E_sky®

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BELT-CP INSTRUCTION MANUAL

Specification:

Lenght：650mm
Height：230mm
Main blade diameter：680mm
Tail blade diameter：130mm
Motor gear：10T
Main driven gear：140T
Tail driven gear:：110T
Driven gear rate：10:140/110:22
weight：About 670g(Including 1800mAh.11.1V Li-poly Battery)

Li-poly Battery：1800 mAh、11.1V Li-poly Battery
Brushless motor：450
ESC：25A
Gyro：1Pcs
Servo：8g*4Pcs
Transmitter：6channel or more(Helicopter system)
receiver：6channel or more

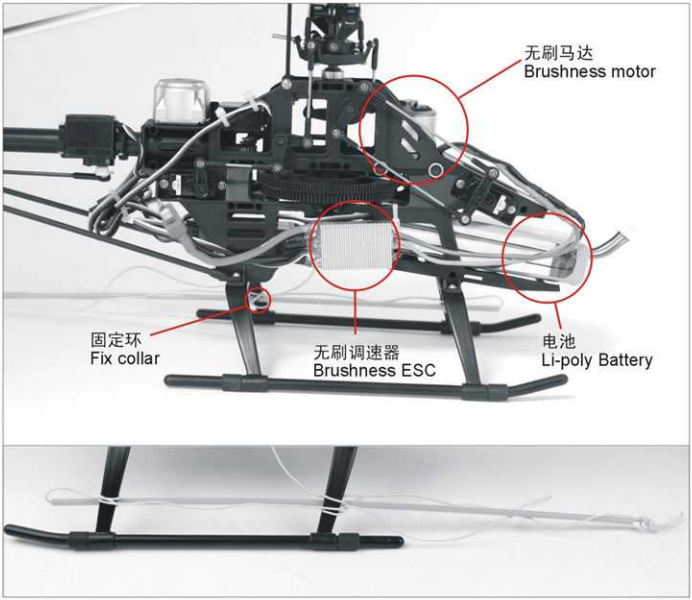
规格配备：

机身长：650mm
机身高：230mm
主翼直径：680mm
尾旋翼直径：130mm
马达齿轮：10T
主齿传动轮：140T
尾驱动主齿：110T
齿轮传动比：10:140/110:22
整机重：约670g(含1800mAh.11.1V锂电)

锂电池：1800mAh、11.1V锂电池
无刷马达：450
调速器：25A
陀螺仪：1Pcs
伺服器：8g*4Pcs
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

★ 说明书内容如有需要任何改动,不需另行通知，TWF有最终修改权.
★ Other Notice is not required if there is any changes on the manual,TWF owns the final right of modification.

提示：飞行之前，请(如图)将接收机天线穿进天线管，固定在有固定环的脚架上。
为了更好的飞行和接收信号，接收机天线需要尽量远离直升机的无刷调速器、无刷马达和电池。
Notice:Before flying,please put the antenna of receiver through the antenna pipe,and then fix it on the fix collar on the landing skid.
For the better flight and the good receiving signal,please keep the antenna of the receiver far away from the brushness ESC,brushness motor and Li-poly battery of the helicopter.



目录 Catalogue

◆ 简 介
Brief introduction

感谢您选择ESKY产品，为了您更加了解使用这款直升机，请您仔细的阅读本产品所配备的说明书后再进行组装以及操作这台直升机，并请您妥善的保存好说明书，以便以后对直升机的调整或是维修做参考。这款直升机是由ESKY自行研发的新产品，无论您是初学者还是飞行爱好者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 so as to know more about it. 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 are a beginner or a heli fan.

◆ 注意事项
Warning

摇控模型不是玩具，会对人身造成伤害，在操作之前请仔细阅读该手册，在操作中不要接近人群，防止伤害他人，注意自身安全。电池充电远离易燃物品。禁止14岁以下儿童操作。造成事故本公司不负任何责任。

E-sky RC model helicpter is not a toy, Please read the instructions carefully before operation, it can cause serious bodily harm if misused and keep away from crowd when you are operating it .Please keep the battery away from combustible when charging.This RC Helicopter is not suitable for children under 14 years old,We will not be responsible for the accident.

警告
Warning

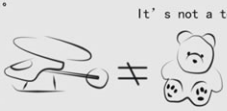
该符号表示你和他人需特别小心的地方，以免造成伤害！
The sign in dicates things you and others should pay attention to, for fear the avoid injury.

禁止
Prohibition

该符号表示为避免造成伤害的意外事故不允许的行为！
The sign indicates the unallowed actions that may cause incident or damage.

1. R/C 模型直升机并不是玩具，操作失误会造成人身伤害和损坏。
2. 如果您是新 手，我们建议您找一位专业的或者操作熟练的模型爱好者指导您操作飞行。
3. 在您操控模型之前您需要学习如何操控和检查所有控制系统是否正常，然后再开始操控。

1.R/C models are not toys! Incorrect operation may cause serious injury or damage.
2.If you are a novice pilot we strongly suggest that you should find an experienced pilot in R/C model to assist you.
3.It is absolutely necessary to read the manual of the helicopter before operation.It is mandatory to check all control systems and mechanical linkages for proper operation before every flight. Safety first!



直升机飞行速度极快，相对潜在一定的危险性，所以场地的选择也十分重要。

Since the helicopter flies very fast, it may cause potential danger, so the choice of the flight field is of great importance.

飞行时须选择四周没有人，无高压电线，少树木等的环境，避免操控不当造成自己与他人的安全及财产损坏。

Do not fly near crowd,high voltage cables or trees to ensure the safety of yourself and others.

请勿在下雨，打雷等恶劣的气候下操作，以确保自身的安全。

Do not fly in the bad weather such as rainy or thundering to ensure the safety of yourself.

初学者建议在空旷场地飞行，并可适当搭配练习架练习飞行，这样能够很大程度的保护飞机，降低飞行失误所造成的损坏。

It is suggested to fly at an open field for beginners, and fly with the training set to practice yourself. In this case can the helicopter be protected and damage caused by the improper operation can be reduced.

在飞行场地或其附近飞行之前，需确认是否有相同频率的飞行物正进行飞行，否则将导致干扰。

Before flying, please make sure that no one else is operating on the same frequency, otherwise there will be the interference.

初学者飞行操控技巧在初期有一定的难度，要尽量避免独自操控飞行，最好请有经验的飞行员在旁指导。

It is difficult for beginners to fly skillfully at the first time, so you'd better fly under the guidance of the experienced pilot.

当直升机主旋翼与尾旋翼运转时，切勿触摸并且使直升机远离其他物件，以避免造成危险和损害。

Don't touch the helicopter when the main blade and tail blade were running, keep it away from other things to avoid danger and damage.

一般，由于遥控飞机是以PVC或聚乙烯为主要材料，所以尽量远离热源，避免因高温而变形甚至发生熔毁的可能。

Generally, R/C models are mainly made up of PVC or polythene, please put it away from the heat source to avoid distortion and melting caused by high temperature.

飞行前的检查和调整 Pre-flight inspection and adjustment

在打开发射机之前，您要确认油门操纵杆是否在最低点，油门微调是否在最低，然后检查倒置开关是否关闭，确认后再打开发射机的电源。
Be sure the throttle stick and the throttle trimmer are at the lowest position, and then check whether the reversing switch is pulled back before turning on the transmitter.

注意所有模型产品的遥控系统的开启都是先打开发射机再接通模型的电源，如果操做反了，可能会有危险。
Always turn on the transmitter first, and then power on the helicopter. If operated contrary,it may cause danger and injury.

当您打开发射机电源在接通模型直升机的电源时，模型直升机的电子系统都需要进行自检，这种自检的过程需要您等待几秒，直到自检完成，指示灯显示可工作的状态，您才能操纵直升机。
When you turn on the transmitter and power on the helicopter,the electronic system will begin to self-calibrate.Never move the helicopter during the process of self-calibration.During the Calibration,the light display blinking or steady red, when the light turns steady green, the helicopter has finished calibration and is ready for flight.

在自检过程中不要用手或其它方式让模型有任何移动。
Do not move the helicopter by hand or other ways when it is under self-calibration.

禁止在飞行时，用手去触摸。
It is prohibited to touch the model when flying.

禁止在人多场所飞行，以免失控至伤。
It is prohibited to fly at crowded place, otherwise it may be out of control and cause injury.

禁止在下雨天飞行。
It is prohibited to fly in the rainy days.

电池的充电 Charging the battery pack

1.将充电器与电源连接，此时充电器电源指示灯显示红灯，电源连接正常。
2.将需要充电的2节或3节锂离子电池分别（可以同时）插入充电器绿色指示灯闪烁，表示正在充电。
3.待绿色指示灯停止闪烁时表示电池已经充满。
1.Connect the charger with power,then the red power indicator lights up,which indicates that the power connection is normal.
2.Connect the 2 cells or 3cells Li-polymer battery with charging ports of charger respectively or simultaneously, then the green charging indicator flashes and it indicates the battery is on charge.
3.Green indicator stops flashing shows that the battery is full.

警告：充电时间最长不能超过120分钟
Wanring:Charge time can not exceed 120 minute.

