

# IGNOVQ 550 INSTRUCTION MANUAL 使用说明书



#### 1. INTRODUCTION 前言

Thank you for buying KDS Products. The KDS 550 Helicopter is designed as an easy to use, full featured Helicopter R/C model capable of all forms of rotary flight. Please read the manual carefully before assembling the model, and follow all precautions and recommendations located within the manual. Be sure to retain the manual for future reference, routine maintenance, and tuning. The KDS 550 is a new product developed by KDS. It features the best design available on the micro-Heli market to date, providing flying stability for beginners, full aerobatic capability for advanced fliers, and unsurpassed reliability for customer support.

感谢您选购KDS产品,为了让您容易方便的使用KDS 550直升机、请您详细的阅读完这本说明书之后再进行组装以及操作这台直升机,同时请您妥善的保存这本说明书、作为日后进行调整以及维修的参考。KDS 550是由KDS自行研发的新产品,不论你是需求飞行稳定性的初学者或是追求性能的飞行爱好者。KDS 550将是你最佳的选择。

#### IMPORTANT NOTES 重要声明

R/C helicopters, including the KDS 550 are no toys. R/C helicopters utilize various high-tech products and technologies to provide superior performance. Improper use of this product can result in serious injury or even death. Please read this manual carefully before using and make sure to be conscious of your own personal safety and the safety of others and your environment when operating all KDS products. Manufacturer and seller assume no liability for the operation or the use of this product. Intended for use only by adults with experience flying remote control helicopters. After the sale of this product we cannot maintain any control over its operation or usage.



It is not a Toy!

KDS 550 遥控直升机并非玩具,它是结合了许多高科技产品所设计出来的休闲用品,所以商品的使用不当或不熟悉都可能会造成严重伤害甚至死亡,使用之前请务必详读说明书,勿轻忽并注意自身安全!任何遥控直升机的使用,制造商和经销商是无法对使用者于零件使用的损耗异常或组装不当所发生之意外负任何责任,本产品是提供有操作过模型直升机经验的成人或有相当技术的人员在旁指导,以确保安全无虞下操作使用,产品售出后本公司将不负任可操作和使用控制上的任可性能与安全责任。

#### NOTE 声明

Fly only in safe areas, away from other people. Do not operate R/C aircraft within the vicinity of homes or crowds of people. R/C aircraft is prone to accidents, failures, and crashes due to a variety of reasons including, lack of maintenance, pilot error, and radio interference. Pilots are liable for their actions and damage or injury occurring during the operation or as of a result of R/C aircraft models.

#### 2. SAFETY NOTES 安全注意事项

#### ● LOCATEAN APPROPRIATE LOCATION 远离障碍物及人群

R/C helicopters 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. Do not play your model in inclement weather, such as rain, wind, snow or darkness.

直升机飞行时具有一定的速度,相对的也潜在着一定危险性,场地的选择也相对的重要,请需遵守法规到合法摇控飞行场地飞行。必须注意周围有没有人、高楼、建筑物、高压电线、树木等等,避免操控的不当造成自己与他人财产的损坏。初次练习时,务必选择在空旷合法专属飞行场地并适当搭配练习架飞行,这对飞行失误造成的损伤将会大幅的降低。请勿在下雨、打雷等恶劣天气下操作,以确保本身及机体的安全。



#### • OBTAIN THE ASSISTANCE OF AN EXPERIENCED PILOT避免独自操控

Before turning on your model and transmitter, check to make sure no one else is operating on the same frequency. Frequency interference can cause your model, or other models to crash. The guidance provided by an experienced pilot will be invaluable for the assembly, tuning, trimming, and actual first flight, (recommend you to practice with computer-based flight simulator.)

