

Hurricane 255 颶風

ASSEMBLY INSTRUCTION
說明書



Specification 規格資料

Overall length : 488 mm (including cabin & canopy)

全 長 : 488 mm (含艙罩)

Main rotor diameter : 550 mm

主旋翼面直徑 : 550 mm

Tail rotor diameter : 110 mm

尾旋翼面直徑 : 110 mm

Motor : KV3400 brushless motor (included)

馬 達 : 3400 KV (內含)

ESC : 18A Micro ESC (included)

電子變速器 : 18A迷你ESC (內含)

Main rotor blades : 250mm CF Blades (included)

主 旋 翼 : 碳纖維槳 250 mm (內含)

Battery : Li-Po 11.1V 900mah (NO : 926081)

電 池 : Li-Po 11.1V 900mah (料號:926081)

Gyro : GU210 Heading Hold Gyro (NO : 924210)

陀 螺 儀 : GU-210機頭鎖定陀螺儀 (料號:924210)

Flying Weight : 360g ± 5 % (Depending on Equipment Used)

飛 行 重 量 : 360g ± 5% (依電裝配置不同而定)

Flying duration : 5-6 minutes with 11.1v/900mah Li-Po battery

飛 行 時 間 : 5 ~ 6 分鐘

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Thank you for purchasing GAUI "Hurricane255" product. As the industry leader and creator of the 255-class RC helicopters, we would like to proudly introduce this ultimate machine to those who love high performance and 3D capable ultra-micro RC helicopter, Please read all instructions thoroughly before operation to get the best flight performance. Part or parts missing from this kit must be reported within 60 days of purchase. No part or parts will be sent under warranty without proof of purchase. To receive part or parts under warranty, the service center must receive a proof of purchase and/or the defective part or parts. Should you find a defective or missing part, contact the authorized GAUI distributor whom you bought it from. Under no circumstances can a dealer or distributor accept return of a kit if assembly has started. This warranty does not cover any components damaged by use or modification. It is welcome that contact <gaui@gaui.com.tw> for more details about GAUI distributors.

感謝你選購泰世科技"颶風255"產品，本公司自2005年推出全球首架100級3D電動直升機迄今，致力於微型3D電動直升機的性能提升，現今我們很榮幸能向您介紹這款最佳性能的微型3D電動直升機，在進行組裝及操作之前，請務必詳細閱讀本說明書。在本說明書的介紹下您將會知道如何組裝及設定您的 颶風255 並獲致穩定及3D性能兼具的飛行特性。產品拆封前請檢視商品內容是否與標示項目及數量相符，若有零件短少或內容物與標示不同，請於購買日起60天內洽詢原購買之經銷商。請注意!! 產品拆封後之短少或不符，以及消費者使用不當或自行改裝產品所造成的瑕疵或損壞，將無法享有保固維修服務。任何保固維修服務之要求，需透過泰世科技公司授權之正式經銷商或其認可之銷售通路確認後方可進行。關於產品使用及購買之相關服務請洽詢泰世科技當地經銷商或歡迎來信詢問，本公司郵件信箱 <gaui@gaui.com.tw>。

Safety Precautions 安全注意事項

1. The "Hurricane255" product is not a toy. It is a high performance model product. It is important to familiarize yourself with the model, its manual, and its construction before assembly or operation. Improper operations may cause personal and/or property damage. Beginner's operating under the supervision of the experienced pilots is necessary.
 2. Do not operate model products in rain, on public roads, near crowds, near airport, or near areas with restricted radio operation.
 3. This product, its parts, and its construction tools can be possibly harmful to your health. Always exercise extreme caution when assembling and/or operating this product. Do not touch any part of model that rotates.
 4. Use an adequate charger for the batteries and follow the instruction correctly, It is highly recommended that use the GAUI electronic gears for this helicopter,.
 5. By the act of assembling or operating this product, the user accepts all resulting liability. GAUI and its distributor have no control over damage resulting from shipping, improper building materials, construction, or improper usage. If the buyer is not prepared to accept this liability, then he/she return this product in new, unassembled, and unused condition to the place of purchase.
1. 颶風255遙控直升機是一高性能飛行產品而非玩具。在組裝及操作之前請充分了解產品內容及其使用注意事項、不當使用及組裝疏失都可能造成操作者及週遭人員嚴重傷害或財物損失。本產品是提供給有經驗的使用者於各合法遙控飛行場飛行，初學者請協同技術人員在旁指導，以確保飛行安全。
 2. 請勿在雨天及天候不佳的狀況下飛行，操作時應遠離道路、機場、及其他禁止遙控飛行器使用之區域。
 3. 測試時請勿接觸產品上的各項旋轉物件，飛行時應遠離運轉中的機體。
 4. 使用原廠電池或其他原廠建議規格之充電器、電池及電子產品並依其指示使用以確保安全。
 5. 產品組裝前請注意!! 使用者對產品開始組裝後所之相關責任及其及疏忽所造成的意外事故須負完全責任。本公司及其經銷商在產品售出後，對於使用者的組裝疏失、運送過程、維修不良和操作不當所發生的意外事故均不負任何責任。

1. Beginner's operating under the supervision of the experienced pilots is necessary. It is highly recommended that inspect the mechanism and check the setting of transmitter by experienced pilots for first flight.
2. Check your radio frequency with the proper operating frequency of the area or country. Always check if there are any modelers operating on the same frequency as you are. Also, check your radio for proper operation and make sure that the power of the transmitter and receiver are sufficient before flight.
3. Make sure the mechanism of the helicopter operates smoothly without interference with each other.
4. Make sure the operating direction of the servos are correct and the servo gears work fine.
5. Make sure the connectors of the electronic gears will not be disconnected due to the vibration.
6. Make sure the parts was assembled correctly and the screws are tighten properly. Inspect the helicopter after flight to find if there is any part was worn or broken, replace the worn parts and ball links immediately to prevent a control failure.
7. If the Main blades or the tail blades were impacted during flight, land the helicopter immediately and check the blades for any damage, the blades of main or tail should be replaced even if there is only slightly impact. The 2mm machine screws which tightened the main grips and spindle shaft should be replaced after each impact of main blades.

