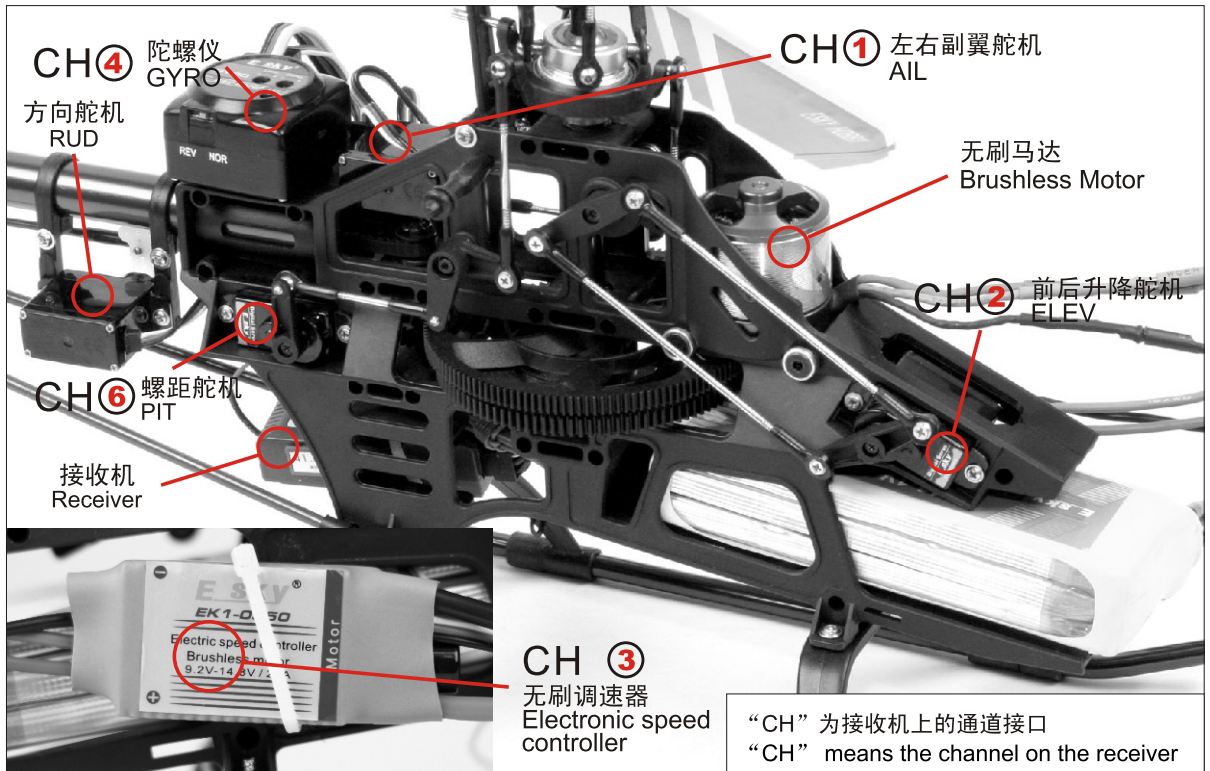


螺距曲线 Pitch Curve

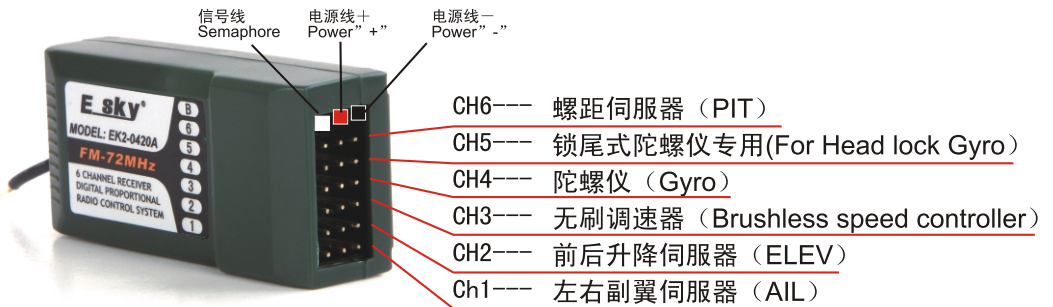




## 电子配件与连接方式 Electronic components connection



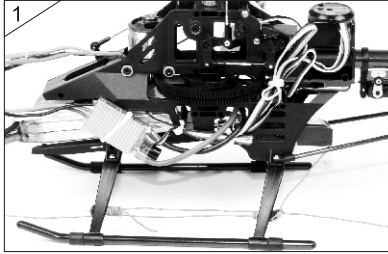
## 接收机的连接 Receiver connection



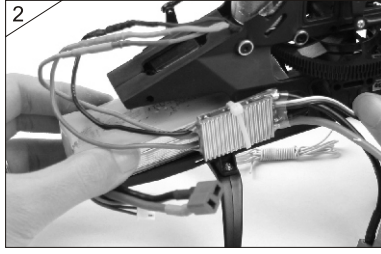
## 陀螺仪的连接 Gyro connection



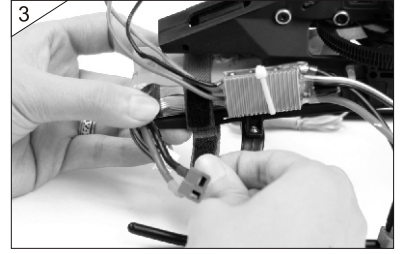
## 起飞步骤 Fly process



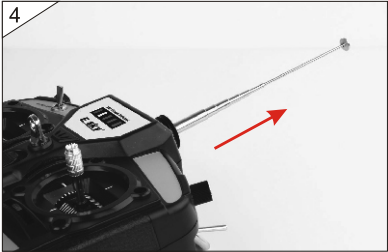
将天线搭配天线管固定于机身上，如上图。  
Please fix the antenna of receiver with frame like above picture.



将电池放入电池槽。  
Remove the canopy and slide the battery into the front of the battery tray as show above.



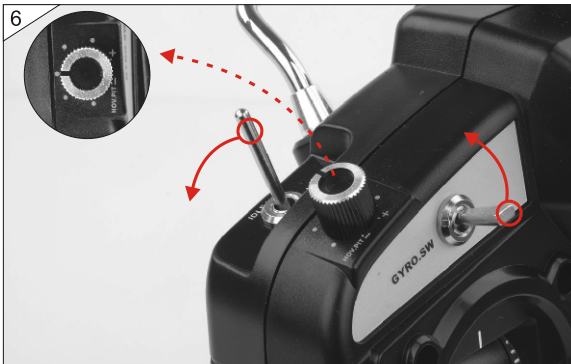
用绑带绑好电池。  
Use Double Faced Adhesive Tape to hold the battery into the tray.



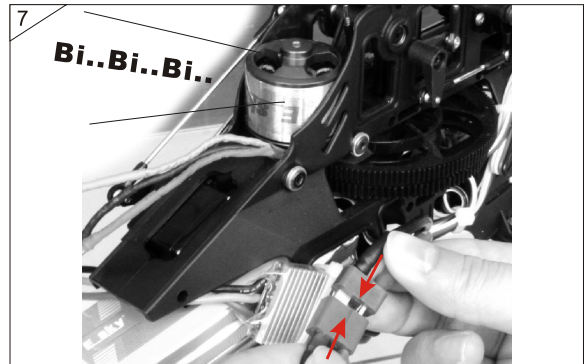
将天线完全拉出。  
Draw out the antenna of transmitter completely.



所有微调置中，油门操作杆与油门微调移至最下方，开启电源。  
Turn on the transmitter using the throttle stick as above. Ensure that throttle stick and trimmer on the bottom, and the other stick and trimmer should be located at center.



螺距微调钮置中、特技开关关闭、陀螺仪切换开关向上。  
Please refer to the above the pitch curve setting should be centered, the IDEL UP switch should be off and the gyro switch should be up.



接上电源，马达发出Bi. Bi. Bi. 声响，此时表示马达进入待机状态，拨动油门游戏杆马达就会开始运转！  
Power on the helicopter, the motor will tong with Bi Bi Bi, which indicates ready to fly.



步骤8将电池接上电调后，陀螺仪上的红色指示灯会开始闪烁进行中立点定位，此时请勿移动直升机，闪烁约5秒后指示灯会由闪烁改为恒亮，方向伺服器同时回归中立点之后才可以移动直升机！

注意！指示灯闪烁中若移动机体，将降低陀螺仪稳定效果！

### Gyro Initialization, Response Test and Adjustment

Your Belt-cp model is equipped with an ESKY 0704B Micro Heading Lock Gyro. This gyro offers an excellent Blend of size, weight, features and performance.

#### Initialization and Response Test

The following checklist includes the steps you must follow to ensure proper initialization and operation of the gyro: After connecting the flight battery to the ESC, be sure that you do not move or sway the helicopter. Allow it to remain motionless until the red LED on the gyro illuminates solidly, indicating that the gyro has initialized properly and is ready for use.

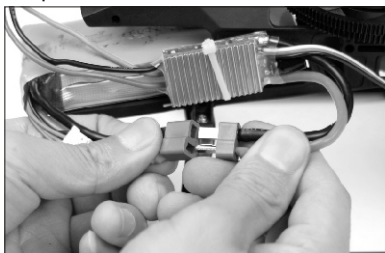
Note: It is extremely important that you do not move or sway the helicopter after powering it on and before the gyro initializes. The gyro must be allowed adequate time to record the neutral position in order to initialize for proper Operation. If you accidentally move the helicopter after powering it on and before the gyro initializes, power the helicopter off (by disconnecting the flight battery from the ESC) then repeat the process to power the helicopter on and to initialize the gyro properly.

Before making your first flight, it will be necessary to confirm that the gyro is responding properly to the movements of the helicopter and providing proper inputs to the tail servo in order to counteract any unwanted changes in yaw. To do this, view the servo arm (from the top of the servo) and note the direction the arm rotates when you give a right rudder input on the transmitter (while the model remains motionless). In the case of the servo installed on your Belt-cp model, the servo arm should rotate toward the front of the helicopter.

Then, yaw the nose of the helicopter quickly to the left, while again noting the direction the tail servo arm rotates. The arm should rotate in the same direction as it did for a right rudder command (toward the front of the helicopter). If the servo arm rotates in the opposite direction, switch the position of the Reverse switch located on the side of the gyro. The switch should be set to the Normal (NOR) position. Then, repeat the steps above to confirm that the gyro is now providing proper inputs to the tail servo.

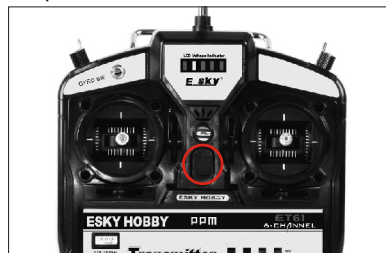
## 结束飞行注意事项 Safty notes end of flight

### Step 1



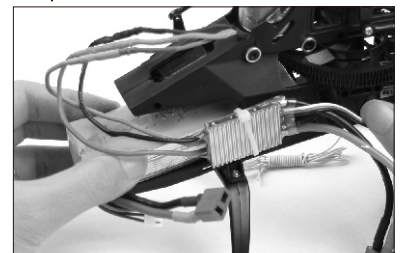
断开直升机电源  
Disconnect battery

### Step 2



关闭发射机电源  
Turn off the transmitter

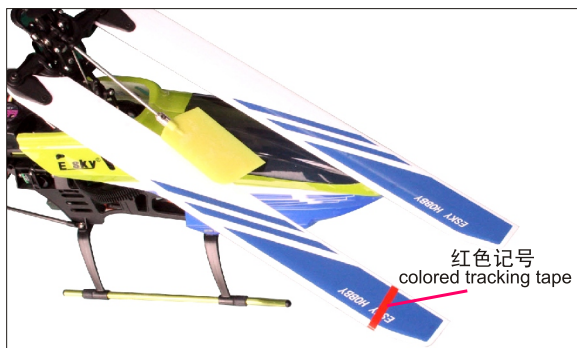
### Step 3



取出电池  
Take out the battery



## 直升机双桨的调整 Blade tacking adjustment



the main rotor blades of each honeybee king3 model are tracked at the factory, minor adjustments to blade tracking may be required after blade changes, linkage adjustments or repairs.

The main rotor blades have been brought up to speed, note which blade is running low and which blade is running high (by the colored tracking tape) as shown as left picture.



the same plane. However, due to slight variations in the ball links and threaded linkage rods/pushrods it may not always be possible to achieve absolutely perfect blade tracking. Don't worry, as the helicopter should still perform well as long as the blade tracking is adjusted as closely as possible.

**Caution: Be sure to maintain a safe distance from the helicopter (1015 feet) when tracking the main rotor blades.**

直升机的主旋翼有两支，当两支主旋翼的角度不同时就会有升力不统一的现象，这时候主旋翼在运转时无法在同一轨迹上，这就是所谓的双桨现象。一旦出现双桨现象，直升机就会抖动并且难以控制。

在其中一支主旋翼贴上深色贴纸做为记号，以便观察主旋翼轨迹。

Blade tracking is a critical element to the flight performance of just about any helicopter, including the honeybee king3. Main rotor blades that are out of track may cause vibration, instability, and loss of power due to increased drag. Although

在主旋翼运转后，观察有记号的主旋翼是在上下轨迹的哪一端。以左图为例，记号出现在下轨迹，表示有记号的主旋翼螺距攻角比较小，升力比较小，所以位于下轨迹。

After confirming which blade is running low and which blade is running high, power down the helicopter in order to make any necessary adjustments to the linkages. You can increase the pitch of the low blade by shortening the " mixing arm to inner swashplate linkage. " This is accomplished by turning one of the Ball Link ends in by one-half to one full turn at a time. Or, you can decrease the pitch of the high blade by I enghthening the same linkage.

拆下有记号主旋翼那端连接的长连杆，顺时针转入会缩短连杆并减少螺距攻角，逆时针转出可放长连杆增加螺距攻角。每一次调整一圈，反复的调整，直到主旋翼轨迹在同一线上为止。

Note: The blade you choose to raise or lower when making tracking adjustments will depend on the pitch of each blade. Because both rotor blades should be as close to 0 degrees as possible when Throttle Hold is activated (DO NOT attempt to check for 0 pitch in the Normal or Stunt/IdleUp flight modes) and the throttle/collective stick is in the middle position, you can easily identify which rotor blade to adjust. If one blade is " lower " than 0 degrees, raise it to match the other blade. If one blade is " higher " than 0 degrees, lower it to match the other blade.

