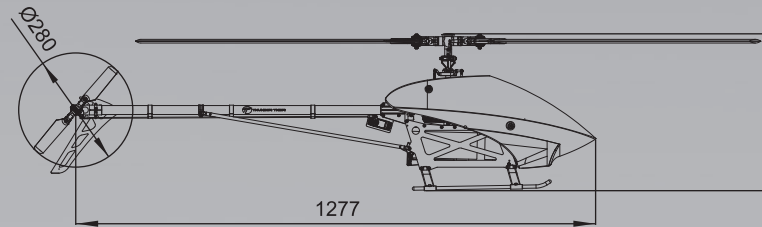
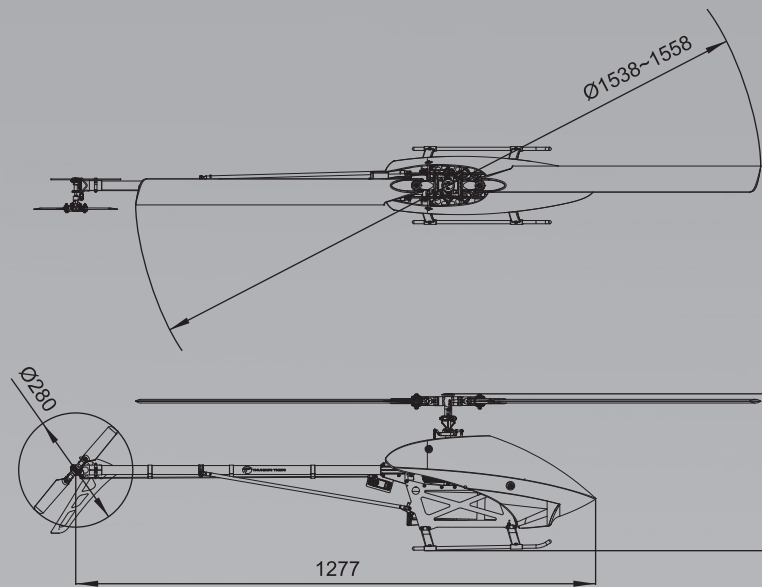


# RAPTOR E700

Flybarless No.4761

# RAPTOR E700

Flybarless No.4761



## SPECIFICATION / 規格表

Description / 產品名稱		RAPTOR E700
Item No. / 產品料號		4761
Power / 動力		Electric Motor
Rotor Head / 主旋翼頭型式		Flybarless
Length / 總長		1277 mm / ( 50.3" )
Width / 總寬		191mm / ( 7.5" )
Height / 總高		385 mm / ( 15.2" )
Main Rotor (Req'd) 主旋翼	Length / 長度	690-700 mm / ( 27.2-27.5" )
	Diameter / 迴轉直徑	1538-1558 mm / ( 60.5-61.3" )
Tail Rotor 尾旋翼	Length / 長度	105 mm / ( 4.1" )
	Diameter / 迴轉直徑	280 mm / ( 11.0" )
Main Gear / Pinion 主齒盤 / 驅動齒數		128T / 13T
Gear Ratio (E:M:T) / 齒輪比		9.85 : 1 : 4.27
Full Equipped Weight w/o Battery 全配重量不含電池		2917-gram (102.9 oz)
Max. Battery on Board 電池最大承載量		160 x 50 x 65 mm (6.3 x 1.96 x 2.55")
Recommended Power Configuration 動力搭配建議		Battery: 12S (6S x 2) 5.0Ah Battery C-rate: Above 30C ESC: 120-160A Motor: 520-560KV Est. Rotor rpm: 2200-2300

## FEATURES / 特色

1. Latest fiberglass canopy design w/sleek scheme
2. Collective pitch range +/-15 degrees
3. Innovative quick-calibration system
4. Bearing equipped washout linkage for ultra smooth control
5. Lightened metal main shaft bearing blocks
6. 12mm hardened hollow steel main shaft
7. 2mm aerospace grade true carbon side frame
8. Lightweight and heavy-duty 14mm herringbone 128T main gear and 13T motor pinion
9. Light yet rigid one-piece machined AL tail case
10. Precise and heavy-duty tail rotor system
11. 8mm torque tube driven tail w/efficient helical bevel tail gear
12. Quick-release battery tray (Patent Pending) fits two 6-cell Lipo battery packs
13. Extended electronics tray for easy installation
14. Top mounted motor for better center of gravity and efficient heat dissipation
15. Adjustable motor mount and pinion bearing block
16. Rear rudder servo plate for easy maintenance and efficient heat dissipation
17. Lightweight and rugged landing skid for low center of gravity
18. Easy to install tail rotor rod guide
19. Lightweight one-piece metal tail boom support bracket
20. Metal servo horns and control arms included

1. 原廠塗裝完成高彩度玻璃纖維機頭罩
2. 主旋翼攻角最大可達+/-15度
3. 原創中立點快速校正系統
4. 控制搖臂連接座採滾珠軸承固定
5. 輕量化主軸軸承座
6. 12mm熱處理強化主軸
7. 高強度2mm碳纖維側板
8. 高負載輕量化14mm人字型128T主齒盤，搭配13T馬達齒輪
9. 一體成型輕量化高強度金屬尾座
10. 高精度全金屬尾旋翼系統
11. 8mm尾傳動軸並搭配高負載尾螺旋傘齒
12. 原創電池快拆機構，可容納2組6-CELL鋰電池
13. 加大電子設備固定座，方便配置
14. 上置式馬達設計使機體重心更為集中且高散熱
15. 可調式馬達固定座及馬達驅動齒輪支撐座
16. 後置式尾舵伺服機固定座方便維修與散熱
17. 高強度輕量化低重心腳架組
18. 快拆式尾旋翼拉桿導環
19. 一體成型輕量化金屬尾管支撐固定座
20. 配備金屬伺服機舵片及控制臂組



## INSTRUCTION MANUAL

## 組裝說明書



This radio control model is not a toy! Before beginning assembly, please read this manual thoroughly. The contents are subject to change without prior notice due to product improvements and specification changes.

本產品為高性能模型非一般玩具，組裝與操作前請詳閱本產品說明書。本套件所附之零件可能跟圖示有所差異。因產品後續之設計研發或功能不斷改善之原因，我們將保留產品規格變更權利，不再另行通知使用者。

# RAPTOR E700

*Flybarless*

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Thank you for purchasing the Thunder Tiger RAPTOR E700 R/C helicopter. This new helicopter is the latest innovation by Thunder Tiger. It has the perfect combination of flying stability and the agility for 3D flying. This helicopter is an excellent choice for flying enthusiasts like you. For convenient assembly and safe operation of the helicopter, please read the instructions carefully. Keep the user manual in case you need it for any information or reference.

感謝您購買雷虎科技 RAPTOR E700 直昇機產品，本項產品為雷虎科技全新開發機種，兼具高度穩定性與3D飛行特性，是熱衷引擎直昇機的您不可錯過的選擇。請於使用本產品前詳盡閱讀使用手冊，以利於組裝工作順暢進行與安全操控本產品。請妥善保存使用說明書，以利後續調整與維修參考用途。

## CAUTION / 警告

1. R/C models are not toys. This product is a high-precision flying machine. Possibilities of unexpected crashes may occur due to electronic interference, incorrect operation, or poor mechanical maintenance. Although it is an R/C model helicopter, the rotor blades rotate at high speeds, which may cause serious damage, injury, or death if the model hits people or property. Therefore, extreme caution must be exercised during operation.
  2. Thunder Tiger ensures parts packaged in this product is highest quality. However, after assembly and usage, parts damaged due to wear or misuse will not be replaced under any circumstances. If you have any questions regarding its operation and repair, Thunder Tigers service agents are able to provide free technical guidance.
  3. This product is only recommended for users ages 16 and up. Because flying an R/C helicopter is difficult, beginners must receive guidance and supervision from experienced pilots to minimize unexpected danger. Practice in spacious areas, far away from obstacles such as buildings, trees, electrical towers, or crowds.
  4. To decrease the cost of repair and maintenance for beginners, it is recommended to fly the helicopter with a practice rack and to learn basic flying skills with a computer R/C flying simulator.
- 
1. 本項遙控直昇機產品並不是玩具，是一項結構精密、高專業度模型產品，如果未經正確組裝與操控，將可能對操控者或其他人造成身體傷害。使用者必須了解，若未確實進行飛行前安全檢查或操控不當，而造成人員受傷或物體損壞，使用者必須負起法律責任。
  2. 本產品由高品質零組件組成，雷虎科技對於安裝過程、使用過後..等人為因素造成損壞事件不負損壞賠償之責。如您需要本產品相關組裝、調整或其他協助，可與雷虎科技全省經銷商聯繫。
  3. 本項產品禁止十六歲以下青少年與孩童使用。強烈建議初學者應取得技術支援後再進行飛行，以避免危險發生。請於空曠地區操控本產品，並避免於建築物、樹木、電塔..等障礙物區域飛行。
  4. 建議初學者可安裝練習架或透過電腦模擬軟體練習，可達到實際練習效果與符合經濟效益。

## AMA INFORMATION / 特別注意事項

Operating a model helicopter requires a high degree of responsibility and skill. If you are a novice to the hobby, it is best to seek help and guidance from accomplished model helicopter pilots. This will greatly speed up the learning process and have you fly successfully in a reasonable amount of time. We also would strongly urge you to join the Academy of Model Aeronautics, if you are in States. The AMA is a non-profit organization that provides its members with a liability insurance plan as well as monthly magazine entitled Model Aviation. All AMA charter aircraft clubs require all pilots to hold a current AMA sporting license prior to operation of their models at club fields. For further information, contact the AMA at:

Academy of Model Aeronautics  
5151 East Memorial Drive  
Muncie, IN 47302  
(317) 287-1256  
<http://www.modelaircraft.org>

操控遙控直昇機對於飛行安全要求極高，需要高度的負責任態度配合，以及較高的操控技巧。如果您是一位初學者，建議您必須向當地專業模型經銷商，或是遙控直昇機相關組織以及經驗豐富的玩家尋求相關協助，以獲得您所需要的訊息以及專業知識。如此可有效協助您縮短學習的時間，更容易學會遙控直昇機的組裝、設定與操控技巧。

1. Make sure that the transmitter battery is fully charged before flying.
  2. Make sure all control surfaces are operated properly before flying.
  3. Do a range check of the radio before the first flight. The electronic equipment must operate properly at a range of at least 5 meters (18 ft) even with the transmitter antenna collapsed.
  4. Make sure there are no other pilots using the same radio frequency with yours and that there are no other radio interference on your frequency.
  5. Be sure to turn on the transmitter first with the throttle stick in the idle position. Plug the battery into the ESC last.
  6. The main rotor and the tail rotor spin at very high RPM. Make sure there is nothing in contact with the rotor blades during the flight.
  7. Always maintain a safe distance from the helicopter during flight.
  8. Never fly the helicopter in the rain or in excessive wind conditions.
  9. Always operate and fly the helicopter in a safe and responsible manner.
  10. Never fly the helicopter over other pilots, spectators, cars or anything that could result in injury or property damage.
1. 確認接收機與發射機電池，均已確實充電完成。
  2. 確認所有操控介面運作順暢。
  3. 確認無其他無線電波干擾，且不與其他同好同時使用相同頻率。
  4. 確實將油門搖桿放置於低速，再將發射機電源開啟，然後再將電池接上。
  5. 確認遙控器發射器與接收機工作正常，將機體放至於距離5公尺外，確認遙控器是否正常，機體控制動作是否正確。
  6. 主旋翼與尾旋翼轉速相當高，運轉時須避免任何障礙物與旋翼接觸。
  7. 飛行時，需與遙控直升機保持安全距離。
  8. 勿於下雨天或是強風的狀態下操控遙控直升機。
  9. 請以安全為第一考量，並以高度負責任的態度參與遙控直升機活動。
  10. 禁止於人群、車輛..或任何其他障礙物上方飛行遙控直升機，避免意外發生。

## POST FLIGHT INSPECTION / 飛行結束安全檢查事項

1. Inspect the model thoroughly to insure no parts have come loose or become damaged during the flight and landing. Replace damaged parts and tighten loose screws before flying again.
  2. Clean the helicopter body.
  3. Lubricate all moving parts to ensure smooth operation for the next flying.
  4. Replace any worn ball links and damaged bearings.
  5. Store the model in a cool, dry place. Avoid putting it under direct sunlight or near a source of heat.
- Following these simple rules will allow you to enjoy the thrill of model helicopter flying for many years.
1. 飛行結束後確認機體所有的零件與螺絲是否有損壞或鬆動，更換損壞零件與確實固定鬆動的螺絲。
  2. 機體清潔乾淨。
  3. 檢查所有活動零組件是否運作順暢，以利下次飛行。
  4. 更換所有鬆動的連桿、接頭，以及損壞的軸承。
  5. 將機體存放於陰涼通風處，避免機體放置於陽光直射處或接近熱源。  
確實執行上述幾項簡單的步驟，將可確保您的愛機維持數年的壽命！

## CAUTION / 注意事項

When the model has crashed, inspect rotor shaft and the blade spindle to make sure they are not bent. If any item is damaged, it must be replaced with a new part to ensure safe operation. Do not glue any broken or damaged plastic parts. Do not repair broken rotor blades.

Always inspect the following items:

Gears, Ball links, Link rods, Bearings, Main shaft, Spindle, Tail boom and support, Fins, Tail rotor shaft, Main blades, Tail blades, the Motor, the Speed control and the Battery.

機體一旦發生墜落事件，請確實檢查主軸、橫軸是否有彎曲變形，如果有任何的損壞，請立即更換原廠新的零組件，確認機體操作安全！切勿使用任何接著劑嘗試黏合塑膠零件；請勿使用修復過的主旋翼。

發生機體墜落事件後，請確實檢查下列項目：

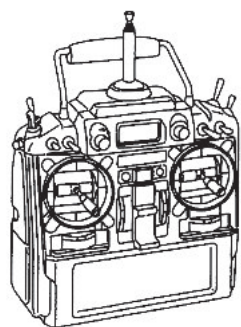
齒輪組、球頭連桿、連桿頭、軸承、主軸、橫軸、尾軸、尾管、尾管支撐架、垂直與水平尾翼、尾驅動輪、主旋翼、尾旋翼、馬達、速控器、電池。



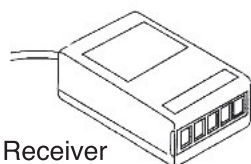
# OTHER ITEMS REQUIRED / 其餘必須配件



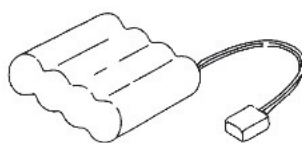
## RADIO SET / 遙控系統



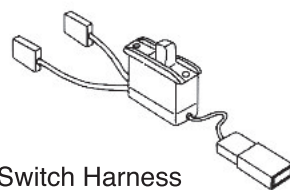
Transmitter (helicopter type only, 6 or more channels)  
發射機 (需具備直昇機控制功能的6動以上遙控器)



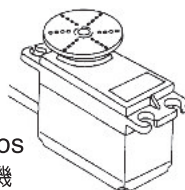
Receiver  
接收機



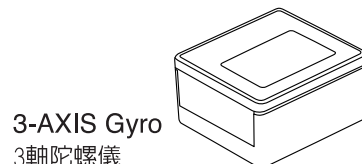
Rx Battery  
接收機電池



Switch Harness  
具備充電線的開關組

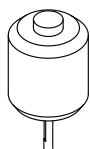


Servos  
伺服機



3-AXIS Gyro  
3軸陀螺儀

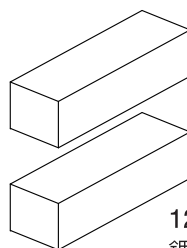
## POWER SYSTEM / 動力系統



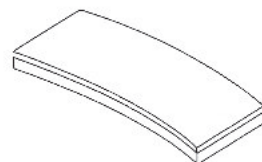
Electric Brushless Motor  
無刷馬達



Electronic Speed Controller  
速控器

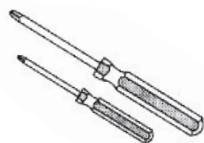


12-14S Li-Po Battery Pack  
鋰聚電池組

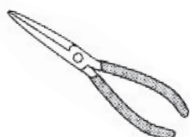


Foam  
雙面膠帶

## TOOLS REQUIRED FOR ASSEMBLY / 需要準備的工具



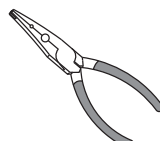
Screw Drivers  
各種規格的螺絲起子



Needle Nose Pliers  
尖嘴鉗



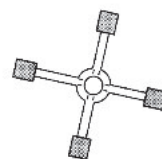
Nipper  
斜口鉗



Ball Link Pliers  
拆連桿頭的專用鉗子



Scissors  
剪刀



Metric 4-way Wrench  
十字套筒板手

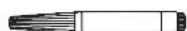
5.5mm  
7mm  
8mm



Hobby Knife  
美工刀



C.A Glue  
瞬間膠



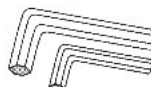
Threadlocker  
螺絲防鬆膠



Grease  
潤滑油



Epoxy  
環氧樹脂

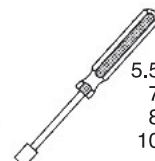


Hex Wrench  
六角板手



Wrench  
開口板手

5.5mm  
7mm



Socket Drivers  
套筒螺絲起子

5.5mm  
7mm  
8mm  
10mm

- A:** Indicates the assembly step number and the parts bags that are to be assembled.
  - B:** Displays actual size drawings, and part quantities used.
  - C:** Refer to parts drawing or exploded view in the last few pages of this manual, order the corresponding item no. for correct replacement parts.
  - D:** This instruction manual uses several symbols. Pay careful attention to them during construction. Details are given at the bottom of each page.
- A:** 顯示組立步驟及需組立之零件包順序。  
**B:** 零件實際對照尺寸及使用數量。  
**C:** 請比對零件形狀以及後附零件包圖示或爆炸圖找出需求零件料號。  
**D:** 操作說明符號可更有效協助組裝者使用此說明書，請依說明書符號指示進行組裝步驟。

### Example 說明範例

**Bag A Main Rotor System / 主旋翼機構組裝**

No.	Description	料號	Qty	No.	Description	料號	Qty
1	MAIN ROTOR BRACKET	主旋翼機架	2	7.1	SHIM	墊片	2
2	SCREW	螺絲	2	7.2	SHIM	墊片	2
3	WASHER	墊圈	2	7.3	SHIM	墊片	2
4	WASHER	墊圈	2	8	WASHER	墊圈	2
5	WASHER	墊圈	2	9	WASHER	墊圈	2
6	HEAD RAIL	頭軌	2	10	HEAD RAIL	頭軌	2
7	HEAD RAIL	頭軌	2	11	HEAD RAIL	頭軌	2

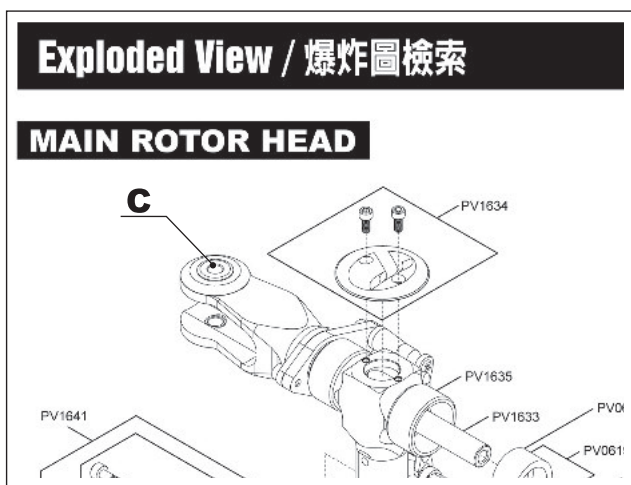
**B** Ensure all screws shown on the page with a star of threadlocker.

**C** Assemble the main rotor shaft housing as drawing.

**D** Diagram for Thrust Bearing Assembly

**DO NOT** over tighten the thrust bearing while securing in order to avoid the bearing damage.

**Apply C.A Glue** / **Apply threadlocker**



## SYMBOLS USED THROUGHOUT THE MANUAL / 符號說明

The parts in the KIT are packed according to each major assembly steps. The part number and quantity are always shown in the table on each page. As good practice, only open up the bag that you need for the particular assembly. 零件均依照組裝步驟包裝，請依照組裝程序，逐一開啟零件包，避免零件遺失。

### Note / 注意

Assembly drawings will contain icons that indicate use of Threadlocker or CA glue as needed. Examples of the icons are as right shown: 請依組裝步驟圖示，使用防鬆膠或接著劑。圖示範例如右：

- T22(#262) → THREADLOCKER / 螺絲防鬆膠
- CA → CA GLUE / 快乾膠

- |  |  |                                    |
|--|--|------------------------------------|
| Apply C.A Glue<br>使用快乾膠黏合                            | Cut off shaded portion<br>依標示部分裁切                              | Cut off excess<br>裁剪多餘部分           |
| Apply threadlocker<br>使用螺絲防鬆膠                        | Ensure smooth, non-binding movement when assembling<br>確認組件靈活度 | Apply grease<br>使用潤滑油膏             |
| Assemble as many times as specified<br>依指示組裝所需數量     | Drill holes with the specified diameter<br>依標示尺寸鑽孔             | Pay close attention here<br>注意組裝步驟 |
| Assemble left and right side the same way<br>左右側組件相同 | Must be purchased separately<br>改裝品需另購                         | Hint<br>組裝提示                       |
| Assemble in right order<br>依標示順序組裝                   |  |                                    |

No.	Description	名稱	Qty
1	MAIN ROTOR GRIP POST	金屬主旋翼轉座支柱	2
2	SOCKET SCREW, M3x12	內六角螺絲, M3x12	2
3	FBL ROTOR GRIP LEVER	金屬旋翼轉座搖臂	2
4	WASHER, d3xD8xW1.4	墊圈, d3xD8xW1.4	2
5	SOCKET SCREW, M3x8	內六角螺絲, M3x8	4
6	LINKAGE BALL (A)	內六角連接頭螺絲(A)	2
7	META ROTOR GRIP SET	主旋翼轉座組	2

No.	Description	名稱	Qty
7-1	BEARING, d8xD16xW5	滾珠軸承, d8xD16xW5	2
7-2	THRUST BEARING, d8xD16xW5	止推軸承, d8xD16xW5	1
7-3	THRUST COLLAR, d8xD12xW0.5	推力軸環, d8xD12xW0.5	1
8	METAL SWASHPLATE	金屬十字盤	1
9	SWASHPLATE POST	十字盤球型支柱	2
10	LINKAGE BALL	十字盤球頭	1
11	LINK BALL	連接球座	2

SOCKET SCREW, M3x12  
內六角螺絲, M3x12

WASHER, d3xD8xW1.4  
墊圈, d3xD8xW1.4

SOCKET SCREW, M3x8  
內六角螺絲, M3x8

LINKAGE BALL (A)  
內六角連接頭螺絲(A)