1. 初學者首次飛行前請由有經驗的使用者先行檢查各機構動作及遙控器設定是否正確，並協同有經驗的使用者完成飛行調整以確保飛行安全。
2. 確認遙控器頻率是否與他人相同以避免干擾，並應在動力系統連接電池前先確認遙控器功能是否正常，並確定遙控器及接收機電量足夠該次飛行。
3. 確認各機構動作是否順暢且無干涉現象。
4. 確認伺服機動作方向是否正確、伺服機齒輪是否有故障或異常。
5. 確認各電子設備接頭是否接合確實，避免飛行時因震動而鬆脫。
6. 確認各裝備及零件已正確按裝，螺絲、螺帽、連桿並無缺少或鬆脫，飛行後另須確認各部零件是否有磨損或破裂，過鬆的連桿或破損零件應先換新，以避免失控的危險。
7. 若飛行中主旋翼或尾旋翼有碰觸地面，應立即降落並檢查機件有無損傷，旋翼產品即使是輕微碰撞亦應立即更新以確保安全，連接主旋翼夾頭之2mm橫軸螺絲在每次主旋翼的撞擊事故後，即使是輕微的撞擊也應立即更換。

Notes for Assembling 組裝注意事項

Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual. Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.

零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。

IMPORTANT 請注意



Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

Please note the following caution symbols during assembly
組裝維修時請注意以下 警示圖案。



CA
瞬間膠

CA- use CA adhesive (right amount use)
CA-以瞬間膠固定(適量使用)



Thread Lock
螺絲止鬆劑

Thread Lock - Use the thread-lock adhesive (right amount use)
螺絲止鬆劑-使用螺絲止鬆劑(適量使用)

Code Letter/Number (#A,#B,#C...,1,2,3...) used in each figure indicates the specific part in that figure only, please refer to the parts list for the actual item numbers. Code Letter/Number is only for the reference in assembly.

每一個插圖中的代號(#A, #B, #C...1, 2, 3...) 僅代表該插圖中的某一零件，同一插圖中若有相同尺寸之零件，會以相同代號代表，插圖代號僅供組裝參考用。

- | | | | | | | | | | |
|---|---|---|---|---|----|----|----|----|----|
| ① | ② | ③ | ④ | ⑤ | #A | #B | #C | #D | #E |
| ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | #F | #I | #J | #G | #H |

Make sure to assemble the parts as shown in figure above, incomplete/incorrect assembly may cause the control failure during flight.
以上圖示，於組裝時請確實注意，避免組裝後試飛造成失控零件鬆脫等情況發生。

Mark 類別	indication 標示 (mm)
B-Bearing B-軸承	B(Dia. in)x(Dia. out)x(Thickness) B(內徑)X(外徑)X(厚度)
Ø-Tap Screw Ø-粗牙螺絲	Ø(Dia. out)x(Length) Ø(外徑)X(長度)
M-Machine Screw M-公制螺絲	M(Dia. out)x(Length) M(外徑)X(長度)
P-tube P-柱狀體	P(Dia. in)x(Dia. out)x(Length) P(內徑)X(外徑)X(長度)
Pillar P-柱狀體	P(Dia. out)x(Length) P(外徑)X(長度)X(實心柱)
N-Nut N-螺母	N(Dia. in)x(Width) L-Lock nut N(外徑)X(總高)
W-Washer W-華司	W(Dia. in)xDia. out)x(Thickness) W(內徑)X(外徑)X(厚度)

Specification of Screws (1:1) 螺絲規格對照圖(1:1)

<p>M2.0 Socket head machine screws M2六角螺絲</p>	<p>M1.4 Machine screws M1.4螺絲</p>	<p>Ø1.4 Self tapping screws Ø1.4螺絲</p>	<p>Ø2.0 Self tapping screws Ø2螺絲</p>	<p>M2.0 Tiny head machine screws M2小頭螺絲</p>	<p>M2.0 Machine screw M2螺絲</p>
<p>Linkage rods 拉桿</p>				<p>M2.0 Socket set screws 止付螺絲</p>	<p>Washer 華司</p>

IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

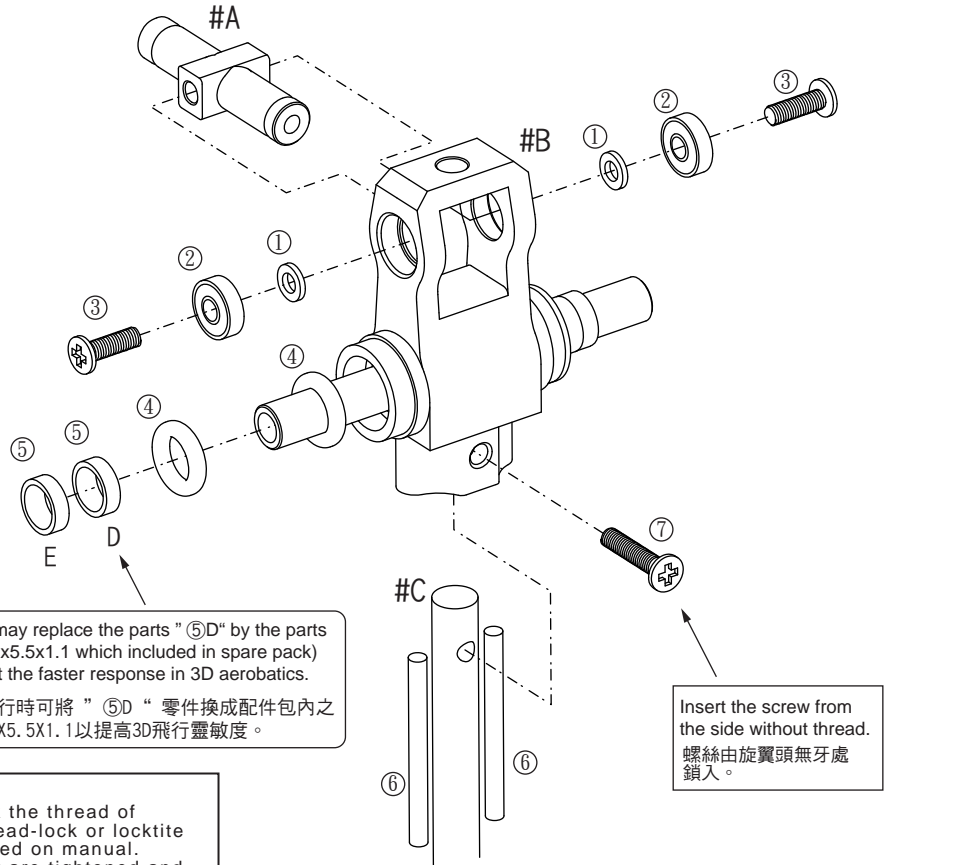
- #A #203647 CNC See-Saw Spindle
CNC平衡桿軸
- #B #207001 Spindle shafts Pack
主旋翼頭組
- #C #203222 Long Main Shafts Pack
長主軸包
- ① W1.4X2.5X0.4 Washer
華司
- ② B1.5X4X1.35 Bearing
軸承
- ③ M1.4X3 Machine Screw
公制螺絲
- ④ O ring O 型環
橫軸O型環
- ⑤ P3.1X3.6X1 Tube
柱狀體
- ⑥ P1.2X13.5 Pillar
柱狀體
- ⑦ M1.4X6 Machine Screw
公制螺絲

You may replace the parts "⑤D" by the parts (P3.1x5.5x1.1 which included in spare pack) to get the faster response in 3D aerobatics.
3D飛行時可將 "⑤D" 零件換成配件包內之 P3.1X5.5X1.1 以提高3D飛行靈敏度。

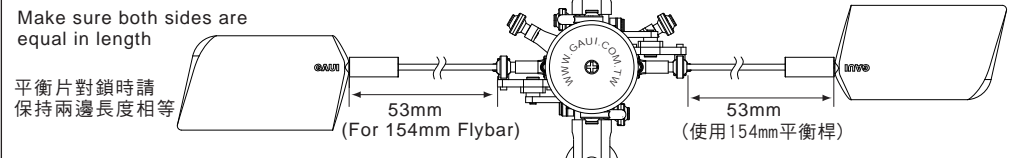
Insert the screw from the side without thread.
螺絲由旋翼頭無牙處鎖入。

Note of Assembling:
Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual.
Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.
組裝注意事項：
零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。

Oil the part if it does not operate smoothly.
機件如有不順暢請適度添加潤滑油。



- #A #203648 CNC Stop Plate
CNC煞車盤
- #B #203642 CNC See-Saw Set
CNC平衡座組
- #C #207008 Flybars Pack(154)
平衡桿包 (154)
- #D #203241 Flybar Adaptors Pack
平衡鏈組
- #E #203116 High Performance Stabilizer Blades Pack
高性能平衡片組
- #F #203640 CNC Mixing Arms
CNC混控臂組
- #G #207000 CNC Main Grips set
CNC主旋翼夾頭組
- ① M2X8.4 Tiny head machine screws
公制小頭螺絲
- ② M2X2 Socket set screws
止付螺絲
- ③ M1.4X6 Machine Screw
公制螺絲
- ④ W1.4X2.5X0.4 Washer
華司
- ⑤ B1.5X4X1.35 Bearing
軸承
- ⑥ M1.4X6 Machine Screw
公制螺絲
- ⑦ W3.1X4.6X1 Washer
華司
- ⑧ B3X6X2.5 Bearing
軸承
- ⑨ M2X5 Socket head machine screws
公制六角螺絲