左图为调整完成的主旋翼轨迹，两支主旋翼完美的在同一轨迹上，直升机的飞行会变的相当稳定。

双桨调整完成后，如果直升机停悬时转速偏慢，请同时缩短两支主旋翼的长连杆，降低螺距攻角让转速上升。

Typically, not much adjustment should be necessary to properly track the main rotor blades. If significant adjustments are required, be sure to double-check the length of both mixing arm to inner swashplate linkages ( they should be close to the same length). You should also check the blades for any warps or twists. In most cases, you should be able to get both blades tracking perfectly in



## 陀螺仪的调整 Gyro adjustment



本机所搭配的陀螺仪是ESKY最新推出的锁尾陀螺仪，具有相当优良的方向舵锁定保持效果，并且具有锁定、非锁定切换、感度调整等功能。  
Your Belt-cp model is equipped with an ESKY new version of Micro Heading Lock Gyro. This gyro offers an excellent blend of heading lock, normal and gain adjustment.

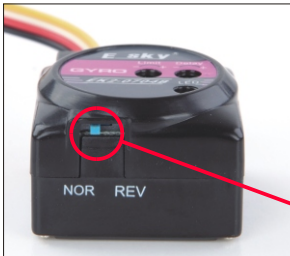
硬件方面可调整的有三处：  
Limit:调整方向舵机的运转行程极限  
Delay:调整修正讯号的频率  
NOR/REV:切换陀螺仪修正方向

Adjustable knob as below:  
Limited: rudder trim  
Delay: sign trim  
NOR/REV: direction reverse

以上三个功能在出厂前皆调整完成，请勿任意变更出厂设置！

The above three functions have been adjusted and tested correctly at factory, please do not change anything if not necessary.

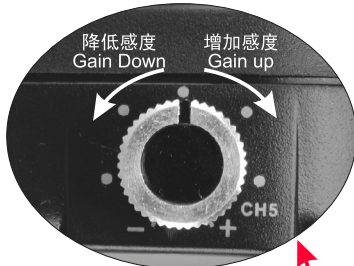
## 陀螺仪正逆转开关 Direction Reversing



如果直升机在尚未起飞就出现在原地打转的现象，表示陀螺仪修正方向错误，请将侧面的NOR/REV开关切换即可。

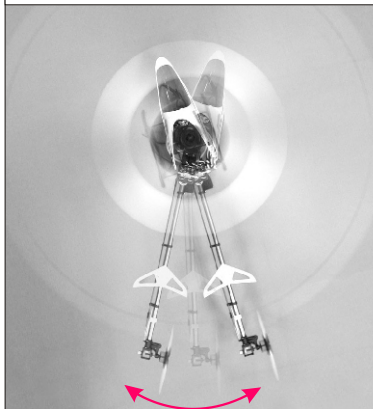
It indicates that the direction reverse if the helicopter always turn around the ground after you power up the helicopter. please check the NOR/REV switch and change it to the other side, until your helicopter flight properly.

NOR/REV



ESKY新版6通道遥控器，利用右上方旋钮可直接增加或减少陀螺仪感度。

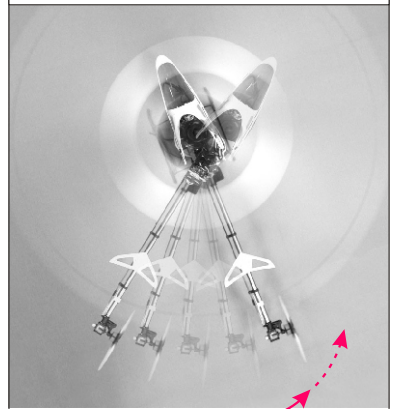
### 降低感度场合 Gain Down(-)



直升机起飞悬停后，方向舵出现左右来回晃动的情况，表示陀螺仪对修正太过敏感，请降低陀螺仪感度。

It indicates that need to decrease the gain of gyro if your helicopter's tail always wobbling left-right violently when hovering.

### 增加感度场合 Gain Down(+)



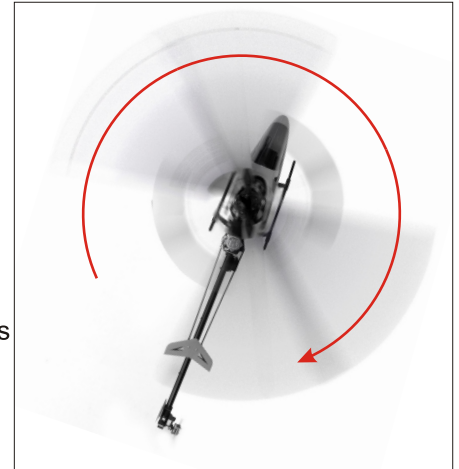
当操控者打方向舵旋转机身时，放开方向舵摇杆，机体应该马上定位，如果停止后还超出定位点，表示陀螺仪修正不够敏感，请增加感度。

It indicates that need to increase the gain of gyro if your helicopter can not located with your direction after you operated the rudder stick.

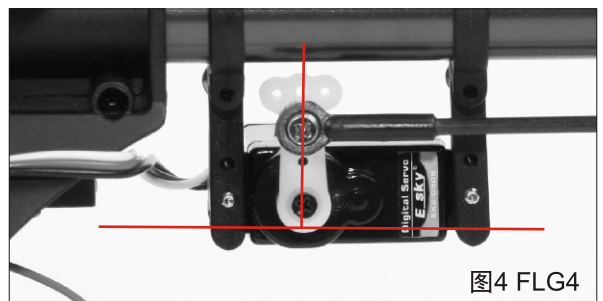
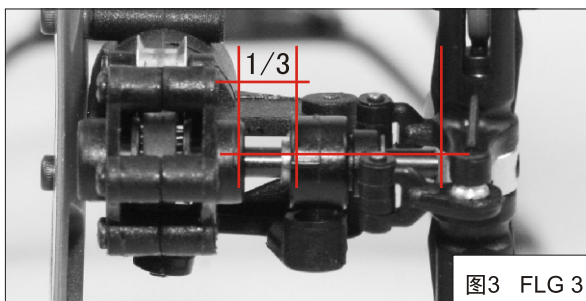
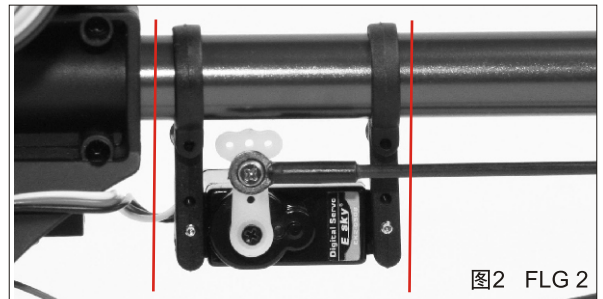
Gain trimmer: ESKY new version of 6channel transmitter offers a Gain Adjustment feature with the gain trim on the right shoulder as shown above picture. This gain trimmer allows you to adjusting gain values directly.

## 尾伺服器的调整 Adjustment of tail servo

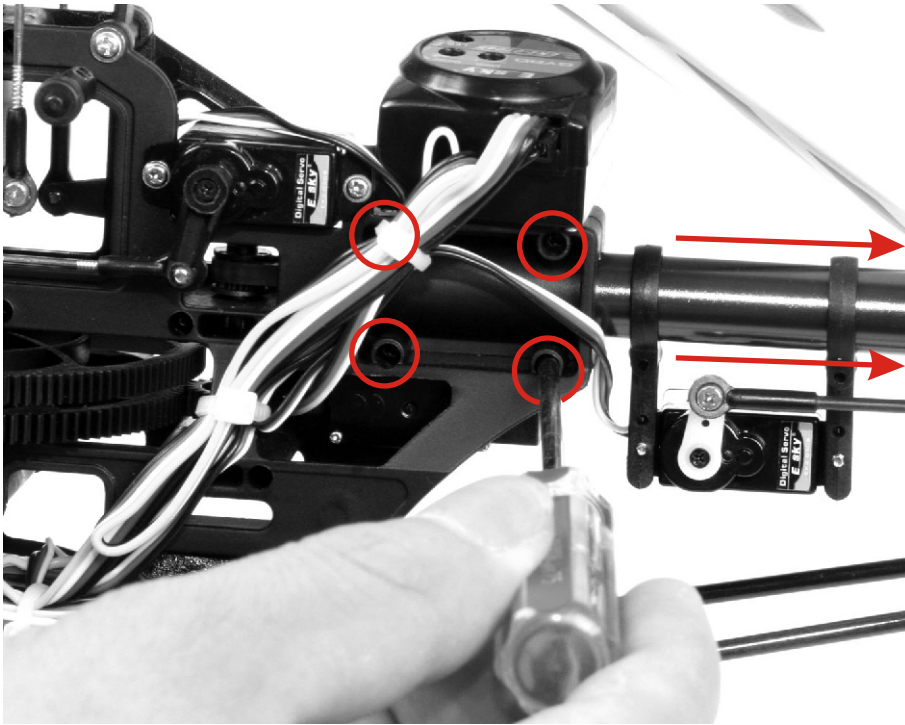
由于直升机属于高精密度模型。在直升机运转时，有多种情况可能引起直升机向一边旋转。可以参考以下方法调试，调校过程中为避免意外发生，**建议把马达和调速器的接线断开**。先打开发射机，再将直升机电源接通。然后将发射机的方向操作杆和微调居中(图1)；保持尾伺服器固定架与尾管尽量垂直(图2)，再左右移动尾伺服器固定座的同时，确保尾旋翼横轴的距离（大约在横轴的3/1处）(图3)，使尾伺服器和摆臂保持90度攻角(图4)



As the helicopter is high precision model, several circumstances may cause the helicopter rotates toward left or right, you can debug as below: Please disconnect brushless motor and ESC in orde to avoid accident, turn on the transmitter and power on the helicopters. Then set rudder stick and trim centered (picture1), keep tail servo link rod and tail tube vertical (picture2), then adjust the tail servo mount and the distance to tail blade shaft (approximately in 1/3 position of the cross shaft)(picture3),make the tail servo and servo horn at a 90° angle of attack(picture4)



## 皮带松紧调整Belt tightness adjustment



在起飞时飞机锁不住尾部，除了陀螺仪没有调节好外，还有可能是皮带松动造成。调整方法如上图所示：将主机架锁住尾管的螺丝松开，然后将尾管往尾部拉，此时要注意皮带的松紧度，不能过松或者过紧，适当即可。紧接着不能松开尾管并锁紧主机架上的四个螺丝。

When taking off, the helicopter may occur that it can't lock the tail well. Besides the reason for unlocked well gyro, the other reason is that the belt has been loose.

Adjustment method as above: Loose the nail of locking the tail tube of main frame, then pull the tube into the tail. At the same time, please attention to the degree of tightness. No more loose or tight. On top of not losing the tail tube, lock the four nails of the main frame.

## 直升机的基本知识Basic knowledge of helicopter

直升机有一对主旋翼，用来产生升力，就好像螺旋推进器产生推力一样。主旋翼同时产生扭力作用在直升机的机身上，使机身反向扭转。产生这种扭力的同时一定要计算安装在直升机尾部的尾旋翼的推力。这种推力能克制主旋翼产生的反扭力，使直升机飞行达到平衡。

对于同轴双旋翼直升飞机来讲，两对旋翼方向相反的主旋翼，相互抵消了反扭力。

Helicopter fixed with a pair of main rotating blades, the main blades, generate lift when rotating, similar to the thrust force generated by the spiral propeller. The rotating main blades also introduce torque force to the fuselage to make the fuselage twist to opposite direction. Thrust force of the tail boom also should be calculated when generating this torque force.

For the coaxial rotor helicopter, the two pairs of rotor blades. Spinning in opposite directions automatically counteract this torque.

### 1) 发射机与直升机基本的操作

#### Basic operating braking of Transmitter and Helicopter

无论是主尾旋翼的直升机，还是同轴双旋翼的直升飞机，他们的基本飞行动作都是一样的。只是发射机因为不同的国家使用习惯存在二种制式。

Both types of helicopter with main & tail blades structure and coaxial-rotor structure have the same performance, but the transmitter has two mode based on different countries all over the world.

### 2) 制式1 (右手油门) Mode 1(Right throttle)



当油门操作杆向上推动时，直升机上升，  
When the throttle stick is pushed forward, the helicopter lifts up.



当油门操作杆向下推动时，直升机下降。  
When the throttle stick is pushed downward, the helicopter descends.



当副翼操作杆向左移动时，直升机飞向左边，  
When the aileron stick is moved to the left, the helicopter moves to the left.



当副翼操作杆向右移动时，直升机飞向右边，  
When the aileron stick is moved to the right, the helicopter moves to the right.

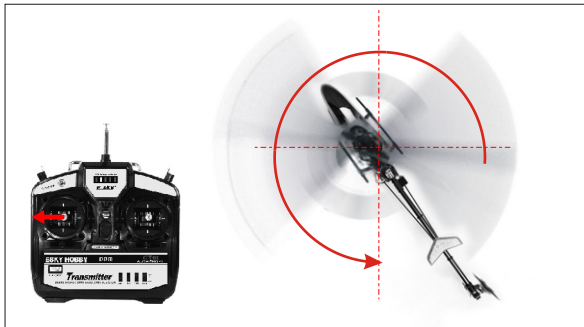




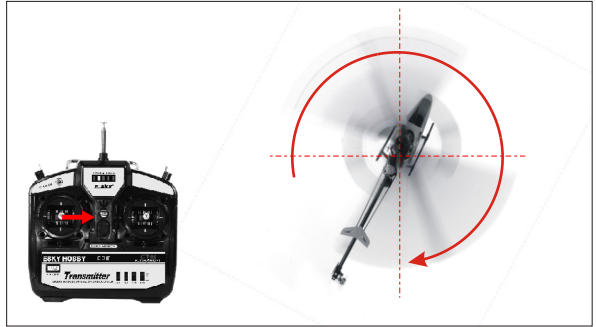
当升降操作杆向上推动时，直升机向前飞。  
When the elevator stick is pushed forward, the helicopter flies forward.