至飞行场飞行前,需确认是否有相同频率的同好正进行飞行,因为开启相同频率的发射机将导致自己与他人立即干扰等意外危险。摇控飞机操控技巧在学习初期有着一定的难度,要尽量避免独自操作飞行,需有经验的人士在旁指导,才可以操控飞行。(勤练电脑模拟器及老手指导是入门必要的选择)。



#### ALWAYS BE AWARE OF THE ROTATING BLADES 远离运转中零件

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



当直升机主旋翼与尾旋翼运转时,切勿触摸并远离任可物件,以避免造成危险及损坏。

#### • PREVENT MOISTURE 远离潮湿环境

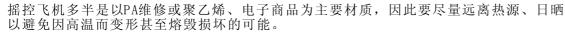
R/C models are composed of many precision electrical components. It is critical to keep the model and associated equipment away from moisture and other contaminants. The introduction or exposure to water or moistrue in any form can cause the model to malfunction resulting in loss of use, or a crash. Do not operate or expose to rain or moisture.



直升机内部也是由许多精密的电子零组件组成,所以必须绝对的防止潮湿或水气,避 免在浴室或雨天时使用,防止水气进入机身内部而导致机件及电子零件故障而引发不 可预期的意外!

#### • KEEP AWAY FROM HEAT 远离热源

R/C models are made upof various forms of plastical. Plastic is very susceptible to damage or deformation due to extreme heat and cold climate. Make sure not to 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.





#### PROPER OPERATION 勿不当使用本产品

Please use the replacement of parts on the manual to ensure the safety of instructors. This product is for R/C model, so do not use for other purpose.

请勿自行改造加工,任何的升级改装或维修,请使用KDS产品目录中的零件,以确保结 构的安全。请确认于产品限界内操作,请勿过载使用,并勿用于安全、法令外其它非 法用途。



#### SAFE OPERATION 安全操作

Operate this unit within your ability. Do not fly under tired condition and improper operation, which may cause danger.

请于自己能力内及需要一定技术范围内操作这台直升机,过于疲劳、精神不佳或不当 操作, 意外发风险将可能会提高。



#### 3.SAFETY CHECK BEFORE FLYING 飞行前安全检查重要事项

Before flying, please check to make sure no one else is operating on the same frequency for the safety. Before flying, please check if the power of transmitter and helicopter are enough for the flight.

Before turn on the transmitter, please check if the throttle stick is in the lowest position, IDLE switch is OFF. When turn off the unit, please follow the power on/off procedure. Power ON-Please turn on the transmitter first, and then turn on helicopter power. Power OFF. Please turn off the helicopter power first and then turn off the transmitter. Improper procedure may cause out of control, so please to have this correct habit.

Before operation, check every movement is smooth and directions are correct. Carefully inspect servos for interference and broken gear.

Check for missing or loose screws and nuts. See if there is any cracked and incomplete assembly of parts. Carefully check main rotor blades and rotor holders. Broken and premature failures of parts possibly result in a dangerous situation.

Check all ball links to avoid excess play and replace as needed. Failure to do so will result in poor flight stability. Check the battery and power plug are fastened. Vibration and violent flight may cause the plug loose and lead to out of control.

#### Check for the tension of tail drive belt.

每次飞行前应先确认所使用的频率是否会干扰他人,以确保你自身与他人的安全。

每次飞行前确定你发射机与直升机电池的电量是在足够飞行的状态。

开机前确认油门摇杠是否位于最低点,熄火降落开关,定速开关(IDLE)是否于关闭位置。

关机时必须遵守电源开关机的程序,开机时应先开启发射机后,再开启直升机电源:关机时应先关闭直升机电源,再关闭发射机电源。不正确的开关机程序可能会造失控的现象,影响自身与他人的安全,请养成正确的习惯。

开机请先确定直升机的各个动作是否顺畅,及方向是否正确,并检查伺服的动作是否有干涉或崩齿的情形,使用故障的伺服器将导致 不可预期的危险。

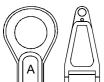
飞行前确认没有缺少或松脱的螺丝与螺帽,确认没有组装不完整或损毁的零件,仔细检查主旋翼是否有损坏,特别是接近主旋翼夹座

损坏或组装不完整的零件不仅影响飞行,更会造成不可预期的危险。注意:对损耗、有裂痕零件更新及定期保养检查得要性。

检查所有的连杆头是否有松脱的情形,过松的连杆头应先更新,否则将造成直升机无法操控的危险。确认电池及电源接头是否固定牢靠,飞行中的震动或激烈的飞行,可以造成接头松脱而造成失控的危险。



When you see the marks as below, please use glue or grease to ensure flying safety. 标有下符号之组装步骤,请配合上胶或上油,以确保 使用之可靠度。



502: Apply CA Glue To Fix.