BEARING, d8xD16xW5  
滾珠軸承, d8xD16xW5

THRUST BEARING, d8xD16xW5  
止推軸承, d8xD16xW5

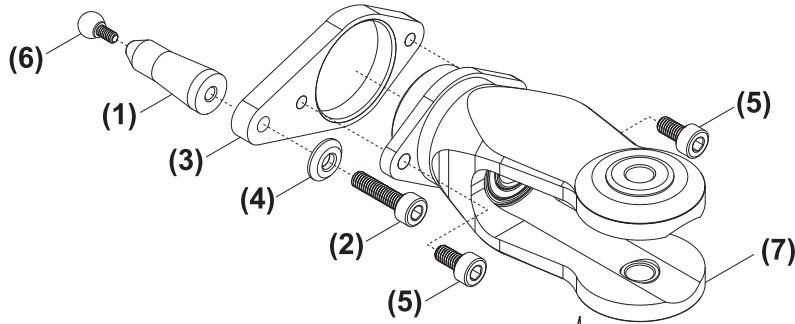
THRUST COLLAR, d8xD12xW0.5  
止推軸環, d8xD12xW0.5

SWASHPLATE POST  
十字盤球型支柱

LINKAGE BALL  
大球頭

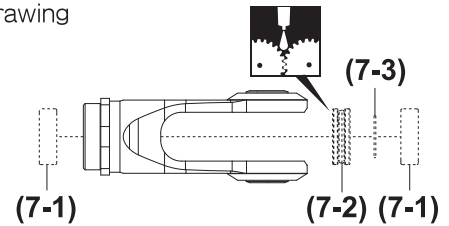
LINK BALL  
連接球座

Secure all screws shown on this page with a drop of threadlocker.  
本頁顯示之螺絲請使用適量防鬆膠鎖固。



Assemble the main rotor pitch housing as drawing  
主旋翼轉座組裝圖

The bearings come with the grips which had been assembled by Factory.  
主旋翼夾座內軸承已由原廠壓配完成。

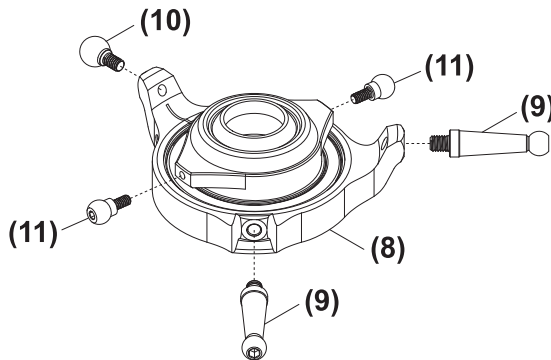


**Diagram for Thrust Bearing Assembly**  
**止推軸承安裝示意圖**

Large Internal Diameter always goes toward the Main Rotor Hub  
內徑較大的一側，面向主旋翼固定座組(內側)。

Small Internal Diameter always goes toward the Blade  
內徑較小的一側，面向主旋翼組(外側)。

Checking Tips:  $\theta_A > \theta_B$   
轉動角度:  $\theta_A > \theta_B$   
(轉動角度大者，內孔大; 轉動角度小者，內孔小)



DO NOT over tighten the linkage ball while securing in order to avoid the screw broken.  
鎖固時，切勿過度迫緊連接頭螺絲以避免螺牙段斷裂。

Assemble left and right side the same way  
左右側組件相同

Apply grease  
使用潤滑油膏

Apply threadlocker  
使用螺絲防鬆膠

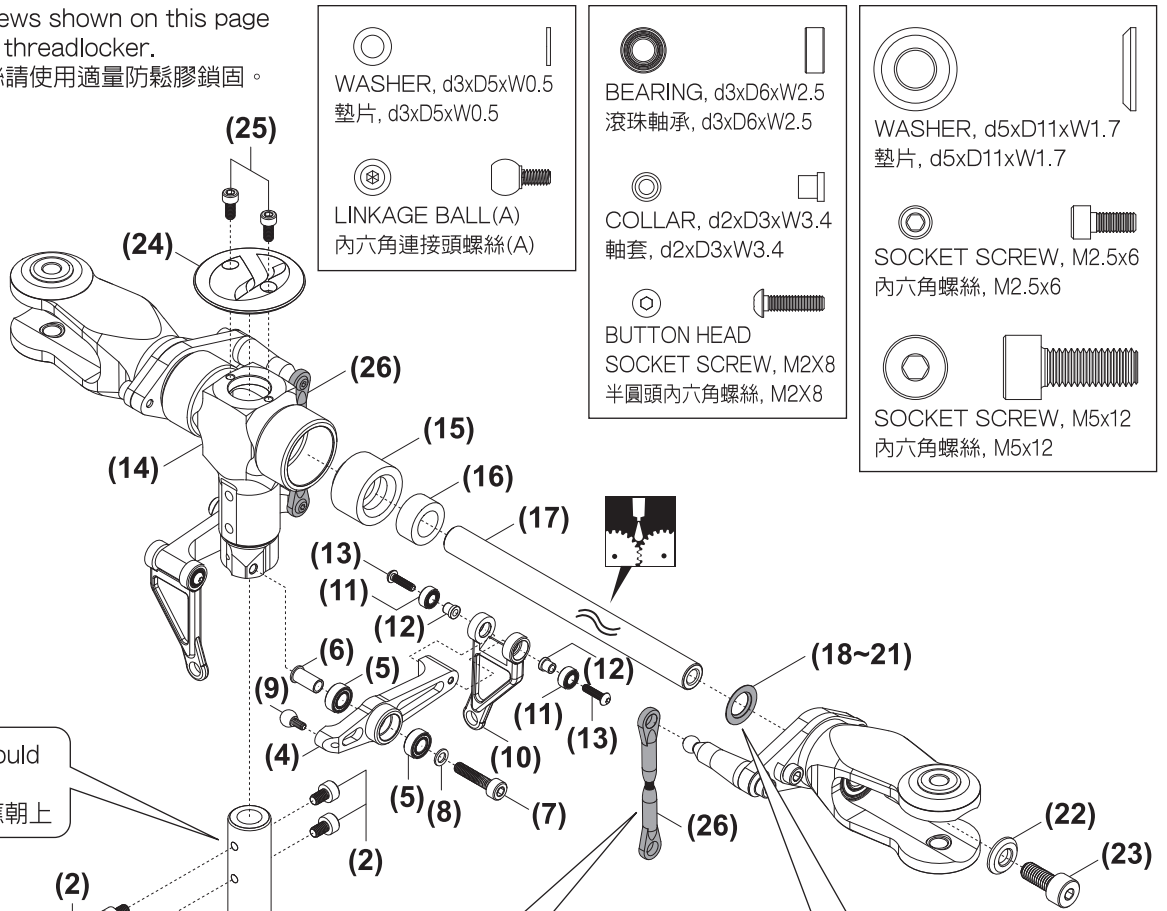


No.	Description	名稱	Qty
1	HARDENED MAIN SHAFT (12mm)	強化主軸(12mm)	1
2	SOCKET SCREW, M3x5	內六角螺絲, M3x5	4
3	METAL SWASHPLATE	金屬十字盤	1
4	FBL CONTROL LEVER	無平衡翼控制搖臂	2
5	BEARING, d4xD8xW3	滾珠軸承, d4xD8xW3	4
6	COLLAR, d3xD4xW8.5	軸套, d3xD4xW8.5	2
7	SOCKET SCREW, M3x14	內六角螺絲, M3x14	2
8	WASHER, d3xD5xW0.5	墊片, d3xD5xW0.5	2
9	LINKAGE BALL (A)	內六角連接頭螺絲(A)	2
10	FBL WASHOUT LINKAGE	無平衡翼連接座	2
11	BEARING, d3xD6xW2.5	滾珠軸承, d3xD6xW2.5	4
12	COLLAR, d2xD3xW3.4	軸套, d2xD3xW3.4	4
13	BUTTON HEAD SOCKET SCREW, M2x8	半圓頭內六角螺絲, M2x8	4
14	FBL MAIN ROTOR HUB	金屬主旋翼固定座	1

No.	Description	名稱	Qty
15	OUTER DAMPER	外避震墊圈	2
16	INNER DAMPER	內避震墊圈	2
17	SPINDLE	固定軸	1
18	THRUST COLLAR, 0.5mm	推力軸環, 0.5mm	2
19	THRUST COLLAR, 1mm	推力軸環, 1mm	2
20	THRUST COLLAR, 0.2mm	推力軸環, 0.2mm	2
21	THRUST COLLAR, 0.1mm	推力軸環, 0.1mm	2
22	WASHER, d5xD11xW1.7	墊片, d5xD11xW1.7	2
23	SOCKET SCREW, M5x12	內六角螺絲, M5x12	2
24	FBL HEAD BUTTON	無平衡翼煞車盤	1
25	SOCKET SCREW, M2.5x6	內六角螺絲, M2.5x6	2
26	LINKAGE ROD SET, 42.55mm	連接桿組, 42.55mm	2
26-1	LINGAGE ROD	連接桿	1
26-2	BALL LINK	單頭連接桿	2

Secure all screws shown on this page with a drop of threadlocker.  
本頁顯示之螺絲請使用適量防鬆膠鎖固。

- SOCKET SCREW, M3x5  
內六角螺絲, M3x5
- BEARING, d4xD8xW3  
滾珠軸承, d4xD8xW3
- COLLAR, d3xD4xW8.5  
軸套, d3xD4xW8.5
- SOCKET SCREW, M3x14  
內六角螺絲, M3x14



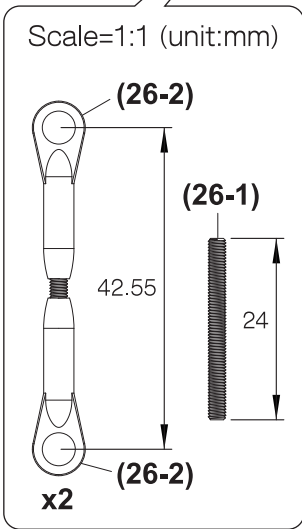
The holes should point up.  
有2孔的一端應朝上

Apply grease  
使用潤滑油膏

Ensure smooth, non-binding movement when assembling  
確認組件靈活度

Assemble left and right side the same way  
左右側組件相同

Apply threadlocker  
使用螺絲防鬆膠



**d8xD12** (1.0mm) (0.5mm) (0.2mm) (0.1mm)

Rotate the Main Rotor Grip to check if it runs effortlessly and smoothly; please reallocate the different thickness of Thrust Collars for getting a proper mesh if too much play or over tight.  
完成組裝後, 請轉動主旋翼轉座確認作動是否順暢; 如間隙過大或過緊, 請更改不同厚度之推力軸環組合以獲得適當間隙。

No.	Description	名稱	Qty
1	TAIL BOOM BRACKET-R	機身尾管固定座(右)	1
2	TAIL BOOM BRACKET-L	機身尾管固定座(左)	1
3	BEVEL SHELL SET	驅動傘齒軸套組	1
3-1	BEVEL SHELL	驅動傘齒軸套	1
3-2	BEARING, d12xD18xW4	滾珠軸承, d12xD18xW4	2
3-3	BEVEL COLLAR, d12xD13xW6.85	傘齒軸環, d12xD13xW6.85	1
4	TAIL DRIVE BEVEL GEAR-A(24T)	尾螺旋傘齒輪A(24T)	1
5	TAIL DRIVE BEVEL GEAR-B(24T)	尾螺旋傘齒輪B(24T)	1
6	TAIL DRIVE GEAR SHAFT	尾驅動齒輪軸	1
7	TAIL DRIVE GEAR-26T	尾驅動齒輪26T	1
8	PIN, Ø2x12	固定銷, Ø2x12	2

No.	Description	名稱	Qty
9	BEARING, d5xD11xW5	滾珠軸承, d5xD11xW5	2
10	SET SCREW, M3x4	無頭內六角螺絲, M3x4	2
11	FRAME SPACER	側板支柱	4
12	REAR SERVO FRAME	伺服機後置固定板	1
13	SOCKET SCREW, M3x22	內六角螺絲, M3x22	2
14	SOCKET SCREW, M3x16	內六角螺絲, M3x16	2
15	SOCKET SCREW, M3x10	內六角螺絲, M3x10	2
16	LOCK NUT, M3	止鬆螺帽, M3	6
17	WASHER, d12xD14.5xW0.2	墊片, d12xD14.5xW0.2	1
18	WASHER, d3xD8xW1.4	墊圈, d3xD8xW1.4	2
19	WASHER, d5xD8xW0.15	墊片, d5xD8xW0.15	2

BEARING, d12xD18xW4  
滾珠軸承, d12xD18xW4

BEVEL COLLAR, d12xD13xW6.85  
傘齒軸環, d12xD13xW6.85

PIN, Ø2x12  
固定銷, Ø2x12

BEARING, d5xD11xW5  
滾珠軸承, d5xD11xW5

SET SCREW, M3x4  
無頭內六角螺絲, M3x4

SOCKET SCREW, M3x22  
內六角螺絲, M3x22

SOCKET SCREW, M3x16  
內六角螺絲, M3x16

SOCKET SCREW, M3x10  
內六角螺絲, M3x10

LOCK NUT, M3  
止鬆螺帽, M3

WASHER, d12xD14.5xW0.2  
墊片, d12xD14.5xW0.2

WASHER, d5xD8xW0.15  
墊片, d5xD8xW0.15

Check the mesh of gears (#4 & #5), please add the washer (#17 & #19) for a proper mesh if too much play.  
請檢查齒輪間隙(#4及#5), 間隙過大時請酌加墊片(#17及#19)。

Assemble the Tail Boom Bracket as drawing. Secure the Screws but do not tighten at this step.  
參考圖示組裝尾管固定座, 螺絲只需稍事固定, 暫無需鎖緊。

Apply threadlocker  
使用螺絲防鬆膠

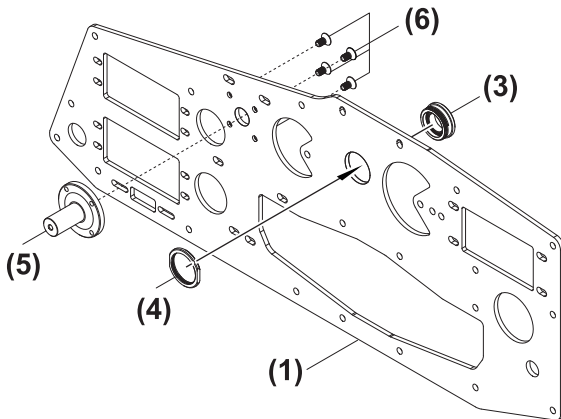
No.	Description	名稱	Qty
1	SIDE FRAME-L	碳纖側板-左	1
2	SIDE FRAME-R	碳纖側板-右	1
3	ELEVATOR WASHER MOUNT	控制臂軸承座	2
4	Nut	軸承座螺帽	2
5	CONTROL LEVER BASE	控制臂固定座	2
6	SINK SOCKET SCREW, M2.5x5	沈頭內六角螺絲, M2.5x5	8

No.	Description	名稱	Qty
7	FRAME SPACER	側板支柱	8
8	GYRO TRAY	陀螺儀座	1
9	MAIN SHAFT BRG BLOCK SET	主軸軸承座	1
10	SET SCREW, M3x20	無頭內六角螺絲, M3x20	1
11	CANOPY RETAINING POST (32mm)	機身固定柱 (32mm)	1
12	TORX SCREW, M3x8	星型低頭螺絲, M3x8	11

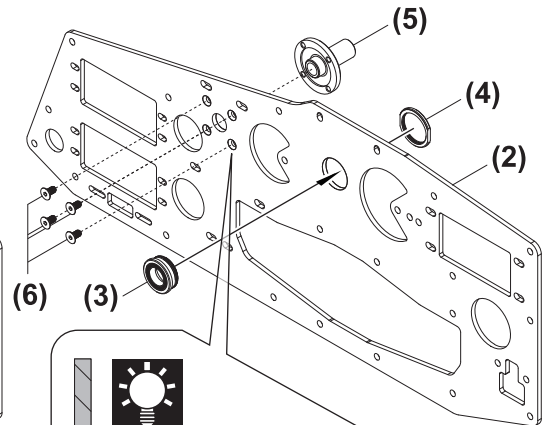


Secure all screws & Washer Mount shown on this page with a drop of threadlocker.  
本頁顯示之螺絲及控制臂軸承座請使用適量防鬆膠鎖固。

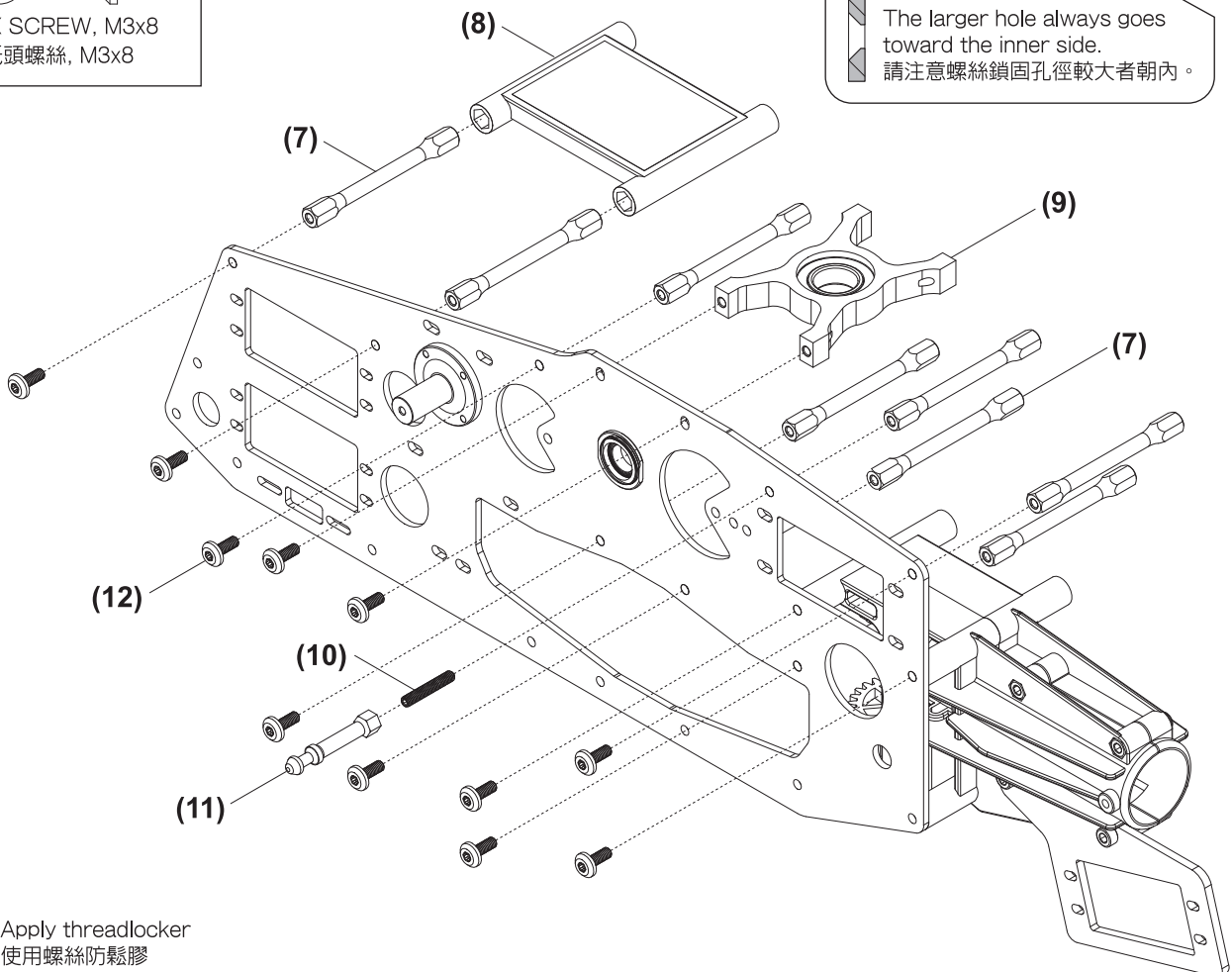
## Left Frame 左側板



## Right Frame 右側板



The larger hole always goes toward the inner side.  
請注意螺絲鎖固孔徑較大者朝內。



Apply threadlocker  
使用螺絲防鬆膠



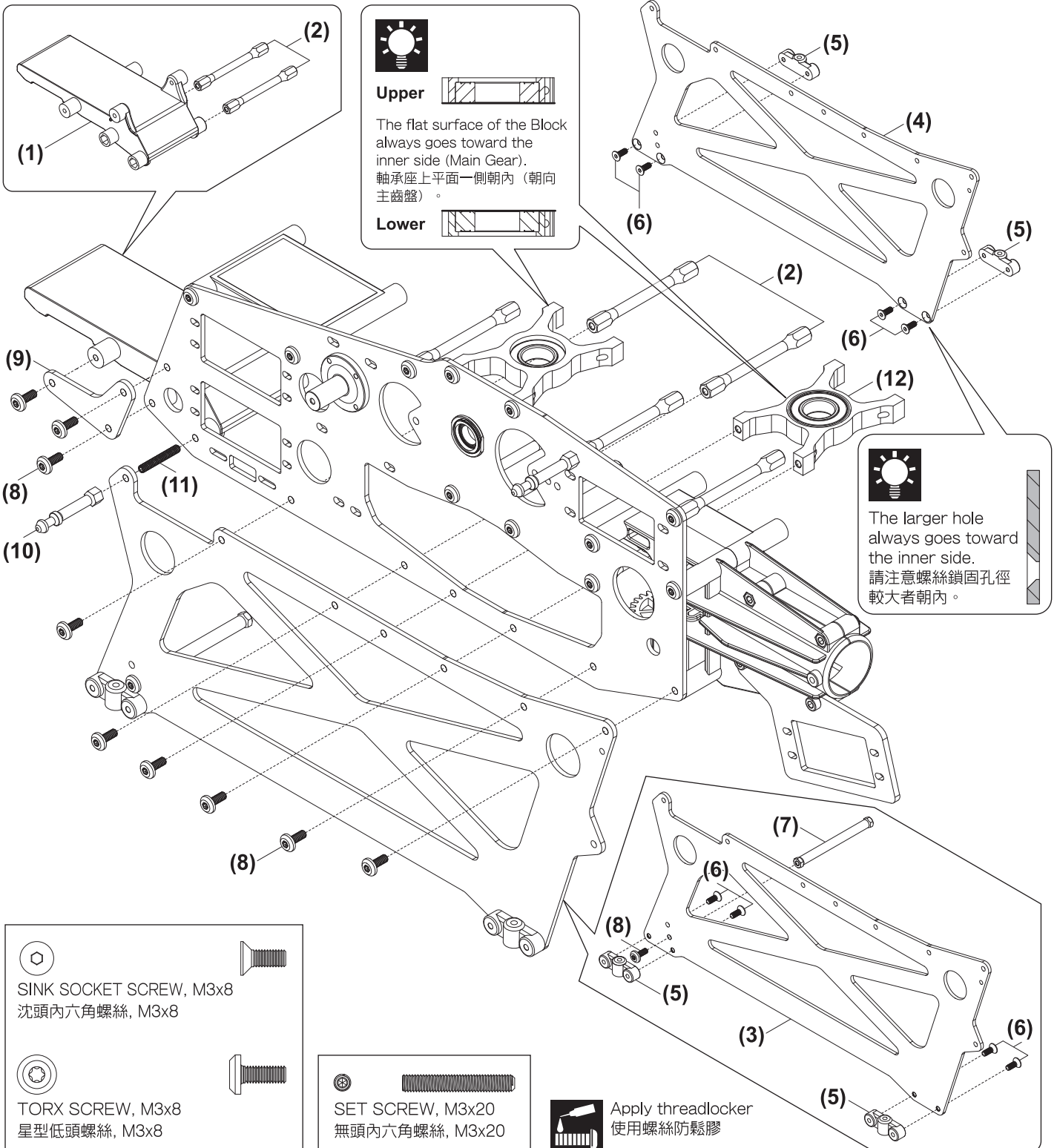
No.	Description	名稱	Qty
1	RADIO TRAY	接收機承座	1
2	FRAME SPACER	側板支柱	4
3	LOWER SIDE FRAME-L	碳纖下側板 - 左	1
4	LOWER SIDE FRAME-R	碳纖下側板 - 右	1
5	SKID BRACKET	支撐架固定座	4
6	SINK SOCKET SCREW, M3x8	沈頭內六角螺絲, M3x8	8

No.	Description	名稱	Qty
7	BATTERY POST	電池盒支柱	1
8	TORX SCREW, M3x8	星型低頭螺絲, M3x8	10
9	RADIO TRAY BRACKET	接收機承座補強板	1
10	CANOPY RETAINING POST (34mm)	機身固定柱 (34mm)	1
11	SET SCREW, M3x20	無頭內六角螺絲, M3x20	1
12	MAIN SHAFT BRG BLOCK SET	主軸軸承座	1



Secure all screws & Washer Mount shown on this page with a drop of threadlocker.