充电注意事项 Charging precautions

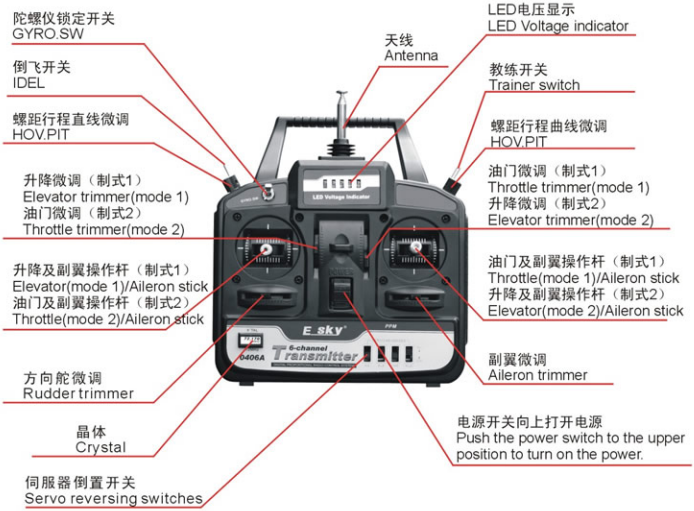
1.接同电源后，电源指示灯红灯会点亮，红灯未亮表示电源没有连接好（图1）。
2.当电池连接好后，绿色指示灯会闪烁，表示正在充电。如果指示灯红灯和绿灯同时闪烁表示电池有误，请检查电池是否损坏。如果绿灯不亮，红灯闪烁时表示充电器进入保护状态，请断开充电器电源3秒以后重新接通电源。
3.充电完成后绿色指示灯恒亮，如果电池长时间不断开时，自放电使单节电池电压低于4.15V时充电器会重新给电池充电，直至再次充满，而且此过程会反复进行，确保电池为饱和状态。(图2)
4.充电时电池必须从模型上取下来进行充电。
5.锂聚合物电池在充电时必须有人看护。
6.充电器充电时应放在干燥通风处，远离热源，远离易燃易爆物品。
7.为了您更安全快捷的充电，请使用ESKY原厂出品的充电器。
1.After connecting the power,the red indicator would get light,otherwise,it indicates that power connection goes wrong.(fig 1)
2.Green indicator would flash after connecting the battery with charger,which indicates that battey is on charge. If green and red indicators flash simultaneously,it indicates the error with battery,please check whether the battery has been damaged.If green indicator goes out and red indicator flashes,it shows that the charger is under protection mode,please disconnect the power for 3 seconds and switch the power on again.
3.Green indicator gets constant light after the charge finished.If the battery has not been unplugged for a long time after charge finished,the battery would be recharged when single battery voltage is lower than 4.15V after self discharge.Also,this procedure will circulate,make sure the battery is in saturated state.(fig 2)
4.Take the battery out from the helicopter while charging.
5.Fire or serious injury would be resulted in under certain conditions,so please follow the instructions and never leave equipment unattended while charging.
6.Keep the battery charged in cool and ventilating place and be away from heat source,flammable and explosible materials.
7.To ensure secure and quick charging,please use ESKY original chargers.

Fig 1

Fig 2

锂聚合物电池的充电方式(图示)
Illustration of Li-po battery charging

发射机介绍Introduction of transmitter



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.

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 forward.

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 rightt, the head of helicopter moves to the right.

起飞步骤 Fly process

Step1

1.Draw out the antenna of transmitter completely.
完全抽出发射机天线.

Step2

2.Turn on the transmitter and set the throttle stick and trimmer to the lowest position.
打开发射机,将油门微调设置为最低.

⚠ 注意：其他微调定位在中心点, 检查所有倒置开关设置（如图）
Note: All the other trimmers must be set in center position, check all the setting of reversing switches as below.

关闭倒飞开关
Turn off switch of inverted flight

伺服器倒置开关设置(左手)
Setting of servo Reverser (left hand)

伺服器倒置开关设置(右手)
Setting of servo Reverser (right hand)

Step3

3.将电池放入电池架.
Install the battery on the battery holder

Step4

4.用电池绑带把电池固定稳.
Fixing the battery by binding band

Step5

5.接通直升机电源,之后调速器会连续发出发出三声Bi Bi Bi的声音后,表示可以正常飞行.
Power on the helicopter,the ESC will tone with BiBiBi,which indicates ready to fly

Step6

6. 陀螺仪指示灯闪烁大约13秒左右,恒亮红灯表示正常待飞.
Gyro indicator will twinkle for appro 13 seconds, steady red indicates ready to fly

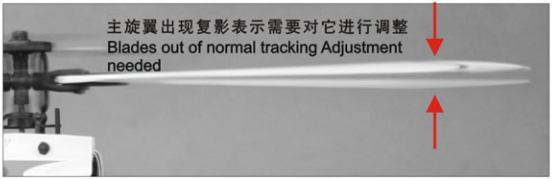
直升机双桨的调整 Blade tracking adjustment

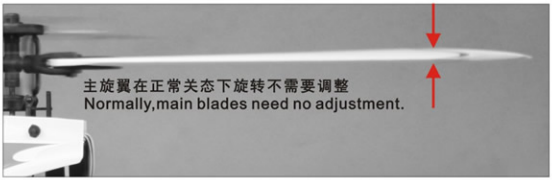
直升机的双桨现象是一个普遍存在的现象，要想使您的直升机飞行稳定，首先要懂得如何处理双桨的问题，直升机的双桨现象是因为同一个平面旋转的不同主旋翼的攻角大小不一样导致不同的主旋翼不能在同一平面旋转，这种现象会引起机体振动，升力减少。

Flying helicopters, it is very necessary to track the main blade properly. We should adjust blades tracking as they are required so as to achieve a stable flight. If the angle of attack of the two rotor blades are not the same, the blades do not track in the same line , there will be a consequent vibration and decrease in lift.

木制主旋翼变形的影响很小，往往是因为翼形的误差，控制机构的间隙，结构塑料件的变形误差而导致双桨现象，如图所示

The influence of blade distortion with wood main rotor is small, the main reason that the wood main rotor blades are out of track are structure clearance, tolerance of the main rotor blades shape and the distorted plastic component,showing as below:





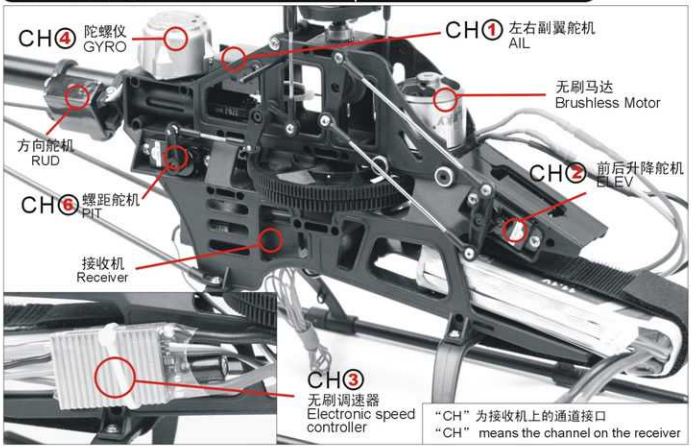
采用木制主旋翼的直升飞机都有攻角调整连杆，您只需扭转球座来改变攻角连杆的长度，就可轻而易举的完成双桨的调整，当然在调整时最好采用正负攻角配合调整。

The helicopter with wood main rotor blade all have pitch control links. You only need to turn the control link to achieve the blade tracking adjustment. Certainly, the best way is to adjust both pitch control link at the same time.

当您调整一支主旋翼还不能改变双桨现象时您可以调整另一支主旋翼来配合调整，这样反复的调整直到您的直升机的主旋翼在同一平面旋转，您会发现您的直升机很稳定。

If you made small adjustment on one rotor blade, the main rotor blades are still out of track, you need to adjust another blade, and repeat the process to check the blade tracking and make adjustment until both blades run in track.With proper adjustment, the helicopter will fly stably and smoothly.

电子配料与连接方法Electronic components and connection



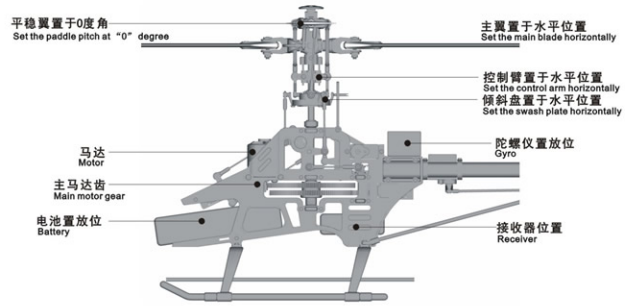
接收机的连接Receiver Connection

陀螺仪的连接Gyro connection

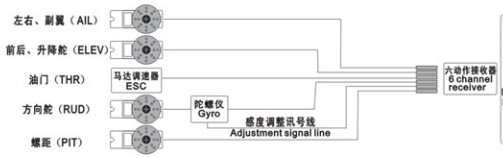
ESKY Professional Gyro

Head lock Gyro

各部件与设备装配图示
Assembly diagram of each spare part and equipment:



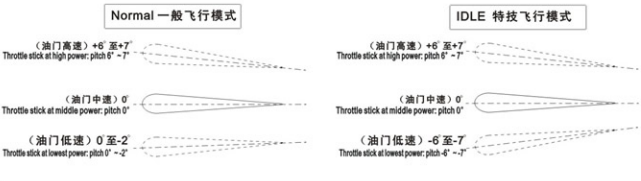
接收器、伺服器连接频道说明
Connection diagram of receiver and servo:



六动作接收器已足够应对遥控直升机的频道需求，除了油门、方向舵、升降舵、副翼等基本动作外，亦可对应具备感度调整讯号线的陀螺仪与螺距

6 channel Receiver which is adequate to the requirements of helicopters is including the following basic is channels: Throttle, Rudder, Elevator, Aileron, as well as Gyro and PIT with the adjustment signal line.