509: Apply Anaerobics Retainer To Fix.

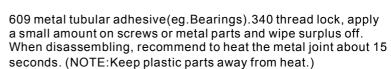
340: Apply Thread Lock To Fix.

OIL: Add Grease. 502:使用瞬间胶固定

609:使用金属管状固定缺氧胶固定

340:使用螺丝缺氧胶固定

OIL:添加润滑油



340 Glue width:approx1mm

340上胶宽度纸1mm

609

Green

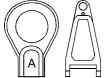
绿色

304

Transparent

透明

609 为强力金属管状(如轴承)接著处,340为螺丝胶,胶合螺丝或金属内外径请务必少量使用,必要时请用手去除胶量,欲拆卸时可以金属接合部位热烤纸15秒。(注意!塑胶件避免接近热 源)



When assembling ball links, make sure the "A" character faces outside.

各项塑胶制连杠头扣接时,A字请朝外。



# 4.ASSEMBLY PROCESS OF MAIN ROTOR HEAD 主旋转头组装步骤(1)

Dos	Dosage form of spare parts			用量表
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
001		Bearing 滚珠轴承	4	Φ8*Φ16*5
002		Metal main rotor holder 主翼夹头	2	
003		Washer 垫片	2	Ф12*Ф15. 8*0. 5
004		Thrust bearing 止推轴承	2	F8-16M
005		Linkage ball A 球头A	4	Ф5*8. 5
006		Bell control arm set 贝尔控制臂	2	

No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
007		Collar 铝套	2	Φ3*Φ4*1
800		Bearing 滚珠轴承	4	Ф3*Ф6*2. 5
009		Socket screw 圆柱头内六角螺丝	2	M3*10
010		Washer 台阶垫片	2	Ф3*Ф5. 5*0. 5
011		Main rotor branch control 主翼支臂	2	
012		Socket screw 圆柱头内六角螺丝	4	M2. 5*6





Bearing 滚珠轴承(Φ8\*Φ16\*5) X4



Washer 垫片(Φ12\*Φ15.8\*0.5)X2













Thrust bearing 止推轴承(F8-16M)X2





Socket screw 圆柱头内六角螺丝(M3\*10) X2





Socket screw 圆柱头内六角螺丝(M2.5\*6) X4





Linkage ball A 球头A(Φ5\*8.5)X4





Bearing 滚珠轴承(Φ3\*Φ6\*2.5) X4



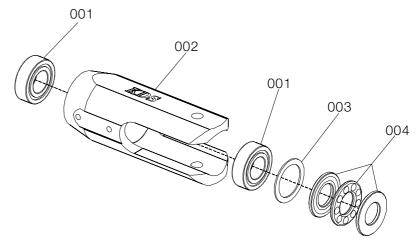


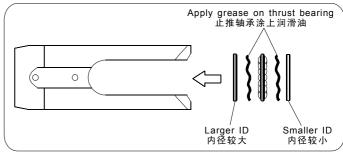
Washer 台阶垫片(Ф3\*Ф5.5\*0.5) X2

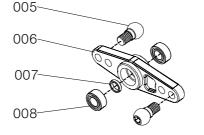




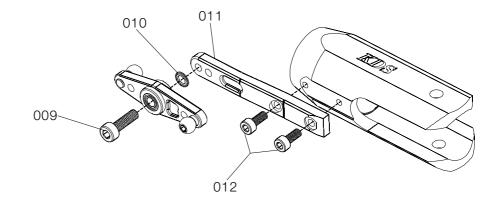
Collar 铝套(Φ3\*Φ4\*1)X2







Apply a little amount of T43 thread lock when fixing a metal part. 螺丝锁入金属件请使用适量螺丝胶。