本頁顯示之螺絲及控制臂軸承座請使用適量防鬆膠鎖固。



No.	Description	名稱	Qty
1	ELEVATOR CONTROL ARM	金屬升降舵控制臂	1
2	ELEVATOR CONTROL ARM LINK	升降舵連接座	1
3	BEARING, d2.5xD7xW3.5	滾珠軸承, d2.5xD7xW3.5	2
4	SOCKET SCREW, M2.5x8	內六角螺絲, M2.5x8	2
5	MOTOR PINION-13T	馬達齒輪(13T)	1
6	SET SCREW, M4x4	無頭內六角螺絲, M4x4	2
7	MOTOR MOUNT	馬達固定座	1

No.	Description	名稱	Qty
8	MOTOR PINION BLOCK	馬達齒輪固定座	1
9	CANOPY RETAINING POST (32mm)	機身固定柱(32mm)	1
10	SET SCREW, M3x20	無頭內六角螺絲, M3x20	2
11	RADIO TRAY BRACKET	接收機承座補強板	1
12	TORX SCREW, M3x8	星型低頭螺絲, M3x8	29
13	SINK SOCKET SCREW, M4x8	沈頭內六角螺絲, M4x8	4
14	CANOPY RETAINING POST (34mm)	機身固定柱(34mm)	1

BEARING, d2.5xD7xW3.5  
滾珠軸承, d2.5xD7xW3.5

SOCKET SCREW, M2.5x8  
內六角螺絲, M2.5x8

SET SCREW, M4x4  
無頭內六角螺絲, M4x4

SET SCREW, M3x20  
無頭內六角螺絲, M3x20

TORX SCREW, M3x8  
星型低頭螺絲, M3x8

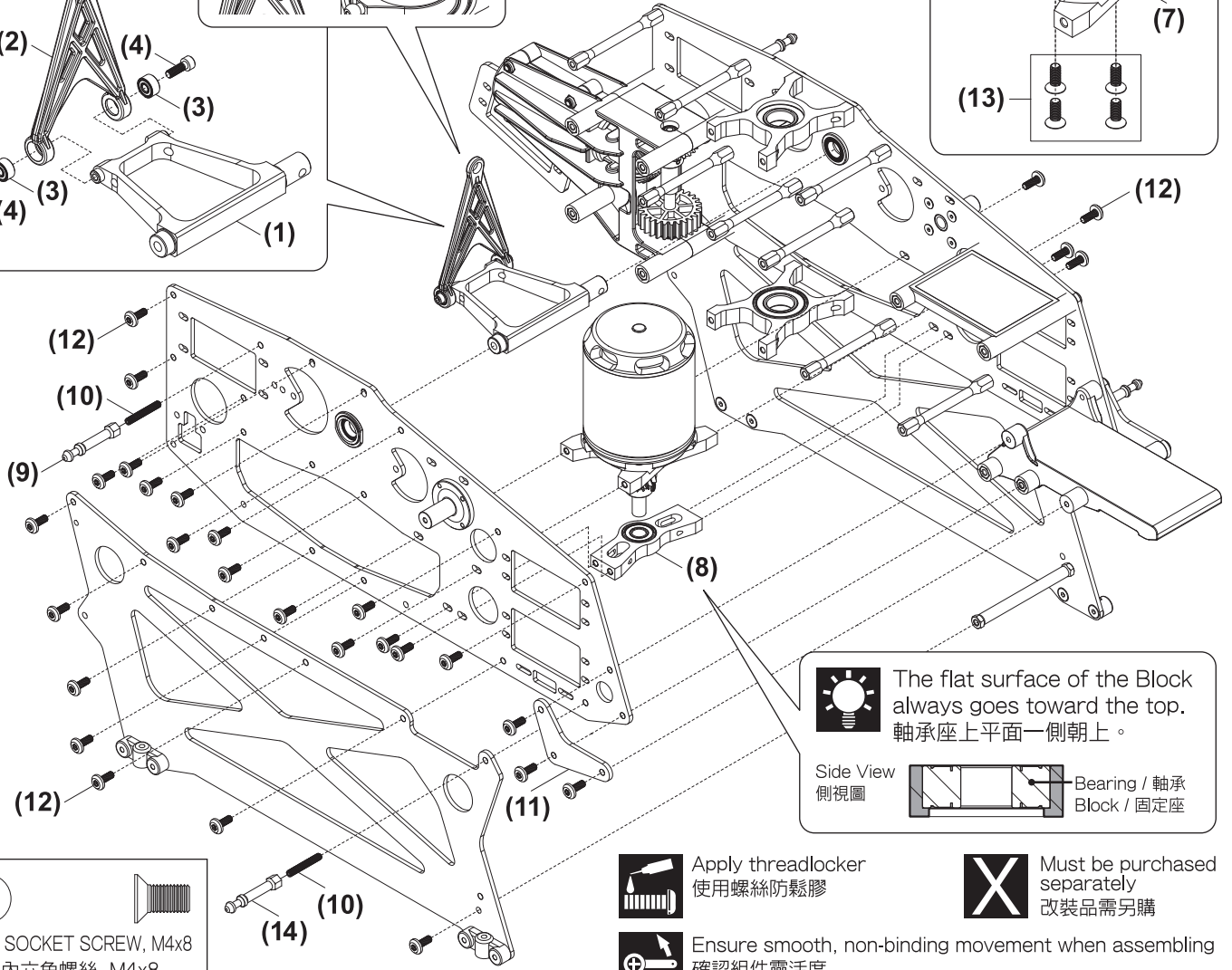
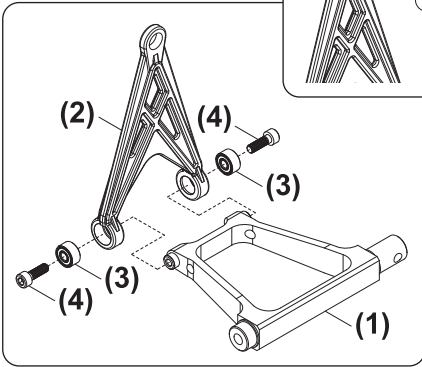
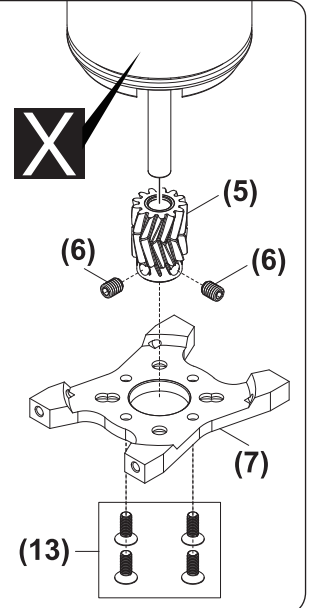


Secure all screws shown on this page with a drop of threadlocker.  
本頁顯示之螺絲請使用適量防鬆膠鎖固。



Applicable to a M4x30mm, M4x25mm, or M3x25mm motors with 4 setting screws installation. 6.0mm/0.236" diameter motor shaft as standard and 38mm/1.496" long shaft is recommended.  
可適用M4x30mm, M4x25mm或M3x25mm鎖固孔位馬達。原廠馬達齒及馬達齒輪固定座可裝配6.0mm/0.236"軸心馬達，建議馬達軸心長度為38mm/1.496"。

The larger hole goes toward the swashplate.  
較大孔面朝十字盤。



The flat surface of the Block always goes toward the top.  
軸承座上平面一側朝上。

Side View 側視圖

Bearing / 軸承  
Block / 固定座

SINK SOCKET SCREW, M4x8  
沈頭內六角螺絲, M4x8

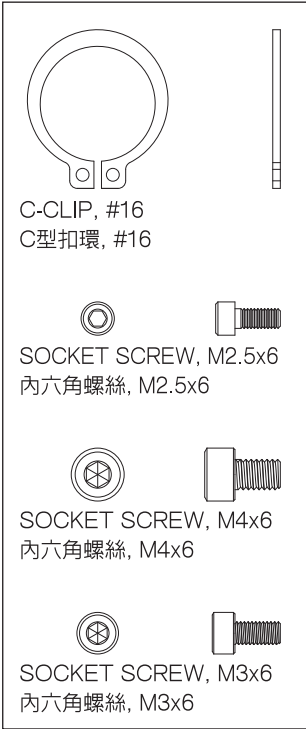
Apply threadlocker  
使用螺絲防鬆膠

Must be purchased separately  
改裝品需另購

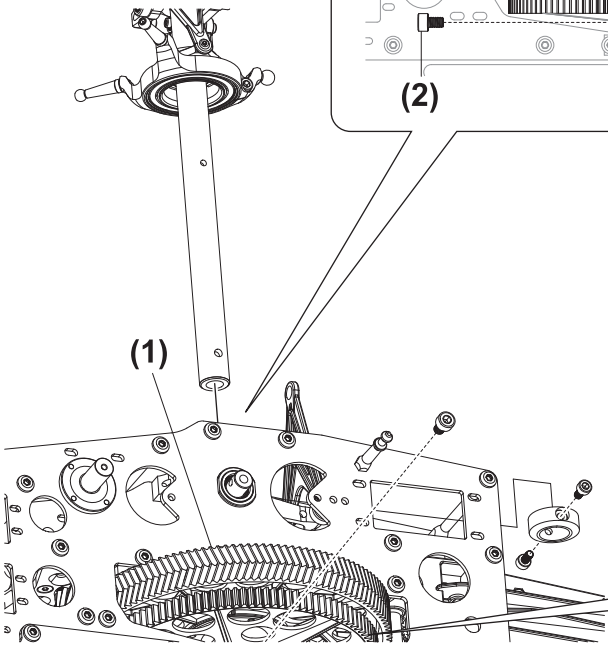
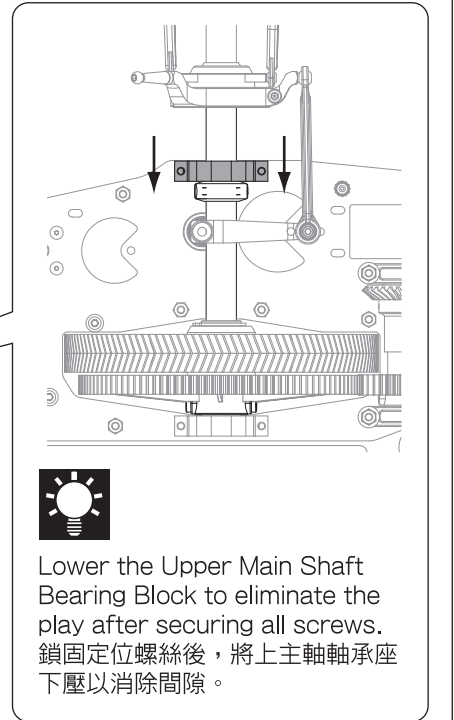
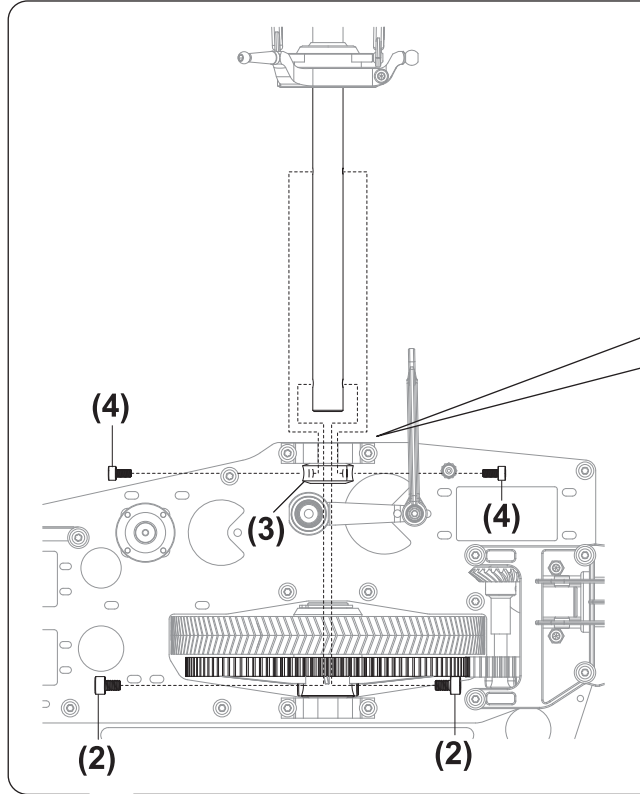
Ensure smooth, non-binding movement when assembling  
確認組件靈活度

No.	Description	名稱	Qty
1	MAIN GEAR SET	主齒輪組	1
1-1	MAIN GEAR, 128T	主齒輪(128T)	1
1-2	TAIL DRIVE PULLEY, 111T	尾驅動輪(111T)	1
1-3	ONE WAY BEARING SHAFT	單向離合器軸	1
1-4	C-CLIP, #16	C型扣環, #16	1

No.	Description	名稱	Qty
1-5	SOCKET SCREW, M2.5x6	內六角螺絲, M2.5x6	8
1-6	ONE WAY CLUTCH HOUSING	單向離合器座	1
2	SOCKET SCREW, M4x6	內六角螺絲, M4x6	2
3	MAIN SHAFT LOCK RING	主軸止檔	1
4	SOCKET SCREW, M3x6	內六角螺絲, M3x6	2



Secure all screws shown on this page with a drop of threadlocker.  
本頁顯示之螺絲請使用適量防鬆膠鎖固。



Line up the holes of the Autorotation Tail Drive Gear, One Way Bearing Shaft & Main Shaft, and then insert the Socket Screw to fix. Add a drop of threadlocker when securing, but do not over tighten.

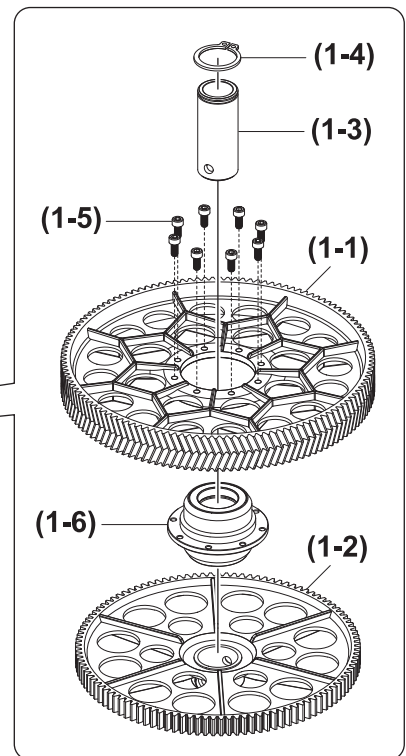
對正尾驅動齒、單向軸套及主軸上孔位後，鎖入內六角螺絲，並使用適量防鬆劑固定。注意！請勿過度緊迫螺絲。



Apply threadlocker  
使用螺絲防鬆膠



Ensure smooth, non-binding movement when assembling  
確認組件靈活度





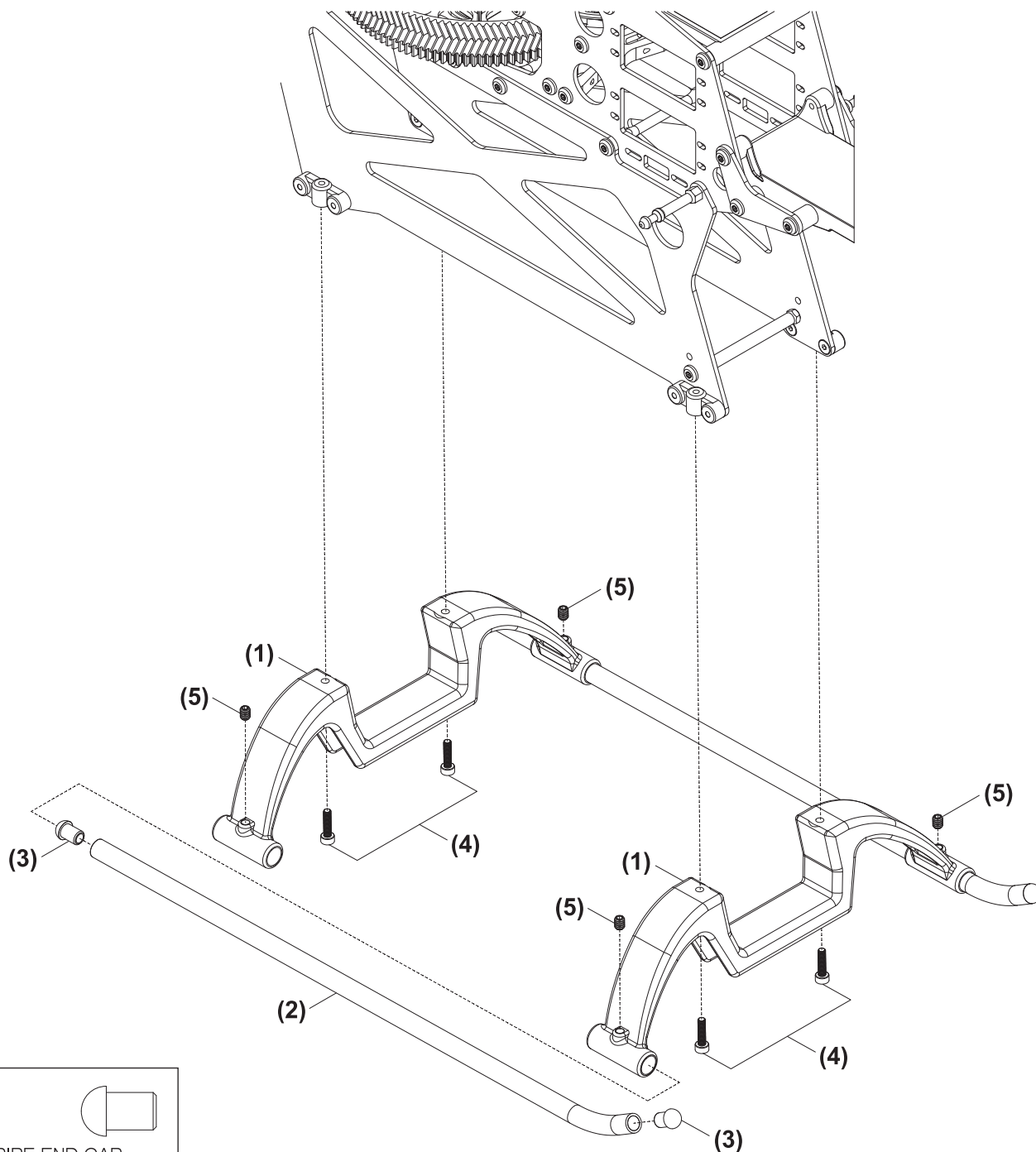
No.	Description	名稱	Qty
1	LANDING SKID BRACE	腳架	2
2	SKID PIPE	底座圓管	2
3	SKID PIPE END CAP	圓管塞	4

No.	Description	名稱	Qty
4	SOCKET SCREW, M3x12	內六角螺絲, M3x12	4
5	SET SCREW, M4x5	無頭內六角螺絲, M4x5	4



Secure all screws shown on this page with a drop of threadlocker.

本頁顯示之螺絲請使用適量防鬆膠鎖固。



SKID PIPE END CAP  
圓管塞

SOCKET SCREW, M3x12  
內六角螺絲, M3x12

SET SCREW, M4x5  
無頭內六角螺絲, M4x5

**L R** Assemble left and right side the same way  
左右側組件相同

Apply threadlocker  
使用螺絲防鬆膠

No.	Description	名稱	Qty
1	CONTROL LEVER-L	金屬側轉控制臂(左)	1
2	CONTROL LEVER-R	金屬側轉控制臂(右)	1
3	BEARING, d8xD12xW3.5	滾珠軸承, d8xD12xW3.5	4
4	LINKAGE BALL(A)	內六角連接頭螺絲(A)	8
5	WASHER	墊圈	2

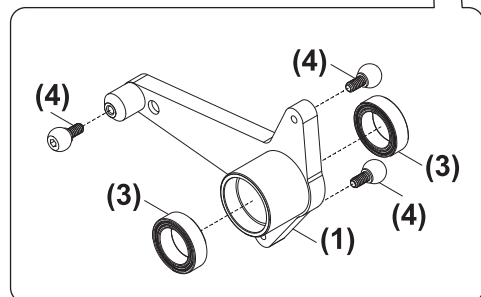
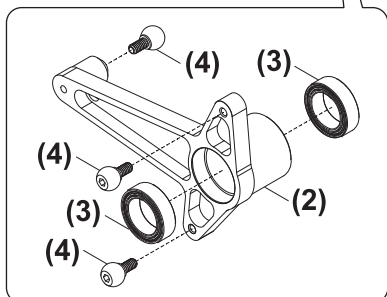
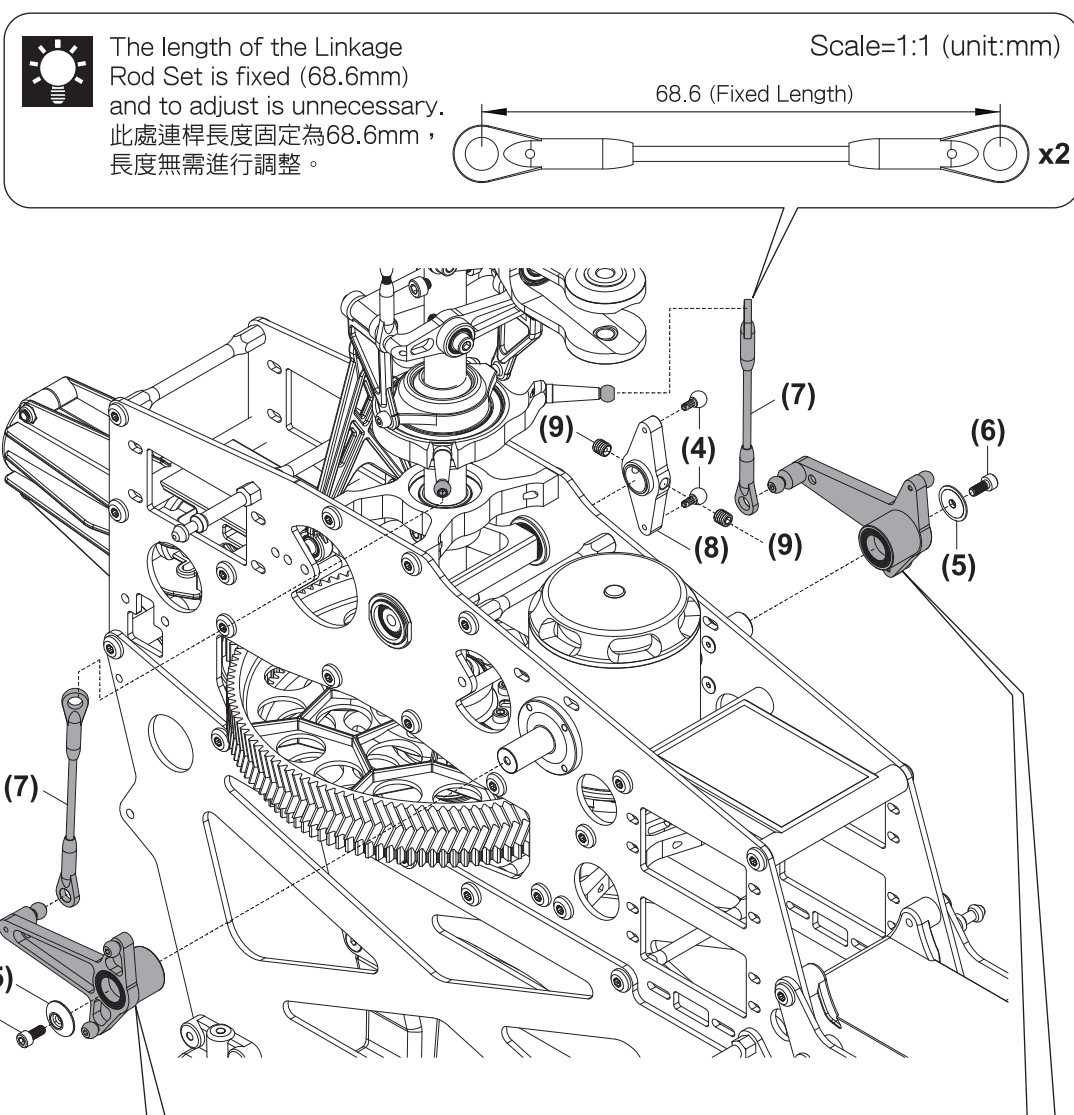
No.	Description	名稱	Qty
6	SOCKET SCREW, M2.5x6	內六角螺絲, M2.5x6	2
7	LINKAGE ROD SET (68.57mm)	連接桿組 (68.57mm)	2
8	ELEVATOR CONTROL LEVER	金屬升降舵控制搖臂	1
9	SET SCREW, M4x4	無頭內六角螺絲, M4x4	2



Secure all screws shown on this page with a drop of threadlocker.