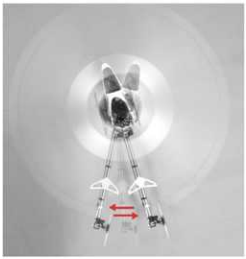
PITCH设定建议说明 飞行前主旋翼设定
Final pre-flight adjustment



单功能控制系统的调整 Adjustment of the monofunction control system

因单功能控制系统主要应用于尾传动直升机。而尾传动直升机的主旋和尾旋的转速比是机械式固定的，所以只有对陀螺仪感度的调整。在直升机飞行时，主旋翼的转速与尾旋翼的转速是固定比例。如果发现尾部不受控制，一直左右小幅度颤抖，尾部无法居中且不受发射机控制时，那是因为尾部被锁得太紧，须调小陀螺仪感度。(如图1，图2)

The monofunctional helicopter control system mainly applies to helicopters with tail rotor driven system. As the rotation speed ratio of the main rotor blades and the tail rotor blades are automatically fixed, so only the adjustment of gain trimmer is needed. During the flight, the tail rotor blades and the main rotor blades rotate in a fixed proportion. If the tail is out of concrol not to get to the center position, and have a slight wobbling, which indicates that the tail is locked too tight, please adjust the gain trimmer to decrease(-)the gyro gain(fig.1 and fig.2)

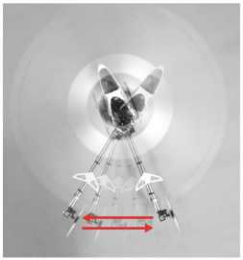


（图一 flg1）

（图二 flg2）

如果发现尾部一直在左右大幅度摇摆不定，尾部无法居中，且不受发射机控制时，这时要将陀螺仪上的感度调大，调到适当位置即可（如图3，图4）

If the tail is out of control and always keeping left-right wobbling violently, please adjust the Gain Trimmer to increase(+) the gyro gain(fig.3 and fig.4).



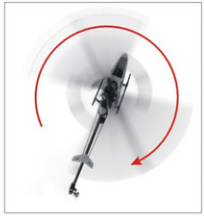
（图三 flg3）

（图四 flg4）

正逆转开关
Normal&Reverse switch

REV：逆转Reverse motion
NOR：正转Normal motion

尾伺服器的调整Adjustment of tail servo



由于直升机属于高精密模型，在直升机运转时，有多种情况可能引起直升机向一边转，可以参考以下方法调试，为避免以外发生，建议把马达和调速度器的接线断掉，打开发射机，将直升机接通电源。然后将发射机上方向操作杆和微调居中（图1）；保持尾伺服器连杆与尾管尽量平行（图2），再配合尾伺服器座左右移动和尾旋翼横轴的距离（大约在横轴的3/1处）来调整（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 order 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 parallel (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)

右手油门
Right hand throttle

方向舵控制杆居中
Set the rudder stick in the center

方向微调居中
Put the rudder trim in the center

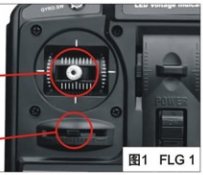


图1 FLG 1

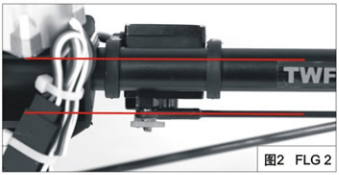


图2 FLG 2

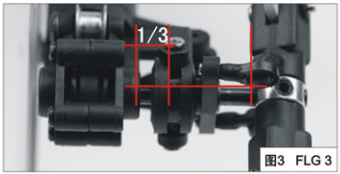


图3 FLG 3

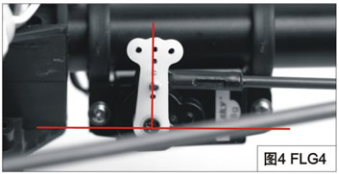
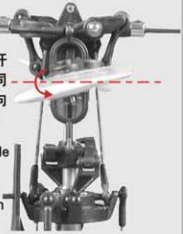


图4 FLG4

可变螺距是怎样运作的 The following pictures will show you How Does CCPM Work

当上推油门操纵杆时，三个伺服器同时上推，主旋翼向正攻角方向扭转。

while push the throttle stick upwards , so do three servos,main rotor blade turn to "+" angle.



当下推油门操纵杆时，三个伺服器同时下推，主旋翼向负攻角方向扭转。

while push the Throttle stick Downwards, so do three servos , main rotor blade turn to "-" angle.

当升降操纵杆下拉时，三个伺服器配合动作将倾斜盘扭向后斜方。

When elevator control stick is moved backward, the all three servos move together tilting the swashplate backward.

当升降操纵杆上拉时，三个伺服器配合动作将倾斜盘扭向前斜方。

When elevator control stick is moved forward, all three servos move together tilting the swash plate forward.

当副翼操纵杆右向推动时，两个伺服器配合扭动倾斜盘往右斜方。

When aileron control stick is moved to the right, both rear servos move together, tilting the swash plate

当副翼操纵杆左向推动时，两个伺服器配合扭动倾斜盘往左斜方。

When aileron control stick is moved to the left, both rear servos move together, tilting the swash plate left.

稳定翼组装步骤 Assembly process of paddles

零件用量表 (Dosage form of spare parts)

序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification
002	I	MXH3003	4	M3*3	009	H	MKP2006	6	M2*6	006	H	平衡翼控制臂 Paddle control arm	2	
013	H	TWP1704	2	T1.7*4	001	F	平衡翼 Paddle	2		031	H	主旋转头 Center hub set	1	
008	H	滚珠轴承 Bearing	8	Φ3*Φ6*L2.5	003	H	平衡翼固定轴 Paddle fixed shaft	2		010	H	旋转头盖 Cap of hub set	1	
012	H	贝尔控制臂 Ball	2		005	H	平衡翼固定环 Paddle collar	2	Φ3*Φ7*5	018	H	MKP1703	2	T1.7*3
007	H	铝球 Aluminum ball	6	Φ4*3	004	H	平衡翼杆 Flybar	1	Φ1.8*220	017	H	TKP1704(大头) Large end screw	2	T1.7*4
011	H	平衡杆中心座 Flybar center holder	1											

组装程序按照编码组装,组装时需注意的重点:

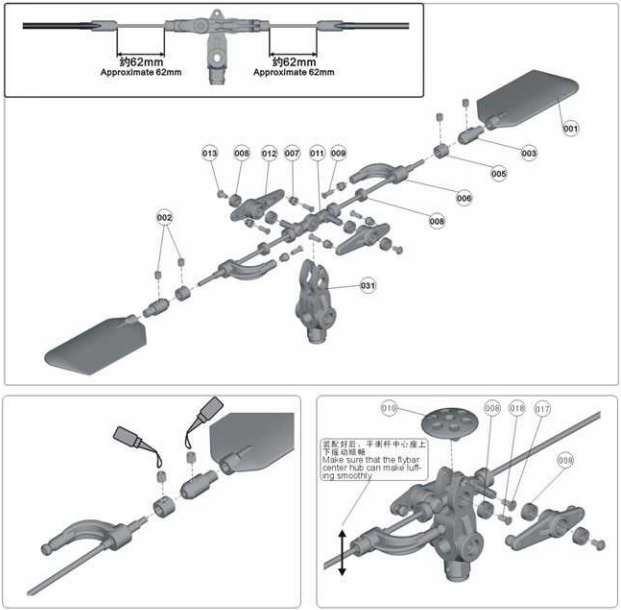
1.平衡杆装配时注意两端必须对等长,平衡翼控制臂锁定的角度、两端必须平行,两件平衡翼锁进的位置必须一致,平衡翼的角度可以使用两支攻角量规、各固定住单一个平衡翼来做调整,螺丝锁固金属件请使用螺丝胶防松,注意螺丝须确实锁紧,但是也不能因此发生过度锁紧,需致使发生滑牙或断裂现象.

2.各控制臂锁固请注意,锁紧后请保持旋转滑顺,并尽量降低前后间隙之锁固要领.

Assemble the components according to the code, pay attention to the following key points:

1.Please note that the length of the two side of the flybar should be equivalent, the locking angle of the paddle and the two sides should be parallel, and you can use an angle of attack gauge to adjust the angle of the paddle, take some screw glue to prevent loosen while locking up the metalwork. Please make sure that the screws are locked in but not too tighten.

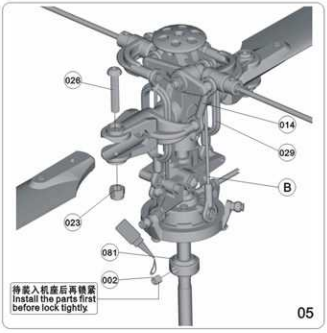
2.Please note that each controlling arm can run smoothly after locking up and try to reduce the fore and after space.