## 4.ASSEMBLY PROCESS OF MAIN ROTOR HEAD 主旋转头组装步骤(2)

Dos	age for	m of spare parts	零件	用量表
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
013		Socket screw 圆柱头内六角螺丝	1	M3*6
014		Braking plate 刹车碟	1	
015		Metal main rotor housing 金属主旋翼固定座	1	
016		Pin 固定座插钳	2	Ф2*31

固定座插销 Feathering shaft sleeve 横轴套管

No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
018		Feathering shaft 横轴	1	Ф8*94. 8
019		Damper rubber 横轴胶圈	2	Ф7. 9*Ф13*6. 5
020		Washer 垫片	2	Φ8*Φ15*1
021		Washer 垫片	2	Ф5*Ф13*1. 2
022		Socket screw 圆柱头内六角螺丝	2	M5*12



017



Socket screw 圆柱头内六角螺丝(M3\*6) X1





Socket screw 圆柱头内六角螺丝(M5\*12)X2





Washer 垫片(Φ8\*Φ15\*1) Χ2



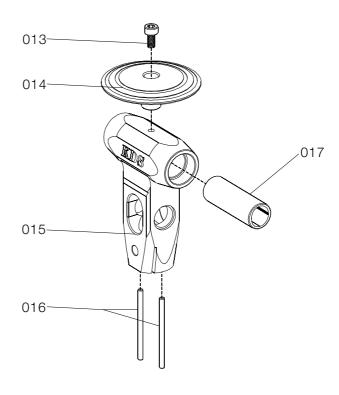


垫片(Φ5\*Φ13\*1.2) Χ2

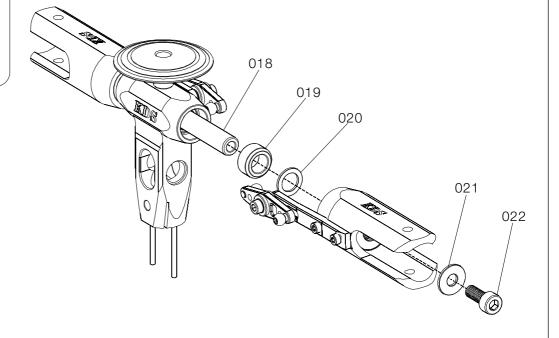




Damper rubber 横轴胶圈(Φ7. 9\*Φ13\*6. 5) X2



Apply a little amount of T43 thread lock when fixing a metal part. 螺丝锁入金属件请使用适量螺丝胶。



#### **4.ASSEMBLY PROCESS OF MAIN ROTOR HEAD**

主旋转头组装步骤(3)

#### Dosage form of spare parts 零件用量表

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No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
023		Metal flybar seesaw holder 金属平衡杆固定座	1	
024		Bearing 滚珠轴承	2	Φ3*Φ7*3
025		Bearing 法兰轴承	2	Φ4*Φ9*4
026		M3 Collar screw 台阶螺丝	2	M3*7. 7
027		Washer 台阶垫片	2	Ф3*Ф5. 5*0. 5
028		Flybar control rod 平衡翼球型控制杆	2	

No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
029		KIMI screw 基米螺丝	2	M4*4
030		Metal flybar control arm 金属平衡翼控制臂	2	
031		Linkage rod (A) 连杆(A)	2	Ф2. 2*18
032		Ball link 拉杆头	4	
033	·	Linkage ball B 球头B	2	Ф5*10. 7
034		Flybar rod 平衡杆	1	Ф3*420