当升降操作杆向下推动时，直升机向后飞。  
When the elevator stick is pushed downward, the helicopter flies backward.

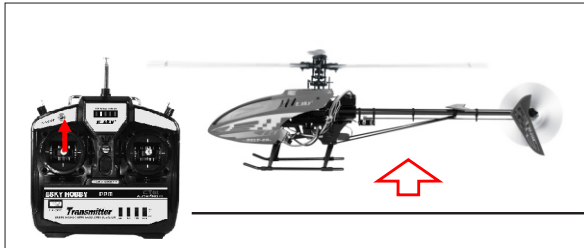


当方向操作杆向左推动时，直升机机头向左转。  
When the rudder stick is moved to the left, the head of helicopter moves to the left.



当方向操作杆向右推动时，直升机机头向右转。  
When the rudder stick is moved to the right, the head of helicopter moves to the right.

### 3) 制式2 (左手油门) Mode 2(Left throttle)



当油门操作杆向上推动时，直升机上升。  
When the throttle stick is pushed forward, the helicopter lifts up.



当油门操作杆向下推动时，直升机下降。  
When the throttle stick is pushed downward, the helicopter descends.



当副翼操作杆向左移动时，直升机飞向左边。  
When the aileron stick is moved to the left, the helicopter moves to the left.



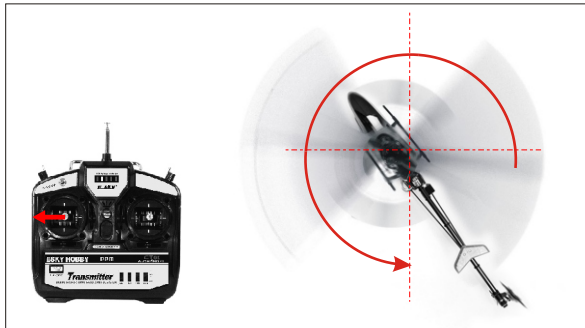
当副翼操作杆向右移动时，直升机飞向右边。  
When the aileron stick is moved to the right, the helicopter moves to the right.



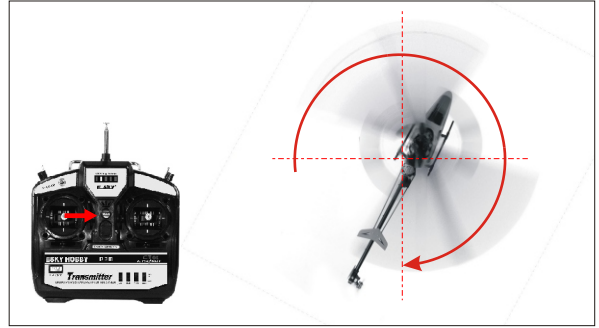
当升降操作杆向上推动时，直升机向前飞。  
When the elevator stick is pushed forward, the helicopter flies forward.



当升降操作杆向下推动时，直升机向后飞。  
When the elevator stick is pushed downward, the helicopter flies backward.



当方向操作杆向左推动时，直升机机头向左转，  
When the rudder stick is moved to the left, the head of helicopter moves to the left.



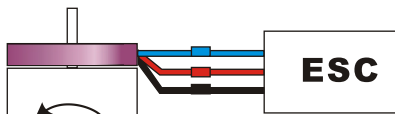
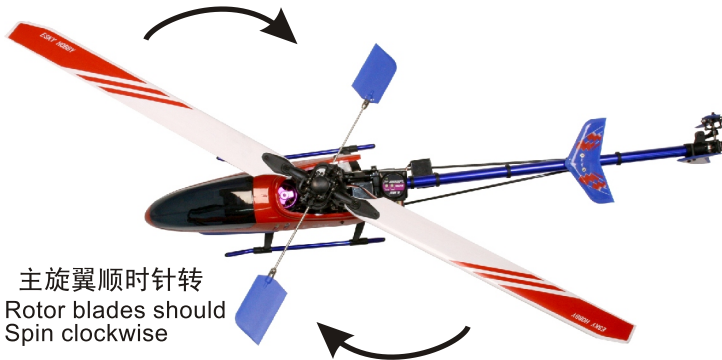
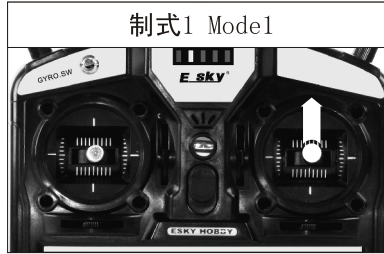
当方向操作杆向右推动时，直升机机头向右转，  
When the rudder stick is moved to the right, the head of helicopter moves to the right.

# 舵面检查：油门 Throttle Checking

将油门拨杆慢慢的往上推，直到马达转动即可，确认马达以逆时针转动，而主旋翼则是顺时针转动即可！

测试时请勿将油门拨杆超过1/5处，马达会急速运转，可能会造成机体或自身的伤害！！

Servo performance checking: Put the throttle stick a little up until the main blade to spin up. Ensure that the main blade spin in clockwise. Do not put the throttle above 20%, otherwise will caused a damage or injury.

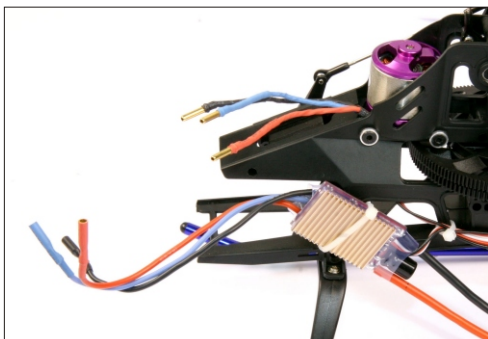


两线对调马达可逆转  
Reverse the position of any two motor wire lead connections to the ESC.

若马达转动方向错误，只有马达会运转，而主旋翼并不会被带动，请将马达与电子调速器(ESC)之间的连接线，选择其中两条对调，无刷马达将会改变旋转方向。

Once you have placed the helicopter in a safe area, free of obstructions, and are clear of the rotor blades, you can safely begin to power up the model to confirm proper operation and operating direction of the motor and rotor blades. Advance the throttle stick slowly, just until the motor and rotor blades begin to spin. Note the direction that the main and tail rotor blades spin. The main rotor blades should spin clockwise when viewed from the top, and the tail rotor blades should spin clockwise when viewed from the right-hand side of the helicopter. If both sets of rotor blades are operating in the wrong direction, power down the helicopter, unplug the flight battery, then simply reverse the position of any two motor wire lead connections to the ESC.

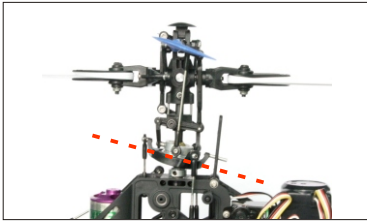
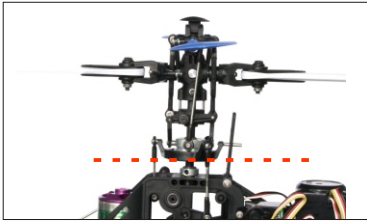
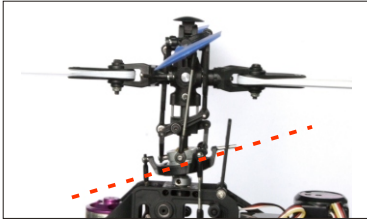
## 拔除马达线防止意外！ Always disconnect the motor and ESC end of your flight.



除非是正式飞行，否则在室内进行维修保养或调整工作时，我们十分强烈的建议玩家将无刷马达与电调的连接线拔除（拔除两条即可），可防止马达意外的旋转造成危险！  
Always disconnect the motor and ESC when you maintain or adjust your helicopter. to avoid a damage or injury.

## 舵面检查：升降舵 Elevator Checking

倾斜盘前后 Swash up/down



制式1 Mode1

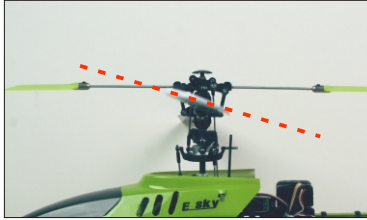


制式2 Mode2



## 舵面检查：螺距(特技模式下) Cyclic pitch Checking (IDEL UP/ON)

倾斜盘上下 Swash Hi/Low



制式1 Mode1



制式2 Mode2





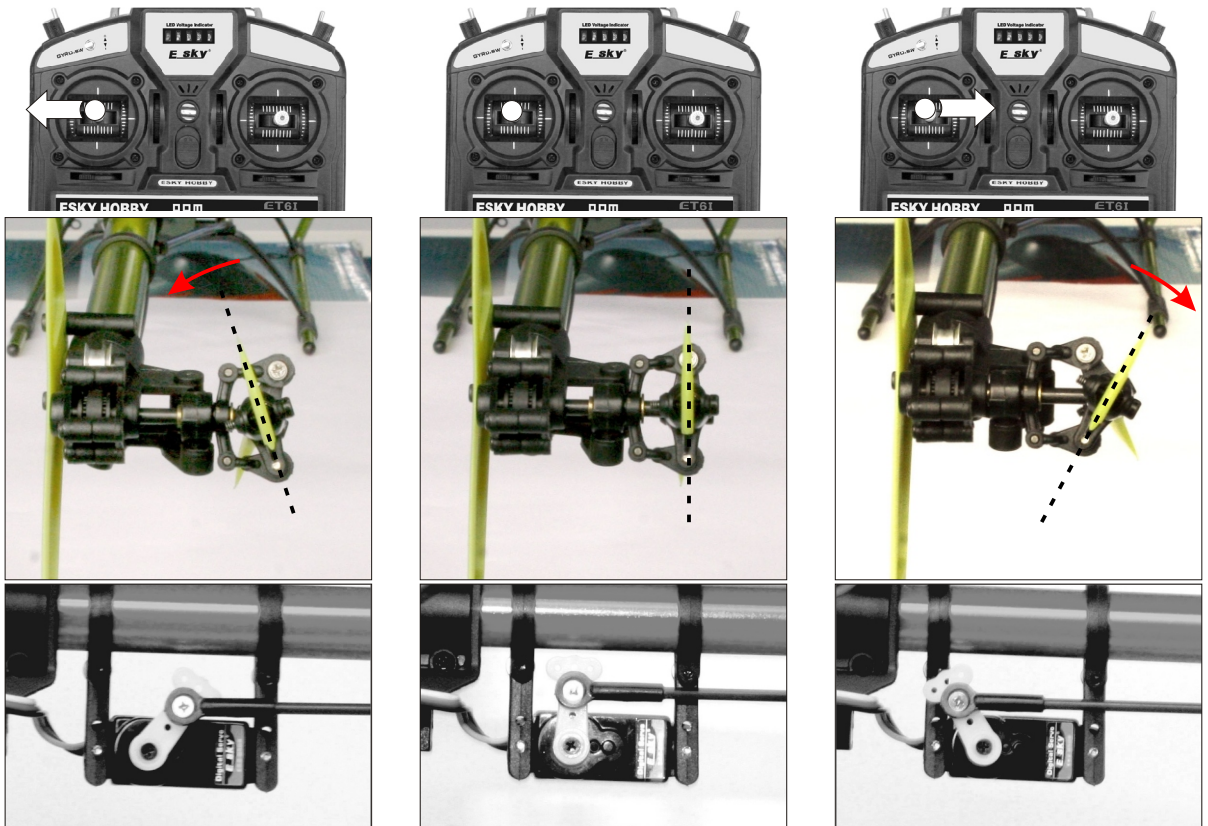
# 舵面检查：副翼 Aileron Checking

## 倾斜盘左右 Swash Left/Right



# 舵面检查：方向舵 Rudder Checking

## 尾旋翼角度左右变化 Tail blade Left/Right



# 主旋翼头组装步骤 Assembly process of main rotor blade



Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑胶件时请务必注意,适当扭力即可。而过大的扭力可能会导致滑牙,断裂。

Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43 (螺丝胶)

Please confirm that the screw is fastened tightly before use.