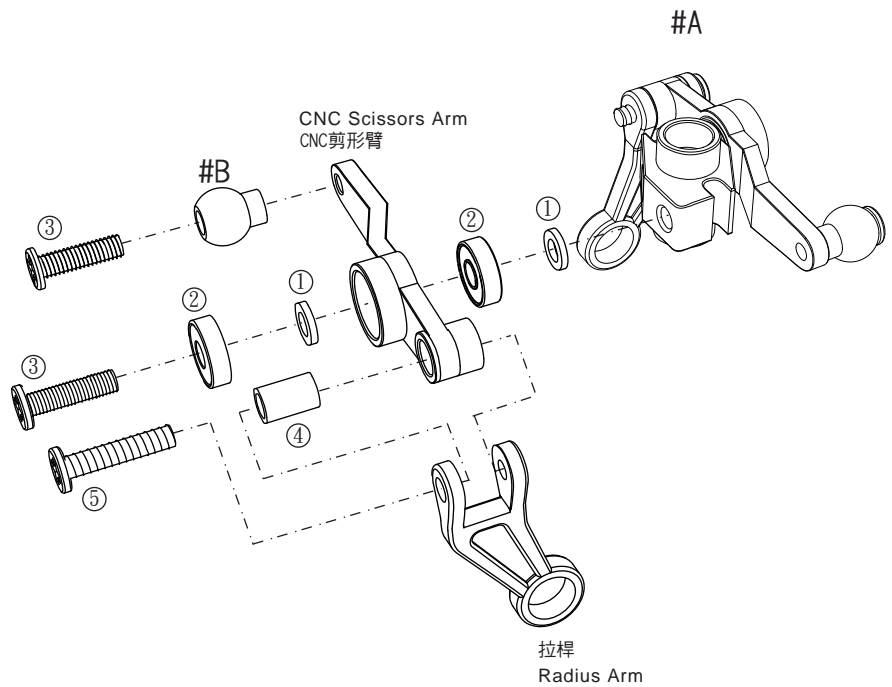
IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

- #A #203643** CNC Washout Base & Arms Assembly
CNC剪形臂及相位器組
- #B #883503** Metal Balls with Stand (3.5mm)
金屬球頭組3.5mm(長)
- ① W1.4X2.5X0.4 Washer 華司
 - ② B1.5X4X1.35 Bearing 軸承
 - ③ M1.4X5 Machine Screw 公制螺絲
 - ④ P1.4X2X3 Tube 柱狀體
 - ⑤ Ø1.4X6 Self tapping screws 粗牙螺絲

Install the spacer ④ (P1.4X2X3) before assemble the linkage.
請先將 4 號 (P1.4X2X3) 置入剪形臂內再將拉桿合上後再依序鎖上。

Note of Assembling:
Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual. Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.
組裝注意事項：
零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。



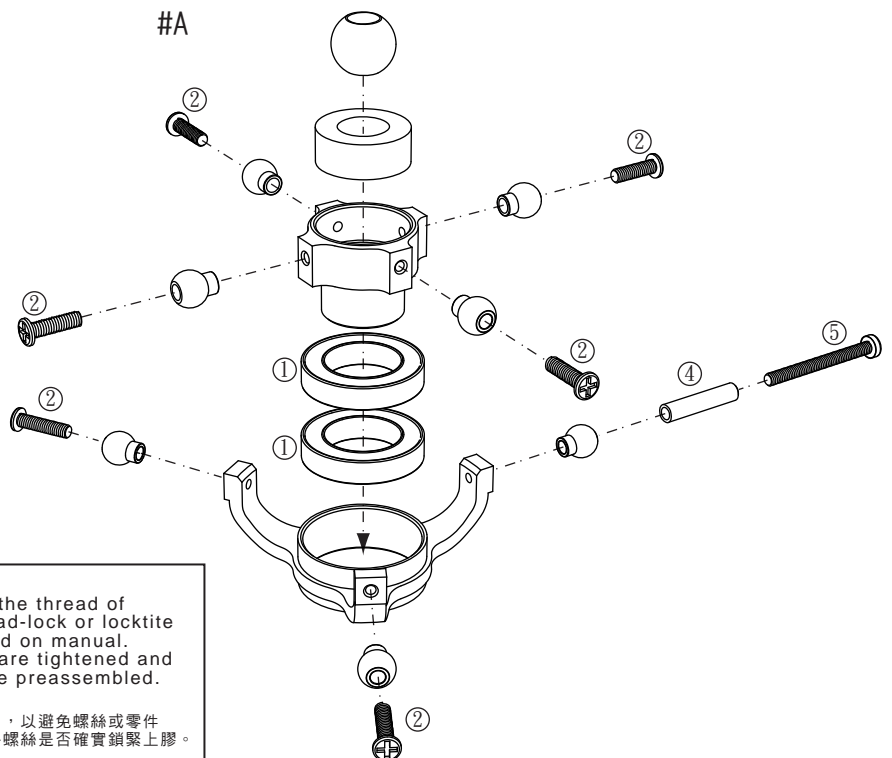
Oil the part if it does not operate smoothly.
機件如有不順暢請適度添加潤滑油。

IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

- #A #203641** CNC Swashplate Assembly
CNC十字盤組
- ① B8X12X2.5 Bearing 軸承
 - ② M1.4X6 Machine Screw 公制螺絲
 - ③ P1.4X2X9 Tube 柱狀體
 - ④ M1.4X15 Machine Screw 公制螺絲

Note of Assembling:
Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual. Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.
組裝注意事項：
零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。