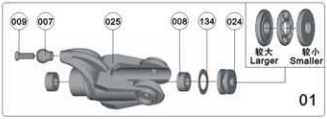


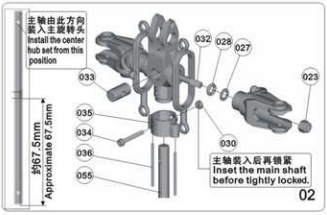
稳定翼组装步骤 Assembly process of paddles

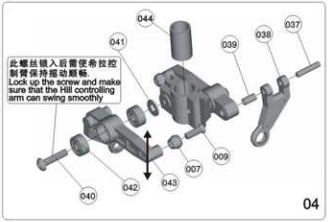
零件用量表 (Dosage form of spare parts)

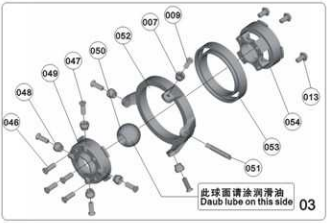
序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification
009	H	MKP2006	7	M2*6	035	H	中心座 Center hub set	1		049	G	倾斜内盘上盖 Cover of swash plate (inner)	1	
007	H	钢球 Aluminum ball	7	Φ4*3	036	H	相位摇销 Plastic bolt	2	Φ1.2*19	047	G	MKP2007	4	M2*7
025	H	主翼夹头 Main blade clamp	2		055	B	主轴 Main shaft	1	Φ5*122	050	G	万向球 universal ball	1	SR5*8
008	H	滚珠轴承 Bearing	4	Φ3*Φ6*2.5	037	G	剪型臂固定销 Forficiform arm fixed pin	2	Φ1.5*8	052	G	倾斜外盘 swash plate (outer)	1	
134	H	垫片 Washer	2	Φ5*Φ8*0.2	038	G	剪型臂 Forficiform arm	2		051	G	倾斜盘固定销 swash plate fixed pin	1	Φ2*Φ14
024	H	止推轴承 Shove-stopping bearing	2	F3-8M	039	G	剪型臂钢衬 Forficiform arm bush	2	Φ1.5*Φ2.5*4	053	G	滚珠轴承 Bearing	1	Φ20*Φ27*4
032	H	主翼固定轴 Main blade fixed shaft	1	Φ3*46	043	G	希控控制臂 Rotor head control arm	2		054	G	倾斜内盘下盖 Bottom cover of swash plate (inner)	1	
030	D	普通螺母 Common nuts	1	M2	042	G	滚珠轴承 Bearing	4	Φ2*Φ5*2.5	013	G	TWP1704	3	T1.7*4
028	H	O型圈 "0" ring	2	Φ2*Φ6*2	044	G	铜套 Copper sheath	1	Φ5*Φ6*10	026	H	MPH3016	2	M3*16
027	H	台阶垫片 Washer	2	Φ3.1*Φ5.5*0.5	041	G	垫片 Washer	2	Φ2*Φ4*0.3	081	H	定位环 Collar	1	
023	H	防松螺母 Locknut	4	M3	040	G	MPP2010	2	M2*10	002	H	MXH3003	1	M3*3
033	H	主旋转头固定螺 Fix pulg of center hub set	1	Φ5.8*11	046	G	TKP1704(小头) Large end screw	4	T1.7*4	014	G	双孔连杆 Ring-link linkage	2	
034	D	MHH2014	1	M2*14	048	G	钢球 Aluminum ball	4	Φ4*4	029	G	双孔拉杆 Ring-link push-rod	2	







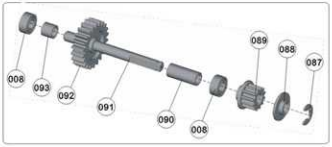


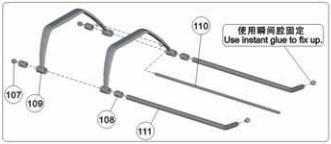


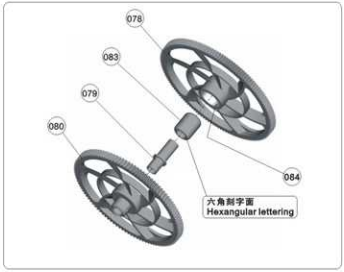
动力系统组装步骤 Assembly process of power system

零件用量表 (Dosage form of spare parts)

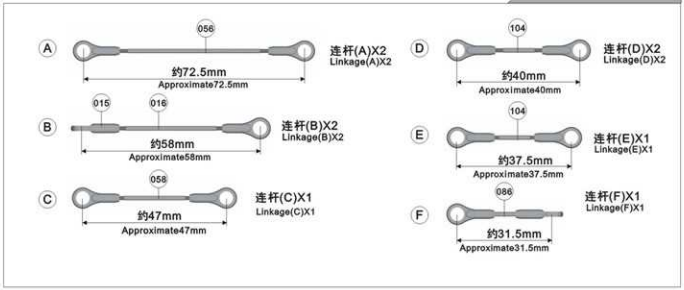
序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification
093	B	齿轮隔套B Gear cap B	1	Φ3*Φ4*3	078	B	主齿轮 Main gear	1	Z=140	111	E	滑撬杆 Skid bar	2	Φ5.5*182
092	B	尾轴从动齿轮 Tail driven gear	1	Z=22	083	B	单向轴承 Oneway bearing	1	Φ6*Φ10*12	110	H	天线套管 Antenna bushing	1	Φ2*Φ3*230
091	B	尾轴从动齿轮轴 Tail driven shaft	1	Φ3*32	079	B	单向轴承连动轴 Oneway auto-driven shaft	1	Φ5*Φ8*21	056	H	拉杆A Push link a	2	Φ1.4*60
090	B	齿轮隔套A Gear cap A	1	Φ3*Φ4*9.6	080	B	副齿轮 Auxiliary gear	1	Z=110	015	H	拉杆头A Head of push link a	18	
008	B	滚珠轴承 Bearing	2	Φ3*Φ6*2.5	084	B	单向轴承座 Oneway bearing holder	1	Φ10*Φ12.5*11.8	016	H	拉杆B Push link b	2	Φ1.4*45
089	B	前同步皮带轮 Synchro belt pulley(front)	1		107	E	滑橇管塞 Skid tube stuff	4		058	H	拉杆C Push link c	1	Φ1.4*32
088	B	前同步皮带轮盖 Cap of synchro belt pulley (front)	1		109	E	滑橇支架 Skid tube strut	2		104	H	拉杆D Push link d	3	Φ1.4*26
087	B	E形卡环 "E" shape card ring	1		108	E	脚架垫 Landing skid mat	4		086	H	拉杆E Push link e	1	Φ1.4*20







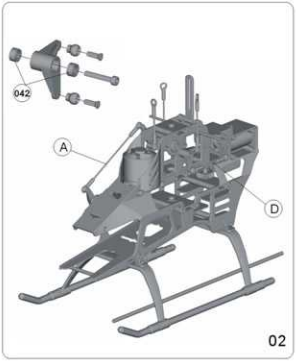
连杆组 Connecting rod

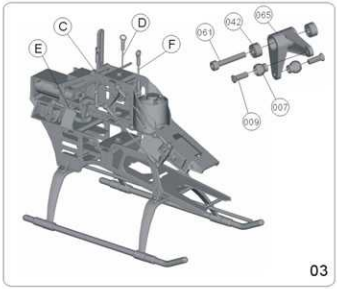


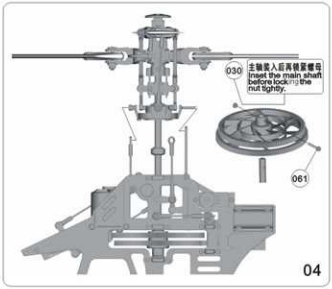
机架组组装步骤 Assembly process of main frame set

零件用量表 (Dosage form of spare parts)

序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification
072		无刷马达 Brushless motor	1	450	068	A	TWP2006	1	T2*6	065	A	L型摇臂(90度) *L" shape control arm(90°)	2	
075		马达齿轮 Motor gear	1	Z=10	132	A	机舱支杆 Cabin spacer	1	Φ2*84	042	A	滚珠轴承 Bearing	4	Φ2*Φ5*2.5
076	A	马达固定座 Motor mount set	1		074	A	摇臂转接座 Rocker commutator set	1		061	A	MHH2012	3	M2*12
069	A	TPP2606	4	T2.6*6	073	A	滚珠轴承 Bearing	2	Φ5*Φ8*2.5	007	A	铝球 Aluminum ball	11	SR2*3
105	A	左侧板 left frame	1		082	A	滚珠轴承 Bearing	3	Φ5*Φ10*3	009	A	MKP2006	11	
103	A	TPP1709	17	T1.7*9	085	A	限位挡块 Fixed piece	1		030	A	螺母 Linkage	1	M2
077	A	MPP3008	2	M3*8	071	A	右侧板 Right frame	1						







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

零件用量表 (Dosage form of spare parts)

序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification	序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification
112	K	尾桨叶 Tail rotor blade	2		126	K	后同步皮带轮 Synchro belt pulley (back)	1		136	K	垫片D Washer D	1	Φ 2*Φ4*0.3
057	K	MHH2007	2	M2*7	127	K	后同步皮带轮盖 Cap of synchro belt pulley (back)	1		034	K	MHH2014	1	M2*14
040	K	MPP2010	2	M2*10	128	K	尾轴左固定座 Tail shaft fixed shaft (left)	1		048	K	钢球 Aluminum ball	1	Φ4*4
114	K	尾翼夹头 Tail blade clamp	2		103	K	TPP1709	3	T1.7*9	047	K	MKP2007	1	M2*7
002	K	MXH3003	1	M3*3	129	K	MPH3010	1	M3*10	116	K	尾螺距钢衬滑座 Tail pitch control set	1	Φ5*10.9
115	K	尾翼固定轴 Tail blade fixed shaft	1	Φ8*13.3	102	K	皮带 Belt	1	810	117	K	尾桨控制臂连接头 Connector of tail blade arm	2	
113	K	滚珠轴承 Bearing	2	Φ2*Φ6*3	101	K	尾管 Tail boom	1	Φ12*352	118	K	尾翼控制臂 Tail blade control arm	1	
124	K	尾轴右固定座 Tail shaft fixed shaft (right)	1		121	K	半螺纹螺丝 Screw	2	2*4	119	K	TPP1405	2	T1.4*5
125	K	尾轴 Tail shaft	1	Φ3*42	042	K	滚珠轴承 Bearing	2	Φ 2 *Φ5*2.5	120	K	滚珠轴承 Bearing	2	Φ4*Φ7*2.5
008	K	滚珠轴承 Bearing	2	Φ3*Φ6*2.5	122	K	尾摆臂 "L" control arm of Tail blade	1		123	K	轴承座 Bearing holder	1	

组装程序按照编码组装,组装时需注意的重点:

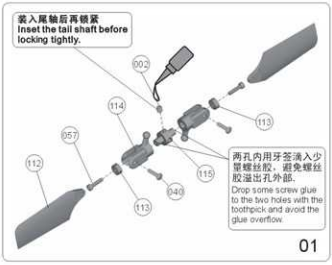
1.尾轴左.右固定座必须对准尾管定位孔装入,确实锁紧.