本頁顯示之螺絲請使用適量防鬆膠鎖固。

Attach the Control Arm onto the Main Frames as drawing, and note the difference of Left & Right Control Arms.  
參考圖示將控制臂裝上側板上，請注意左、右邊方向性。



Apply threadlocker  
使用螺絲防鬆膠



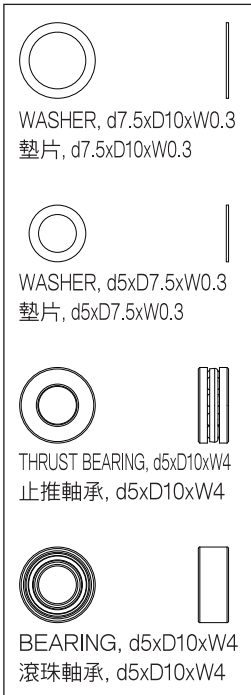
Ensure smooth, non-binding movement when assembling  
確認組件靈活度

No.	Description	名稱	Qty
1	METAL TAIL GRIP	金屬尾旋翼轉座	2
2	WASHER, d7.5xD10xW0.3	墊片, d7.5xD10xW0.3	2
3	WASHER, d5xD7.5xW0.3	墊片, d5xD7.5xW0.3	2
4	THRUST BEARING, d5xD10xW4	止推軸承, d5xD10xW4	2
5	BEARING, d5xD10xW4	滾珠軸承, d5xD10xW4	4
6	TAIL ROTOR HUB	尾旋翼座	1
7	SET SCREW, M3x3	無頭內六角螺絲, M3x3	2
8	WASHER, d3xD7xW0.5	墊圈, d3xD7xW0.5	2
9	TORX SCREW, M3x8	星型低頭螺絲, M3x8	2
10	TAIL PITCH CONTROL LINK	尾旋翼連接頭	2

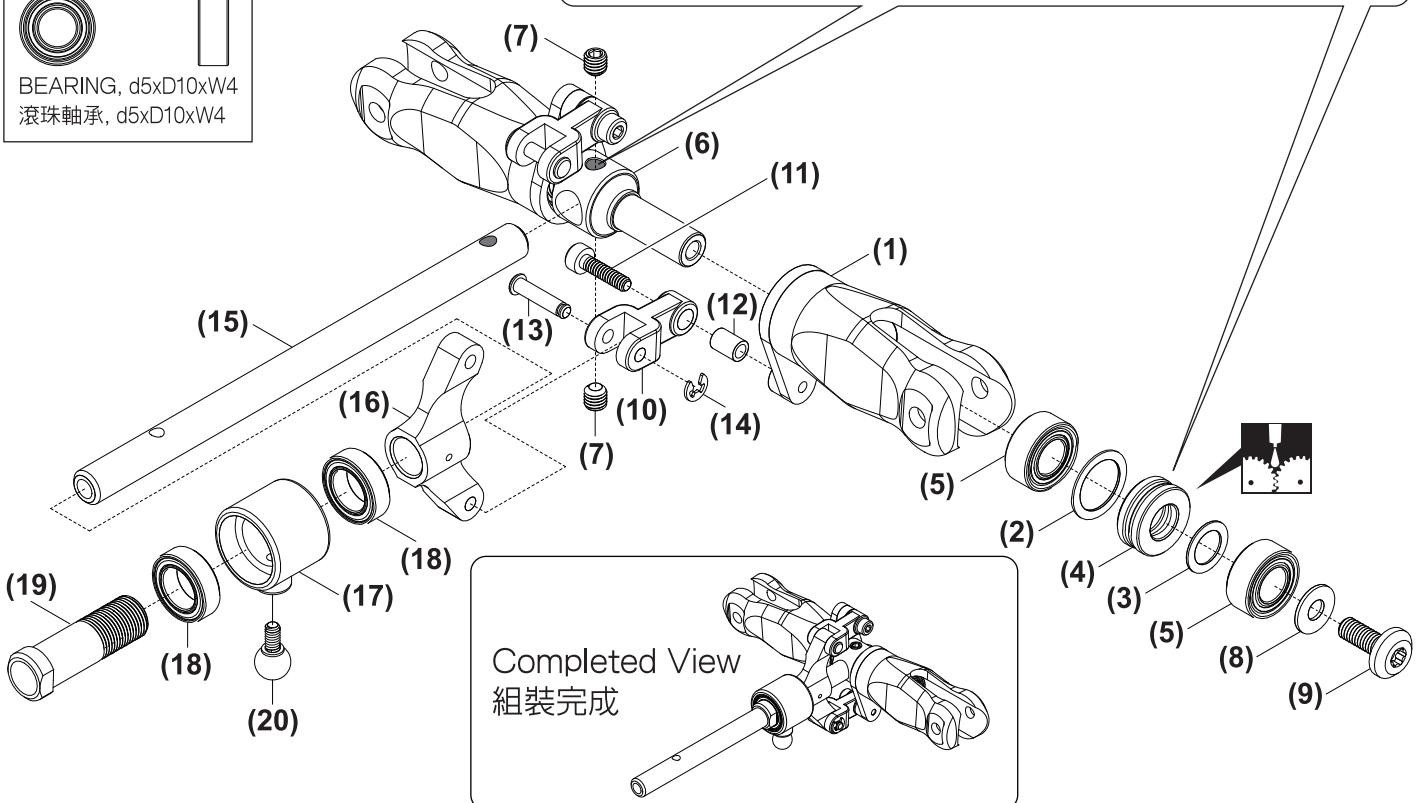
No.	Description	名稱	Qty
11	SOCKET SCREW, M2x8	內六角螺絲, M2x8	2
12	COLLAR, d2xD3xW4.2	軸環, d2xD3xW4.2	2
13	PIN, Ø2 x19	固定銷, Ø2 x19	2
14	E-CLIP, #1.5	E型扣環, #1.5	2
15	TAIL ROTOR SHAFT	尾旋翼軸	1
16	TAIL PITCH CONTROL FORK	尾旋翼控制座	1
17	TAIL PITCH SLIDER	尾旋翼滑座	1
18	BEARING, d6xD10xW3	滾珠軸承, d6xD10xW3	2
19	TAIL PITCH SLIDER BUSHING	尾旋翼控制軸套	1
20	LINKAGE BALL(B)	內六角連接頭自攻螺絲(B)	1



Secure all screws shown on this page with a drop of threadlocker.  
本頁顯示之螺絲請使用適量防鬆膠鎖固。



- Note the orientation of the Thrust Bearings; please refer page 6, Diagram for Thrust Bearing Assembly.
  - Line up the concave of Tail Rotor Shaft and the hole of Hub when securing the Tail Rotor Hub onto the Tail Rotor Shaft.
1. 請參考第 6 頁止推軸承安裝示意圖, 注意安裝方向性。  
2. 將尾旋翼固定座鎖上尾旋翼主軸時, 請注意軸上凹槽需對正固定座上螺絲孔。



Apply threadlocker  
使用螺絲防鬆膠



Assemble left and right  
side the same way  
左右側組件相同



Ensure smooth, non-binding  
movement when assembling  
確認組件靈活度



Apply grease  
使用潤滑油膏

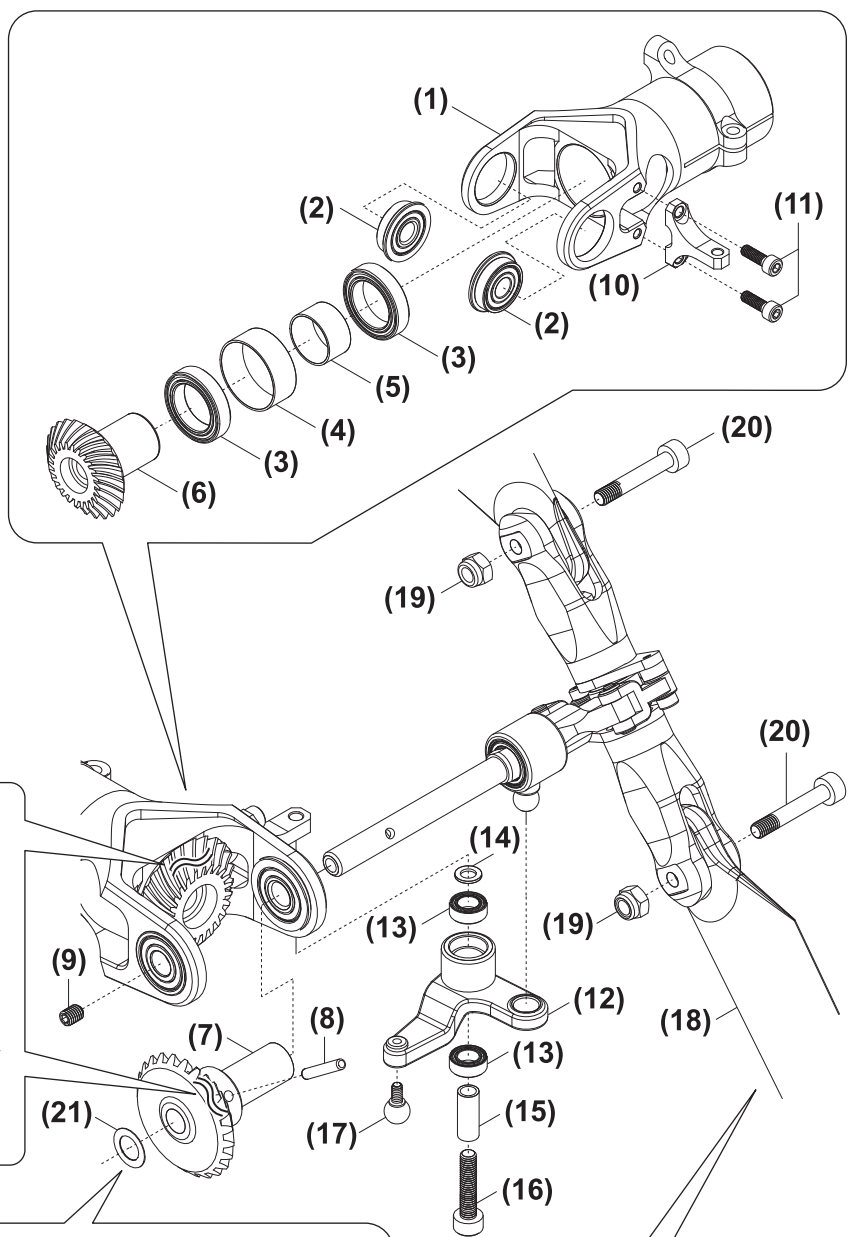


No.	Description	名稱	Qty
1	METAL TAIL UNIT HOUSING	金屬尾座	1
2	FLANGE BEARING, d5xD13xW4	凸緣軸承, d5xD13xW4	2
3	BEARING, d12xD18xW4	滾珠軸承, d12xD18xW4	2
4	COLLAR, d16.5xD18xW6.83	尾座軸承間隔環, d16.5xD18xW6.83	1
5	COLLAR, d12xD13xW6.85	尾傘齒軸環, d12xD13xW6.85	1
6	TAIL INPUT BEVEL-A(24T)	尾螺旋傘齒輪A(24T)	1
7	TAIL OUTPUT BEVEL-B(24T)	尾螺旋傘齒輪B(24T)	1
8	PIN, d2x12	軸承滾針, d2x12	1
9	SET SCREW, M3x4	無頭內六角螺絲, M3x4	1
10	TAIL LEVER BKT	金屬尾控制臂座	1
11	SOCKET SCREW, M2.5x8	內六角螺絲, M2.5x8	2

No.	Description	名稱	Qty
12	TAIL PITCH CONTROL LEVER	尾旋翼控制桿	1
13	BEARING, d4xD7xW2.5	滾珠軸承, d4xD7xW2.5	2
14	WASHER, d3xD5xW0.5	墊片, d3xD5xW0.5	1
15	COLLAR, d3xD4xW10	軸環, d3xD4xW10	1
16	SOCKET SCREW, M3x14	內六角螺絲, M3x14	1
17	LINKAGE BALL(B)	內六角連接頭自攻螺絲(B)	1
18	CARBON TAIL BLADE	碳纖維尾旋翼	2
19	LOCK NUT, M3	止鬆螺帽, M3	2
20	SOCKET SCREW, M3x20	內六角螺絲, M3x20	2
21	WASHER, d5xD8xW0.15	墊片, d5xD8xW0.15	1



Secure all screws shown on this page with a drop of threadlocker.  
本頁顯示之螺絲請使用適量防鬆膠鎖固。



Apply some of silicon oil or grease onto the gears. (Using PV0269 Grease for Plastic Parts is recommended.)  
在傘齒輪上塗抹些許矽膠油或塑膠零件潤滑油 (推薦使用PV0269塑膠零件潤滑油)。

Check the mesh of gears (#6 & #7), please add the washer (#21) for a proper mesh if too much play.  
請檢查齒輪間隙(#6及#7), 間隙過大時請酌加墊片(#21)。

Apply threadlocker  
使用螺絲防鬆膠

Ensure smooth, non-binding movement when assembling  
確認組件靈活度

Apply grease  
使用潤滑油膏

Ensure the leading edges of the blades are toward correct side as shown.  
請確認旋翼前緣朝向正確方向(如圖示)。

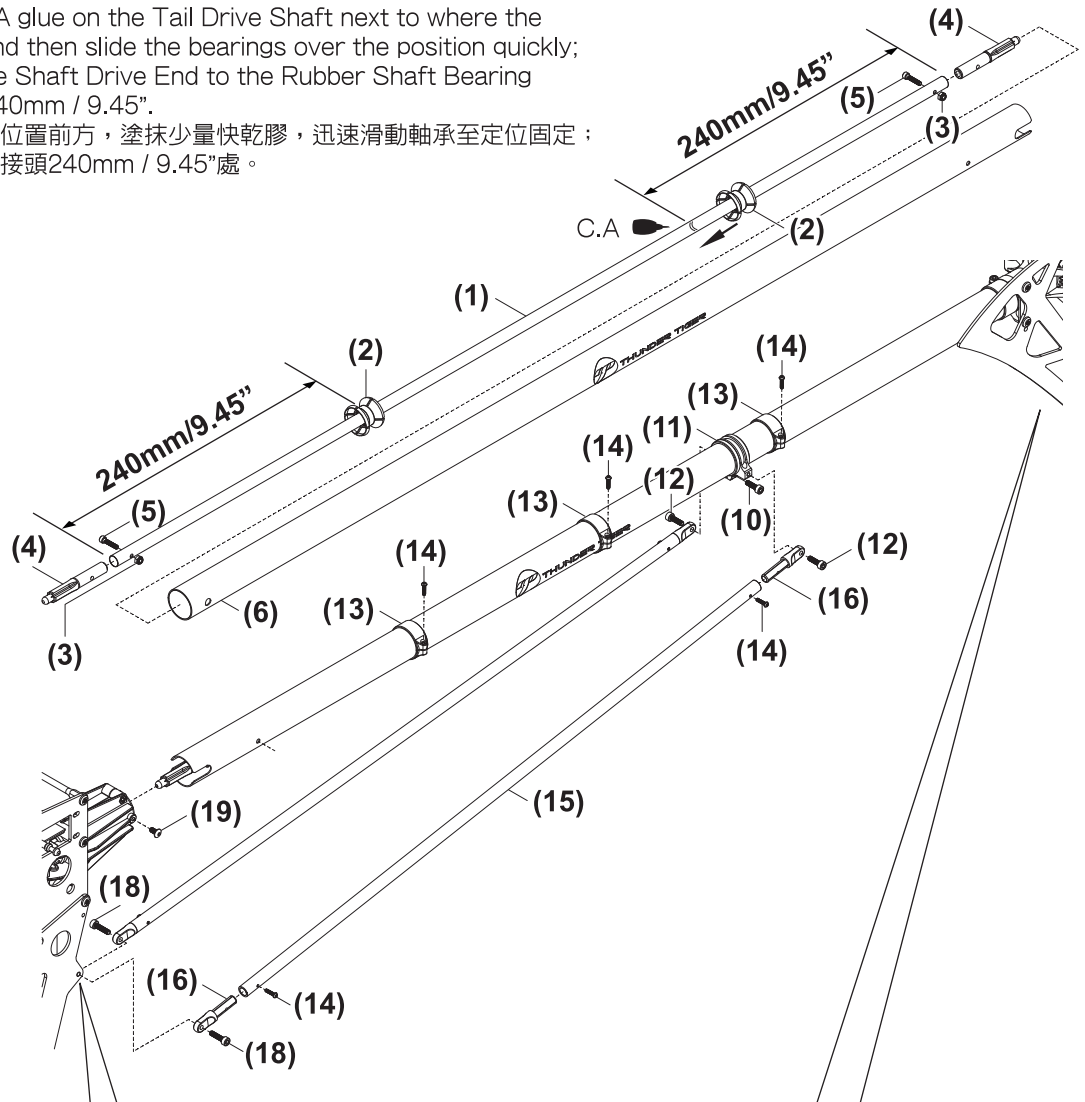
No.	Description	名稱	Qty
1	TAIL DRIVE SHAFT	尾驅動軸	1
2	TAIL DRIVE SHAFT BRG	尾驅動軸軸套組	2
3	LOCK NUT, M2.5	止鬆螺帽, M2.5	2
4	TAIL DRIVE SHAFT LINKER	尾驅動連接棒	2
5	SOCKET SCREW, M2.5x12	內六角螺絲, M2.5x12	2
6	TAIL BOOM	尾管	1
7	TORX SCREW, M3x8	星型低頭螺絲, M3x8	2
8	CARBON VERTICAL FIN	碳纖垂直安定面	1
9	TAIL STOPPER	尾管止擋塊	1
10	SOCKET SCREW, M3x8	內六角螺絲, M3x8	2

No.	Description	名稱	Qty
11	TAIL SUPPORT BRACKET	尾管固定座	1
12	SOCKET SCREW, M3x10	內六角螺絲, M3x10	2
13	ROD GUIDE	推拉桿固定環	3
14	SELF TAPPING SCREW, M2x8	自攻螺絲, M2x8	7
15	TAIL SUPPORT ROD	尾管支撐架	2
16	TAIL SUPPORT ROD END	尾管支撐架接頭	4
17	BATTERY POST	電池盒支柱	1
18	SOCKET SCREW, M3x12	內六角螺絲, M3x12	2
19	BUTTON HEAD SOCKET SCREW, M3x6	半圓頭內六角螺絲, M3x6	1



Add a drop of thin CA glue on the Tail Drive Shaft next to where the bearing should be, and then slide the bearings over the position quickly; the distance from the Shaft Drive End to the Rubber Shaft Bearing Support is approx. 240mm / 9.45".