使用前,请确认螺丝处于锁紧状态。

No.	Code No.	Name	Specification	Quantity
001	0401	平衡杆中心座 Flybar central holder		1
002	0429	主旋转头 Center hub set		1
003	0446	十字槽平头螺丝 Cruciform slotted screw	ST1.7*3	2
004	0406	轴承 Bearing	$\phi 3 \times \phi 6 \times 2.5$	4
005	0429	销子 Bolt	$\phi 1.6 \times 18.5$	2
006	0422	平衡翼杆 Flybar	$\phi 2.0 \times 220$	1
007	0403	基米螺丝 Kimi screw	M3x3	2
008	0403	平衡翼控制臂 Paddle control arm		2
009	0405	$\phi 4.0$ 球头 4.0 Ball head	$\phi 4.0$	4
010	0405	十字槽平头螺丝 Cruciform slotted screw	M2*6	4
011	0430	轴承 Bearing	$\phi 2 \times \phi 5 \times 2$	2
012	0406	贝尔控制臂 Bell control arm set		2
013	0406	十字槽带华司螺丝 Cross recess head screw	ST1.7*4	2

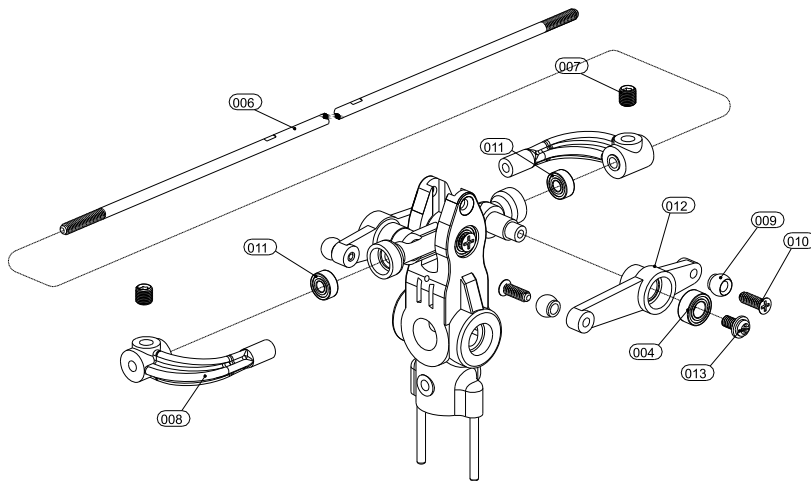
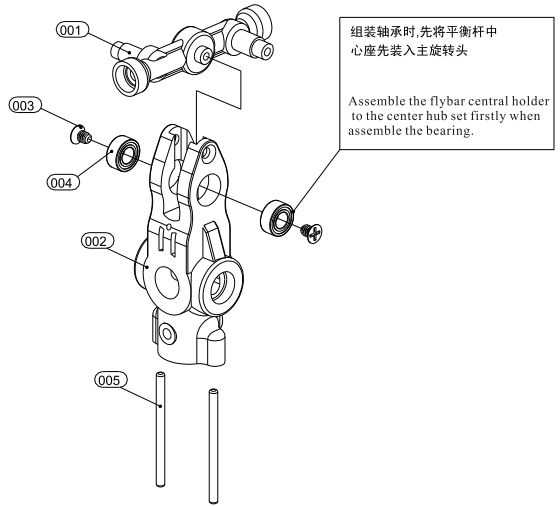
十字槽平头螺丝 (M2\*6mm)x4  
Cruciform slotted screw

$\phi 4.0$ 球头 ( $\phi 4.0 \times 3\text{mm}$ )x4  
4.0 Ball head

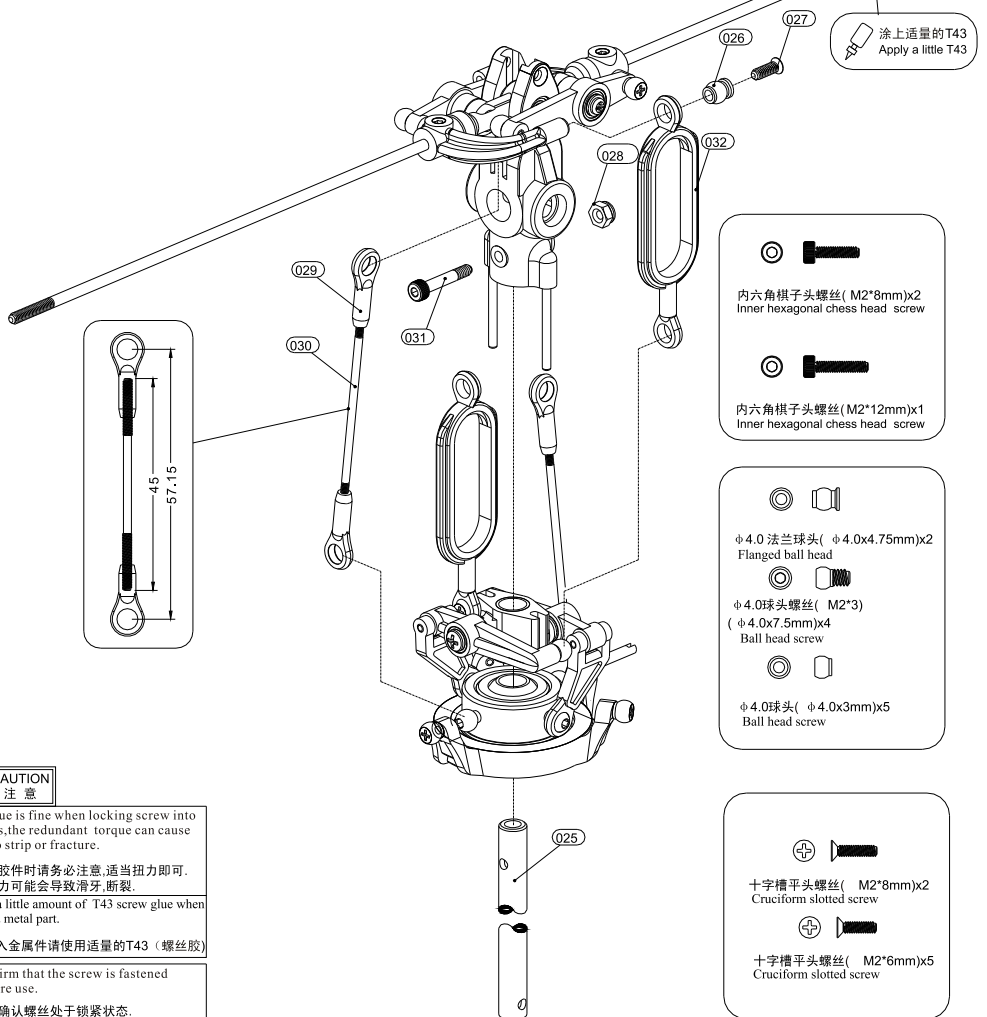
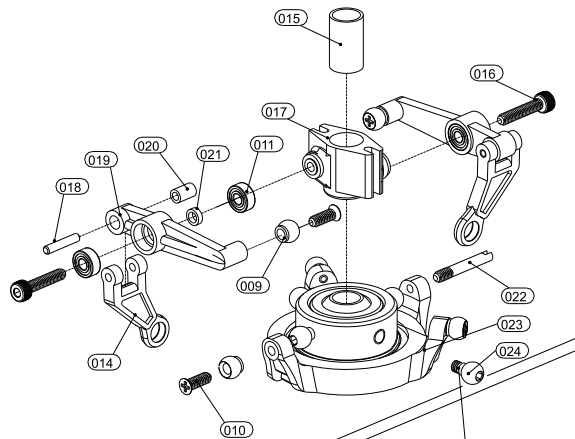
十字槽平头螺丝 (ST1.7\*4mm)x2  
Cruciform slotted screw

十字槽带华司螺丝 (ST1.7\*4mm)x2  
Cruciform slotted screw

M3 基米螺丝 (M3x3mm)x2  
M3 Kimi screw



No.	Code No.	Name	Specification	Quantity
014	0432	剪形臂 Forciform arm		2
015	0407	铜套 Copper sheath	$\phi 5^* \phi 6^*10$	1
016	0432	内六角棋子头螺丝 inner hexagonal chess head screw	M2*8	2
017	0407	中心座滑块 Center holder block		1
018	0432	销子 Bolt	$\phi 1.5^*8$	2
019	0432	希拉控制臂 Rotor head control arm set		2
020	0432	铜套 Copper sheath	$\phi 1.5^* \phi 2.5^*4$	2
021	0432	铜套 Copper sheath	$\phi 2.0^* \phi 3.4^*1.1$	2
022	0431	倾斜盘固定销 Swash plate fixed bolt	$\phi 2.0^*14$	1
023	0431	倾斜盘 Swash plate		1
024	0431	球头螺丝 Ball head screw	S $\phi 4^*7.5$	4
009	0405	$\phi 4.0$ 球头 4.0 ball head	$\phi 4.0$	5
010	0405	十字槽平头螺丝 Cruciform slotted screw	M2*6	5
011	0430	轴承 Bearing	$\phi 2^* \phi 5^*2$	4
025	0538	主轴 Main shafts	$\phi 5^*122$	1
026	0403	法兰球头 Flanged ball head	$\phi 4^*5$	2
027	0403	十字槽平头螺丝 Cruciform slotted screw	M2*8	2
028	0429	防松螺母 Locknut	M2.0	1
029	0412	长球头座 Porlat spheriod head holder	$\phi 4$	4
030	0427	拉杆 Push bar	M1.6*45	2
031	0429	内六角棋子头螺丝 cruciform head inner hexagon screw	M2*12	1
032	0413	双孔框形拉杆 Diplopore oval push bar		2



注意  
Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑胶件时请务必注意,适当扭力即可,而过大的扭力可能会导致滑牙,断裂。

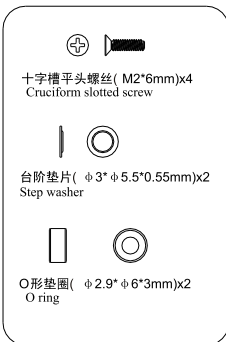
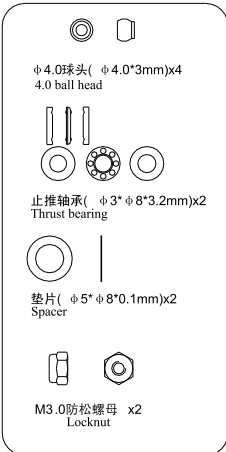
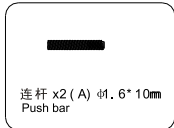
Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43 (螺丝胶)

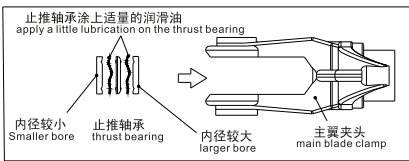
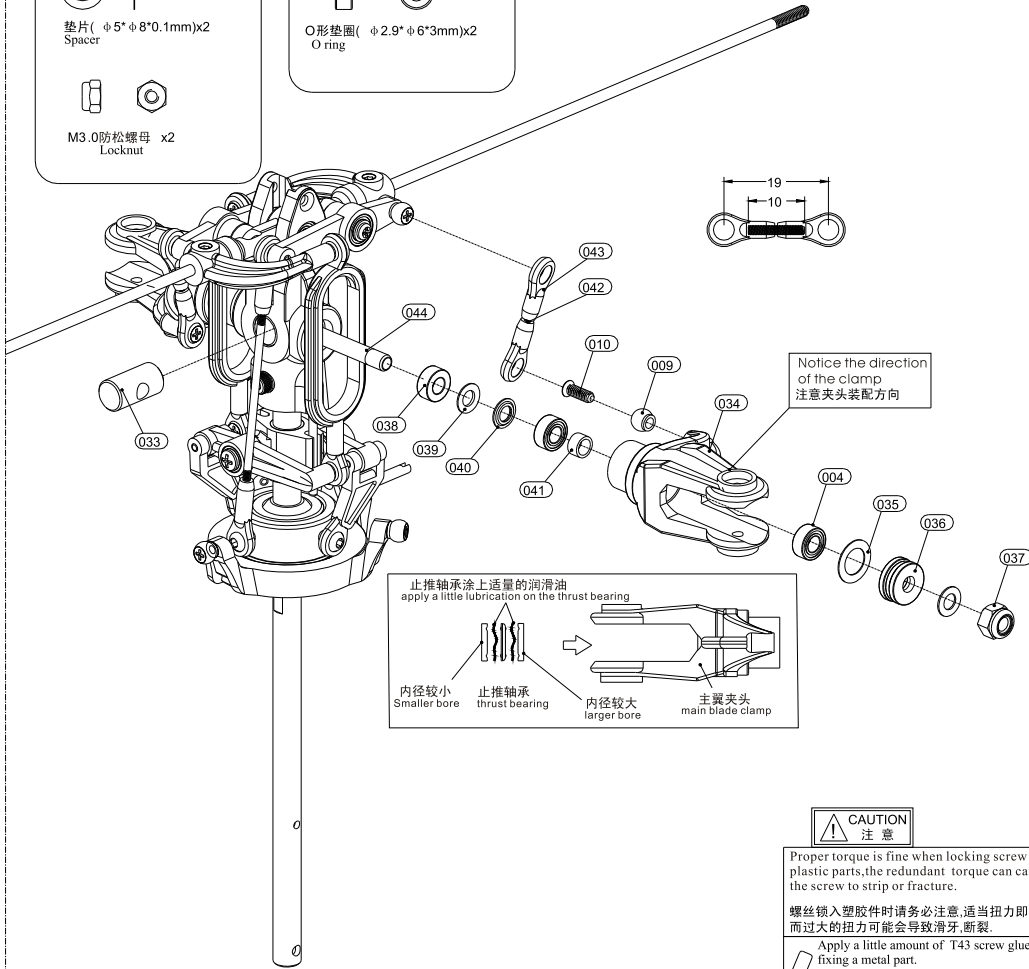
Please confirm that the screw is fastened tightly before use.

使用前,请确认螺丝处于锁紧状态。

# 桨夹头组装步骤 Assembly of propeller clamp



No.	Code No	Name	Specification	Quantity
033	0429	固定塞 Fixed plug		1
034	0402	主翼夹头 Main blade clamp		2
035	0402	垫片 Spacer	$\phi 5^* \phi 8^* 0.2$	2
036	0500	止推轴承 Thrust bearing	F3-8M	2
037	0404	防松螺母 Locknut	M3	2
038	0429	O形圈 O ring	$\phi 2.9^* \phi 6^* 3$	2
039	0402	垫片 Spacer	$\phi 3.1^* \phi 5.6^* 0.1$	2
040	0531	台阶垫片 Step washer	$\phi 3.1^* \phi 5.5^* 0.55$	2
041	0402	铜套 Copper sheath	$\phi 3^* \phi 4^* 2.2$	2
042	0427	螺杆 Screw rod	M1.6*10	2
043	0411	短球头拉杆 Ball head push bar(short)		4
044	0404	横轴 Cross shaft		4
004	0509	轴承 Bearing	$\phi 3^* \phi 6^* 2.5$	4
009	0402	$\phi 4.0$ 球头 4.0 ball head	$\phi 4.0$	2
010	0402	十字槽平头螺丝 Cruciform slotted screw	M2*6	2



**CAUTION 注意**

Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑胶件时请务必注意, 适当扭力即可. 而过大的扭力可能会导致滑牙, 断裂.

Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43 (螺丝胶)

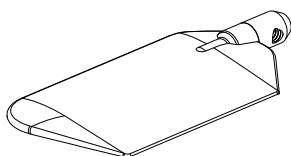
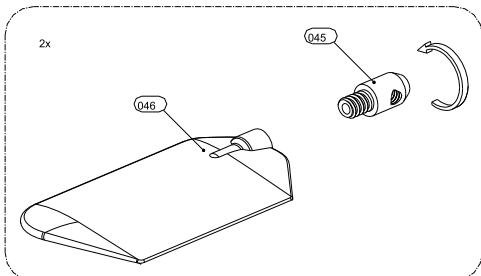
Please confirm that the screw is fastened tightly before use.

使用前, 请确认螺丝处于锁紧状态.