IMPORTANT 請注意

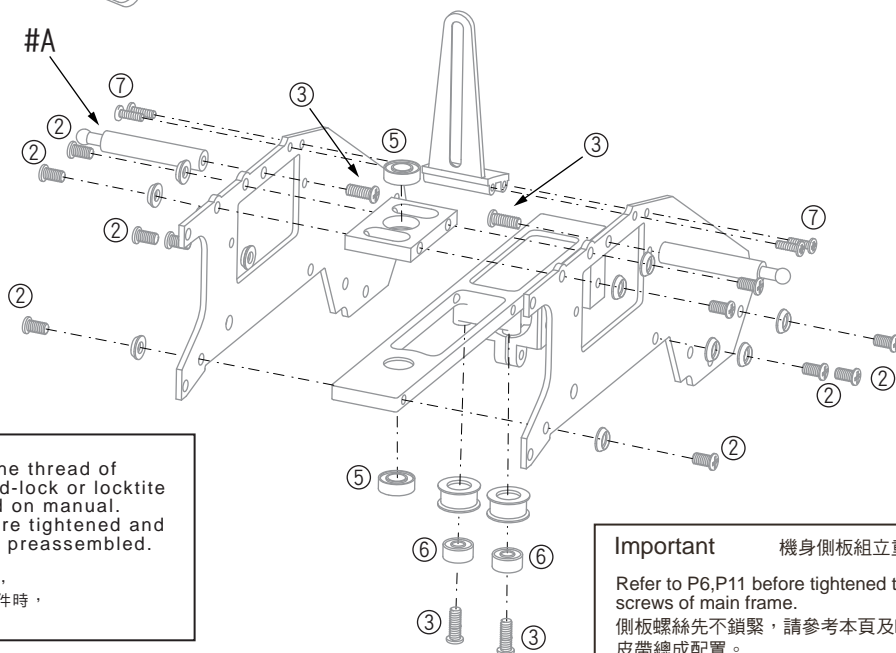
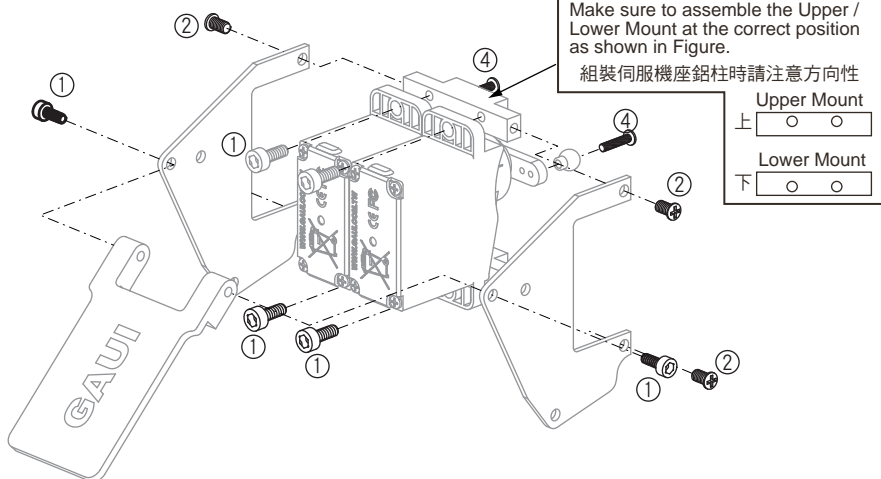
Use the thread-lock adhesive if the screws are tightened to the metal parts.
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Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

⑤ Use the locktite adhesive to adhere both bearings to bearing mounts.
用缺氣膠固定上下兩個軸承，注意勿沾黏到軸承內環

#A	#207003	H255 Canopy Posts 颶風255艙罩支柱
①	M2X5	Socket head machine screws 公制六角螺絲
②	M2x3.2	Tiny head machine screws 公制小頭螺絲
③	M2X4.6	Tiny head machine screws 公制小頭螺絲
④	M1.4X6	Machine Screws 公制螺絲
⑤	B3X6X2	Bearing 軸承
⑥	B2X5X2.5	Bearing 軸承
⑦	Ø1.4x4	Self tapping screws 粗牙螺絲

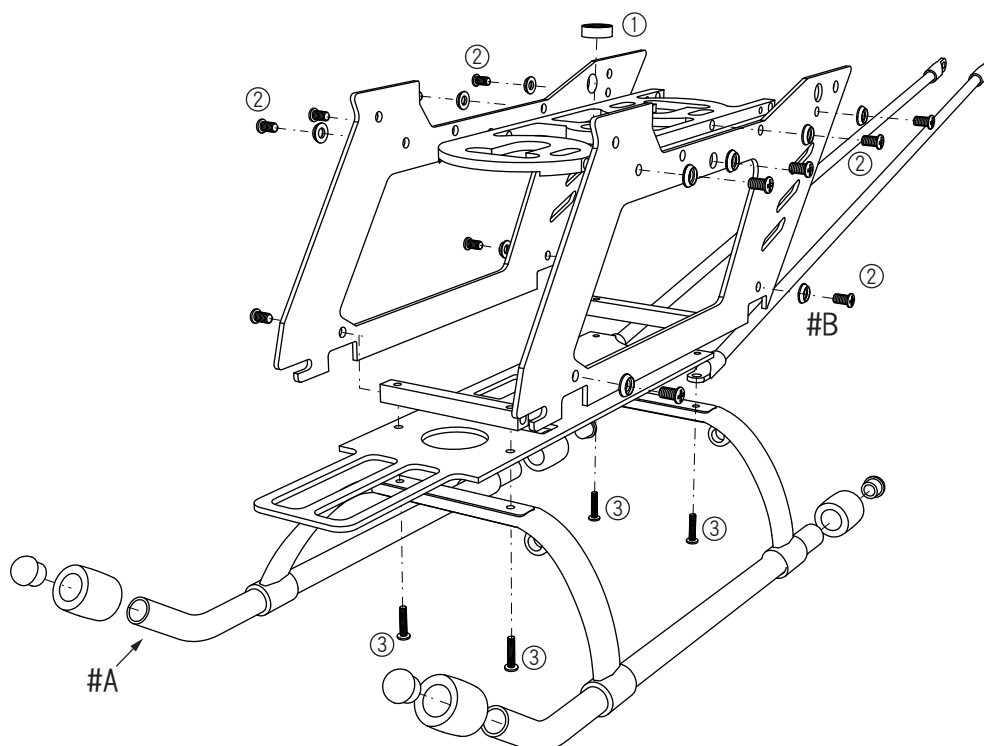
Note of Assembling:
Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual.
Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.