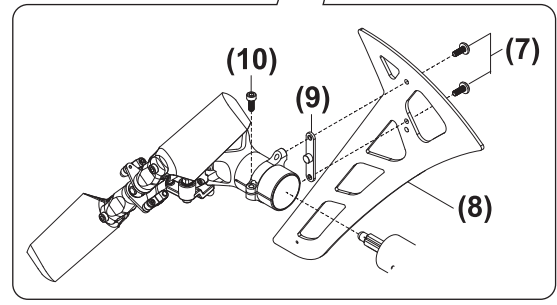
在尾傳動軸上軸承固定位置前方，塗抹少量快乾膠，迅速滑動軸承至定位固定；該定位大約距離軸傳動接頭240mm / 9.45"處。



- LOCK NUT, M2.5  
止鬆螺帽, M2.5
- SOCKET SCREW, M2.5x12  
內六角螺絲, M2.5x12
- TORX SCREW, M3x8  
星型低頭螺絲, M3x8
- SOCKET SCREW, M3x8  
內六角螺絲, M3x8
- SOCKET SCREW, M3x10  
內六角螺絲, M3x10
- SELF TAPPING SCREW, M2x8  
自攻螺絲, M2x8
- SOCKET SCREW, M3x12  
內六角螺絲, M3x12
- BUTTON HEAD SOCKET SCREW, M3x6  
半圓頭內六角螺絲, M3x6

**Rear View 後視圖**

Secure the screws into the Frame Spacer when attaching the Tail Boom Support End on the Main Frames.  
安裝尾管支撐桿於側板上時，請注意需將鎖固螺絲鎖固於六角固定支柱上。



Apply threadlocker  
使用螺絲防鬆膠



Assemble left and right side the same way  
左右側組件相同



Apply C.A Glue  
使用快乾膠黏合

No.	Description	名稱	Qty
1	LINK BALL	連接球座	6
2	SERVO MOUNTING	伺服機墊片	6
3	SERVO NUT	伺服機螺帽	6
4	SERVO MOUNTING	伺服機固定片	2
5	SERVO BED	伺服機固定座	2
6	SERVO HORN COLLAR	伺服機擺臂軸套	4
7	SERVO HORN	伺服機擺臂	3
8	RUDDER SERVO HORN	尾舵伺服機擺臂	1

No.	Description	名稱	Qty
9	LINKAGE BALL (A)	內六角連接頭螺絲(A)	1
10	SET SCREW, M3x3	無頭內六角螺絲, M3x3	4
11	SOCKET SCREW, M2.5x6	內六角螺絲, M2.5x6	4
12	BUTTON HEAD SOCKET SCREW, M3x5	半圓頭內六角螺絲, M3x5	4
13	BUTTON PHILLIPS TAPPING SCREW, M2.6x10	扁圓自攻螺絲(粗), M2.6x10	4
14	BUTTON PHILLIPS TAPPING SCREW, M2.6x14	扁圓自攻螺絲(粗), M2.6x14	12
15	TORX SCREW, M3x8	星型低頭螺絲, M3x8	4

Do not tighten the screw #11 & #10 at this step for preforming servo of calibrations later.  
螺絲#11 & #10暫勿鎖緊以便後續中立點調整。

LINK BALL  
連接球座

LINKAGE BALL (A)  
內六角連接頭螺絲(A)

SET SCREW, M3x3  
無頭內六角螺絲, M3x3

SOCKET SCREW, M2.5x6  
內六角螺絲, M2.5x6

BUTTON HEAD SOCKET SCREW, M3x5  
半圓頭內六角螺絲, M3x5

BUTTON PHILLIPS TAPPING SCREW, M2.6x10  
扁圓自攻螺絲(粗), M2.6x10

BUTTON PHILLIPS TAPPING SCREW, M2.6x14  
扁圓自攻螺絲(粗), M2.6x14

TORX SCREW, M3x8  
星型低頭螺絲, M3x8

The adaptors come with the kit are applicable to ACR RC / Futaba servos as standard parts. The option adaptors for JR or Hitec are also available separately:  
內附標準伺服機擺臂軸套適用於ACE RC及Futaba伺服機。  
JR或Hitec伺服機使用之軸套可另外購買：  
No.PV1623-J Servo Horn Adaptor for JR 伺服機擺臂軸套, JR  
No.PV1623-H Servo Horn Adaptor for Hitec 伺服機擺臂軸套, Hitec

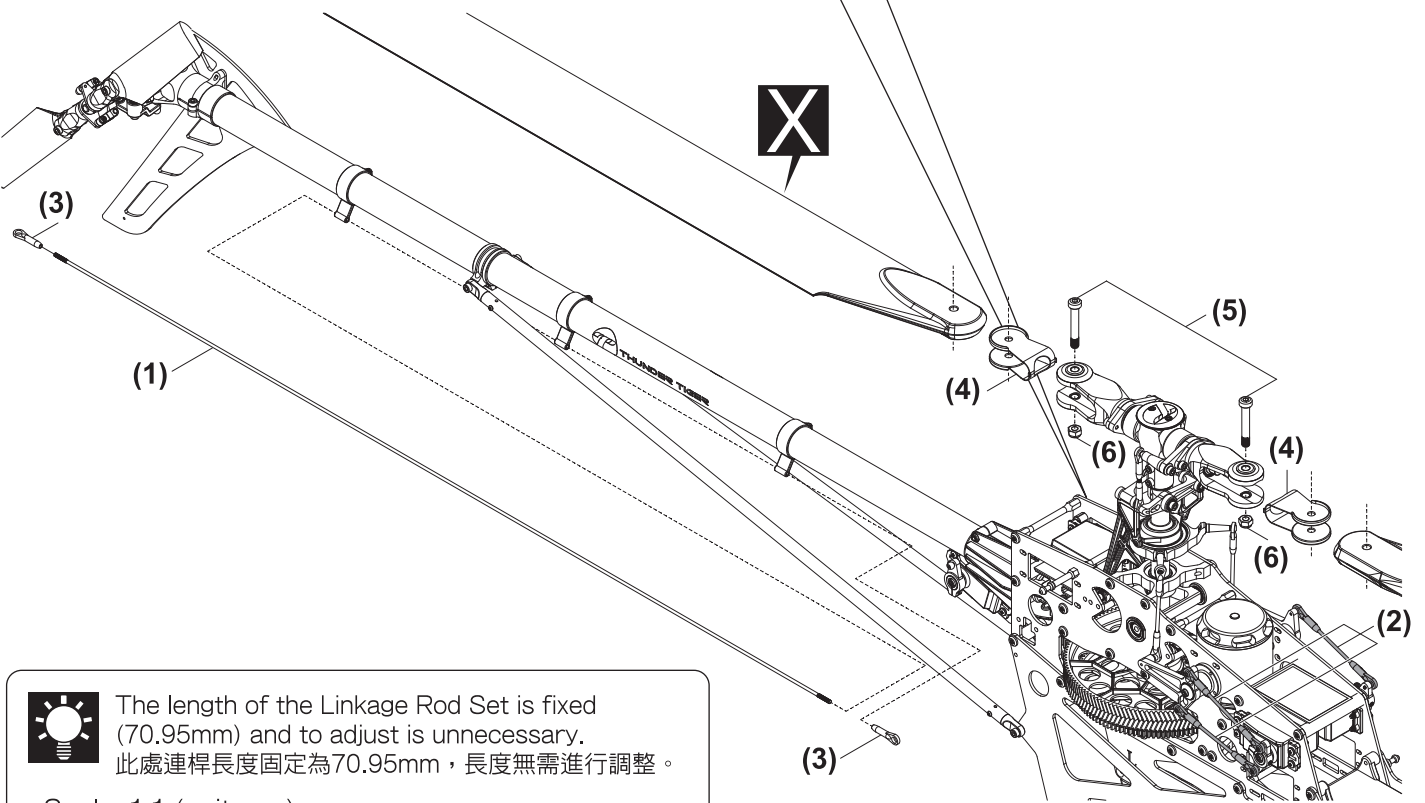
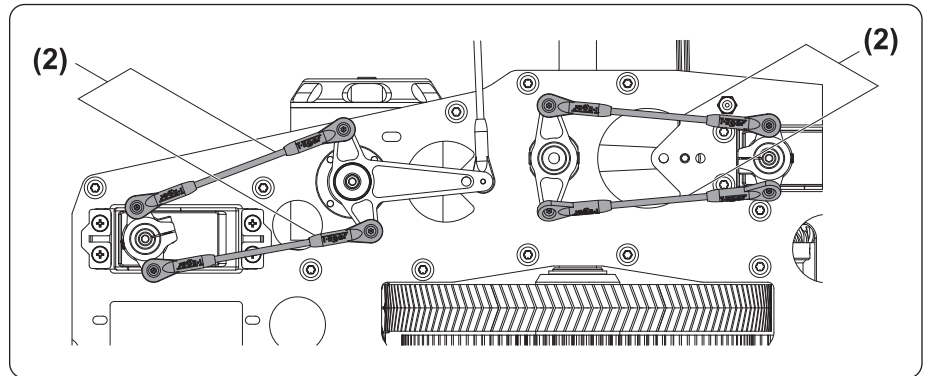
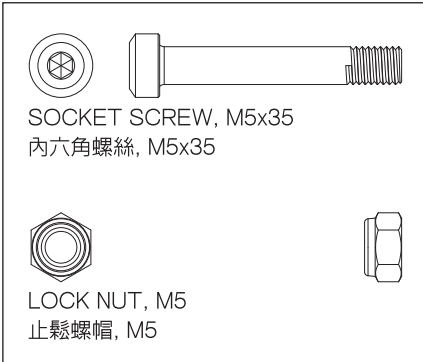
Apply threadlocker 使用螺絲防鬆膠

Must be purchased separately 改裝品需另購



No.	Description	名稱	Qty
1	TAIL LINKAGE ROD	尾推拉桿	1
2	LINKAGE ROD	連接桿	6
3	BALL LINK	單頭連接桿	2

No.	Description	名稱	Qty
4	ROTOR SPACER	主旋翼墊片	2
5	SOCKET SCREW, M5x35	內六角螺絲, M5x35	2
6	LOCK NUT, M5	止鬆螺帽, M5	2



The length of the Linkage Rod Set is fixed (70.95mm) and to adjust is unnecessary.  
此處連桿長度固定為70.95mm，長度無需進行調整。

Scale=1:1 (unit:mm)

70.95(Fixed Length)



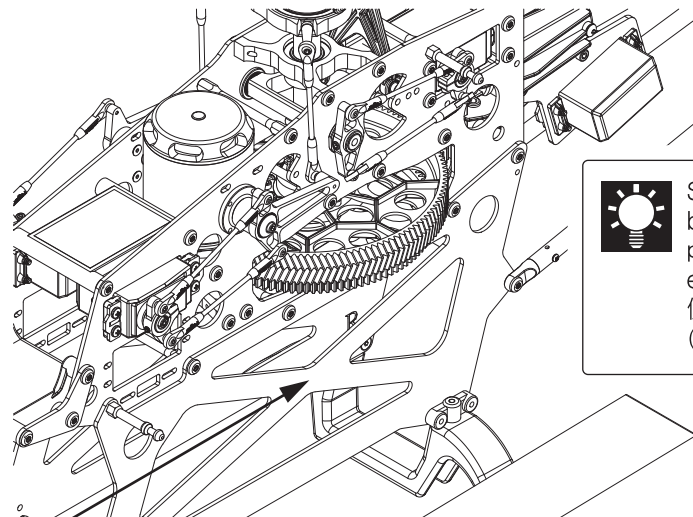
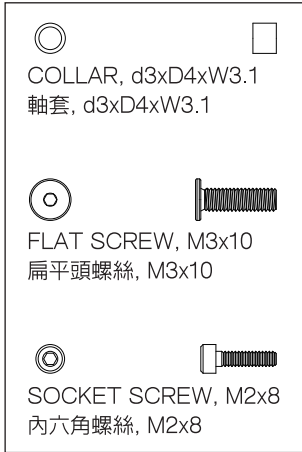
1. You may need to adjust the linkage to ensure the blade tracking. Please refer page 27 : Blade Tracking Adjustment.
  2. Install the main blades with the Socket Screw. Do not over tighten and ensure the blades run effortlessly.
  3. For safety the rpm of using carbon blades should not exceed 2,300.
1. 您可能必需調整相關的連桿來確保旋翼旋轉軌跡正常。請參閱第27頁“主旋翼軌跡調整”說明。
  2. 以內六角螺絲安裝上主旋翼。請勿過度鎖緊。
  3. 安全起見，碳纖維主旋翼轉速請勿超過2,300rpm。



Must be purchased separately  
改裝品需另購

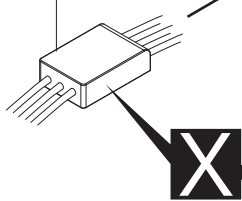
No.	Description	名稱	Qty
1	BATTERY TRAY	電池座	1
2	BATTERY TRAY CATCH	電池座夾扣	1
3	COLLAR, d3xD4xW3.1	軸套, d3xD4xW3.1	2

No.	Description	名稱	Qty
4	FLAT SCREW, M3x10	扁平頭螺絲, M3x10	2
5	SPRING	拉伸彈簧	2
6	SOCKET SCREW, M2x8	內六角螺絲, M2x8	2

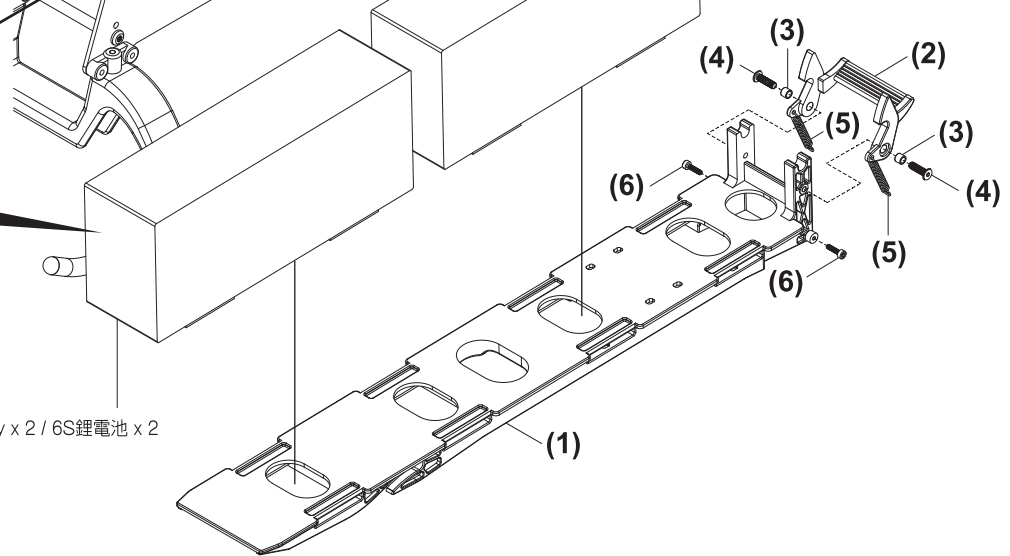


Secure the speed controller and battery(option) with straps to prevent them from being ejected in flight.  
使用適當束帶固定速控器及電池組(選購), 以防止飛行中脫落。

Electronic Speed Controller / 速控器

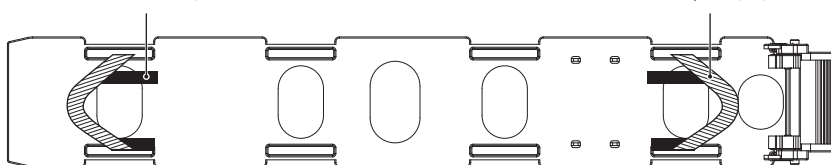


6S Li-Po Battery x 2 / 6S鋰電池 x 2



Foam / 泡棉膠

Strap / 束帶

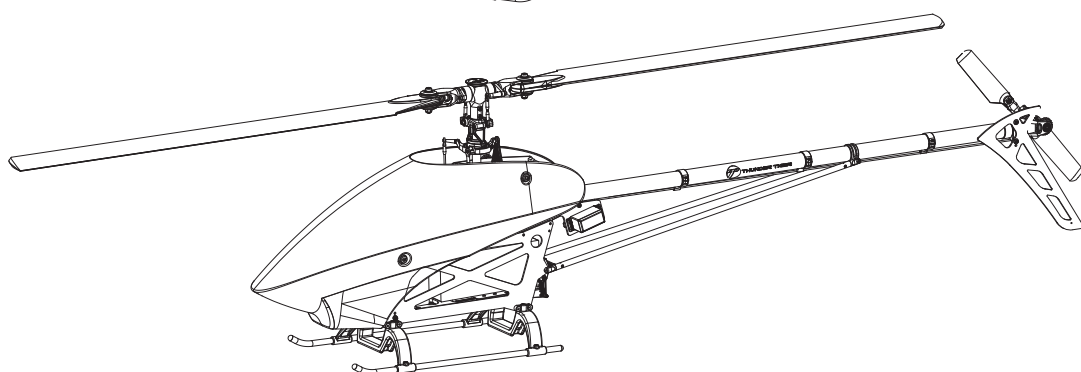
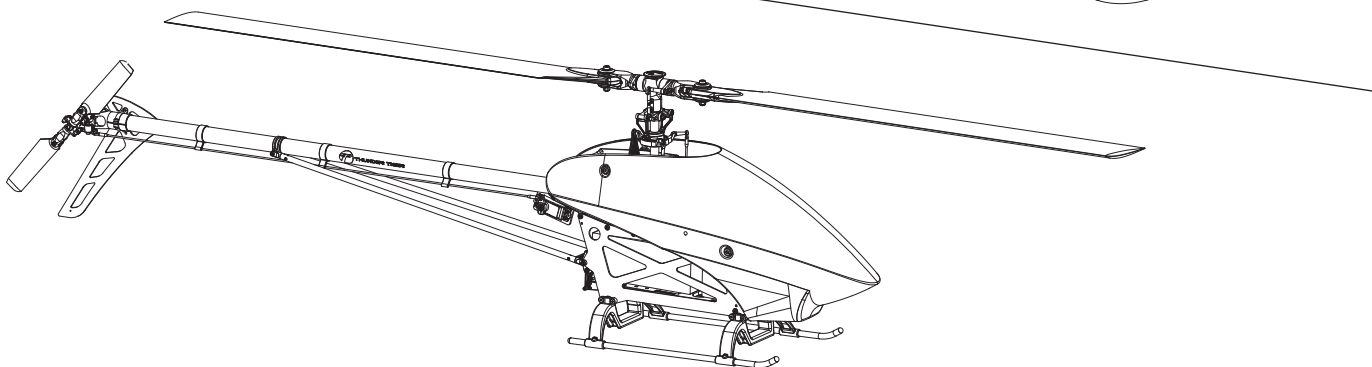
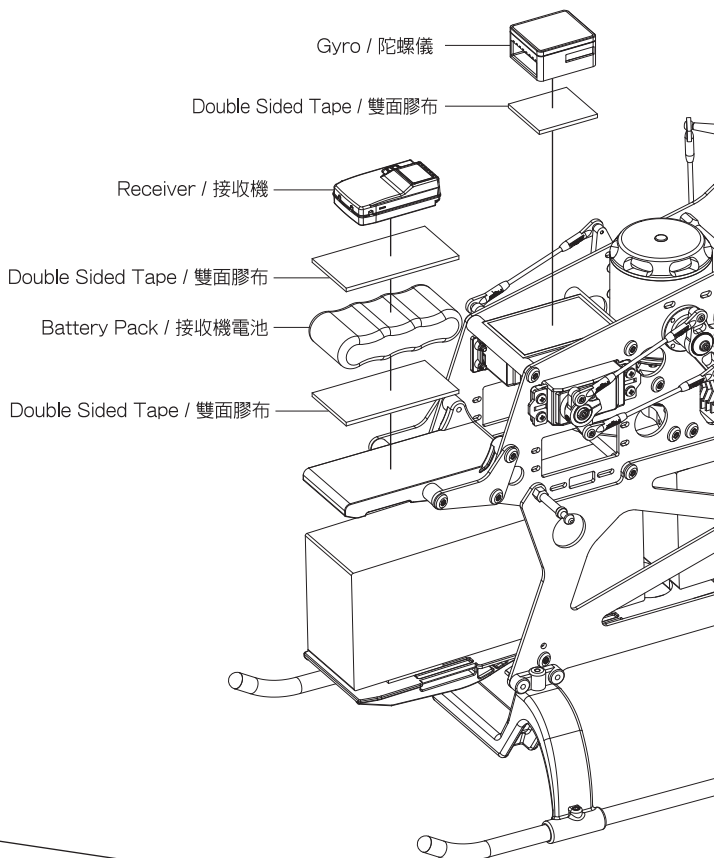
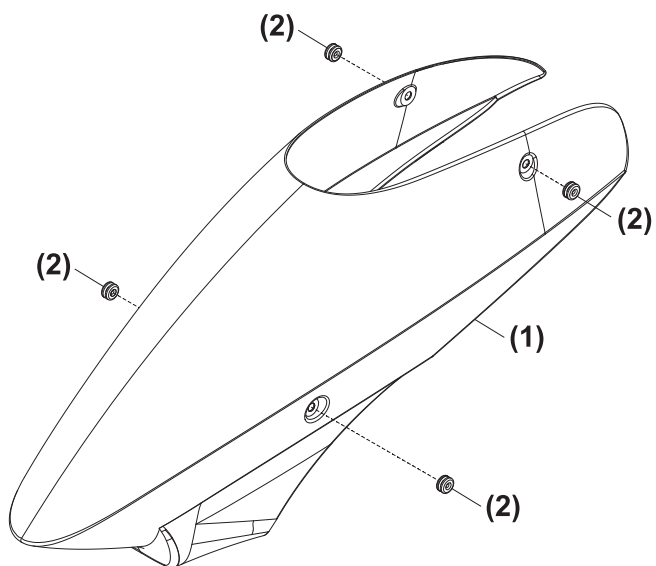


Stick a foam tape onto the position where the strap ties through the battery tray to prevent the strap from being worn and broken in hard flight.  
將泡棉膠貼在束帶穿過電池座的位置上, 可防止束帶於激烈飛行中磨損及斷裂。

Must be purchased separately  
改裝品需另購

No.	Description	名稱	Qty
1	FIBERGLASS CANOPY	玻纖機殼	1

No.	Description	名稱	Qty
2	RUBBER GROMMET	機身固定墊圈	4



Completed View  
組裝完成



Must be purchased separately  
改裝品需另購

## ⚠ WARNING! / 警告!

For safety, please ensure the motor has been deactivated and will not drive the main rotor head before performing the following setting processes. You may just unplug 2 of the wires from the motor and the ESC or move the motor with pinion away from the main gear to avoid a rotating rotor head.

安全起見，執行下列設定程序時，請確認馬達不會驅動主旋翼頭。您可拔除馬達與速控器間任兩條連接線，或將馬達驅動齒與主齒盤脫離。

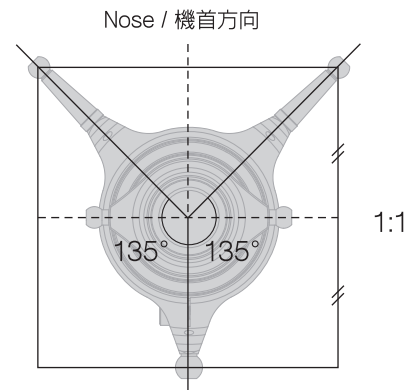
## Swashplate Type Setting / 十字盤模式設定

Choose and activate the swashplate mixing for a 135° CCPM program in your transmitter is the best recommended. Please refer your transmitter manual to find a proper swashplate setting.

A 140° CCPM program is also applicable to the helicopter if your transmitter does not feature a 135° CCPM program.

最佳設定為選用135度十字盤混控程式。請參考您的發射機說明書進行設定。

如您的發射機未具備135度十字盤混控程式，選用140度模式亦可正常操作本產品。



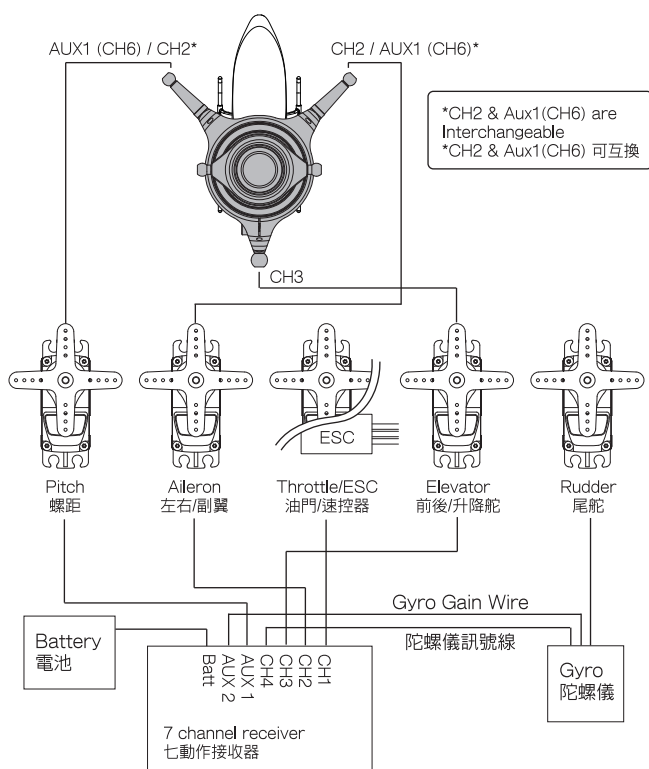
## Electric Device Connection / 電子設備連接說明

E-CCPM system requires 3 channel for aileron, elevator and an AUX(for pitch). They are operated together to carry out the rolling, flipping and collective controlling. As a result, the following connecting manner is recommended.