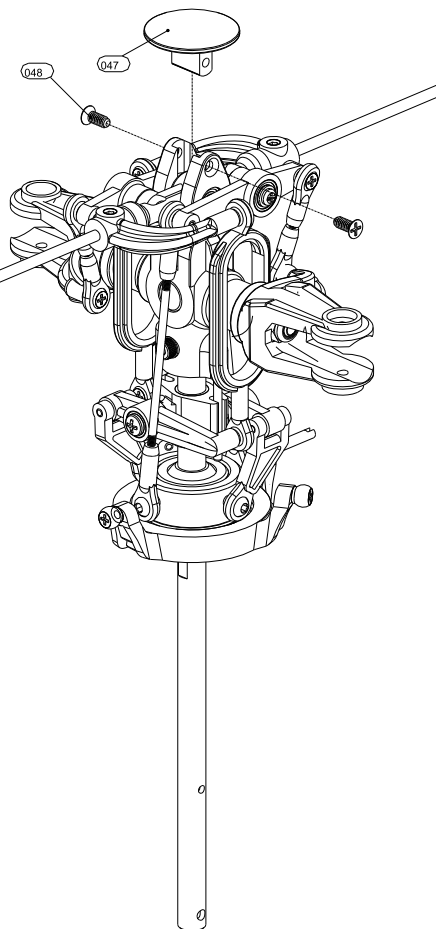


# 稳定翼组装步骤 Assembly process of paddles

No.	Code No.	Name	Specification	Quantity
045	0414	平衡翼固定轴 Paddle fixed shaft		2
046	0414	平衡翼 Paddle		2
047	0409	刹车碟 Braking vane		1
048	0409	十字槽平头螺丝 Cruciform slotted screw	M2x4	2
007	0414	基米螺丝 Kimi screw	M3x3	2



涂上适量的T43  
Apply a little amount  
of T43 screw glue



Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑胶件时请务必注意,适当扭力即可,而过大的扭力可能会导致滑牙,断裂。

Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43 (螺丝胶)

Please confirm that the screw is fastened tightly before use.

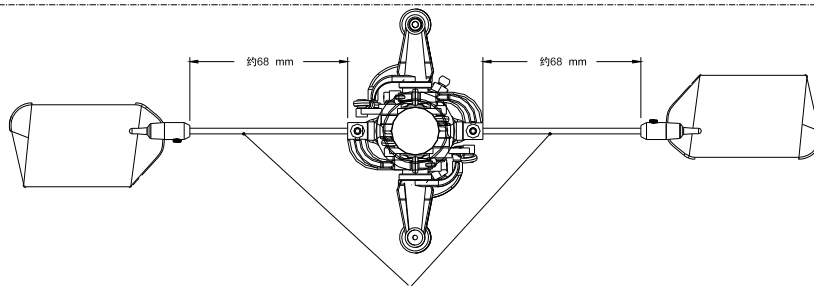
使用前,请确认螺丝处于锁紧状态。



十字槽平头螺丝 (M2\*4mm)x2  
Cruciform slotted screw



M3 基米螺丝 (M3x3mm)x2  
Kimi screw



请保持平衡杆两边长度相等  
Make sure both sides are equal in length



# 伺服器组装步骤 Assembly of servo



φ4.0球头(φ4.0\*3mm)x4  
4.0 ball head



十字槽平头螺丝(M2\*6mm)x4  
Cruciform slotted screw



十字槽带华司螺丝(ST1.7\*4mm)x6  
Cross recess head screw

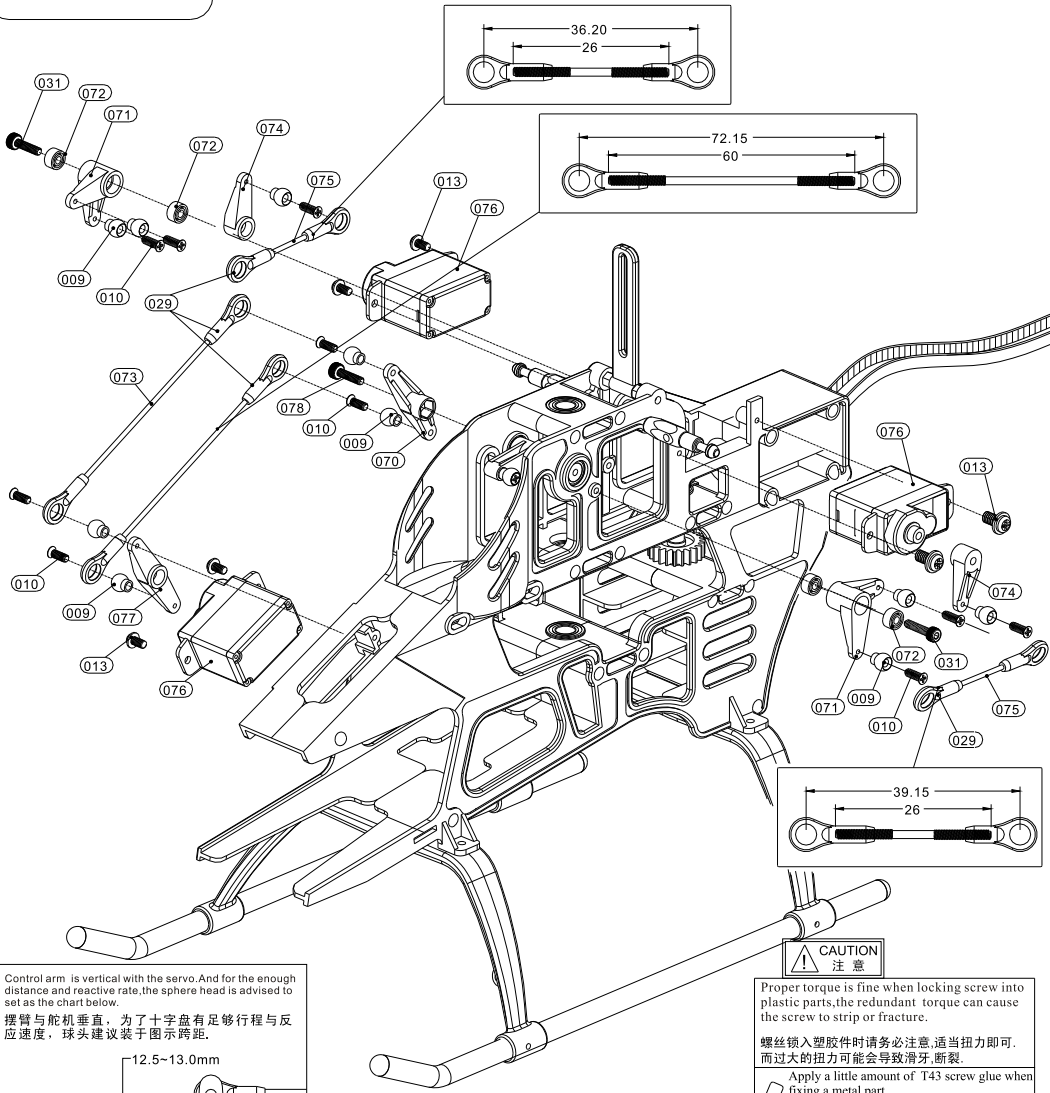


内六角棋子头螺丝(M2\*7mm)x1  
Inner hexagonal chess head screw

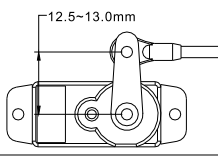


内六角棋子头螺丝(M2\*12mm)x1  
Inner hexagonal chess head screw

No.	Code No	Name	Specification	Quantity
070	0526	转拉臂 Turn arm		1
071	0527	L形摆臂 L-shape control arm		2
072	0527	轴承 Bearing	φ2*φ5*2.5	4
073	0548	拉杆 Push link	φ1.4*60	2
074		单边摆臂 Single control arm		2
075	0548	拉杆 Push link	φ1.4*26	2
076	0508	舵机 Servo		3
077		一字摆臂 - shape control arm		1
078	0526	内六角棋子头螺丝 inner hexagonal chess head screw	M2*7	1
009	0405	φ4.0球头 4.0 ball head	φ4.0	10
010	0405	沉头十字螺丝 Cruciform slotted screw	M2*6	10
013	0531	十字槽带华司螺丝 Cross recess head screw	ST1.7*4	6
029	0412	长球头座 Porlat spheroid head holder		8
031	0527	内六角棋子头螺丝 inner hexagonal chess head screw	M2*12	2



Control arm is vertical with the servo. And for the enough distance and reactive rate, the sphere head is advised to set as the chart below.  
摆臂与舵机垂直。为了十字盘有足够行程与反应速度，球头建议装于图示跨距。



**CAUTION 注意**  
Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.  
螺丝锁入塑胶件时请务必注意,适当扭力即可。而过大的扭力可能会导致滑牙、断裂。  
Apply a little amount of T43 screw glue when fixing a metal part.  
螺丝锁入金属件请使用适量的T43(螺丝胶)

Please confirm that the screw is fastened tightly before use.  
使用前,请确认螺丝处于锁紧状态。

# 主齿轮组装步骤 Assembly of main gear set

No.	Code No	Name	Specification	Quantity
079	0510	HF-0712 单向轴承 Oneway bearing	$\phi 6 \times \phi 10 \times 12$	1
080	0534	主齿轮 Main gear	140T	1
081	0534	副齿轮 Auxiliary gear	110T	1
082	0534	单向轴承套 Oneway auto-driven shaft	$\phi 5 \times \phi 8 \times 21$	1
083	0538	定位环 Collar		1
084	0548	拉杆 Push link	$\phi 1.4 \times 20$	1
085	0548	拉杆 Push link	$\phi 1.4 \times 32$	1
007	0538	基米螺丝 Kimi screw	M3x3	1
028	0538	防松螺母 Locknut	M2.0	1
029	0412	长球头座 Porlat spheriod head holder	$\phi 4$	6
031	0538	内六角棋子头螺丝 inner hexagonal chess head screw	M2*12	1
075	0548	拉杆 Push link	$\phi 1.4 \times 26$	1



Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑胶件时请务必注意 适当扭力即可。而过大的扭力可能会导致滑牙、断裂。

Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43（螺丝胶）

Please confirm that the screw is fastened tightly before use.

使用前，请确认螺丝处于锁紧状态。



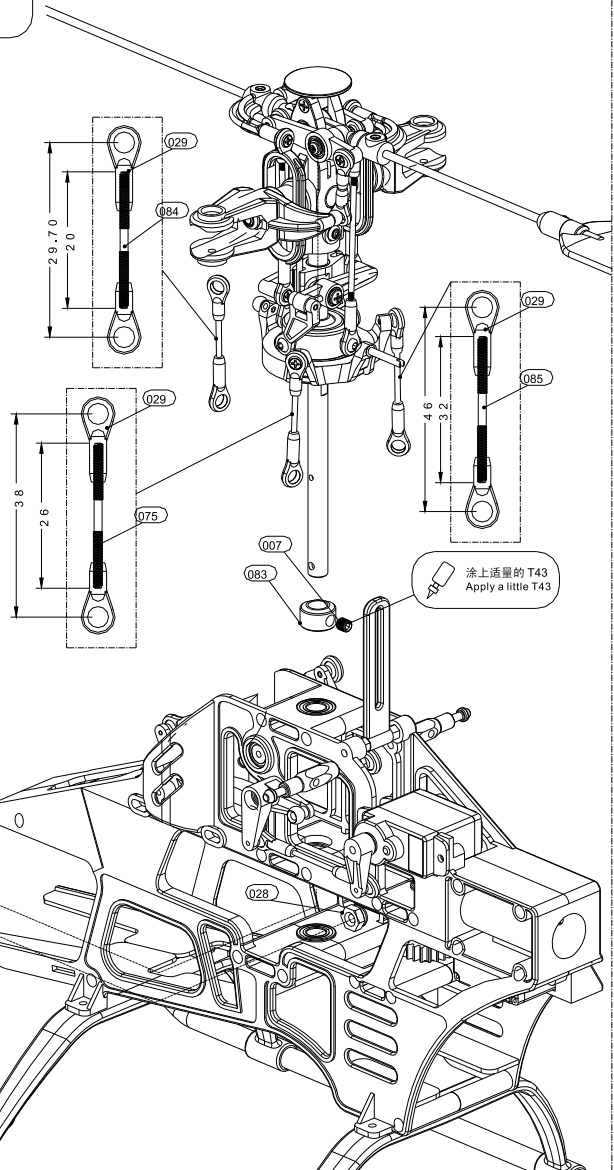
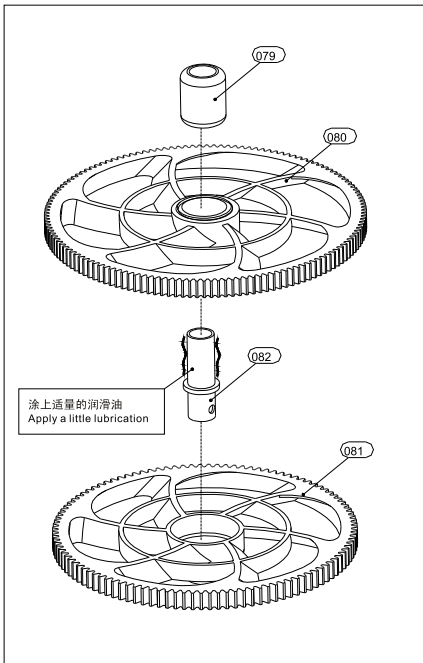
M3 基米螺丝 (M3x3mm)x2  
Kimi screw



内六角棋子头螺丝 (M2\*12mm)x1  
Inner hexagonal chess head screw



M2\_0防松螺母 x1  
Locknut





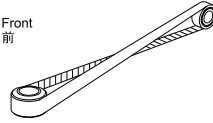
# 尾旋组组装步骤 Assembly process of tail boom set