組裝注意事項：
零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。

**IMPORTANT 請注意**

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

#A	#207044	Landing Gear Brace Set 颶風255 高剛性腳架組
#B	#203662	Countsunk Washer and Screw set 沉頭墊片及螺絲組
①	B3X6X2	Bearing 軸承
②	M2X3.2	Tiny head machine screws 公制小頭螺絲
③	M1.4X7	Machine Screw 公制螺絲



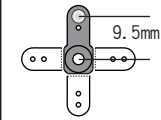
The servo #922093 is recommended to be used for CCPM.
The servo #922095 is recommended to be used for Tail.
CCPM伺服機建議使用#922093，
尾伺服機建議使用#922095。

Make sure to use the Ball With Stand for the horns of PIT / AIL / RUD servos, the Ball Without Stand should be used on the horn of ELE servo, the distance between ball and horn screw was shown in below.

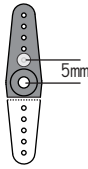
請注意：

螺距 (PIT) / 副翼 (AIL) / 尾 (RUD) 伺服機需使用長頸球頭，升降 (ELE) 伺服機需使用無頸球頭，3顆CCPM伺服機及尾伺服機建議使用之舵片請參考右圖並修剪。

- | | |
|----------|------------------------------------|
| ① M2X3.2 | Tiny head machine screws
公制小頭螺絲 |
| ② Ø2X5 | Self tapping screws
粗牙螺絲 |