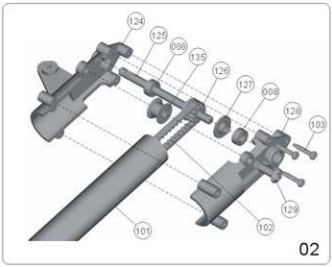
2.尾翼固定轴M3螺丝孔须对准尾轴平面槽后锁入螺丝.

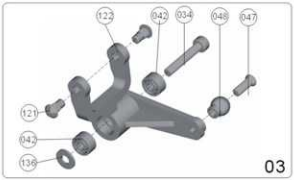
Assemble the components according to the code, pay attention to the following key points:

1.The left and right mount of the tail shaft should aim at the locating hole of the tail boom, then embed it and lock up.

2.Make the M3 screw hole on the tail fin fixed axis aim at the tail shaft canal, then lock up the screw.







尾管组组装步骤 Assembly process of tail boom set

零件用量表 (Dosage form of spare parts)

序号 No	包装 Package	品名 Name	数量 Quantity	规格 Specification
068	I	TWP2006	4	T2*6
094	I	尾舵机固定座 Tail servo control set	2	
097	D	尾杆导向环 Tail rod oriented ring	1	
063	D	尾支撑杆 Tail sustaining rod	2	Φ3*230
100	I	水平翼 Horizontal fin set	1	
099	I	TWP1706	2	T1.7*6
041	I	垫片D Washer D	2	Φ2*Φ4*0.3
131	I	MPP2014	2	M2*14
130	D	垂直翼 Vertical fin set	1	
095	D	拉杆头B Push-rod b	2	
062	D	尾支撑杆头A Head of tail sustaining rod A	2	
096	D	尾拉杆 Tail push-rod	1	Φ2*300
064	D	尾支撑杆头B Head of tail sustaining rod B	2	Φ1.4*80
106	D	TWP2080	2	T2*8

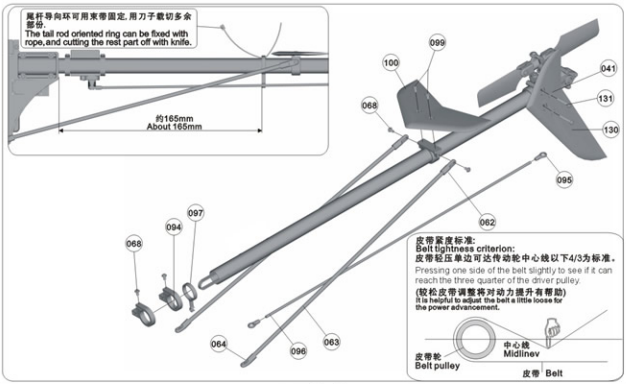
组装程序按照编码组装,组装时需注意的重点:

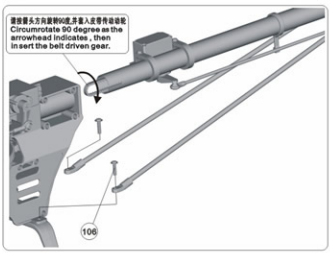
1.尾管插入机身时请按图示旋转90度,并套入机身,皮带装入尾皮带轮内,然后将尾管向后调整,使皮带轻微拉紧,并确认尾旋翼是否按照图示旋转,后将机身尾管处螺丝锁紧.

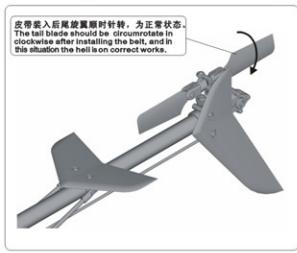
2.尾拉杆与拉杆头B需使用瞬间胶连接固定.

Assemble the components according to the code,please attention to the following key points:

1. Traverse 90 degree while inserting the tail boom to the airfame according to the graphics, put the belt into the tail belt pulley then adjust the tail boom retral and stretch the belt slightly. Make sure the tail rotor blade run as showed on the graphics, and lock up the screws at the body tail boom.
2. Connect the tail push-rod and drawbar head B with instant glue.