No.	Code No.	Name	Specification	Quantity
086	0528	十字槽圆头螺丝 Cruciform round screw	M2*14	2
087	0424	尾拉杆固定套 Tail push-rod control set		2
088	0421	尾舵机固定座 Tail servo control set		2
089	0423	尾管 Tail boom		1
090	0418	水平翼固定座 Horizontal fin set holder		1
091	0528	尾齿轮座右 Right tail gear holder		1
092	0417	尾横轴组 Tail cross shaft set		1
093	0528	皮带压轮 Belt wheel		1
094	0417	皮带轮盖 Cap of belt pulley		2
095	0531	垫片 Washer	$\phi 2 \times \phi 5 \times 0.5$	2
096	0528	尾齿轮座左 Left tail gear holder		1
097	0531	内六角圆头螺丝 inner hexagonal round head screw	M3*10	1
098	0420	尾旋翼 Tail rotor blade		1
004	0509	轴承 Bearing	$\phi 3 \times \phi 6 \times 2.5$	2
063	0528	十字槽圆头螺丝 Cruciform round screw	ST1.7*9	3



Front  
前

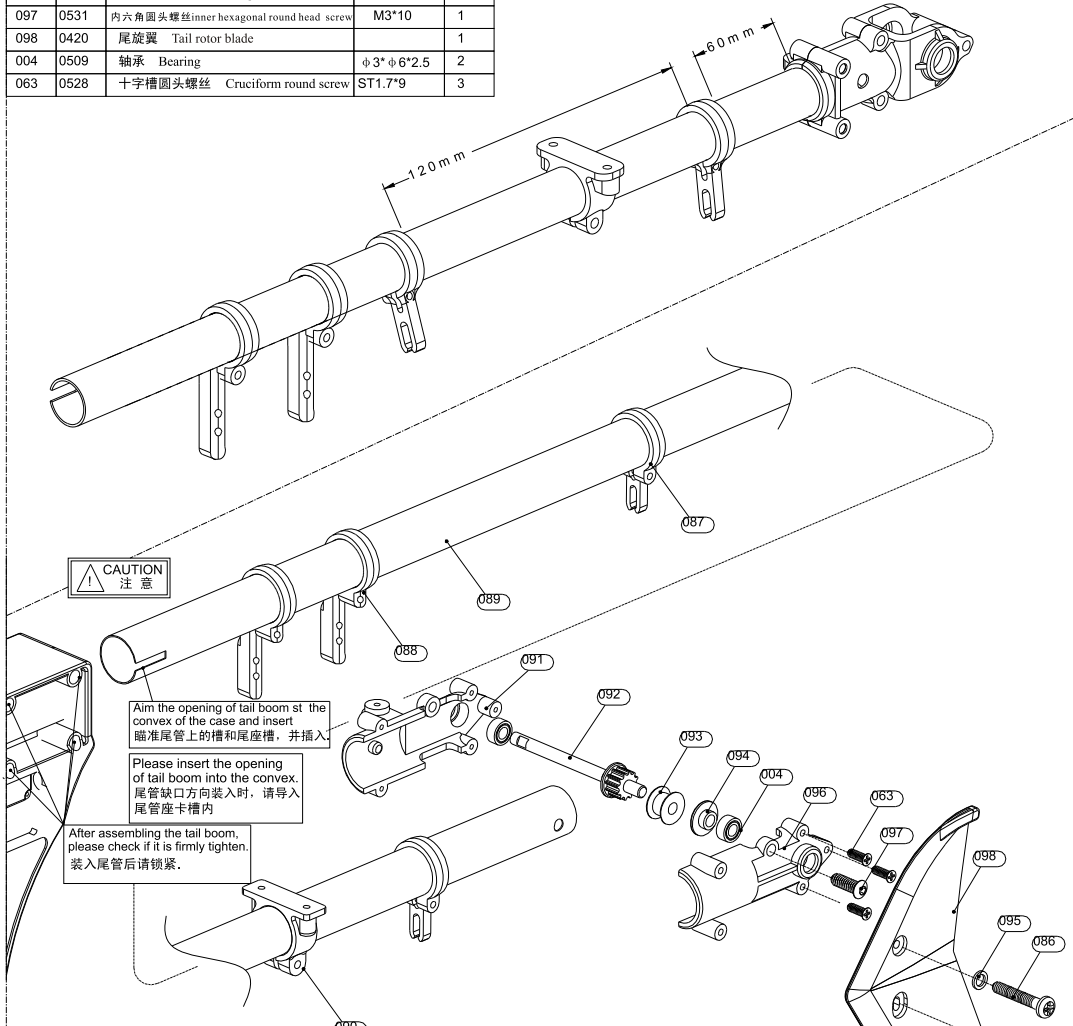
Back  
后



Drive belt illustration  
尾传动皮带装配示图

1. Check to rotate the belt 90 degrees when assembling
2. Belt tension: Recommend to lightly tighten the drive belt after assembling tail boom to avoid vibration, belt friction and rotation slip

1. 组装时确认皮带顺转90度。
2. 皮带紧度：建议尾管组装后皮带请稍微拉紧，避免震动皮带摩擦或转动打滑



Aim the opening of tail boom st the convex of the case and insert  
瞄准尾管上的槽和尾座槽，并插入

Please insert the opening of tail boom into the convex.  
尾管缺口方向装入时，请导入尾管座卡槽内

After assembling the tail boom, please check if it is firmly tighten.  
装入尾管后请锁紧。



Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑胶件时请务必注意，适当扭力即可，而过大的扭力可能会导致滑牙、断裂。

Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43（螺丝胶）

Please confirm that the screw is fastened tightly before use.

使用前，请确认螺丝处于锁紧状态。

垫片 ( $\phi 2 \times \phi 5 \times 0.5$ )x2  
Washer



棋子头六角螺丝 (M2\*14mm)x2  
Inner hexagonal chess head screw



圆头六角螺丝 (M3\*10mm)x1  
Cruciform round screw

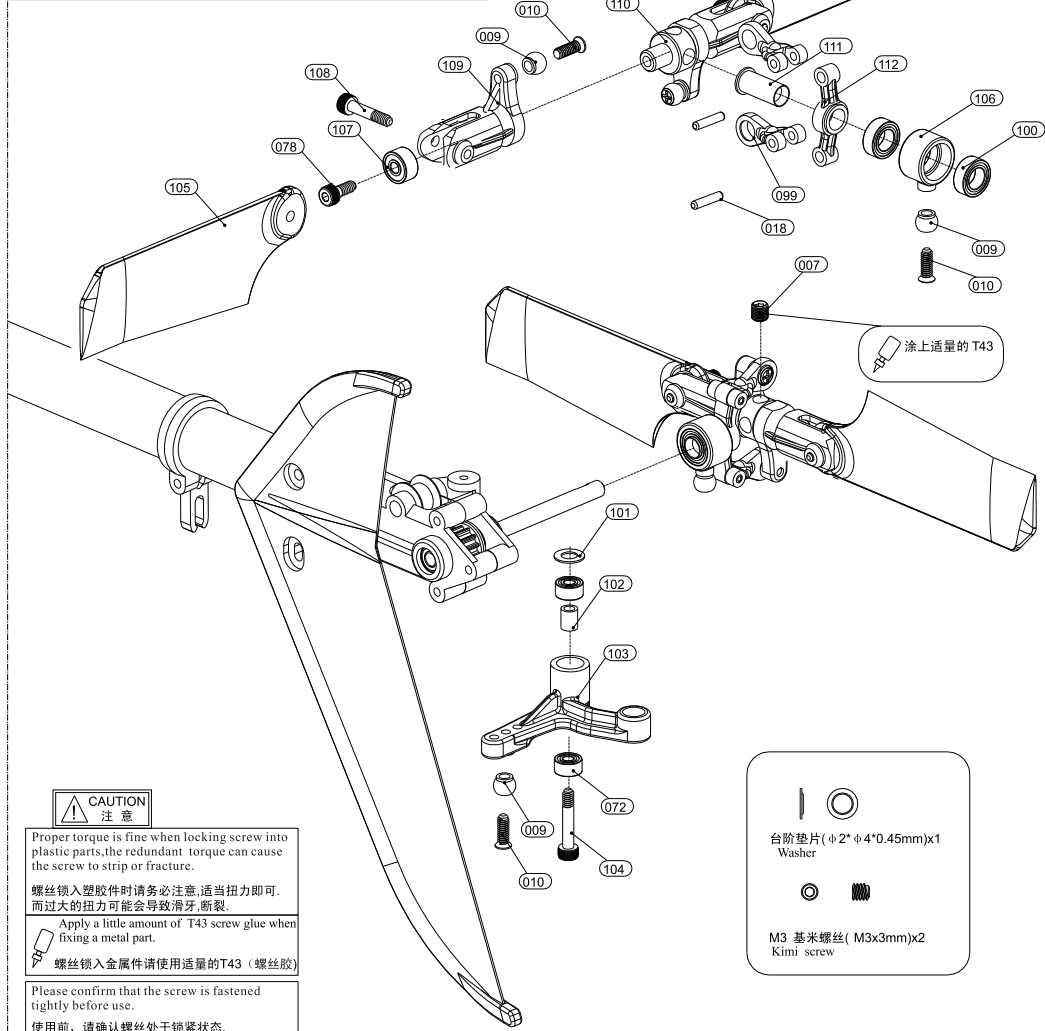
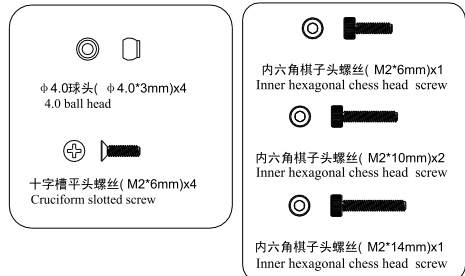


圆头十字槽螺丝 (ST1.7 \*6mm)x3  
Cruciform round screw



# 尾旋翼组装步骤 Assembly process of tail rotor blades

No.	Code No.	Name	Specification	Quantity
099	0408	尾控制连杆头 Tail controlling rod head		2
100	0551	轴承 Bearing	$\phi 4^* \phi 7^* 2.5$	2
101	0425	台阶垫片 Washer	$\phi 2^* \phi 4.5^* 0.4$	1
102	0425	铜套 Copper sheath	$\phi 2^* \phi 4.0^* 5$	1
103	0425	尾旋翼控制臂 Tail rotor blade control arm		1
104	0425	内六角棋子头螺丝 inner hexagonal chess head screw	M2*14	1
105	0420	尾旋翼 Tail rotor blade		2
106	0408	尾控制轴承座 Tail controlling bearing holder		1
107	0508	轴承 Bearing	$\phi 2^* \phi 6^* 3$	1
108	0410	内六角棋子头螺丝 inner hexagonal chess head screw	M2*10	2
109	0410	尾翼夹头 Tail blade clamp		2
110	0409	尾旋翼T型座 Tail blade T set		1
111	0408	尾T型控制臂铜套 T shape control copper sheath	$\phi 3^* \phi 5^* 9.7$	1
112	0408	尾T型控制臂 T shape tail controlling arm		1
007	0409	基米螺丝 Kimi screw	M3x3	1
009	0405	$\phi 4.0$ 球头 4.0 ball head	$\phi 4.0$	4
010	0405	十字槽沉头螺丝 Cruciform slotted screw	M2*6	4
018	0408	销子 Bolt	$\phi 1.5^* 8$	2
072	0425	轴承 Bearing	$\phi 2^* \phi 5^* 2.5$	2
078	0409	内六角棋子头螺丝 inner hexagonal chess head screw	M2*7	2



**CAUTION 注意**

Proper torque is fine when locking screw into plastic parts,the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑件时请务必注意,适当扭力即可,而过大的扭力可能会导致滑牙,断裂。

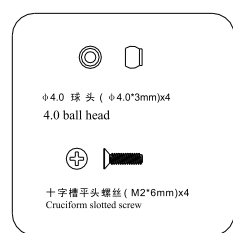
Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43 (螺丝胶)

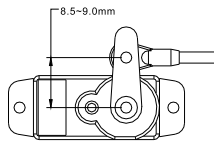
Please confirm that the screw is fastened tightly before use.

使用前,请确认螺丝处于锁紧状态。

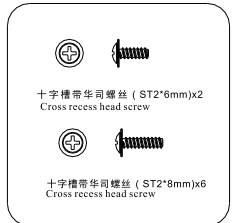
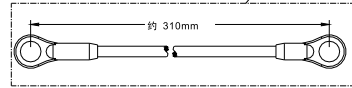
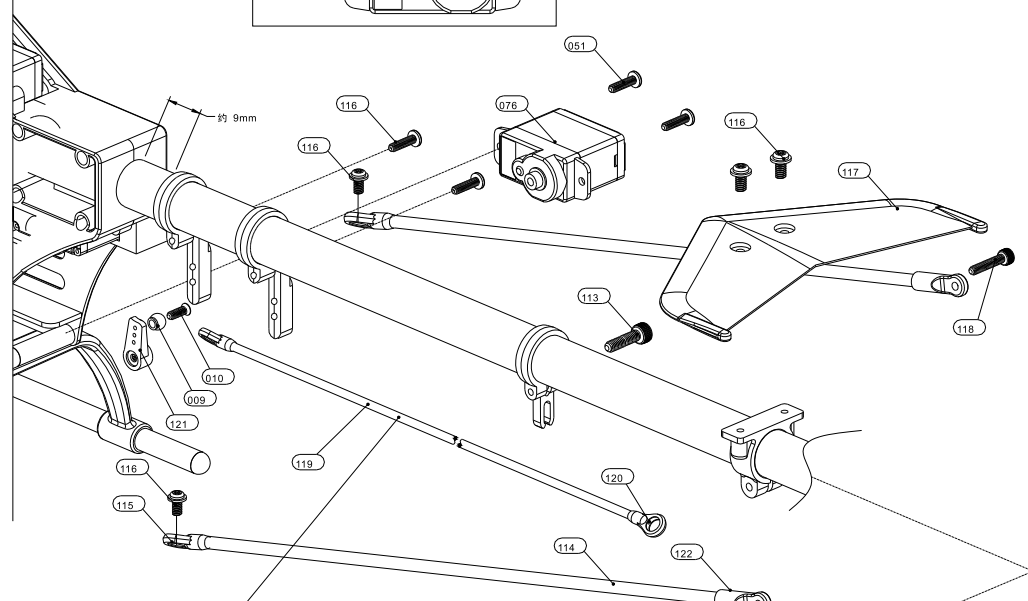




For the enough distance and reactive rate, The sphere head is advised to be set as the chart. 为了降翼有足够行程与反应速度，球头建议装于图示跨距。



No.	Code No.	Name	Specification	Quantity
113	0424	内六角棋子头螺丝 Inner hexagonal chess head screw	M2*6	2
114	0541	尾支撑架 Tail sustain set		2
115	0541	尾支撑接头 A Connector of tail sustaining		2
116	0418	十字槽带华司螺丝 Cross recess head screw	ST2*8	6
117	0419	水平翼 Horizontal fin set		1
118	0418	内六角棋子头螺丝 Inner hexagonal chess head screw	M2*16	1
119	0533	尾控制连杆 Tail controlling rod		1
120	0533	尾控制连杆头 Tail controlling rod head		2
121		舵机摆臂 Servo control arm		1
122	0541	尾支撑架接头 B Connector of tail sustaining		2
028	0418	防松螺母 Locknut	M2.0	1
051	0446	十字槽带华司螺丝 Cross recess head screw	ST2*6	2



**CAUTION**  
注意

Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

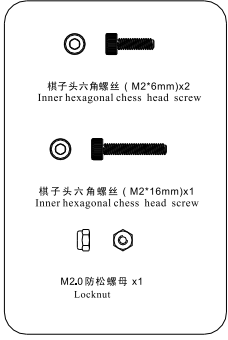
螺丝锁入塑胶件时请务必注意,适当扭力即可,而过大的扭力可能会导致滑牙,断裂。

Apply a little amount of T43 screw glue when fixing a metal part.