Bearing 法兰轴承(Φ4\*Φ9\*4) X2





M3 Collar screw 台阶螺丝(M3\*7.7)X2





Linkage ball B 球头B( $\Phi$ 5\*10.7)X2





Washer 台阶垫片(Ф3\*Ф5. 5\*0. 5) X2



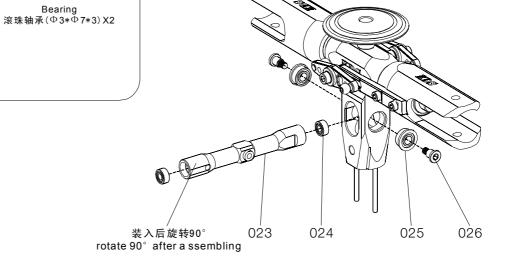


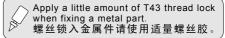
KIMI screw 基米螺丝(M4\*4)X2

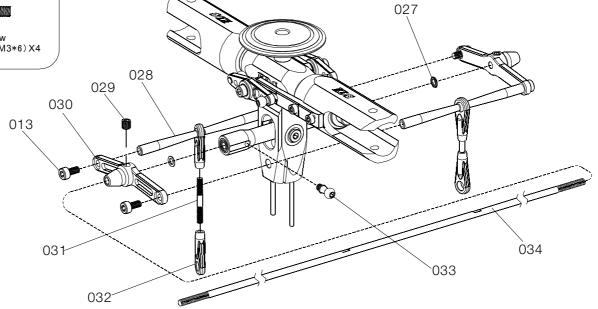




Socket screw 圆柱头内六角螺丝(M3\*6)X4



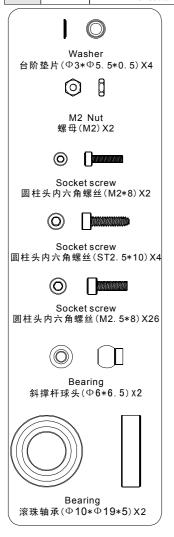


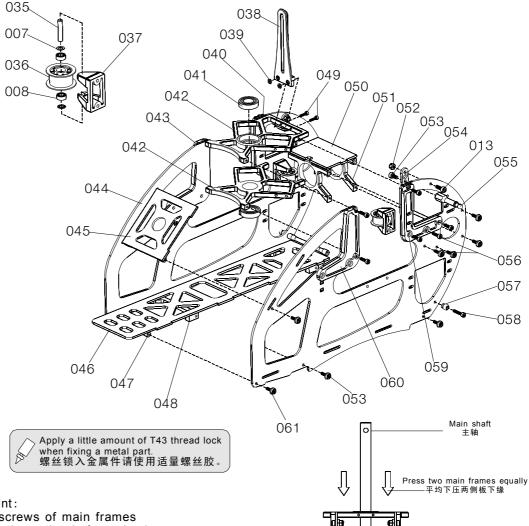


#### 5.ASSEMBLY PROCESS OF MAIN FRAME AND POWER SYSTEM 主体侧板与动力系统组装步骤(1)

Dos	Dosage form of spare parts			用量表
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
035		Pin 皮带轮压轮销	2	Ф3*14. 8
036		Belt wheel 皮带压轮	2	
037		Belt wheel holder 皮带压轮座	2	
038		Anti-rotation bracket 十字盘导板	1	
039		M2 Nut 螺母	2	M2
040		Rear strengthening plate 后右加强块	1	
041		Bearing 滚珠轴承	2	Φ10*Φ19*5
042		Main shaft mounting holder 主轴固定座	2	
043		Front strengthening plate 前右加强块	1	
044		Main frame 碳纤侧板	2	

No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
045		ESC mounting plate ESC固定板	1	
046		Battery mounting plate 电池固定板	1	
047		Frame mounting bolt 机身铝固定柱	3	Φ5*55
048		Landing skid mount 脚架固定座	2	
049		Socket screw 圆柱头内六角螺丝	2	M2*8
050		Receiver mounting plate 接收机固定板	1	
051		Tail boom stiffener 尾管固定座	2	
052		M3 Locknut 防松螺母	2	M3
053		Socket screw 圆柱头内六角螺丝	26	M2. 5*8
054		Canopy mounting bolt holder 机壳铝柱固定板	2	
055		Canopy mounting bolt 机壳固定柱	2	





Glass surface

玻璃平面

90

Main frame

90°

Main frame assembly key point:

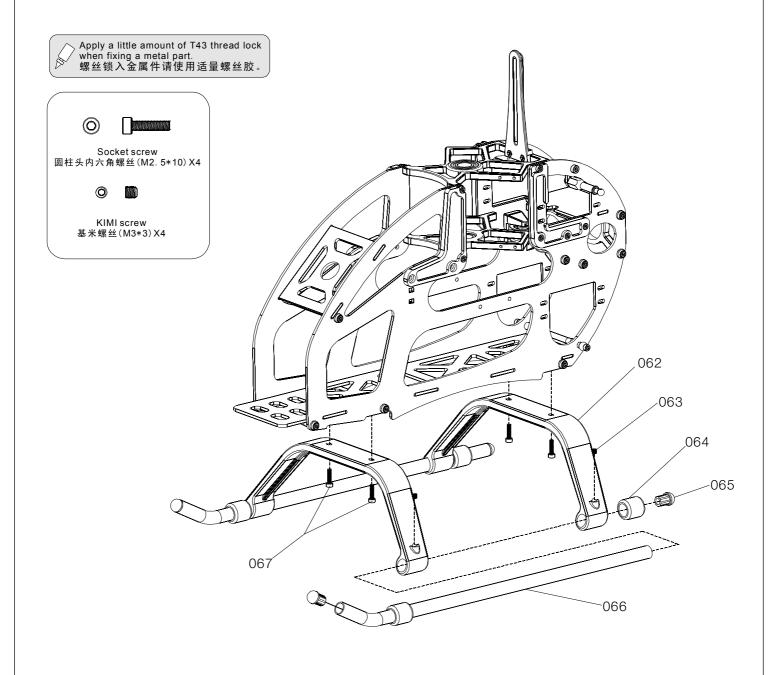
First do not fully tighten the screws of main frames and put two bearings through the main shaft to check if the movements are smooth. The bottom bracket must be firmly touched the level table top (glass surface) : please keep the smooth movements on main shaft and level bottom bracket, then slowly tighten the screws. This assembly can help for the power and flight performance.

机身侧板组装重点: 侧板螺丝不完全锁紧,放入主轴惯穿二颗轴承确认上下移动必须滑顺,主体底板必须与水平旧面(玻璃平面)踏实紧贴,请保持主轴滑顺与底板平行旧面后慢慢锁紧螺丝。正确侧板的组装对动力与飞行性能有明显帮助。

### 5.ASSEMBLY PROCESS OF MAIN FRAME AND POWER SYSTEM 主体侧板与动力系统组装步骤(2)

Dos	Dosage form of spare parts			用量表
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
056		Socket screw 圆柱头内六角螺丝	4	ST2. 5*10
057		Linkage Ball 斜撑杆球头	2	Ф6*6. 5
058		Socket screw 圆柱头内六角螺丝	2	M2. 5*12
059		Rear strengthening plate 左后加强块	1	
060		Front strengthening plate 左前加强块	1	
061		Washer 螺丝铝垫	16	

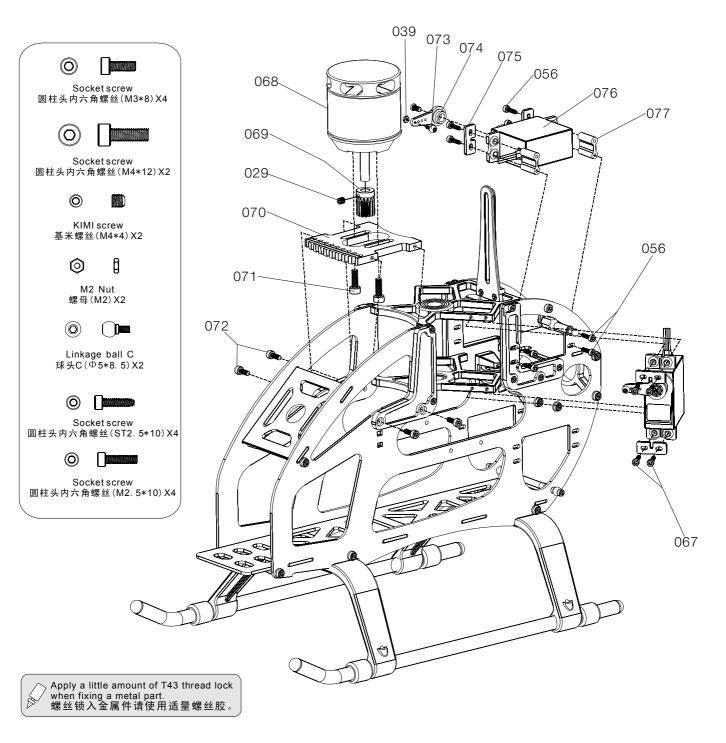
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
062		Landing skid 脚架	2	
063		KIMI screw 基米螺丝	4	
064		Landing skid pipe rubber ring 脚架垫圈	4	
065		Landing skid stopper 脚架管塞	4	
066		Skid pipe 脚架铝管	2	
067		Socket screw 圆柱头内六角螺丝	4	M2. 5*10