装配完成图 Picture of completed assembly

电子备料 Ready to fly equipment

锂电池 11.1V 1800mAh

接收机 6-channel or more

陀螺仪 Gyro

6-channel,helicopter system
6通道或以上发射机

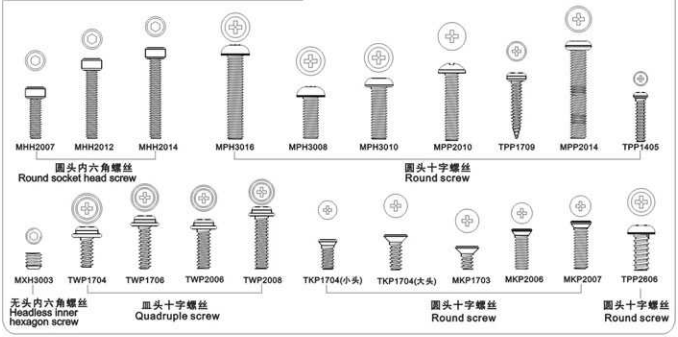
25A or more
25A 或25A以上

8g servo x4pcs
8g 舵机X4pcs

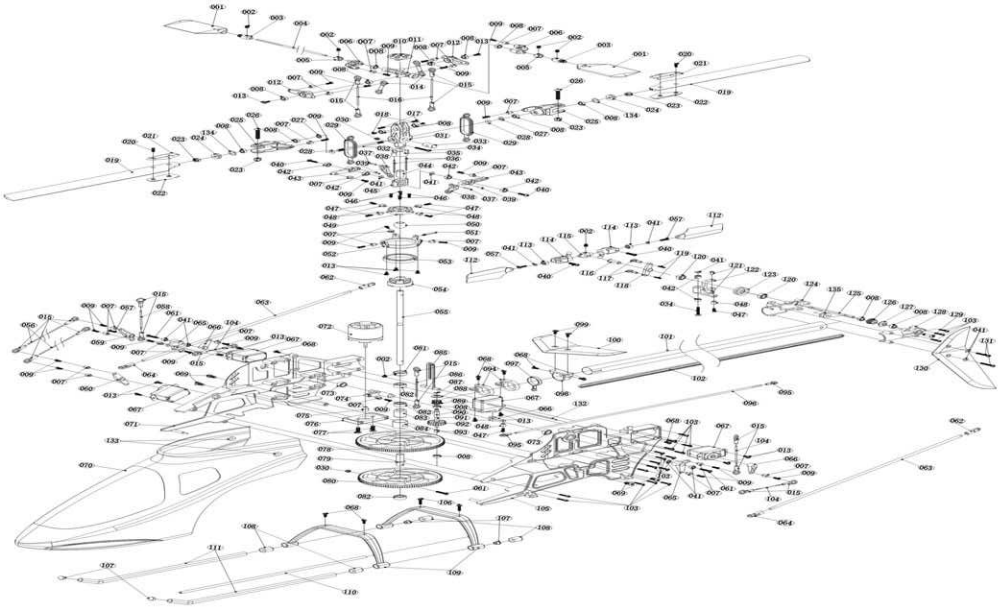
450 Brushless motor
450无刷马达

Charger
充电器

螺丝规格参照图 Screws specification



分解图 Explosion picture



配件料表 Expoloded view

编号	名称	数量	规格
001	平衡翼 Paddle	2	
002	MXH3003	6	M3*3
003	平衡翼固定轴 Paddle fixed shaft	2	
004	平衡翼杆 Flybarø2X220	1	ø 2*220
005	平衡翼固定环 Paddle collar	2	ø3*ø7*5
006	平衡翼控制臂 Paddle control arm	2	
007	铝球 Aluminum ball SD4*3	24	ø 4*3
008	滚珠轴承 Bearingø3Xø6X2.5	16	ø3*ø6*2.5
009	MKP2006	24	M2*6
010	旋转头盖 Cap of hub set	1	
011	平衡杆中心座 Flybar center holder	1	
012	贝尔控制臂 Bell	2	
013	TWP1704	13	T1.7*4
014	双孔连杆 Ring-like linkage	2	
015	拉杆头A Head of push link A	18	
016	拉杆B Push link B (M1.4*45)	2	ø1.4*45
017	TKP1704(大头) Large end screw	2	T1.7*4
018	MKP1703	2	M1.7*3
019	主翼 Main blade	2	
020	TKP2005	2	T2*5.5
021	主翼夹片A Main blade collet A	2	
022	主翼夹片B Main blade collet B	2	
023	防松螺母 Locknut M3	4	M3
024	止推轴承 Shove-stopping bearing	2	F3-8M
025	主翼夹头 Main blade clamp	2	
026	MPH3016	2	M3*16
027	台阶垫片 Washer D3.1*D5.5**L0.5	2	
028	O形圈 "O" ring	2	ø2*ø 6*2
029	双孔拉杆 Ring-like push-rod	2	
030	普通螺母 Common nuts M2	2	M2
031	主旋转头 Center hub set	1	
032	主翼固定轴 Main blade fixed shaft	1	ø 3*46
033	主旋转头固定塞 Fixed plug of center hub set	1	ø 5.8*11
034	MHH2014	2	M2*14
035	中心座 Center hub set	1	
036	相位插销 Plastic bolt D1.2*19	2	ø1.2*19
037	剪型臂固定销 Forficiform arm fixed pin	2	ø1.5*8
038	剪型臂 Forficiform arm	2	
039	剪型臂铜衬 Forficiform arm bush	2	ø1.5*ø2.5*4
040	MPP2010	4	M2*10
041	垫片 Washer D(ø2Xø4X0.3)	7	ø2*ø4*0.3
042	滚珠轴承 Bearingø2Xø5X2.5	10	ø2*ø 5*2.5
043	希拉控制臂 Rotor head control arm	2	
044	铜套 Copper sheath ø6X10	1	ø 6*10
045	中心座滑块 Center holder block	1	

编号	名称	数量	规格
046	TKP1704(小头) Small end screw	4	T1.7*4
047	MKP2007	6	M2*7
048	铝球 Aluminum ball SD4*4	6	ø 4*4
049	倾斜内盘上盖 Cover of swash plate (inner)	1	
050	万向球 Universal ball	1	SR5*8
051	倾斜盘固定销 Swash plate fixed pin	1	ø2*14
052	倾斜外盘 Swash plate (outer)	1	
053	滚珠轴承 Bearingø20Xø27X4	1	ø20*ø27*4
054	倾斜内盘下盖 Bottom cover of swash plate (inner)	1	
055	主轴 Main shaft	1	ø 5*122
056	拉杆A Push link A(M1.4*60)	2	ø 1.4*60
057	MHH2007	3	M2*7
058	拉杆C Push link C (M1.4*32)	1	ø1.4*32
059	较拉座控制臂 Control arm	1	
060	舵机一字型摆臂 "—" shape control arm of servo	1	
061	MHH2012 M2*12 inner screw	3	M2*12
062	尾支撑杆头A Head of tail sustaining rod A	2	
063	尾支撑杆 Tail sustaining rod	2	ø 3*230
064	尾支撑杆头B Head of tail sustaining rod B	2	
065	L型摆臂(90°) "L" shape control arm(90°)	2	
066	舵机摆臂 Servo control arm	3	
067	伺服器 Servo	4	
068	TWP2006	8	T2*6
069	TPP2606	4	T2.6*6
070	机壳 Cabin	1	
071	右侧板 Right frame	1	
072	无刷马达 Brushless motor 450	1	450
073	滚珠轴承 Bearing	2	ø5*ø8*2.5
074	摆臂转接座 Rocker commutator set	1	
075	马达齿轮 Motor gear	1	Z=10
076	马达固定座 Motor mount set	1	
077	MPH3008	2	M3*8
078	主齿轮 Main gear	1	Z=140
079	单向轴承连动轴 Oneway auto-driven shaft	1	ø5*ø8*21
080	副齿轮 Auxiliary gear	1	Z=110
081	定位环 Collar	1	
082	滚珠轴承 Bearing	3	ø5*ø10*3
083	单向轴承 Oneway bearing	1	ø6*ø10*12
084	单向轴承座 Oneway bearing holder	1	ø10*ø12.5*11.8
085	限位档块 Fixed piece	1	
086	拉杆E Push link E	1	ø1.4*20
087	E形卡环 "E" shape card ring	1	
088	前同步皮带轮盖 Cap of synchro belt pulley (front)	1	
089	前同步皮带轮 Synchro belt pulley (front)	1	
090	齿轮隔套A Gear cap A	1	ø3*ø4*9.6

编号	名称	数量	规格
091	尾轴从动齿轮轴 Tail driven shaft	1	ø3*32
092	尾轴从动齿轮 Tail driven gear	1	
093	齿轮隔套B Gear cap B	1	ø3*ø4*3
094	尾SERVO固定座 Tail servo control set	2	
095	拉杆头B Push-rod B	2	
096	尾拉杆 Tail push-rod	1	
097	尾杆导向环 Tail rod oriented ring	1	
098	水平翼固定座 Horizontal fin set holder	1	
099	TWP1706	2	T1.7*6
100	水平翼 Horizontal fin set	1	
101	尾管 Tail boom	1	ø12*352
102	皮带 Belt	1	810
103	TPP1709	20	T1.7*9
104	拉杆D Push link D (M1.4*26)	3	ø1.4*26
105	左侧板 left frame	1	
106	TWP2008	2	T2*8
107	滑橇管塞 Skid tube stuff	4	
108	脚架垫 Landing skid mat	4	
109	滑橇支架 Skid tube strut	2	
110	天线套管 Antenna bushing	1	ø2*ø3*230
111	滑橇杆 Skid bar	2	ø5.5*182
112	尾旋翼 Tail rotor blade	2	
113	滚珠轴承 Bearing	2	ø2*ø6*3
114	尾翼夹头 Tail blade clamp	2	
115	尾翼固定轴 Tail blade fixed shaft	1	ø8*13.3
116	尾螺距铜衬滑座 Tail pitch control set	1	ø5*10.9
117	尾翼控制臂连接头 Connector of tail blade arm	2	
118	尾翼控制臂 Tail blade control arm	1	
119	TPP1405	2	T1.4*5
120	滚珠轴承 Bearing	2	ø4*ø7*2.5
121	半螺纹螺丝 Screw 2*4	2	2*4
122	尾摇臂 "L" control arm of Tail blade	1	
123	轴承座 Bearing holder	1	
124	尾轴右固定座 Tail shaft fixed shaft (right)	1	
125	尾轴 Tail shaft	1	ø 3*42
126	后同步皮带轮 Synchro belt pulley (back)	1	
127	后同步皮带轮盖 Cap of synchro belt pulley (back)	1	
128	尾轴左固定座 Tail shaft fixed shaft (left)	1	
129	MPH3010	1	M3*10
130	垂直翼 vertical fin set	1	
131	MPP2014	2	
132	机壳支撑杆 Cabin spacer	1	ø2*84
133	软胶头 Soft colloid	2	
134	垫片 Washer D5*D8*L0.5	2	ø5*ø8*0.2
135	皮带压轮 Belt wheel	1	

配件图 (Spare parts picture)

EK1-0500

平衡推力轴承
Balance trust bearing

EK1-0501

塑胶尾旋翼(白色)
Plastic tail blade (white)

EK1-0502

塑胶尾旋翼(黄色)
Plastic tail blade (yellow)

EK1-0503

皮带
Belt

EK1-0505

脚架垫
Landing skid mat

EK1-0506

轴承
Bearing

EK1-0507

轴承
Bearing

EK1-0508

轴承
Bearing

EK1-0509

轴承
Bearing

EK1-0510

单向轴承
Oneway bearing

EK1-0511

塑胶平稳翼(白色)
Plastic paddle (white)

EK1-0512

塑胶平稳翼(黄色)
Carbon fibre paddle(yellow)

EK1-0513

机头罩组(黄色)
Canopy set (yellow)

EK1-0514

机头罩组(白色)
Canopy set (white)

EK1-0515

主旋翼夹头组
Main blade clamp set

EK1-0516

贝尔控制臂组
Bell control arm set

EK1-0517

主旋翼固定座组
Main Blade Housing

EK1-0518

平稳翼中心座组
Flybar case set

EK1-0519

平稳翼控制组
Flybar Paddle controling set

EK1-0520

希拉控制臂组
Control arm set

EK1-0521

控制杆组
Controlling shaft set

EK1-0522

倾斜盘组
Swashplate set

EK1-0523

机身组
Main Frame set

EK1-0524

连杆头组
Linkage Rod set

EK1-0525

倾斜盘导板
Swashplate guide plate

EK1-0526

升降控制组
Elevator Controlling set

EK1-0527

左右控制摇臂组
L&R Controlling Arm Set

EK1-0528

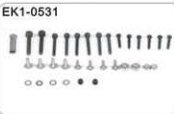
尾传动座组
Tail driven set

EK1-0529

尾旋翼控制组
Tail blade controlling set

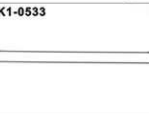
EK1-0530

户外急救零件包
Outdoor first aid accessory

EK1-0531

螺丝备用包
Screws standby

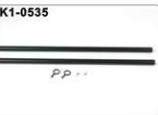
EK1-0532

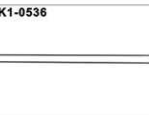
马达固定座组
Motor Mount set

EK1-0533

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

EK1-0534

主齿轮组
Main gear set

EK1-0535

尾管组
Tail boom set

EK1-0536

平衡杆
Flybar

EK1-0537

尾翼夹头组
Tail blade clamp set

EK1-0538

主轴组
Main shaft set

EK1-0539

主齿轮
Main gear

EK1-0540

横轴
Feathering shaft

EK1-0541

尾管支撑架组
Tail driven pedestal set

EK1-0542

尾翼主轴组
Tail blade main shaft set

EK1-0543

脚架组
Landing skid set

EK1-0544

尾传动轮组
Tail driven gear set

EK1-0545

垂直水平尾翼组(白色)
Vertical & horizontal tail blade set (white)