螺丝锁入金属件请使用适量的T43 (螺丝胶)

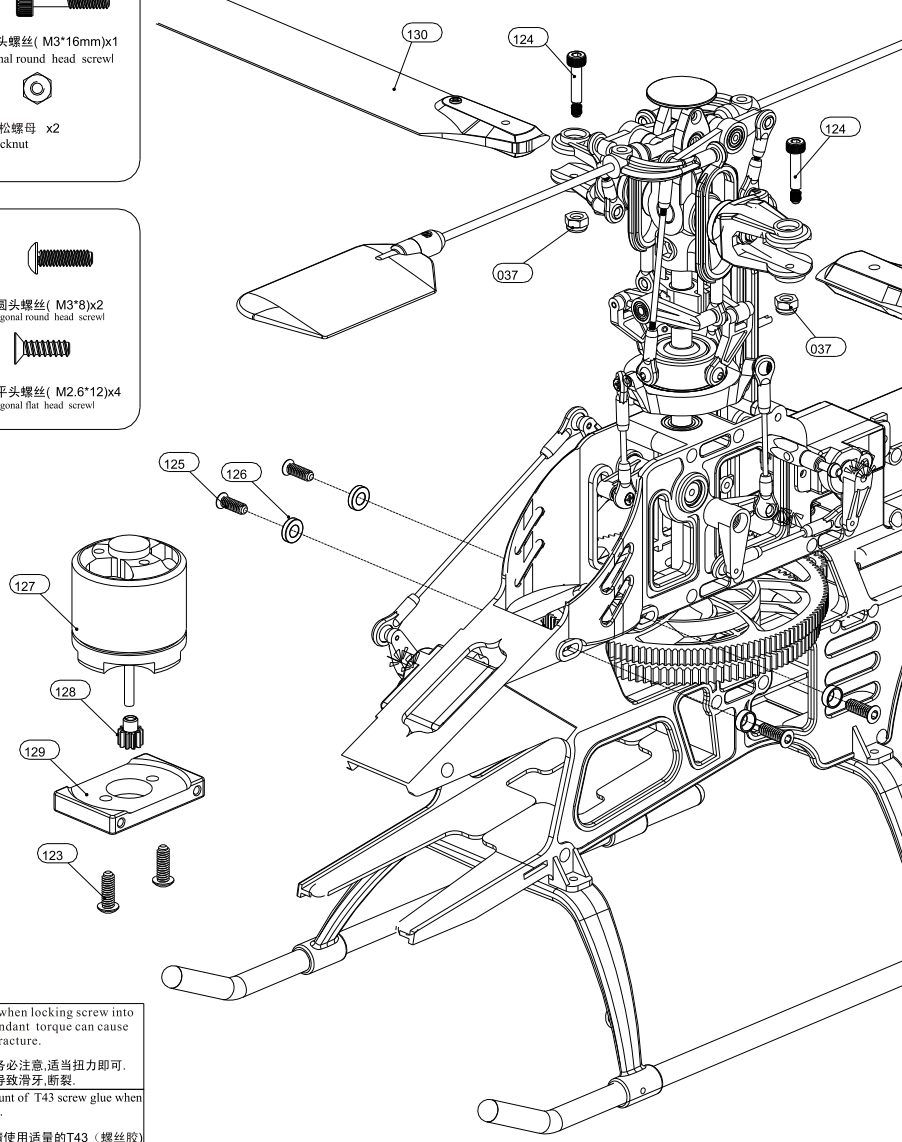
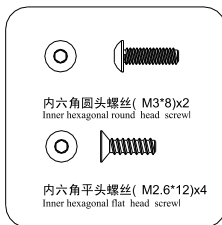
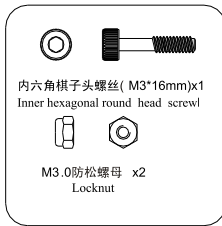
Please confirm that the screw is fastened tightly before use.

使用前,请确认螺丝处于锁紧状态。



# 动力系统组装步骤 Assembly process of power system

No.	Code No.	Name	Specification	Quantity
123	0424	内六角圆头螺丝 inner hexagonal round head screw	M3*8	2
124	0446	内六角棋子头螺丝 inner hexagonal chess head screw	M3*16	2
125	0532	内六角平头螺丝 inner hexagonal flat head screw	ST2.6*12	4
126	0532	锥形垫片 Cone washer	φ 2.6*φ 5*1.2	4
127	0005	无刷马达 Brushless motor	450L	1
128	0352	马达齿 Motor gear	10T	1
129	0532	马达座 Motor mount set		1
130		主翼 Main fine		1对
037	0446	防松螺母 Locknut	M3	2



Proper torque is fine when locking screw into plastic parts, the redundant torque can cause the screw to strip or fracture.

螺丝锁入塑胶件时请务必注意,适当扭力即可,而过大的扭力可能会导致滑牙,断裂。

Apply a little amount of T43 screw glue when fixing a metal part.

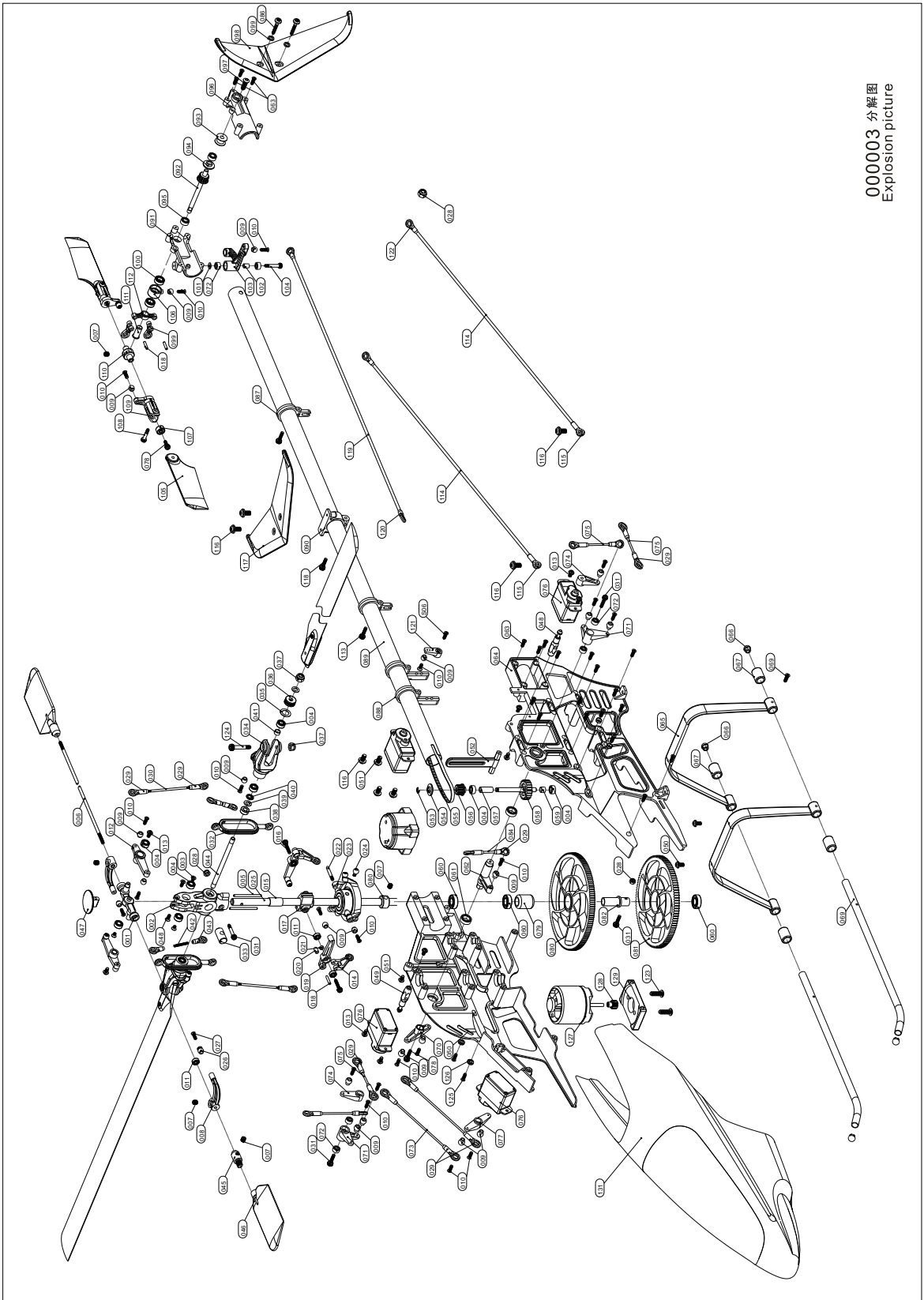
螺丝锁入金属件请使用适量的T43 (螺丝胶)

Please confirm that the screw is fastened tightly before use.

使用前,请确认螺丝处于锁紧状态。



分解图Explosion View



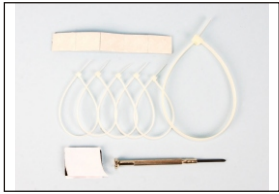
000003 分解图  
Explosion picture

# 零件清单Parts List

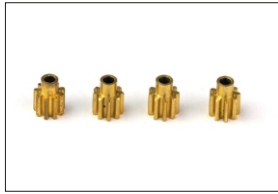
No.	Code No.	Name	Specification	Quantity
001	0401	平衡杆中心座 Flybar central holder		1
002	0429	主旋转头 Center hub set		1
003	0446	十字槽平头螺丝Cruciform slotted screw	ST1.7*3	2
004	0509,0406,0542	轴承 Bearing	φ3*φ6*2.5	10
005	0429	销子 Bolt	φ1.6*18.5	2
006	0422	平衡翼杆 Flybar	φ2.0*220	1
007	0403,0414,0409,0446	基米螺丝 Kimi screw	M3x3	6
008	0403	平衡翼控制臂 Paddle control arm		2
009	0405,0402,0410	φ4.0球头 φ4.0 ball head	φ4.0	26
010	0405,0402,0410	十字槽平头螺丝Cruciform slotted screw	M2*6	26
011	0430	轴承 Bearing	φ2*φ5*2	6
012	0406	贝尔控制臂 Bell control arm set		2
013	0406,0446	十字槽带华司螺丝Cross recess head screw	ST1.7*4	8
014	0432	剪形臂 Forciform arm		2
015	0407	铜套 Copper sheath	φ5*φ6*10	1
016	0432	内六角棋子头螺丝Socket head screw	M2*8	2
017	0407	中心座滑块 Center holder block		1
018	0432,0408	销子 Bolt	φ1.5*8	4
019	0432	希拉控制臂 Rotor head control arm set		2
020	0432	铜套 Copper sheath	φ1.5*φ2.5*4	2
021	0432	铜套 Copper sheath	φ2.0*φ3.4*1.1	2
022	0431	倾斜盘固定销 Swash plate fixed bolt	φ2.0*14	1
023	0431	倾斜盘 Swashplate		1
024	0431	球头螺丝 Ball head screw	Sφ4*7.5	4
025	0538	主轴 Main shaft	φ5*122	1
026	0403	法兰球头 Flanged ball head	φ4*5	2
027	0403	十字槽平头螺丝Cruciform slotted screw	M2*8	2
028	0429,0418	防松螺母 Locknut	M2.0	3
029	0412	长球头座 Porlat spheroid head holder	φ4	18
030	0427	拉杆 Push bar	M1.6*45	2
031	0429,0527,0446	内六角棋子头螺丝Cruciform head inner hexagon screw	M2*12	5
032	0413	双孔框形拉杆Diplopor oval push bar		2
033	0429	固定塞 Fixed plug		1
034	0402	主翼夹头 Main blade clamp		2
035	0402	垫片 Spacer	φ5*φ8*0.2	2
036	0500	止推轴承 Thrust bearing	F3-8M	2
037	0404,0446	防松螺母 Locknut	M3	4
038	0429	O形圈 O shape ring	φ2.9*φ6*3	2
039	0402	垫片 Washer	φ3.1*φ5.6*0.1	2
040	0531	台阶垫片 Step washer	φ3.1*φ5.5*0.55	2
041	0402	铜套 Copper sheath	φ3*φ4*2.2	2
042	0427	螺杆 Screw rod	M1.6*10	2
043	0411	短球头拉杆 Ball head push bar(short)		4
044	0404	横轴 Cross shaft		4
045	0414	平衡翼固定轴 Paddle fixed shaft		2
046	0414	平衡翼 Paddle		2
047	0409	刹车碟 Braking vane		1
048	0409	十字槽平头螺丝Cruciform slotted screw	M2x4	2
049	0428	机头罩固定柱Canopy supporter		2
050	0523	右侧板 Right frame		1
051	0531,0446	十字槽带华司螺丝Cross recess head screw	ST2*6	8
052	0525	十字盘导板 Cross guide board		1
053	0542	E型扣 E shape clasper	φ2.5	1
054	0542	尾传动轮盖 Tail gear cover		1
055	0503	尾传动皮带 Tail belt		1
056	0542	尾传动皮带轮 Tail gear	13T	1
057	0542	铜套 Copper sheath	φ3*φ4*9.6	1
058	0542	尾轴从动齿轮 Tail driven gear	22T	1
059	0542	铜套 Copper sheath	φ3*φ4*3	2
060	0550	轴承 Bearing	φ5*φ10*3	3
061	0549	轴承 Bearing	φ5*φ8*2.5	2
062	0526	摆臂 Control arm		1
063	0523,0528,0446	十字槽圆头螺丝 Cruciform round screw	ST1.7*9	20
064	0523	左侧板 Left frame		1
065	0416	滑撬支架 Skid tube strut		2