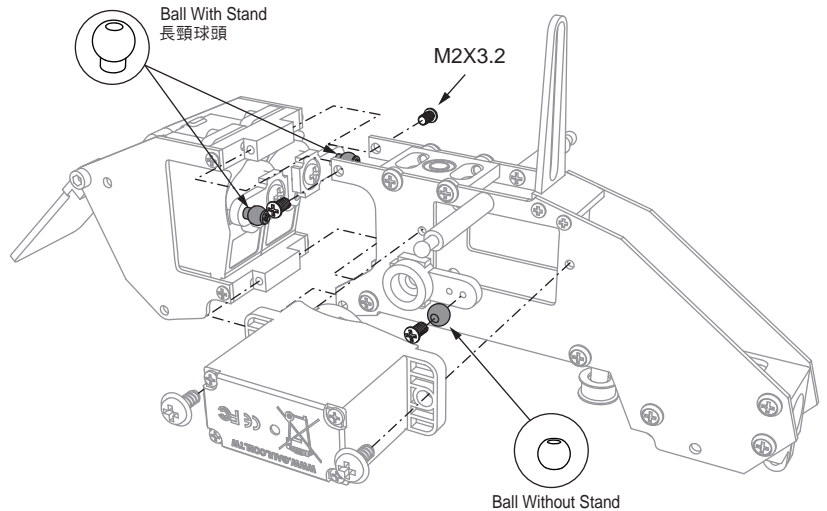
PIT 螺距伺服機
AIL 副翼伺服機
ELE 升降舵伺服機



RUD 尾伺服機



Spare 備用舵角片



IMPORTANT 請注意

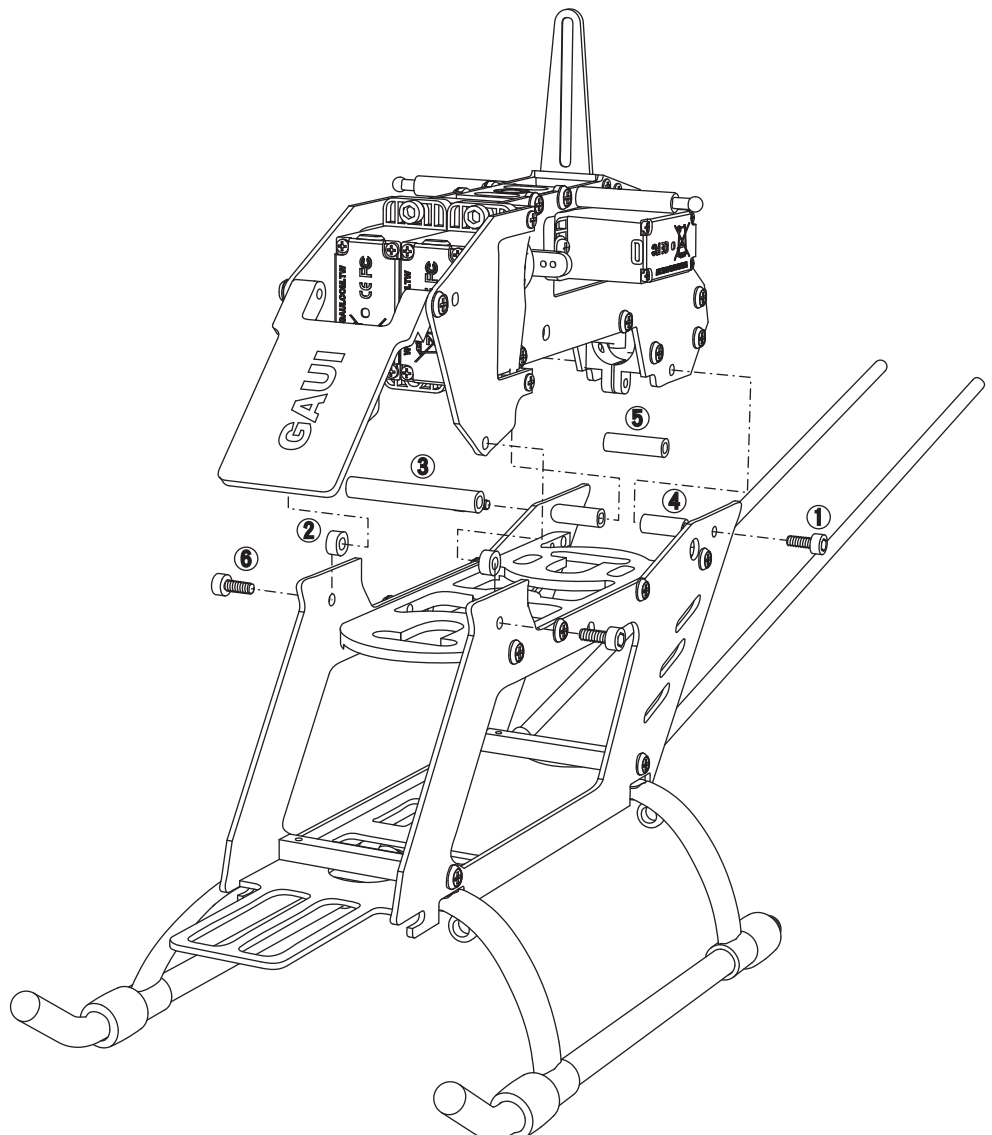


Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

- | | |
|--------------|--------------------------------------|
| ① M2X14 | Socket head machine screws
公制六角螺絲 |
| ② P2X4X2 | Tube
柱狀體 |
| ③ P2X3.5X25 | Tube
柱狀體 |
| ④ P2X3.5X8.5 | Tube
柱狀體 |
| ⑤ P2X3.5X12 | Tube
柱狀體 |
| ⑥ M2X10 | Socket head machine screws
公制六角螺絲 |

Note of Assembling:
Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual.
Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.

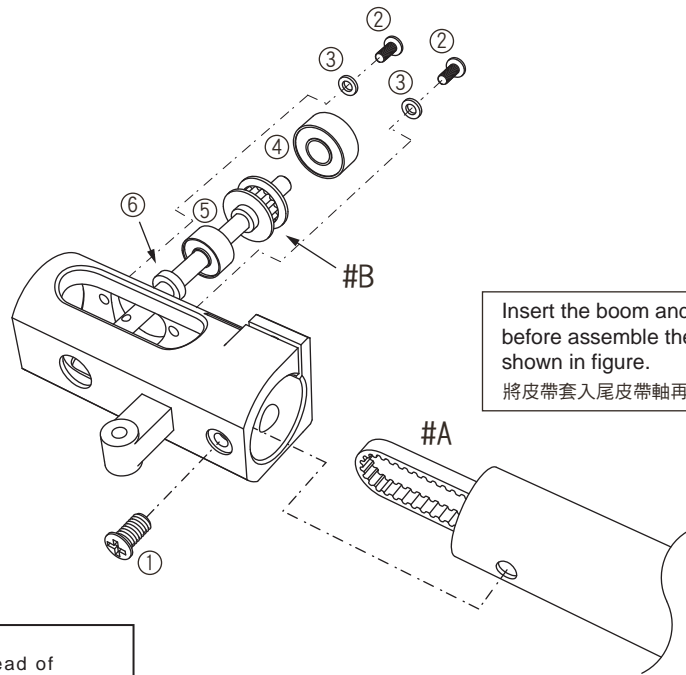
組裝注意事項：
零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。



IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全!
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

- | | | |
|----|--------------|--|
| #A | #861001 | Tail Rotor Belt
尾傳動皮帶 |
| #B | #207010 | High Performance Tail Output Shaft Set
高性能尾軸組 |
| ① | M2X3.2 | Tiny heed machine crew
公制小頭螺絲 |
| ② | M1.4X4 | Machine Screw
公制螺絲 |
| ③ | P1.4X2.5X0.4 | Washer
華司 |
| ④ | B2X7X3 | Bearing
軸承 |
| ⑤ | B2X5X2.5 | Bearing
軸承 |
| ⑥ | P2X3.5X1 | Washer
華司 |



Insert the boom and belt assembly before assemble the tail parts as shown in figure.
將皮帶套入尾皮帶軸再依圖組裝。