### 5.ASSEMBLY PROCESS OF MAIN FRAME AND POWER SYSTEM 主体侧板与动力系统组装步骤(3)

Dosa	age for	零件	用量表	
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
068		Motor 马达	1	Kv1200
069		Motor pinion 马达齿轮	1	14T
070		Motor mount 马达固定座	1	
071		Socket screw 圆柱头内六角螺丝	2	
072		Socket screw 圆柱头内六角螺丝	4	M3*8

No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
073		Linkage ball C 球头C	2	Ф5*8. 5
074		Servo horn 伺服器舵角片	2	
075		Servo plate 伺服器压片	4	
076		Servo 伺服器	2	680
077		Servo mount 伺服器固定座	2	

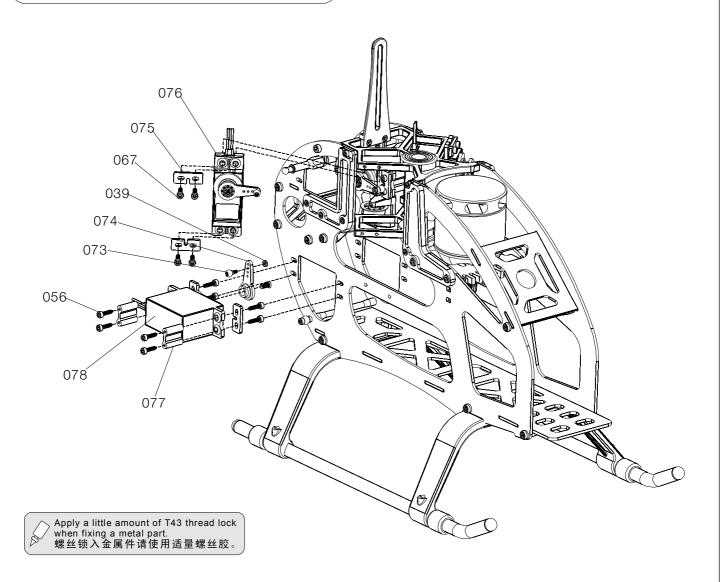


### 5.ASSEMBLY PROCESS OF MAIN FRAME AND POWER SYSTEM 主体侧板与动力系统组装步骤(4)

Dosage form of spare parts 零件用量表					
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格	
078		Servo 伺服器	1	690	

M2 Nut Socket screw 園柱头内六角螺丝(ST2.5\*10) X8

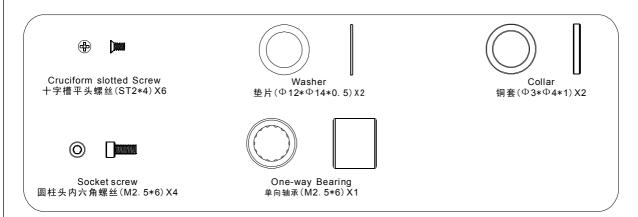
© Linkage ball C 球头C(中5\*8.5) X2 園柱头内六角螺丝(M2.5\*10) X4