No.	Code No.	Name	Specification	Quantity
066	0415	滑撬保护套 Skid protection cannula		4
067	0416	滑撬垫圈 Skid gasket		4
068	0415	滑撬杆 Skid bar		2
069	0416	十字槽平头螺丝 Cruciform slotted screw	ST1.7*4	2
070	0526	转拉臂 Turn arm		1
071	0527	L形摆臂 L shape control arm		2
072	0506,0527,0425	轴承 Bearing	φ2*φ5*2.5	4
073	0548	拉杆 Push link	φ1.4*60	2
074		单边摆臂 Single control arm		2
075	0548	拉杆 Push link	φ1.4*26	3
076	0508	舵机 Servo		3
077		一字摆臂 - shape control arm		1
078	0526,0409	内六角棋子头螺丝inner hexagonal chess head screw	M2*7	3
079	0510	HF-0712 单向轴承Oneway auto-driven shaft	φ6*φ10*12	1
080	0534	主齿轮 Main gear	140T	1
081	0534	副齿轮 Auxiliary gear	110T	1
082	0534	单向轴承套 Oneway auto-driven shaft	φ5*φ8*21	1
083	0538	定位环 Collar		1
084	0548	拉杆 Push link	φ1.4*20	1
085	0548	拉杆 Push link	φ1.4*32	1
086	0528	十字槽圆头螺丝Cruciform round screw	M2*14	2
087	0424	尾拉杆固定套 Tail push-rod control set		2
088	0421	尾舵机固定套 Tail servo control set		2
089	0423	尾管 Tail boom		1
090	0418	水平翼固定座 Horizontal fin set holder		1
091	0528	尾齿轮座右 Right tail gear holder		1
092	0417	尾横轴组 Tail cross shaft set		1
093	0528	皮带压轮 Belt wheel		1
094	0417	皮带轮盖 Cap of belt pulley		2
095	0531	垫片 Washer	φ2*φ5*0.5	2
096	0528	尾齿轮座左 Left tail gear holder		1
097	0531	内六角圆头螺丝inner hexagonal round head screw	M3*10	1
098	0420	尾旋翼 Tail rotor blade		1
099	0408	尾控制连杆头Tail controlling rod head		2
100	0551	轴承 Bearing	φ4*φ7*2.5	2
101	0425	台阶垫片 Washer	φ2*φ4.5*0.4	1
102	0425	铜套 Copper sheath	φ2*φ4.0*5	1
103	0425	尾旋翼控制臂Tail rotor blade control arm		1
104	0425	内六角棋子头螺丝inner hexagonal chess head screw	M2*14	1
105	0420	尾旋翼 Tail rotor blade		2
106	0408	尾控制轴承座Tail controlling bearing holder		1
107	0508	轴承 Bearing	φ2*φ6*3	1
108	0410	内六角棋子头螺丝inner hexagonal chess head screw	M2*10	2
109	0410	尾翼夹头 Tail blade clamp		2
110	0409	尾旋翼T型座 Tail blade T set		1
111	0408	尾T型控制臂铜套 T shape control copper sheath	φ3*φ5*9.7	1
112	0408	尾T型控制臂 T shape tail controlling arm		1
113	0424	内六角棋子头螺丝inner hexagonal chess head screw	M2*6	2
114	0541	尾支撑架 Tail sustain set		2
115	0541	尾支撑接头A Connector of tail sustaining		2
116	0418	十字槽带华司螺丝Cross recess head screw	ST2*8	6
117	0419	水平翼 Horizontal fin set		1
118	0418	内六角圆头螺丝 inner hexagonal chess head screw	M2*16	1
119	0533	尾控制连杆Tail controlling rod		1
120	0533	尾控制连杆头Tail controlling rod head		2
121		舵机摆臂 Servo control arm		1
122	0541	尾支撑架接头B Connector of tail sustaining		2
123	0424	内六角圆头螺丝inner hexagonal round head screw	M3*8	2
124	0446	内六角棋子头螺丝inner hexagonal chess head screw	M3*16	2
125	0532	内六角平头螺丝inner hexagonal flat head screw	ST2.6*12	4
126	0532	锥形垫片 Cone washer	φ2.6*φ5*1.2	4
127	0005	无刷马达 Brushless motor	450L	1
128	0352	马达齿 Motor gear	10T	1
129	0532	马达座 Motor mount set		1
130		主翼 Main fin		1对

# 配件清单 Spare parts list



000204  
工具包  
Allen Key



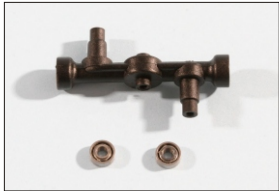
000318  
马达齿轮9 T  
Brushless motor gear



000319  
马达齿轮10 T  
Brushless motor gear



000320  
马达齿轮11 T  
Brushless motor gear



000665  
平衡杆固定座组  
Balancing pole mounting



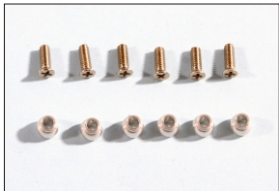
000666  
主翼夹头组  
Main blade clamp set



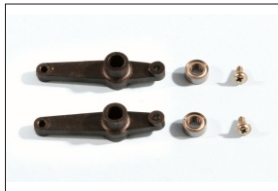
000667  
平衡杆控制臂组  
flybar control arm set



000668  
横轴组  
Feathering shaft set



000669  
球头组  
Ball End set



000670  
贝尔控制臂组  
Bell control arm set



000671  
相位座组  
plastic bolt set



000672  
尾控制臂组  
Tail rotor blade control arm set



000673  
尾翼T型座组  
main blade T hold set



000674  
尾翼夹头组  
Tail blade clamp set



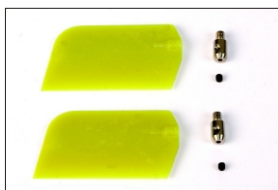
000675  
短拉杆头组  
short push-rod head set



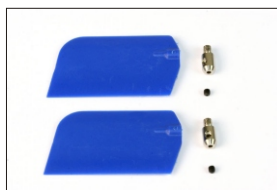
000676  
长拉杆头组  
long push-rod head set



000677  
双孔连杆  
Ring-link push-rod



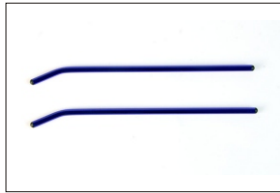
000678  
平衡翼组(绿色)  
paddle Set(green)



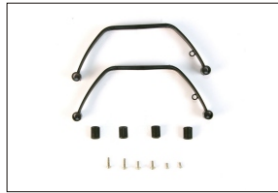
000679  
平衡翼组(蓝色)  
paddle Set(Blue)



000680  
滑撬组(绿色)  
Skid set(green)



000681  
滑撬组(蓝色)  
Skid set(Blue)



000682  
滑撬支架组  
Skid bar



000365  
尾传动轮组  
Tail driven gear set



000683  
水平翼固定座  
Horizontal fin set holder



000684  
垂直水平翼组(绿色)  
Vertical & horizontal  
tail blade set((Green)



000685  
垂直水平翼组(蓝色)  
Vertical & horizontal  
tail blade set(Blue)



000686  
尾翼(绿色)  
Tail rotor blade (Green)



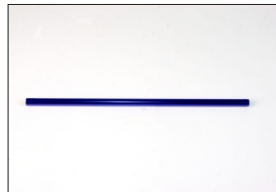
000687  
尾翼(蓝色)  
Tail rotor blade (Blue)



000688  
尾舵机固定座组  
Tail servo mount



000690  
尾管(绿色)  
Tail boom(Green)



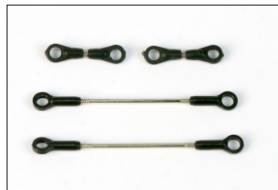
000691  
尾管(蓝色)  
Tail boom(Blue)



000692  
拉杆定位套  
push-rod fixed bush



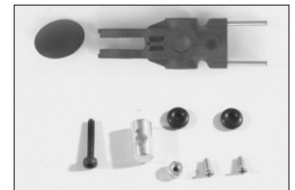
000693  
尾控制臂L组  
tail L control arm set



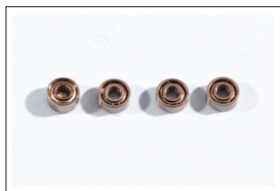
000696  
拉杆组  
Push rod set



000697  
机壳支杆  
Canopy shoring



000698  
主旋转头组  
center hub and spindle  
set



000699  
轴承  
Bearing 2\*5\*2.0



000700  
倾斜盘组  
Swashplate set

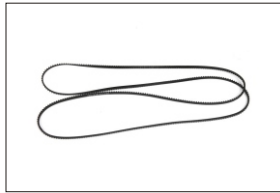


000701  
希拉控制臂组  
Control arm set

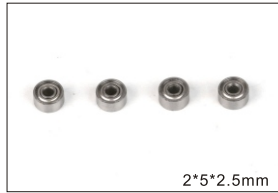


000321  
平面推力轴承  
Balance trust bearing



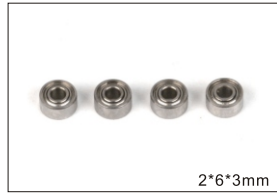


000324  
皮带  
Belt



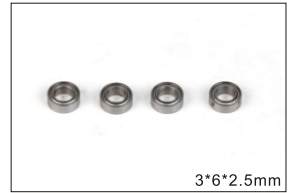
000327  
轴承  
Bearing

2\*5\*2.5mm



000329  
轴承  
Bearing

2\*6\*3mm



000330  
轴承  
Bearing

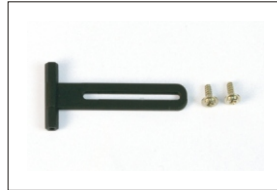
3\*6\*2.5mm



000331  
单向轴承  
Oneway bearing



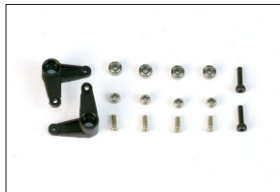
000344  
机身组  
Main Frame set



000346  
倾斜盘导板  
Swashplate guide plate



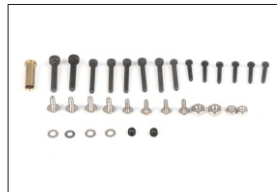
000347  
升降控制组  
Elevator Controlling set



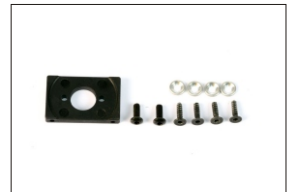
000348  
左右控制摇臂组  
L&R Controlling Arm Set



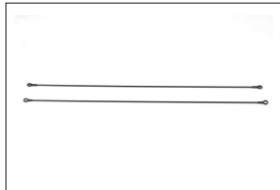
000349  
尾传动座组  
Tail driven set



000352  
螺丝备用包  
Screws standby



000353  
马达固定座组  
Motor Mount set



000354  
尾舵控制连杆组  
Tail servo control push-rod set



000355  
主齿轮组  
Main gear set



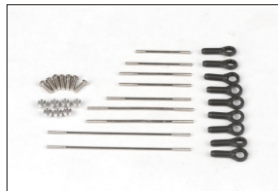
000359  
主轴组  
Main shaft set



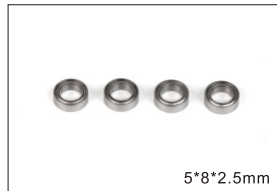
000362  
尾管支撑架组  
Tail driven pedestal set



000363  
尾翼主轴组  
Tail blade main shaft set

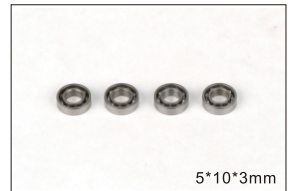


000369  
伺服器连杆  
Servo Linkage Rod



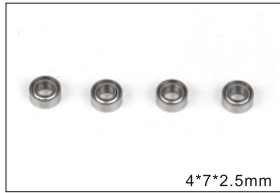
000370  
轴承  
Bearing

5\*8\*2.5mm



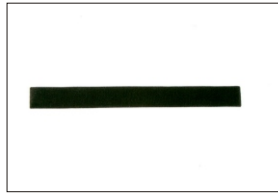
000371  
轴承  
Bearing

5\*10\*3mm



000372  
轴承  
Bearing

4\*7\*2.5mm



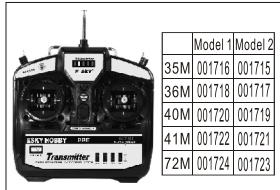
001421  
电池绑带  
Battery band



001469  
木桨  
Wooden blade



001470  
木桨  
Wooden blade



发射机  
6CH Transmitter



000836  
无刷马达调速器  
Brushless motor esc



接收机  
Receiver



000178  
锂电池11.1V 1800mAh 20C  
Lithium battery



000155  
伺服器  
Servo



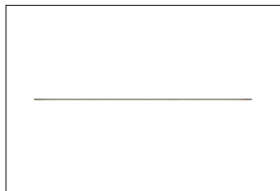
000855  
陀螺仪  
Gyro



000152  
充电器  
Charger



001134  
无刷马达  
Brushless motor



000689  
平衡杆  
Flybar



000695  
机头罩(红色)  
Canopy(Red)



000694  
机头罩(绿色)  
Canopy(green)



000203  
训练架  
Training sets

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