EK1-0546

垂直水平尾翼组(黄色)
Vertical & horizontal tail blade set (yellow)

EK1-0547

连杆
Linkage Rod

EK1-0548

伺服器连杆
Servo Linkage Rod

EK1-0549

轴承
Bearing

EK1-0550

轴承
Bearing

EK1-0551

轴承
Bearing

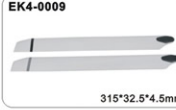
EK1-0552

塑胶升级组
Plastic Upgrade Set

EK1-0553

螺丝连杆组
Screw Push-rod Set

EK4-0009



木制主旋翼
Wooden main blade

EK2-0406A

六通道发射机
6CH Transmitter

EK2-0420A

接收机
Receiver

EK2-0500

舵机
Servo

EK1-0584

主齿轮
Main gear

EK2-0704

陀螺仪
Gyro

EK1-0350

无刷马达调速器
Brushless motor ESC

EK2-0186

锂电池 11.1V 1800mAh 20C
Lithium Battery

EK5-0006

无刷马达
Brushless motor

EK2-0851

充电器
Charger

EK1-0351

无刷马达齿轮（9齿）
Brushless motor gear(9T)

EK1-0352

无刷马达齿轮（10齿）
Brushless motor gear(10T)

EK1-0353

无刷马达齿轮（11齿）
Brushless motor gear(11T)

一般保养方法

请定期检查:Belt-CP电动遥控直升机为精密零组件构成的精细模型产品,所以飞行者须注意确保各控制组件及机构之性能良好,使其能发挥优异稳定的飞行特性,如果您的维护不当,飞行时将可能导致意外或其他损失,建议您注意养成直升机定期检查的习惯,以确保让您的爱机随时保持最佳性能.

主旋翼机构检查重点

1、主旋翼固定座:当主旋翼运转发生异常时、飞行当中会发生明显不明的震动情形，请检查主旋翼、横轴、主轴是否有变形或平衡不良，必要时请将主旋翼头固定座更新。
2、主旋翼缓冲油封：缓冲油封长期使用会发生弹性疲乏，会影响飞行稳定性，此时建议更新。
3、主旋翼夹座：主旋翼一般飞行前虽然确认过螺距，但实际飞行时仍需增加螺距行程才足够使用，如飞行时升降动作迟缓情形。检查重点包含了塑胶件以及轴承、球轴承等，塑胶件及球轴承若发现明显间隙、轴承钢珠脱落均需要更换新品。

注意：

飞行前主旋翼必须详细的做好平衡的动作，并请修正双桨不良状况，以提升升力效能，注意因平衡不佳的震动将导致各零件损坏与松脱。

机身组检查重点

1、主轴轴承：主轴轴承经长期重负载动作、正常飞行约100趟后必须检查各部轴承性能状况，建议更换新品以维持运作顺畅度，如果经常进行激烈的3D飞行或严重撞击，建议您必须时常检查主轴轴承，当发现主轴轴承有明显的间隙、异音或转动有明显的阻碍都必须更换新品。
2、单向轴承组：单向轴承组并不经常发生损坏的情形，但是为了保持良好顺畅的运作、建议您约50趟的周期当中清拆卸下来清洁与上油。如果发生主齿轮明显异动,请立即更换单向轴承套。
3、尾传动皮带：尾传动皮带虽然采用高速传动效能纤维耐变形皮带，但长时间使用仍然会产生延展现象，请随时检查施以尾管重新拉伸修正调整，以维持良好的尾舵控制机能，如果当您发现皮带的边缘有磨耗严重现象，或是断齿的状况，为了维护飞行的安全建议您将它更新。

控制杆组头检查重点

控制连杆、控制臂连接座、升降舵连接座组装时请特别注意各连接部位需保持滑顺且尽量减少轴向左右摇晃间隙、此要点将严重影响飞行稳定性能。各连接杆如因坠机损坏之外、因自然磨损或是因飞行场地等恶劣因素也会发生磨损或松脱的情形，当您发现任何连接杆发生间隙、或是轻推即可脱出，建议您好立即更新，以确保飞行性能与安全。

尾旋翼系统检查重点

1、尾齿轮组：尾齿轮组请注意尾旋翼轴承的检查，当您发现轴承有明显的间隙时请更新，避免轴承咬死，并请注意尾舵轮不可将它锁死，必须能保持顺畅运动以免发生塑胶件熔毁的情形。
2、尾旋翼控制滑座：当您于草地飞行时，请注意检查避免尾旋翼滑座是否有发生落地时卷入杂草的状况，若有必须立即将它清除再进行下一次飞行，否则可能会因为杂草纤维阻碍运作，造成尾旋翼控制失常的情形，平常保养尽量避免使用润滑油于外部机构，避免沾染灰尘等杂物，严重时甚至会发生其他部位轴承磨损及尾旋翼滑座无法运作的情形。
3、尾旋翼固定座：飞行约50趟左右请将尾旋翼固定座拆卸下来进行清洁保养，确认轴承间隙是否正常，如转动不顺畅或间隙过大请更换轴承，以确保控制系统完善。
4、尾旋翼：飞行时发生触地的情形请立即检修，若发现尾旋翼有明显的外观损伤时请立即更换，以避免发生尾部震动并因此损伤其它零件，确保飞行品质。

注意！

螺丝松动将导致不可预期的意外，请务必定期检查锁固。

REGULAR MAINTENANCE:

Regular inspection: Regular maintenance is required to keep the Belt-CP electronic helicopter in optimal and safe flying condition. The model requires precise configuration of the components and setting to be kept by the owner. Maintain regular maintenance on the model to avoid accidents or loss, and keep the optimum performance.

MAIN ROTOR CHECKLIST:

1. Main rotor Housing: when the main rotor housing is worn or faulty, there will be obvious vibration and poor flight control. Check if the main rotor, main shaft and feathering shaft is deformed or imbalance.Replace parts as necessary to eliminate imbalance.
2. O-Rings: The O-Rings will lose their elasticity over time. This will cause excess play on rotor and cause instability. Replace as needed.
3. Main Rotor Holder:When the heli will not fly or reacts sluggishly even after checking for proper setting of pitch and throttle, The following checking is needed: Plastic parts, Bearings, Ball bearings, Rotor blades are needed to be checked.Check for excess play or gaps between the surfaces, missing or broken parts,or binding or restricted movement, it is important to check for main rotor balance before each flight. Operating the model when out of balance will cause excessive worn and premature failure of parts, possibly resulting in a dangerous situation.

The Control Arm should be check regularly for checked, Worn, bent or binding control arms and pushrods. Smooth movement of control arms and linkages is required for stable, vibration free flight.

Attentions:

The Swashplate should be checked for excess slop in the main ball where the main shaft rides on, and slop or looseness between the plastic and metal surfaces. Swashplate wear will result in poor stability and lack of control during flight. Replace as necessary.

FUSELAGE/CHASSIS:

1. Main shaft bearing: Normal replacement interval for proper operation is 100 flights. If flying 3D or extreme aerobatics often, inspect the bearing frequently and shorten the interval as necessary.
2. One way bearing: one way bearings have longer lifetimes. Failure is not common to keep the one-way bearing in good operation, remove it and lubricate after every 50 flights. If the main driven gear is loose,you should replace the one way bearing.
3. Tail drive belt: TWF uses only the top quality stretch-proof belts. It is however impossible to prevent the belt from stretching or wearing out. Check the belt tension regularly, and check for the worn on the teeth. Replace if necessary.

LINKAGE RODS & CONNECTING PARTS.

During assembly, take special care to keep the connecting parts in smooth operation, and avoid excess play or binding. Failure to do so will result in poor stability. The linkage rods and ends will be broke and worn out due to normal usage, crashing and poor maintenance and environment. Check for wear and proper operation regularly, replace as needed.

TAIL ROTOR SYSTEM:

1. Tail rotor control set: check the tail rotor bearing regularly. If there is excess play or gaps,please replace immediately. Avoid any binding or improper contact on the tail components and bearings as this will cause excess wear and heat potentially melting or deforming the tail system.
2. Tail unit assembly: avoid flying in tail grass or weeds. If grass and weed becomes lodged in the tail rotor unit, it will interfere with the operation, as cause the helicopter to lose control. Always check forforeign objects in the tail and clean them off immediately. Avoid using lubricants on the exposed surfaces of the model as it will attract and collect dirt and debris, and cause failure.
3. Tail rotor housing: Disassemble tail rotor housing for cleaning and maintenance after every 50 flights. If the tail does not operate smoothly or shows any signs of stress or wear, please replace immediately.
4. Tail rotor: check the tail rotor blades regularly for damage, especially if the helicopter ever strikes the ground while flying, or after the hard landings. Damaged Tail Rotor blades can induce vibration.

Attentions:
The loosing screw may lead to some unexpected accidents. Make sure to check the screws regularly.