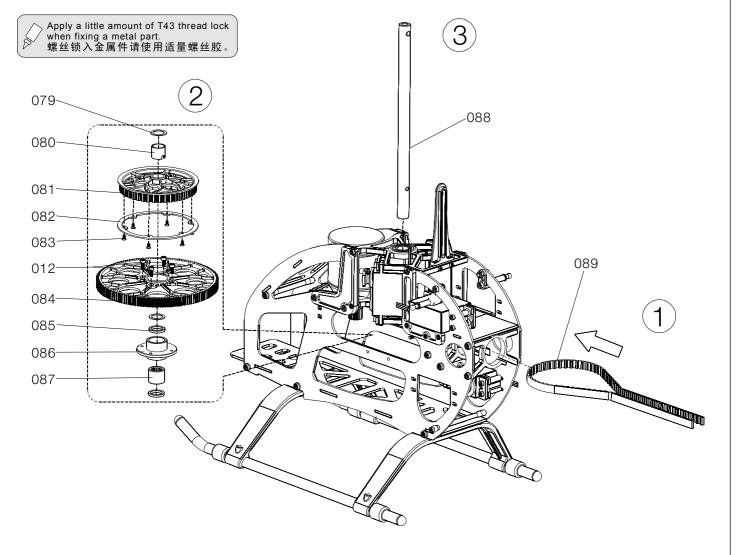


### 5.ASSEMBLY PROCESS OF MAIN FRAME AND POWER SYSTEM 主体侧板与动力系统组装步骤(5)

Dos	age for	零件用量表		
No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
079		Washer 垫片	2	Ф10*Ф14*0.5
080		Pulley mount 皮带轮固定座	1	
081		Pulley 皮带轮	1	
082		Pulley cover 皮带轮盖	2	
083		Cruciform slotted Screw 十字槽平头螺丝	6	ST2*4
084		Main drive gear 主齿轮	1	115T

No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
085		Linkage ball C 单向轴隔套	2	Ф10*Ф14*2
086		One way bearing block 单向轴轴承座	1	
087		One-way Bearing 单向轴承	1	
088		Main shaft 主轴	1	
089		Belt 皮带	1	672XL





#### **5.ASSEMBLY PROCESS OF MAIN FRAME AND POWER SYSTEM** 主体侧板与动力系统组装步骤(6)

### Dosage form of spare parts 零件用量表

No.序号	Spare part 配件	Description 名称	Quantity 数量	Specification 规格
090		Pin 皮带轮销子	1	Ф3*Ф14*0.5
091		Collar 铝套	1	
092		Main shaft bearing block 下主轴轴承座	1	







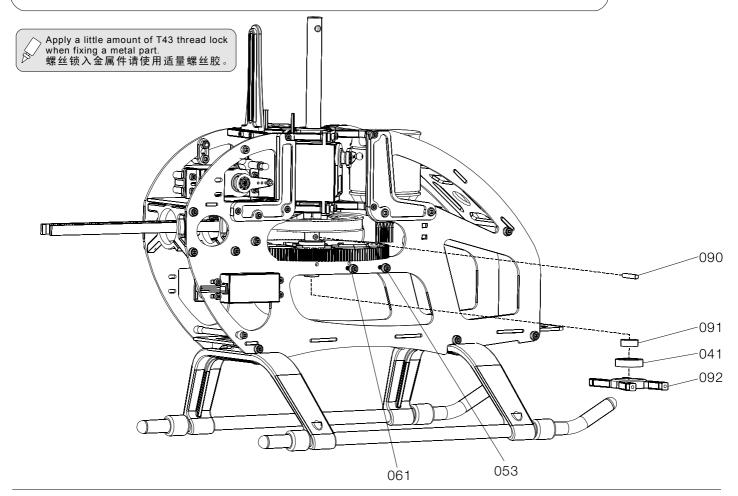




Bearing 滚珠轴承(Φ10\*Φ19\*5) X2

Collar 铝套(Φ3\*Φ4\*1) X2

Socket screw 圆柱头内六角螺丝(M2.5\*8)X4







Socket screw 圆柱头内六角螺丝(M3\*40)X2



Socket screw 圆柱头内六角螺丝(M4\*20) X1



Socket screw 圆柱头内六角螺丝(M3\*12) X2



Socket screw 圆柱头内六角螺丝(M2. 5\*8) X2



Socket screw 圆柱头内六角螺丝(M2\*6)X2



Socket screw 圆柱头内六角螺丝(M2.5\*10)X1





Linkage ball B 球头B(Φ5\*10.7)X6



Linkage ball A 球头A(Φ5\*10.7)X2





M2 Nut 螺母(M2)X2





M3 Nut 防松螺母(M3)X2





Linkage ball 斜撑杆球头(Φ6\*6.5) X2