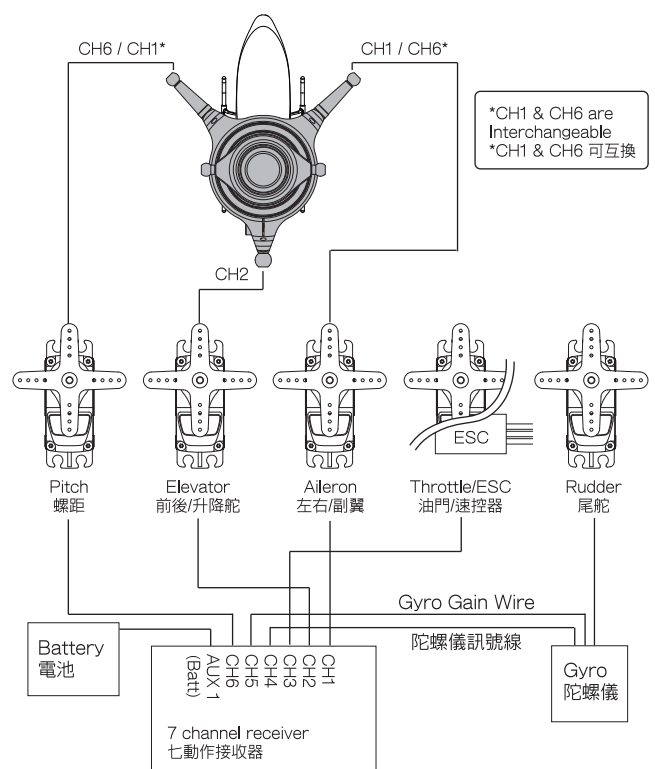
The following chart is the E-CCPM connecting for your reference. Please also consult your radio instruction manual.

E-CCPM系統需要使用三個通路予副翼、升降舵、與螺距（使用AUX通道）。在混控模式下，必須藉由三類伺服機同時完成動作，因此建議依照下列說明完成伺服機與接收機連結。下列圖示為安裝範例，實際接線方式，請參照您的遙控器使用說明書。

### JR Radio System



### ACE RC / FUTABA / HITEC Radio System



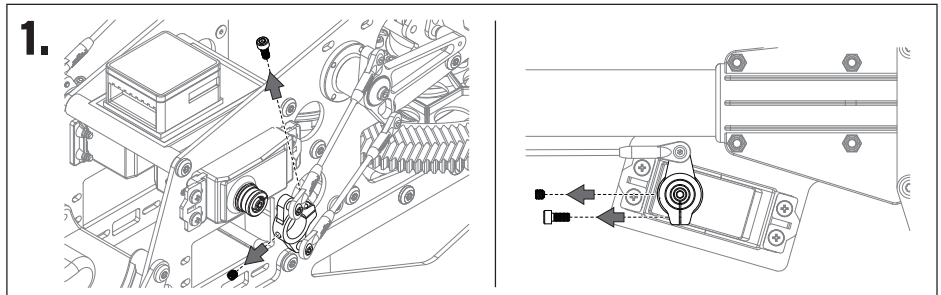


# Mechanism Neutral Position Setting / 中立點設定

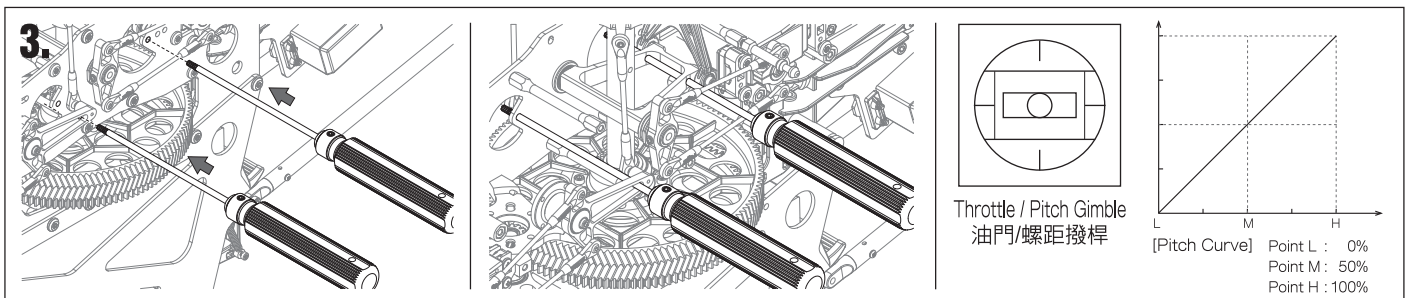


The innovative Quick-calibration System helps you to get a mechanism neutral position of the cyclic & rudder servo easier and fast. Please perform the procedure of the calibration as following illustrations step by step.  
獨特創新的快速中立點校正系統，能幫助您快速完成鴉舵面及尾舵伺服機的機構中立點校正；請依以下說明執行。

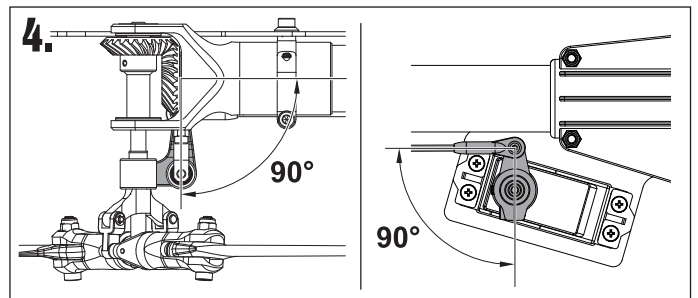
1. Loose the setting screws of the horns or just unhook the horn from the horn adaptor.
1. 鬆開擺臂上迫緊螺絲螺絲，或直接將擺臂自擺臂內襯上拆下。



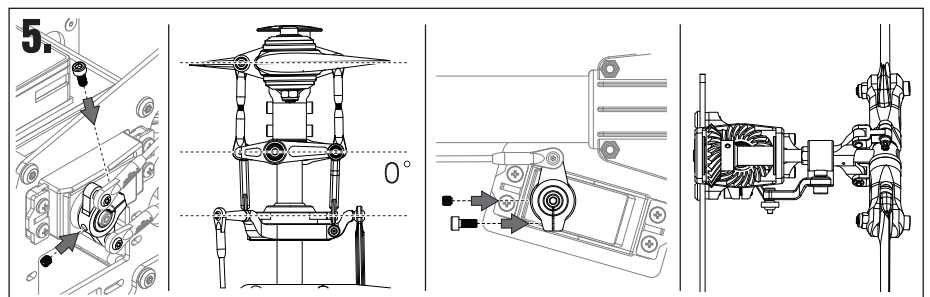
2. Refer your radio system manual to check and ensure that all of the trims & sub-trims are set at their neutral positions (the setting value should be 0), and switch to a non-heading lock mode for your gyro.
3. For calibration of the cyclic servos: please use a 3.0mm handle driver to pin the control arm. And then adjust the pitch curve as a negative 45° straight line (from 0 to highest 100% and pass through the mid-point 50%), therefore, all cyclic servos now are at the neutral position.
2. 請參考您的遙控系統說明書，將遙控器內微調設定全部設定為中立點位置，並將陀螺儀設定為非鎖定模式。
3. 執行舵面伺服機中立點校正：請使用3.0mm手工工具固定控制臂；接著，將螺距曲線設定為負斜率之對角線（由0經過50至100%之直線），此時所有伺服機皆位於中立點位置。



4. For calibration of the rudder servo: check the servo horn is vertical to the servo; moreover, the tail pitch control lever is also vertical to the tail boom while the tail control stick and trim are centered. Tread the ball linkage to shorten/ lengthen the tail rotor linkage if non-vertical.
4. 執行尾舵伺服機中立點校正：確認當尾舵撥桿及微調均位於中立點時，尾舵擺臂垂直於伺服機，同時尾舵螺距控制臂也垂直於尾管。若尾舵推拉桿太短或過長，請調整球頭連桿鎖入拉桿距離。

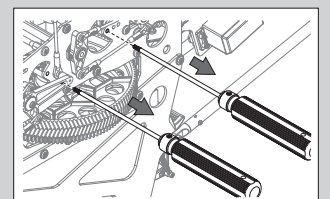


5. Mount all of the servo horns onto the adaptors and then tighten the setting screws, DONE! The collective pitch now is 0° at the neutral position of the cyclic servos, and the tail rotor is at 0° or a little off set to the right.
5. 將所有伺服機擺臂套入內襯並鎖固迫緊螺絲，完成！此時舵面伺服機應位於中立點位置，主旋翼攻角為0度，同時，尾旋翼旋翼攻角為0度，或稍偏向右。



## ⚠ WARNING! / 警告!

Remember to turn the receiver power off and extract the handle drivers from the helicopter before performing the next procedure.  
執行下一設定步驟前，請記得關閉接收機電源，並自機體上移除手工具。



# Swashplate & Servo Direction Setting / 十字盤及伺服機方向設定

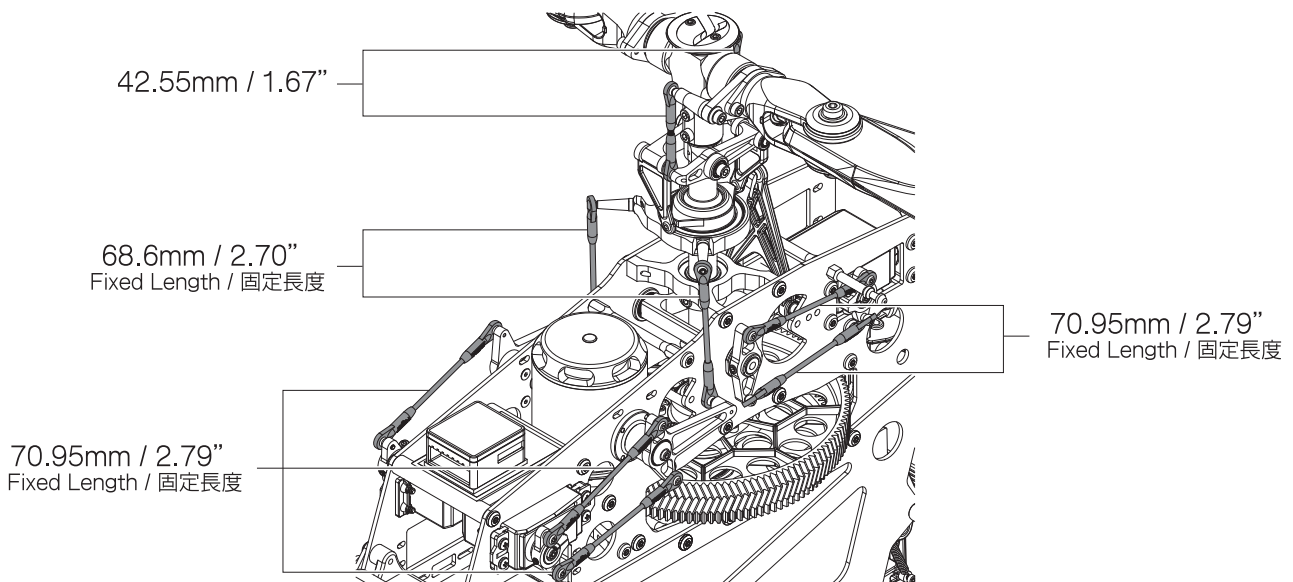


Ensure there is none of the control bind at full travel before going through following setting procedures. Next, refer the illustrations below to check the direction of servo & swashplate with a given transmitter input. Adjust the servo reversing function in your transmitter if incorrect.

繼續設定前，請確認伺服機及連桿作動順暢且可達最大作動量。接著，請參考以下圖示，確認伺服機動作及十字盤混控設定可正確對應撥桿動作。若作動方向不正確，請調整您發射機上的伺服機逆轉功能。

	Mold 1	Mold 2	Servo Horn movement 伺服機擺臂動作			Check Point 機構動作確認
Aileron 副翼			Right Side / 右側 	Left Side / 左側 	Front View / 前視圖 	
Elevator 升降舵			Left Side / 左側 			Left View / 左視圖 
Pitch 螺距			Right Side / 右側 	Left Side / 左側 	Left Side / 左側 	Front View / 前視圖 
Rudder 尾舵			Right Side / 右側 			

## Index of Linkage Length / 連桿長度索引

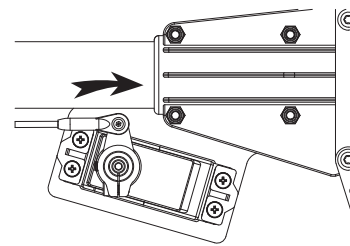
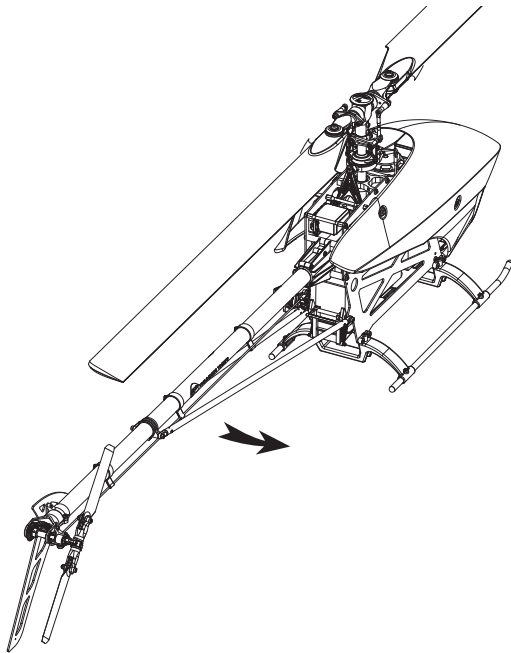


It is recommended to use a Heading Lock Gyro. With a Heading Lock Gyro, you may not use the trim and the revolution mixing function of tail control. Mount the servo arm for the moment and check the movement of the tail servo:

1. While giving the right rudder control, the servo arm should move toward the nose of helicopter.
2. Rotate the helicopter with your hand counterclockwise, the servo arm should move toward the nose of helicopter.

建議搭配鎖定式陀螺儀，可使您無需額外設定微調及混控功能來控制尾舵。暫將伺服機擺臂固定後進行尾舵伺服機作動確認：

1. 當執行右舵時，伺服機擺臂應朝機頭方向作動。
2. 將整台直昇機逆時針旋轉時，伺服機擺臂應朝機頭方向作動。



Rudder Servo  
尾舵伺服機

After ensuring the moving direction of tail servo, you have to mount the servo arm in the correct position. Please reset the receiver power and do not move the helicopter. While the tail control stick and trim are centered, mount the servo arm vertically. Next, two points may be your concern:

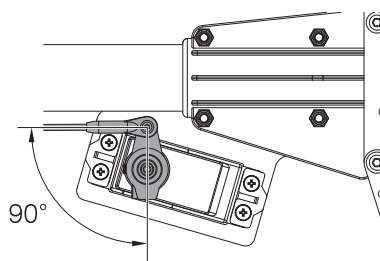
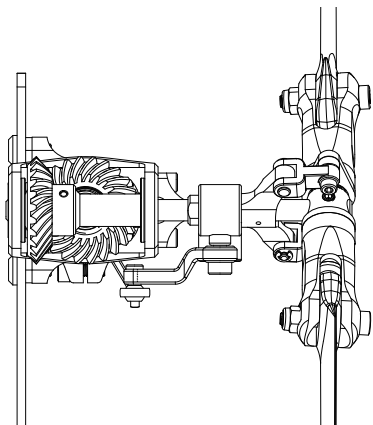
1. The traveling limit of the rudder servo may not go beyond the mechanical movement.
2. The rudder servo arm should be vertical while the tail rotor is at 0 pitch or with a little offset to the right.

(Referring to the photo below)

確認尾舵伺服機動作正確後，即可將伺服機擺臂確實安裝固定；請勿移動直昇機並重新啟動接收機電源。

當尾舵撥桿與微調置中時，將伺服機擺臂垂直伺服機安裝固定。接著，請特別注意下列兩者：

1. 尾舵伺服機最大行程量切勿大於機械行程量。
2. 當尾旋翼螺距為0或稍偏向右時，尾舵伺服機擺臂應在垂直位置。（請對照下圖）



Rudder Servo  
尾舵伺服機

Note1: To find the traveling limit, you have to adjust the Gyro referring to its manual.

Note2: To adjust the pirouetting speed of the helicopter, please use the "Travel Adjustment" or the "D/R & EXP" function of your transmitter.

說明1：請參考陀螺儀說明書調整陀螺儀以確認伺服機最大行程量。

說明2：調整尾舵自旋速度，請設定發射機上“行程設定 (Travel Adjustment)”或“大小動 (D/R)、指數值 (EXP)”功能。

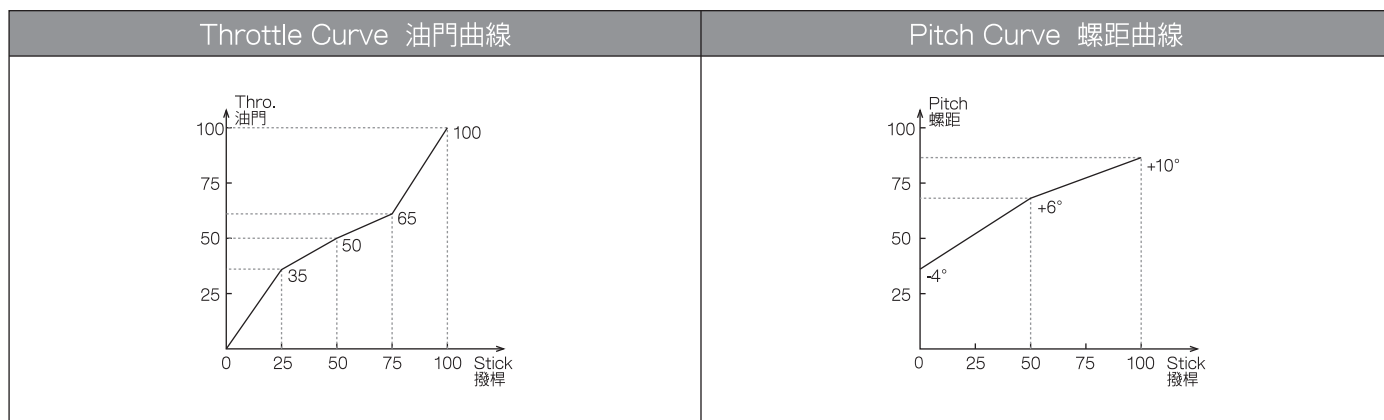
# Throttle & Pitch Curve Setting / 油門及螺距曲線設定



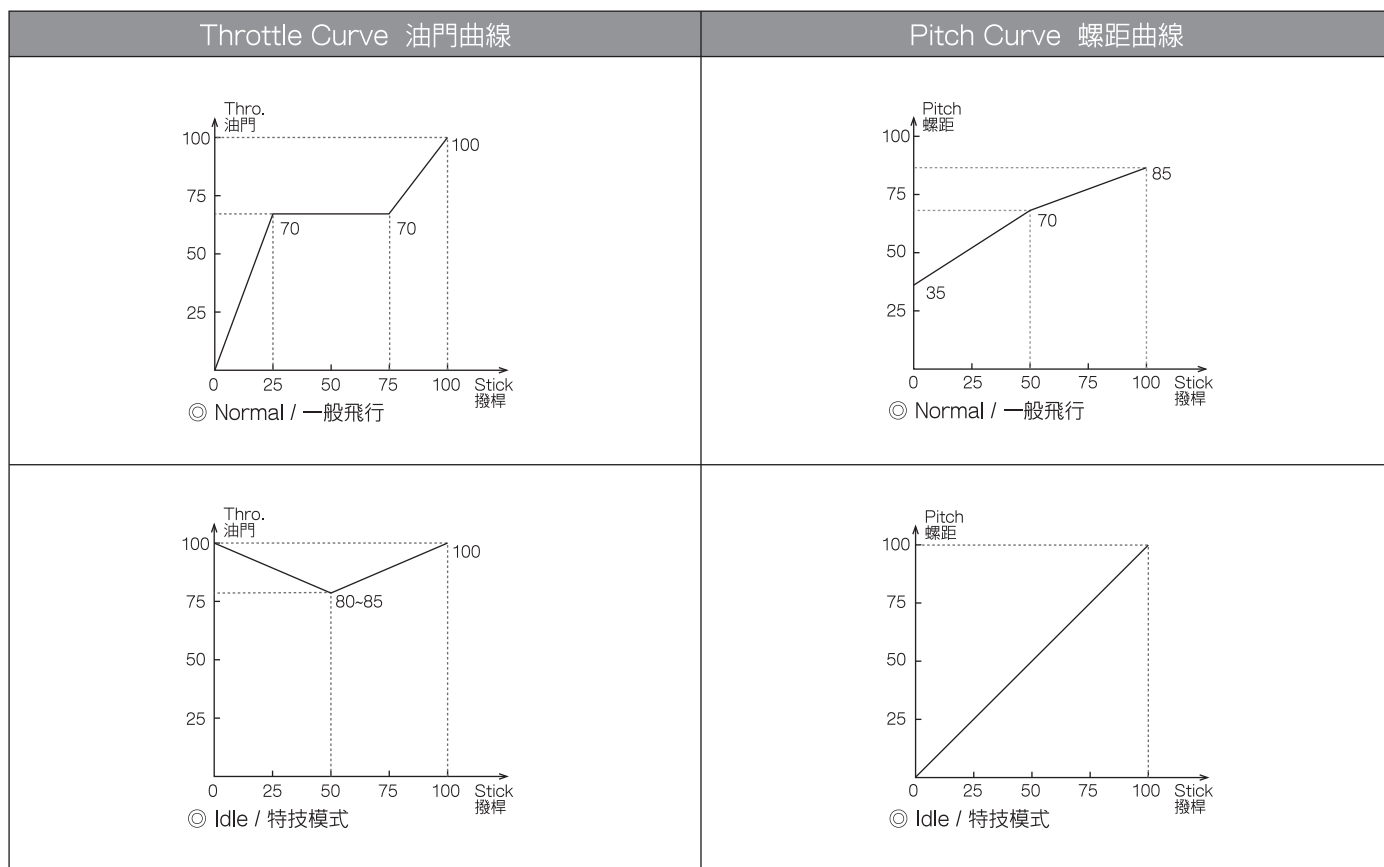
The following is the setting up data of pitch curve and throttle curve for your reference only. Please ask an experienced pilot to help if you have never done this before.