升级件 Upgraded parts list

EK5-0201

金属夹头组
Metal oar nip

EK5-0202

剪形臂
Scissors shape arm

EK5-0203

倾斜盘
Swashplate set

EK5-0205

尾齿轮箱组
Tail gear box set

EK5-0208

中心座组
Central holder

EK5-0211

尾旋翼夹头组
Tail main rotor grip holder set

EK4-0015

碳纤主旋翼
Carbon fibre main blade

EK4-0150

碳纤尾旋翼
Carbon fibre tail blade

EK4-0151

碳纤平稳翼
Carbon fibre paddle

EK4-0153

碳纤尾管
Carbon fibre tail boom

EK4-0154

垂直尾翼(碳纤)
Vertical Tail Blade(Carbon Fibre)

EK4-0155

水平尾翼(碳纤)
Horizontal Tail Blade(Carbon Fibre)

EK1-0554

碳纤机身组（升级件）
Carbon Fibre Main Frame set(Upgrade)

EK4-0156

左上侧板
Upper & Left Frame

EK4-0157

右上侧板
Upper & Right Frame

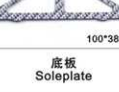
EK4-0158

左下侧板
Lower & Left Frame

EK4-0159

右下侧板
Lower & Right Frame

EK4-0160



底板
Soleplate


EK4-0058

玻璃钢机头罩组
Glass Fiber reinforced Plastic Canopy Set


EK1-0348

螺距规
Screw-pitch gauge

EK1-0504

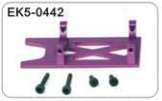
主翼支撑架
Main blade sustain set


EK1-0552

塑胶升级组
Plastic Upgrade Set


EK1-0553

螺丝连杆组
Screw Push-rod Set


EK5-0442

接收机底板组
Receiver soleplate


EK5-0443

马达固定座组
Motor Mount Set


EK5-0444

主轴轴承座组
bearing set on main shaft


EK5-0445

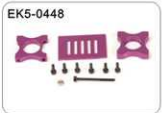
十字盘固定座组
Swashplate mount


EK5-0446

左右舵角控制器
Left and right rudder controller


EK5-0447

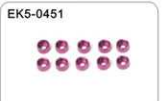
前后舵角控制器
Front and rear rudder controller


EK5-0448

尾管固定座组
Tail boom hold set


EK5-0449

伺服机水平固定座组
Horizontal fixed set of tail servo


EK5-0451

螺丝铝套
Screw aluminum cannula


EK5-0450

驱动皮带轮轴承座
The bearing holder of drive belt wheel


EK1-0185

锂电池 11.1V 1550mAh 20C
Lithium Battery


EK1-0186

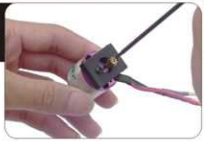
锂电池 11.1V 1800mAh 20C
Lithium Battery


EK1-0187

锂电池 11.1V 2100mAh 20C
Lithium Battery

电子配件的安装 Assembly of electric parts

把脚架安装在机身上
Assembly the landing skid onto the body.



用螺丝把马达和固定座拧紧
Fix up the motor and mount with screws.

再把马达固定在机身上
Fix the motor on the body.

4

将前后升降舵机固定
Fix the front and rear ELEV servos.

5

将左右副翼舵机固定
Fix the left and right AILE servos.

6

将螺距舵机固定
Fix the pitch servo

7

将方向舵机固定
Fix the rudder servo

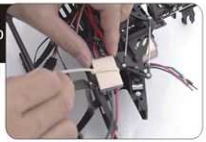
8

用球头钳把拉杆连上
Connect the push-rod with the bulb clipper.

9

将陀螺仪固定好
Fix the gyro.

10



将调速器用双面贴粘好并固定
Stickup the ESC with double paste and fix it.

11

将接收机放进机身并用双面贴粘好
Put the receiver into the body and stickup with double paste.

12

将陀螺仪和方向舵机连接
Connect the gyro and rudder servo.

13

将主旋翼固定好
Fix up the main blade.

14

将调速器和马达连接
Connect the ESC and motor.

15

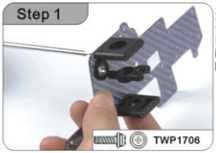
装配完成
Assembled

16

整机图
RTF drawing

Belt-CP碳纤版机身安装步骤 Assembly process of airframe for Belt-CP(Carbon fibre version)

Step 1



将主轴固定座组装在右上侧板上。
Fix the main shaft bearing set on the top right lateral plate.

Step 2

将限位块安装在右上侧板上。
Fix the cross -disk mounting seat on the right lateral plate.

Step 3

将尾传动齿轮组安装在右侧板上。
Fix the tail driven gear on the right lateral plate.

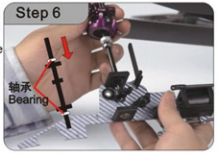
Step 4

将尾管固定座安装在右侧板上。
Fix the tail boom box on the top right lateral plate.

Step 5

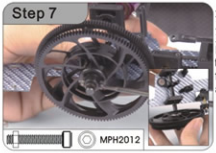
将尾管装入尾管固定座之后，再把皮带套在尾传动轮上。
Fix the tail boom onto the tail boom mount and slip the belt on the tail driven wheel.

Step 6



将主轴固定座装入轴承后，再把主轴放置进去。
Put in the main shaft after fixing the main shaft mount on the bearing.

Step 7



将主齿轮装入主轴后，对准孔位用螺丝和螺母固定好。
Put the main gear into the main shaft, and then fixing them by screws and nuts.

Step 8

把马达固定座用大十字螺丝固定在右上侧板。
Fix the motor mounting set on the top right lateral plate by big cross screw.

Step 9

再将接收机底版用十字螺丝固定在右上侧板相应位置。
Fix the receiver soleplate on the corresponding position of top right lateral plate by cross screw.

Step 10

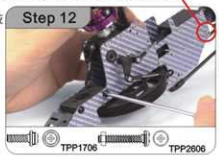
再将摆臂转接座装入轴承孔（如图）。
Place the pull-rod shaft on the corresponding position.

调节尾管皮带的松紧后，再用螺丝和螺帽把之前留的空拧紧。
Adjust the tightness of tail tube belt, and then tighten the preformed hole by screw and nut.

Step 11

将左上侧板合上，与相应的螺丝孔对齐。
Fold the top left lateral plate and adjust to the screw hole.

Step 12

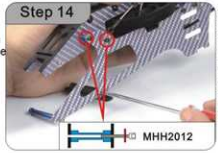


如图用相应的螺丝固定左上侧板。
Fix the top left lateral plate with screws as showed .

Step 13

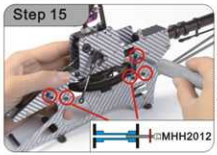
将最下面的主轴 固定座固定在左下侧板上。
Fix the nethermost main shaft mounting set on the left lower lateral plate.

Step 14



将左下侧板利用铝合金支撑管和内六角螺丝固定在已装好的机架上。(如图)
Fix the left lower lateral plate on the assembled airframe by A-alloy supporting tube and inner hexangular screws.

Step 15

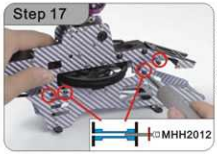


继续固定左下侧板，注意铝合金支撑管和侧板还有六角螺丝的位置。
Continue to fix the left lower lateral plate, pay attention to the positions of A-alloy supporting tube, lateral plate and hexangular screws.

Step 16

将左下侧板利用铝合金支撑管和内六角螺丝固定在已装好的机架上。(如图)
Assemble the left lower lateral plate to the airframe with A-alloy supporting tube and inner hexangular screws.

Step 17

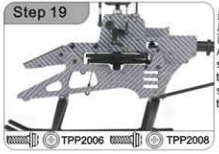


然后用内六角螺丝和十字螺丝把右下侧板固定在机身上。
Fix the right lower lateral plate on the airframe with inner hexangular screws and cross screws.

Step 18

再然后用球头钳把拉杆固定。
Then fix the pull-rod by ball-head nipper.

Step 19

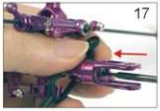


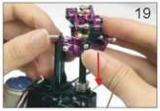
最后把脚架安装好，注意后面两颗十字螺丝长，前面的短。
Assemble the landing skid. Please pay attention that two rear cross screws are longer than the front ones.

Step 20

完成。
Completed.

五金升级件的安装 Assembly process of upgrade








28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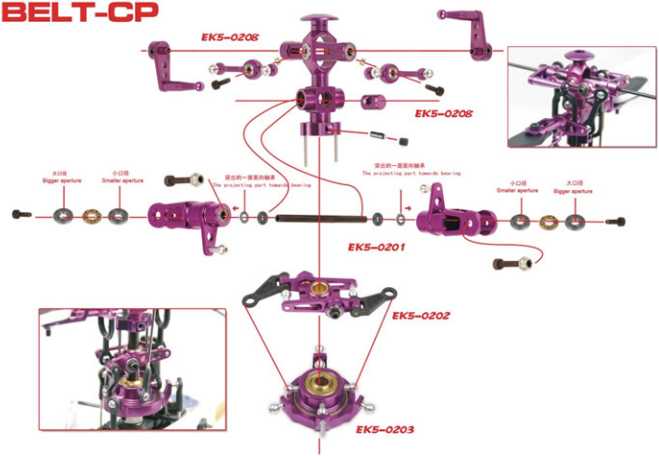
38

BELT-CP


EK5-0208
EK5-0208
大口径
Bigger aperture
小口径
Smaller aperture
突出的一面面向轴承
The projecting part towards bearing
突出的一面面向轴承
The projecting part towards bearing
小口径
Smaller aperture
大口径
Bigger aperture
EK5-0201
EK5-0202
EK5-0203

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