下列參數設定僅供參考，請依實際狀況進行調整，或詢求有經驗的玩家協助。

## Novice / 初學者設定



## 3D Flight / 進階玩家設定



### ! WARNING / 警告!

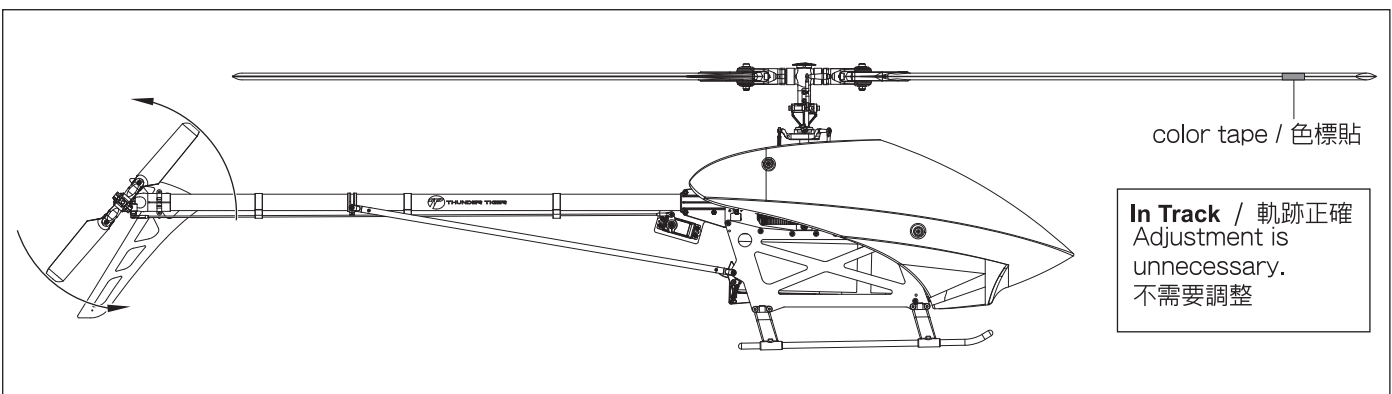
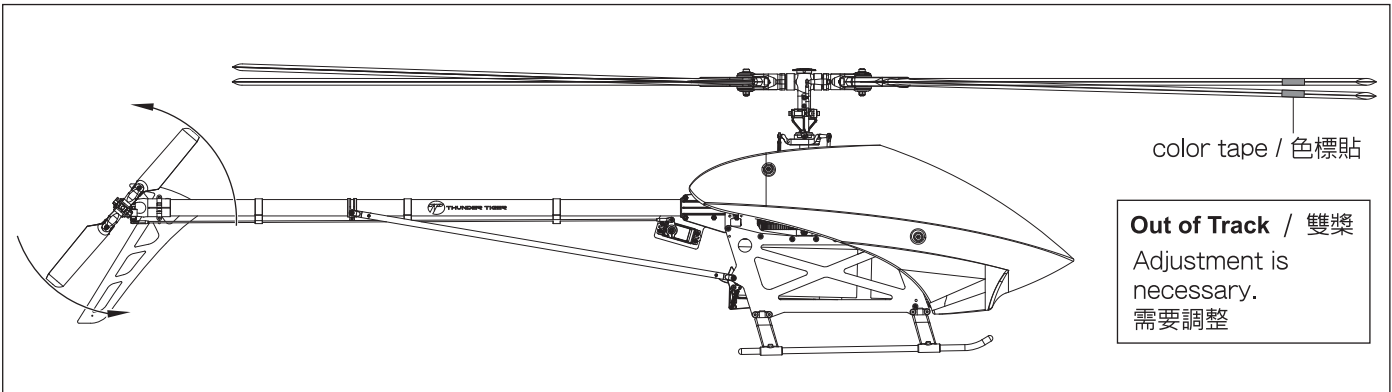
1. Too much collective pitch will bring about too much loading to the power and drive system.
  2. Too much headspeed will lead to blades (grips) explosion.
  3. It's very dangerous for setting the headspeed over the blades (grips) limit.
  4. Please do not set the collective pitch to exceed the maximum ( $\pm 15^\circ$ ).
1. 過大的集合螺距設定會使馬達及傳動系統超載。  
 2. 過快的主旋翼轉速會造成主旋翼轉座崩裂或射槳。  
 3. 將旋翼轉速設定超過槳片負載極限極端危險!  
 4. 請勿將聚合螺距設定超過最大值 ( $\pm 15$ 度角)。



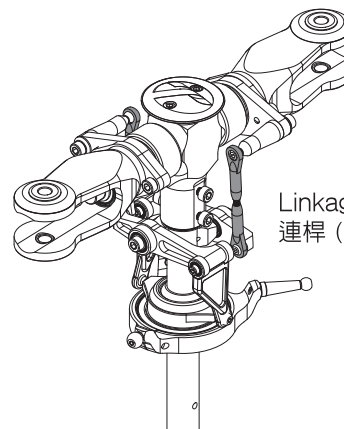
## ⚠ CAUTION / 警告！

For safety, ensure to keep a safe distance from the helicopter at least 10 meter (30 feet) while making tracking adjustment.

安全起見，進行主旋翼軌跡調整時，請至少與直昇機保持10米（30呎）的安全距離。



1. Use a color tape at the tip of main blades for tracking identification easily.
  2. Increase the main blade speed to just before the helicopter lifts-off.
  3. Observe which blade appears to be lower than the other, and increase the pitch of the lower blade one turn of the Linkage Rod (refer Page 7) at a time until each blade runs in track. If both main blades rotate in the same path, it doesn't need to be adjusted.
1. 在主旋翼前端貼上色標可方便辨識軌跡。
  2. 提高主旋翼轉速使機體稍懸浮於地面。
  3. 觀察兩支旋翼軌跡是否有落差（雙槳），調整軌跡較低旋翼上之連桿（參閱第7頁）長度，一次調整一圈，直至兩支旋翼軌跡一致。若軌跡一致則無需調整。



Linkage Rod (refer Page 7)  
連桿（參閱第7頁）

## ⚠ CAUTION / 警告！

Out of track causes vibration, instability and a loss of power due to additional drag. Please adjust the tracking repeatedly until the blades are in track properly.

旋翼軌跡落差（雙槳）會造成直昇機震動、不平衡及損失動力。請務必進行調整以使旋翼軌跡精準正確。

## Cautions of Li-Po Battery Pack Using / 鋰聚電池使用注意事項



Lithium Polymer (Li-Po) battery is volatile. Failure to read and follow the safety instructions or the instruction manual offered by manufacturers may result in fire, personal injury and damage to property if charged or used improperly. Please READ your Li-Po battery manual thoroughly before using. Some precaution and information for your reference below:

1. ONLY use a charger specifically designed for Li-Po battery packs to charge/discharge your Li-Po battery packs. Failure to use an improper charger may cause a fire, which may result in personal injury and property damage.
2. A parallel charging process is strongly recommended, otherwise, the balancer is necessary if using a serial charging process.
3. Gernally DO NOT over charge the battery over the maximum voltage of 4.2V/per cell and over discharge drop below 3.0V/per cell.
4. Always keep the voltage of every cell at 3.8V if the pack will be stored for a long term.
5. Always avoid any puncture of the battery pack at all times.

Neither Thunder Tiger nor our distributors/retailers assume liability for failures to comply with these cautions, safety recommended and instruction manual. Users assume all risks associated with Li-Po battery packs.

鋰聚電池具有相當之危險性。疏於詳閱以下注意事項及電池廠商所提供的說明書，或未依據正確操作方式使用，可能會引發火災、人身傷害及財產損失。

請務必在使用前詳閱並遵守使用說明。以下注意事項及訊息提供您參考：

1. 請務必使用鋰聚電池專用充電器充/放電鋰聚電池組。使用不正確的充電器可能會引發火災、人身傷害及財產損失。
2. 強烈建議使用平行充電式的充電器充電。若使用串充方式請務必加裝平衡器。
3. 請勿過度充電使電壓超過4.2伏特/單一電池蕊，或過度放電使電壓低於3.0伏特/單一電池蕊。
4. 如需長期儲存電池，請保持單一電池蕊電壓在3.8伏特。
5. 任何情況下，皆勿擠壓電池。

雷虎科技或授權經銷商/模型店對未依照正確方式使用或安並規定之意外具免責條款，使用人應自負使用鋰聚電池所可能衍生的風險。

## After Flight Checklist / 飛行後的檢查項目

- (1) Check every screw and bolt to make sure none has loosened due to vibration.
  - (2) Check every rotating and movable part to ensure they still move smoothly and normally.
  - (3) Clean off the exhaust residue from helicopter.
  - (4) Check all movable parts, such as gears, ball links, belt, etc. for unusual wear.
- (1) 每次飛行後必須詳細的檢查機體的各部位螺絲有無鬆動情形，若發生鬆動必須確實鎖緊再進行下飛行。
  - (2) 每次飛行後檢查每一個轉動部位（含單頭連接桿）均能順暢的運作。
  - (3) 直昇機本體必須確實的清潔。
  - (4) 檢查每一個動作部位，齒輪、球頭、皮帶等是否有不正常磨損。

## Regular Maintenance / 定期保養事項

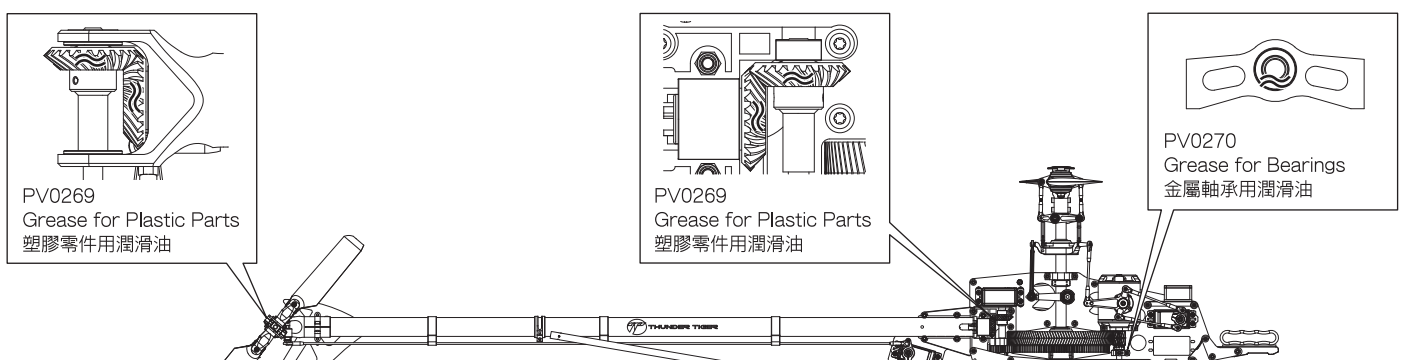
### WARNING / 警告！

Lack for regular maintenance or apply a wrong type of grease/oil onto the parts may cause damage and model crash, which may cause series injury or death if the model hits people or property.

疏於定期保養，或塗抹不正確類型的潤滑油皆可能損壞零件造成摔機，因而導致人員受傷或財產損失。

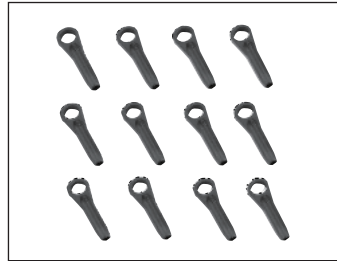
For safety, to check and maintain the parts every 5~10 flights is strongly recommended. Please re-apply the proper grease or oil onto the bevel bears and bearings as the illustrations.

強烈建議您每飛行5~10趟需執行下列定期保養事項。請依圖示說明重新在傘齒及軸承上塗抹潤滑油。

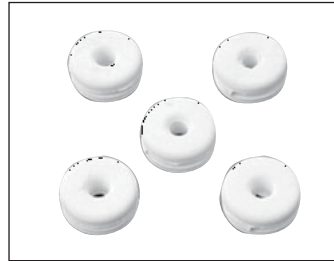




3892  
CARBON TAIL BLADE 105mm  
105碳纖尾旋翼



PV0041  
BALL LINK, R30  
單頭連接桿



PV0062  
BODY MOUNT RUBBER, R30  
機身固定墊圈組



PV0177-1  
ROTOR BOLT  
螺絲組



PV0268  
LOCTITE, #262  
螺絲防鬆劑(紅), #262



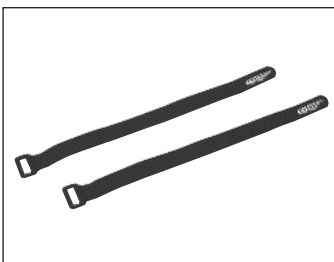
PV0270  
THRUST BEARING GREASE  
止推軸承潤滑脂



PV0407  
TAIL PITCH SLIDER  
尾旋翼滑座, R60 / R90



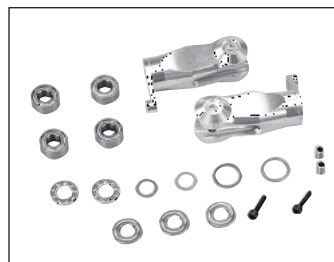
PV0425  
TAIL CONTROL BUSHING  
尾旋翼控制軸套



PV0572  
VELCRO  
魔鬼氈組



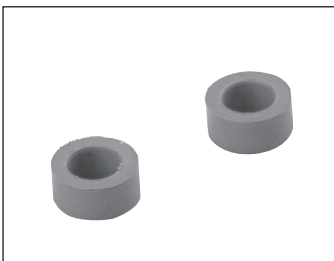
PV0589  
CONTROL ARM BASE  
控制臂固定座



PV0595  
METAL TAIL GRIP SET  
金屬尾旋翼轉座組



PV0619  
3D DAMPER SET, R90 3D  
3D避震墊圈組, R90 3D



PV0620  
3D INNER DAMPER, R90 3D  
3D內避震墊圈, R90 3D



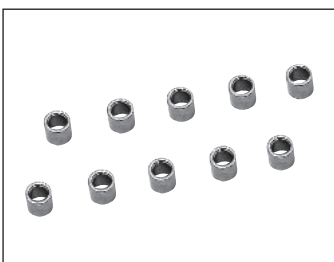
PV0621  
3D OUTER DAMPER, R90 3D  
3D外避震墊圈, R90 3D



PV0681  
MAIN HUB BOLT  
主旋翼頭固定螺絲



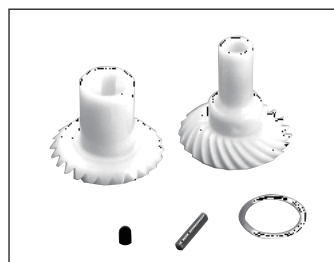
PV0760  
LOCTITE, #648  
金屬防鬆劑(綠), #648



PV0788  
COLLAR, d2xD3x2.7t  
軸環, d2xD3x2.7t



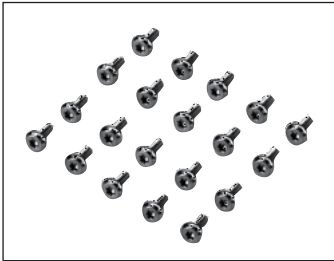
PV1379  
LINKAGE BALL SCREW  
球頭螺絲



PV1541  
REAR T. H. BEVEL GEAR SET  
尾傘齒輪組



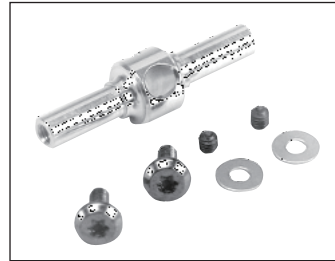
PV1564  
METAL ELEVATOR WASHER MOUNT SET  
金屬控制臂軸承座



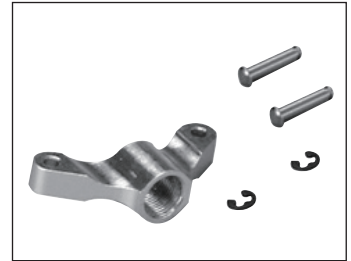
PV1577  
TORX SCREW, M3x8  
星型低頭螺絲, M3x8



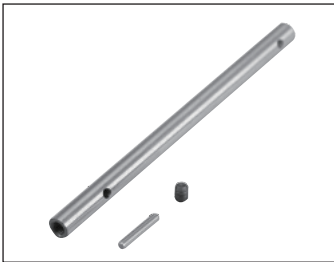
PV1582  
METAL RUD.SERVO HORN SET  
金屬尾舵伺服機擺臂



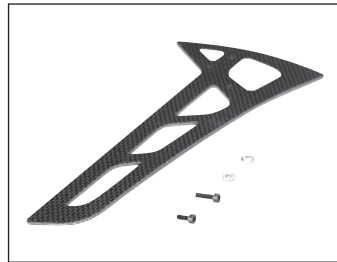
PV1593  
METAL TAIL ROTOR HUB  
金屬尾旋翼座



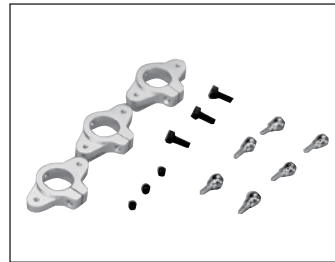
PV1595  
METAL T.PITCH CON. FORK  
金屬尾旋翼控制座



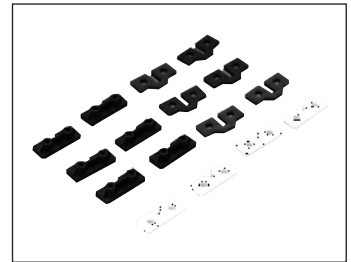
PV1596  
TAIL OUTPUT SHAFT  
尾旋翼軸



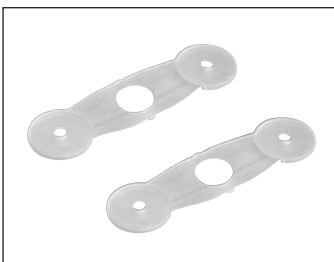
PV1600-1  
CARBON VERTICAL FIN  
碳纖維垂直安定面



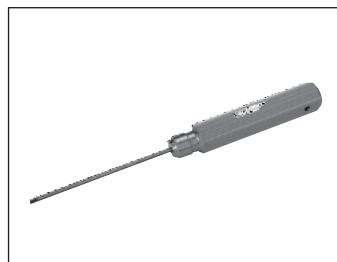
PV1603  
METAL CYC.SERVO HORN SET  
金屬伺服機擺臂



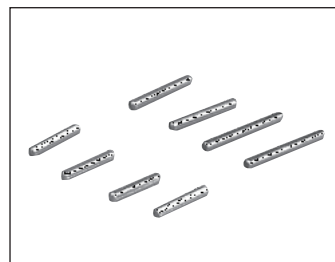
PV1604  
SERVO MOUNTING SET  
伺服機墊片組



PV1605  
MAIN ROTOR GRIP SPACER  
主旋翼轉座墊片



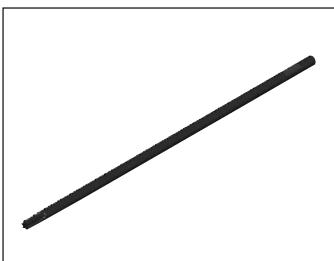
PV1607  
TORX SCREW DRIVER  
星型工具組



PV1612  
PIN SET  
固定銷組



PV1623-F  
SERVO HORN COLLAR FUTABA  
伺服機擺臂軸套(FUTABA)



PV1629  
TORX DRIVER BIT  
星型圓棒



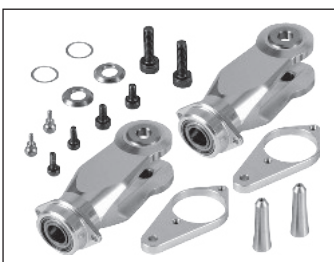
PV1633  
SPINDLE  
固定軸



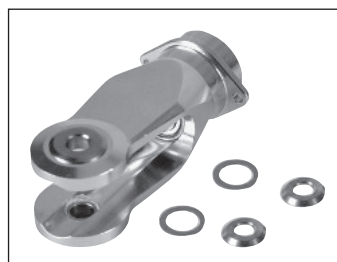
PV1634  
HEAD BUTTON  
煞車盤



PV1635  
METAL FBL MAIN ROTOR HUB  
無平衡翼金屬主旋翼固定座



PV6047  
METAL FBL ROTOR GRIP SET-V2  
金屬主旋翼轉座組(無平衡翼)-V2



PV1637  
METAL ROTOR GRIP(BODY)  
金屬主旋翼轉座(本體)



PV0580  
METAL ROTOR GRIP LEVER  
無平衡翼金屬旋翼轉座搖臂



PV6048  
METAL MAIN ROTOR GRIP POST-V2  
金屬主旋翼轉座支柱-V2





PV1640  
HARDENED MAIN SHAFT (12MM)  
主軸



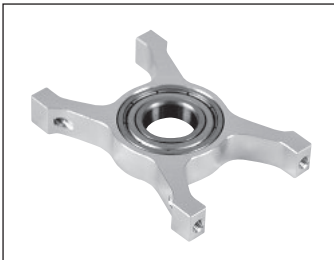
PV6049  
METAL FBL CONTROL LEVER-V2  
金屬無平衡翼控制搖臂-V2



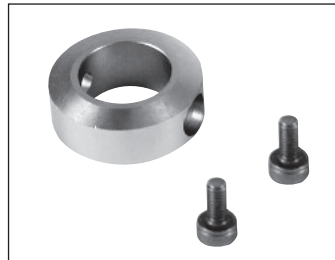
PV1643  
FBL WASHOUT LINKAGE  
無平衡翼連接座



PV1644  
METAL SWASHPLATE  
金屬十字盤組



PV1645  
METAL MAIN SHAFT BRG BLOCK  
金屬主軸軸承座組



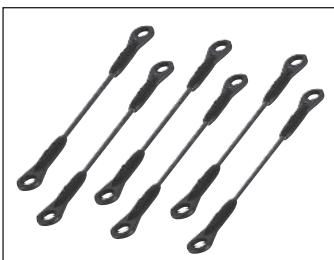
PV1646  
MAIN SHAFT LOCK RING  
主軸止檔



PV1647  
FBL LINKAGE ROD SET  
無平衡翼連接桿組



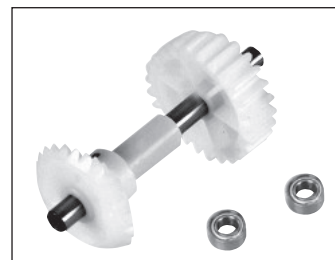
PV1648  
LINKAGE ROD - 68.57mm  
一體式連接桿 - 68.57mm



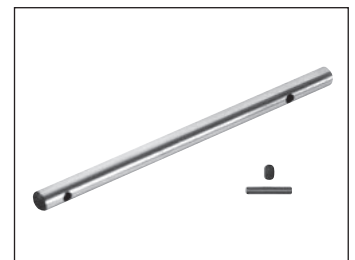
PV1649  
LINKAGE ROD - 70.95mm  
一體式連接桿組 - 70.95mm



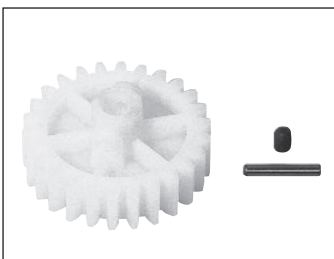
PV1650  
TAIL BOOM BRACKET  
機身尾管固定座



PV1651  
TAIL DRIVE GEAR SET  
尾驅動齒輪組



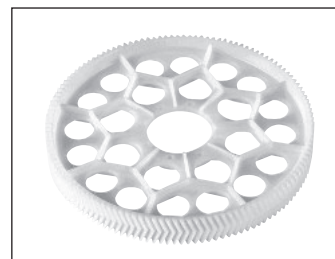
PV1652  
TAIL DRIVE GEAR SHAFT  
尾驅動齒輪軸



PV1653  
TAIL DRIVE GEAR, 26T  
尾驅動齒輪, 26T



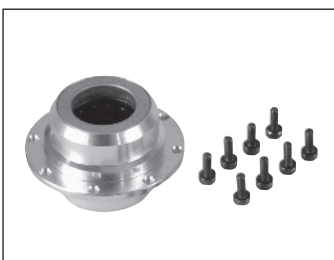
PV1655  
SERVO BRACKET  
伺服機固定座



PV1656  
HERRINGBONE MAIN GEAR, 128T  
人字形主齒輪, 128T



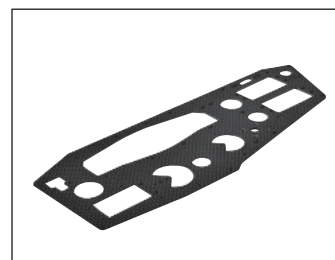
PV1657  
TAIL DRIVE PULLEY, 111T  
尾驅動輪, 111T



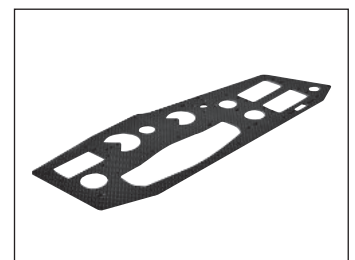
PV1658  
ONE WAY CLUTCH HOUSING  
單向離合器座



PV1659  
ONE WAY BEARING SHAFT  
單向離合器軸



PV1660  
SIDE FRAME-L(1)  
碳纖側板 - 左(單片)



PV1661  
SIDE FRAME-R(1)  
碳纖側板 - 右(單片)



PV1663  
METAL CONTROL ARM SET - L  
金屬側轉控制臂組 - 左



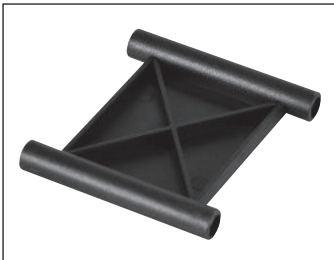
PV1664  
METAL CONTROL ARM SET - R  
金屬側轉控制臂組 - 右



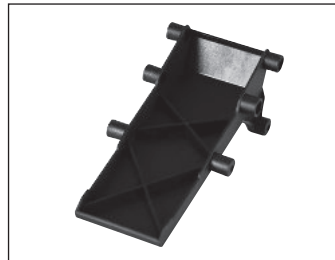
PV1665  
METAL ELEVATOR CONTROL ARM  
金屬升降舵控制臂組



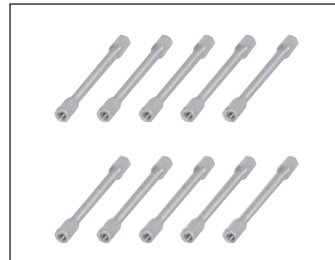
PV1667  
ELEVATOR CONTROL ARM LINK  
升降舵連接座



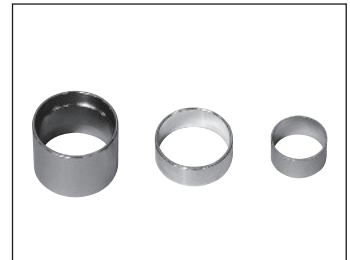
PV1668  
GYRO TRAY  
陀螺儀座



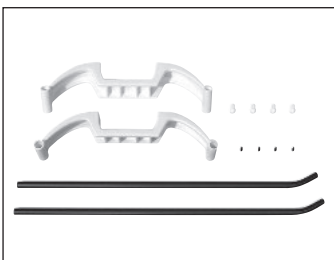
PV1669  
RADIO TRAY  
接收機承座



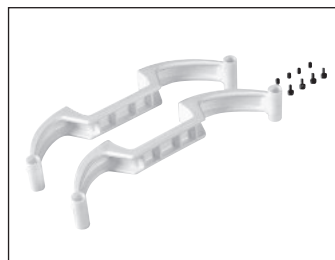
PV1670  
METAL FRAME SPACER  
金屬側板支柱



PV1671  
COLLAR SET  
軸環組



PV1672  
LANDING SKID SET  
腳架組



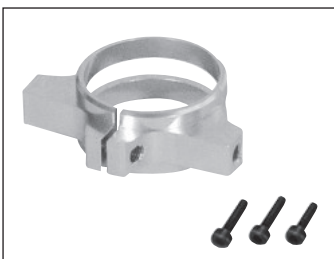
PV1673  
LANDING SKID BRACE  
腳架



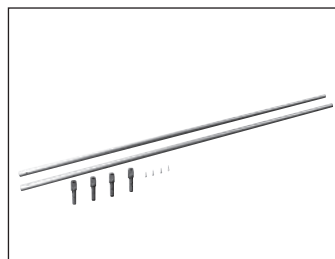
PV1674  
TAIL DRIVE SHAFT BEARING SET  
驅動軸輔助軸套



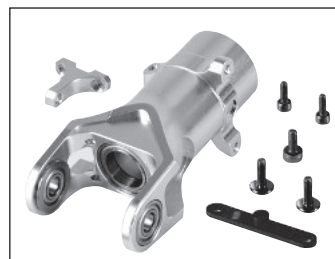
PV1675  
ROD GUIDE SET  
推拉桿固定環



PV1676  
METAL TAIL SUPPORT BRACKET  
金屬尾管固定座



PV1677  
TAIL SUPPORT ROD SET  
尾管支撐架組



PV1680  
METAL TAIL CASE SET  
金屬尾座



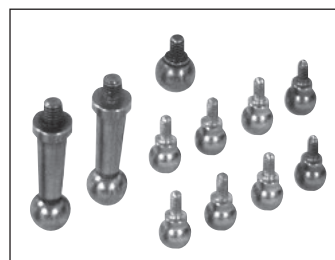
PV1681  
TAIL PITCH CONTROL LEVER  
尾旋翼控制桿



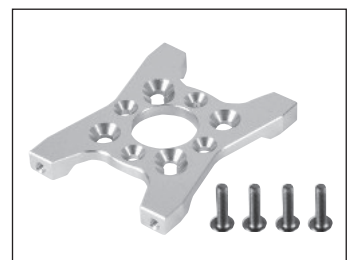
PV1683  
FIBERGLASS CANOPY  
玻纖機殼



PV1684  
CANOPY RETAINING POST  
機身固定柱



PV1688  
LINK BALL SET  
球頭組



PV1690  
METAL MOTOR MOUNT  
馬達固定座



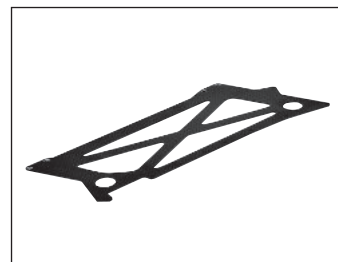
PV1692  
MOTOR PINION, 13T  
馬達齒輪, 13T



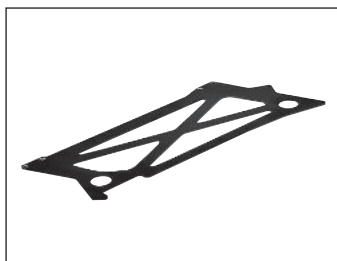
PV1693  
MOTOR PINION BLOCK(6MM)  
馬達齒輪固定座



PV1694  
SKID BRACKET  
支撐架固定座



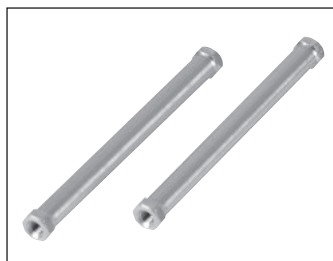
PV1695  
LOWER CARBON FRAME - L  
碳纖下側板 - 左



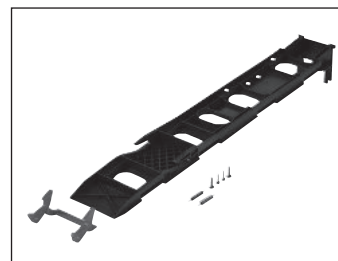
PV1696  
LOWER CARBON FRAME - R  
碳纖下側板 - 右



PV1697  
RADIO TRAY BRACKET  
接收機承座補強板



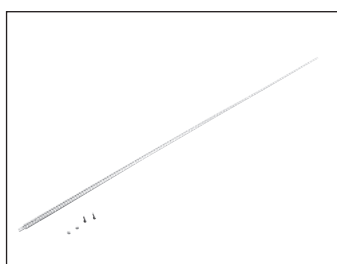
PV1698  
BATTERY POST  
電池盒支柱



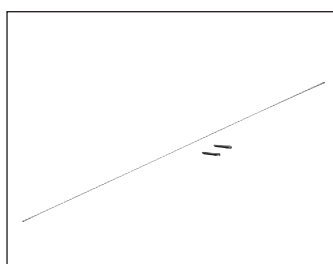
PV1699  
BATTERY TRAY SET  
電池座組




PV1754  
TAIL BOOM  
尾管






PV1755  
METAL TAIL DRIVE SHAFT SET  
金屬尾驅動軸組




PV1756  
TAIL CONTROL ROD  
尾推拉桿

	No.	DESCRIPTION	中文名稱
	PD1244	LOCK NUT, M3	止鬆螺帽, M3
	PV0235	LOCK NUT, M2.5	止鬆螺帽, M2.5

	No.	DESCRIPTION	中文名稱
	PD1598	SET SCREW, M4x4	無頭內六角螺絲, M4x4
	PV0225	SET SCREW, M3x4	無頭內六角螺絲, M3x4
	PV0226	SET SCREW, M4x3	無頭內六角螺絲, M4x3
	PV0227	SET SCREW, M4x5	無頭內六角螺絲, M4x5
	PV0780	SET SCREW, M3x3	無頭內六角螺絲, M3x3

	No.	DESCRIPTION	中文名稱
	PV0046	BALL BEARING, d8xD12xW3.5	軸承組, d8xD12xW3.5
	PV0048	BALL BEARING, d4xD8xW3	軸承組, d4xD8xW3
	PV0052	BALL BEARING, d6xD10xW3	軸承組, d6xD10xW3
	PV0059	BALL BEARING, d5xD11xW5	軸承組, d5xD11xW5
	PV0170	BALL BEARING, d12xD24xW6	軸承組, d12xD24xW6
	PV0175	BALL BEARING, d8xD16xW5	軸承組, d8xD16xW5
	PV0176	BALL BEARING, d4xD7xW2.5	軸承組, d4xD7xW2.5
	PV0197	BALL BEARING, d12xD18xW4	軸承組, d12xD18xW4
	PV0200	BALL BEARING, d5xD10xW4	軸承組, d5xD10xW4
	PV0203	BALL BEARING, d6xD15xW5	軸承組, d6xD15xW5
	PV0373	BALL BEARING, d6xD12xW4	軸承組, d6xD12xW4
	PV0919	BALL BEARING, d3xD6xW2.5	軸承組, d3xD6xW2.5
	PV1610	BALL BEARING, d2.5xD7xW3.5	軸承組, d2.5xD7xW3.5
	PV1686	BALL BEARING, d25xD37xW7/C2	軸承組, d25xD37xW7/C2
		PV0172	THRUST BRG, d8xD16xW5
PV1432		THRUST BRG, d5xD10xW4	止推軸承, d5xD10xW4
	PV1611	FLANGE BEARING, d5xD13xW4	凸緣軸承, d5xD13xW4

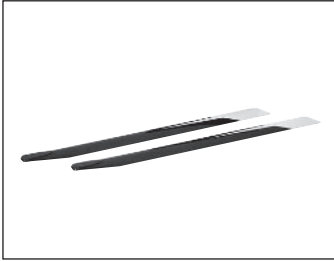
	No.	DESCRIPTION	中文名稱
	PV0209	WASHER, d4xD11xt1.7	墊圈, d4xD11xt1.7
	PV0210	WASHER, d3xD8xt1.4	墊圈, d3xD8xt1.4
	PV0271	WASHER, d3xD5xt0.5	墊片, d3xD5xt0.5
	PV1627	THRUST COLLAR SET	推力軸環組

	No.	DESCRIPTION	中文名稱
	PV0212	SOCKET SCREW, M3x10	內六角螺絲, M3x10
	PV0213	SOCKET SCREW, M3x12	內六角螺絲, M3x12
	PV0214	SOCKET SCREW, M3x14	內六角螺絲, M3x14
	PV0215	SOCKET SCREW, M3x18	內六角螺絲, M3x18
	PV0216	SOCKET SCREW, M3x25	內六角螺絲, M3x25
	PV0218	SOCKET SCREW, M3x8	內六角螺絲, M3x8
	PV0220	SOCKET SCREW, M4x12	內六角螺絲, M4x12
	PV0223	SOCKET SCREW, M4x8	內六角螺絲, M4x8
	PV0256	SOCKET SCREW, M3x6	內六角螺絲, M3x6
	PV0637	SOCKET SCREW, M2.5x12	內六角螺絲, M2.5x12
	PV0777	SOCKET SCREW, M2x8	內六角螺絲, M2x8

	No.	DESCRIPTION	中文名稱
	PV0232	SELF TAPPING SCREW, M2x8	十字自攻螺絲, M2x8
	PV0261	SELF TAPPING SCREW, M2.6x14	十字自攻螺絲, M2.6x14



## OPTIONAL PARTS / 改裝零件包



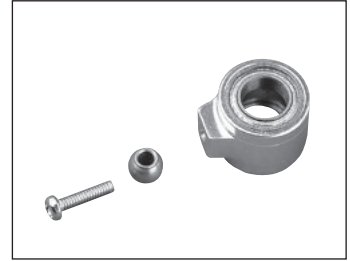
3917  
FBL CARBON BLADE, 690mm  
無平衡翼碳纖彩獎, 690mm



PV0269  
PLASTIC GEAR GREASE  
塑膠軸承潤滑油脂(白色)



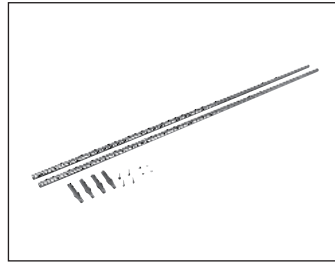
PV0404  
70° FLAP DAMPER  
70度避震墊圈



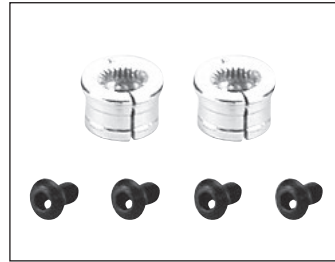
PV0457  
METAL TAIL PITCH SLIDER  
金屬尾旋翼滑座組



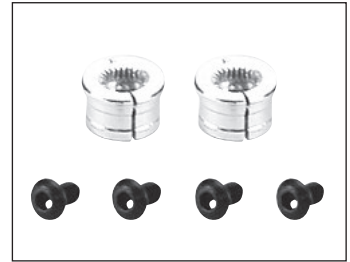
PV0517  
ONEWAY BEARING GREASE  
單向軸承油脂



PV1590  
CARBON TAIL SUPPORT SET  
碳纖尾管支撐架組



PV1623-J  
SERVO HORN COLLAR(JR)  
伺服機擺臂軸套(JR)



PV1623-H  
SERVO HORN COLLAR(HITEC)  
伺服機擺臂軸套(HITEC)



PV1691  
MOTOR PINION - 14T  
馬達齒輪(14T)

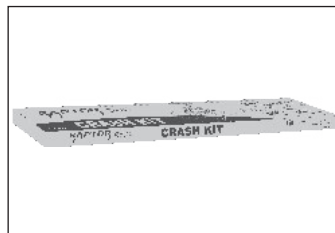


PV1757  
MOTOR PINION - 12T  
馬達齒輪(12T)

## ELECTRONIC DEVICE & ACCESSORY / 電子設備及配件



2389  
BL MOTOR OBL50/05-50H,530KV  
無刷馬達 OBL50/05-50H,530KV



3941  
RAPTOR E700 CRASH KIT  
翼手龍 E700 維修套件



8086  
POWER MONITOR  
即時電量計



8088  
GT5.1, 3-AXIS GYRO  
GT5.1, 3軸陀螺儀



8127  
DS1015, DIGITAL SERVO  
DS1015, 數位伺服機

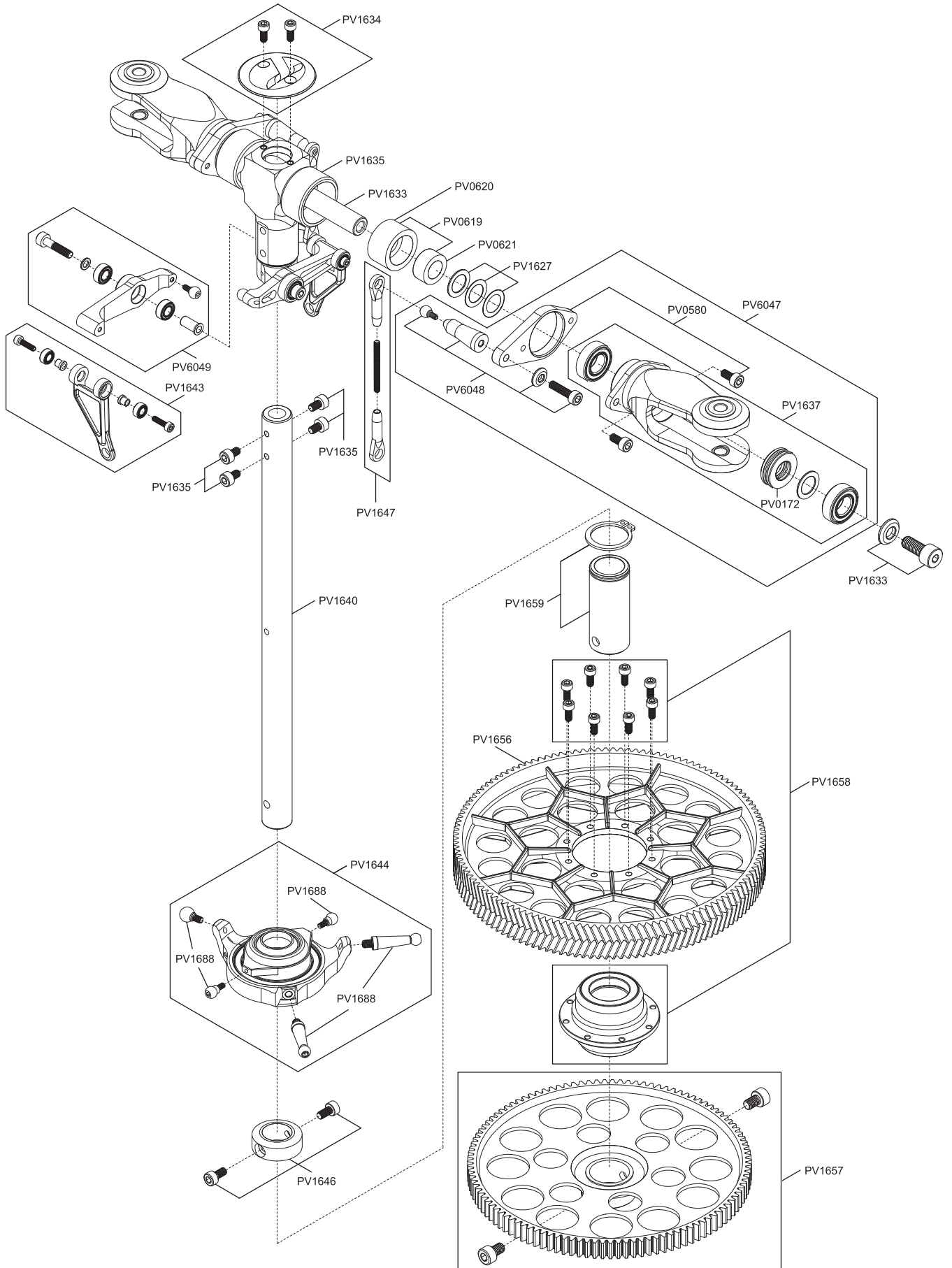


8158  
DSHV0507nT, HV DIGITAL  
RUDDER SERVO (NARROW BAND)  
DSHV0507nT, 高壓尾舵數位伺服機(窄頻)



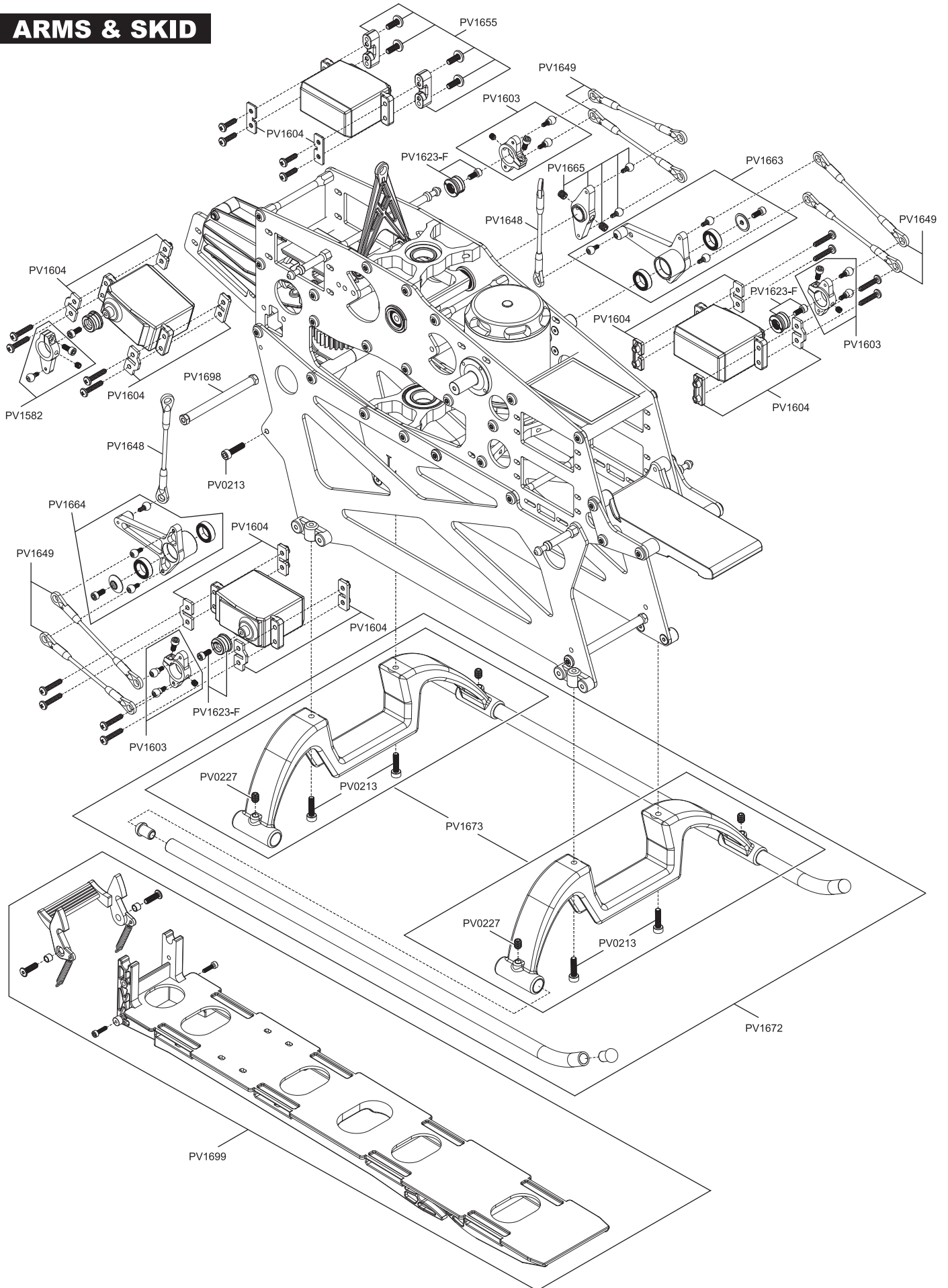
8169  
DSHV0818T, HV DIGITAL SERVO  
DSHV0818T, 高壓數位伺服機

## MAIN ROTOR HEAD





## ARMS & SKID





**TAIL UNIT**