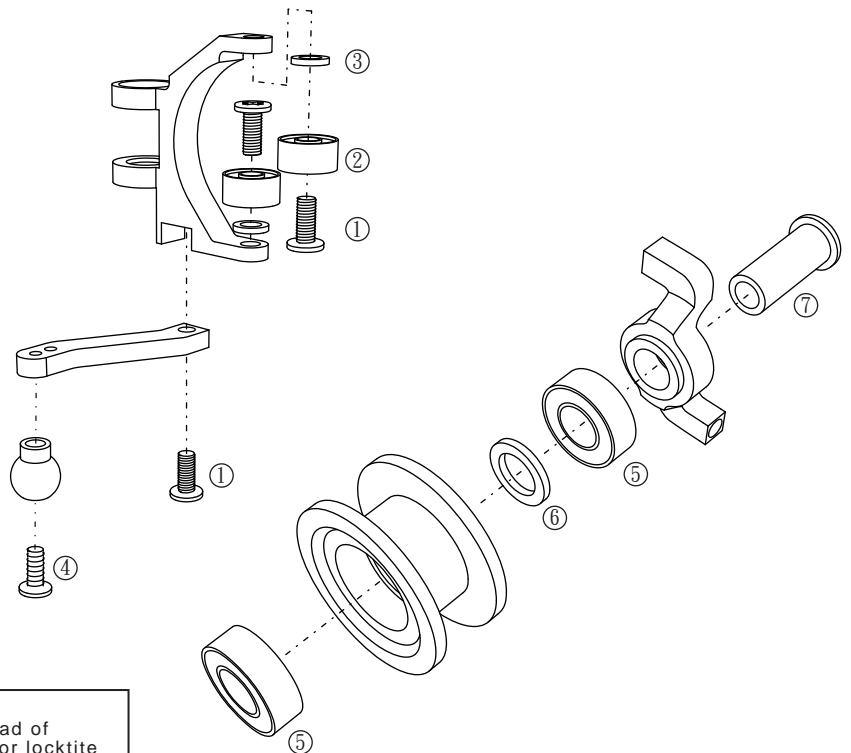
Note of Assembling:
Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual.
Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.

組裝注意事項：
零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。

IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全!
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

- | | | |
|---|--------------|-----------------------------|
| ① | M1.4X4 | Machine Screw
公制螺絲 |
| ② | B1.5X4X2 | Bearing
軸承 |
| ③ | W1.4X2.5X0.4 | Washer
華司 |
| ④ | Ø1.4X6 | Self tapping screws
粗牙螺絲 |
| ⑤ | B3X6X2 | Bearing
軸承 |
| ⑥ | W3.1X4.6X0.6 | Washer
華司 |
| ⑦ | P2X3X7.3 | Tube
柱狀體 |



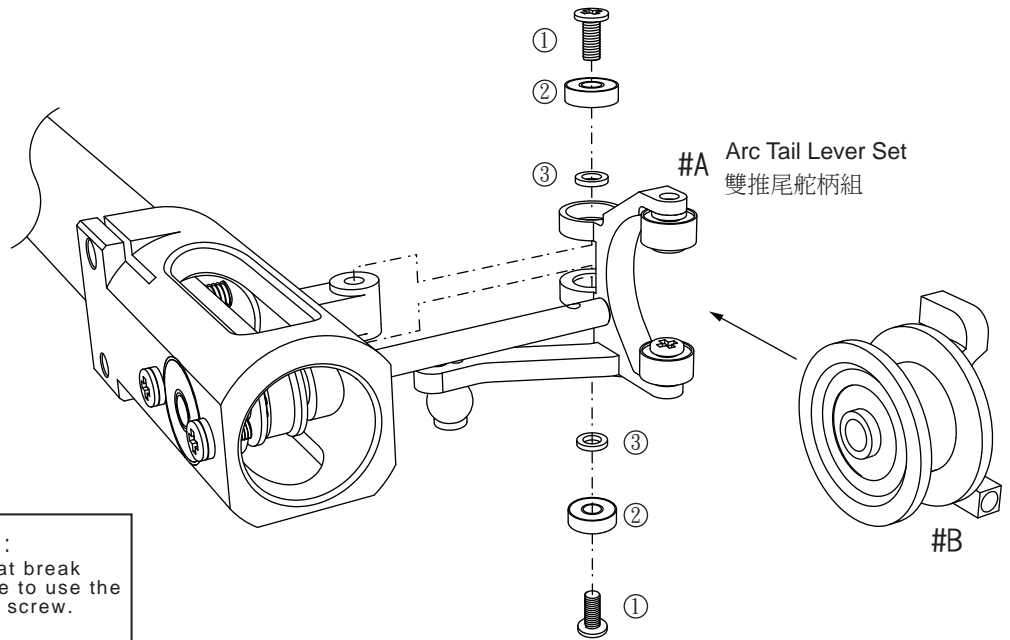
Note of Assembling:
Do not tighten the screws too much that break the thread of parts or screws, it is necessary to use the thread-lock or locktite adhesive for the parts or screws which indicated on manual.
Recheck the screws or nuts to make sure they are tightened and adhered properly, even for the parts which were preassembled.

組裝注意事項：
零件組裝時請依說明書指示上膠，並適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，在裝配原廠已完成組裝之零件時，請再確認各螺絲是否確實鎖緊上膠。

IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

- #A #207026 H255 Arc Tail Lever Set 颶風 255 雙推尾舵柄組
- #B #207025 CNC Tail Pitch Slider CNC雙推尾滑套
- ① M1.4X3 Machine Screw 公制螺絲
- ② B1.5X4X1.35 Bearing 軸承
- ③ W1.4X2.5X0.4 Washer 華司



Note For Tail Assembly:

Do not tighten the screw ① too much that break the thread of parts or screw, make sure to use the thread-lock or locktite adhesive on the screw.

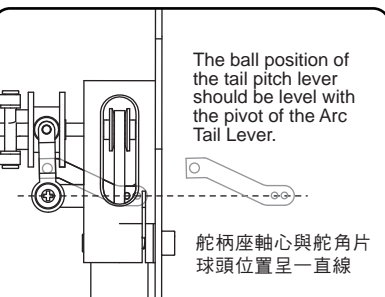
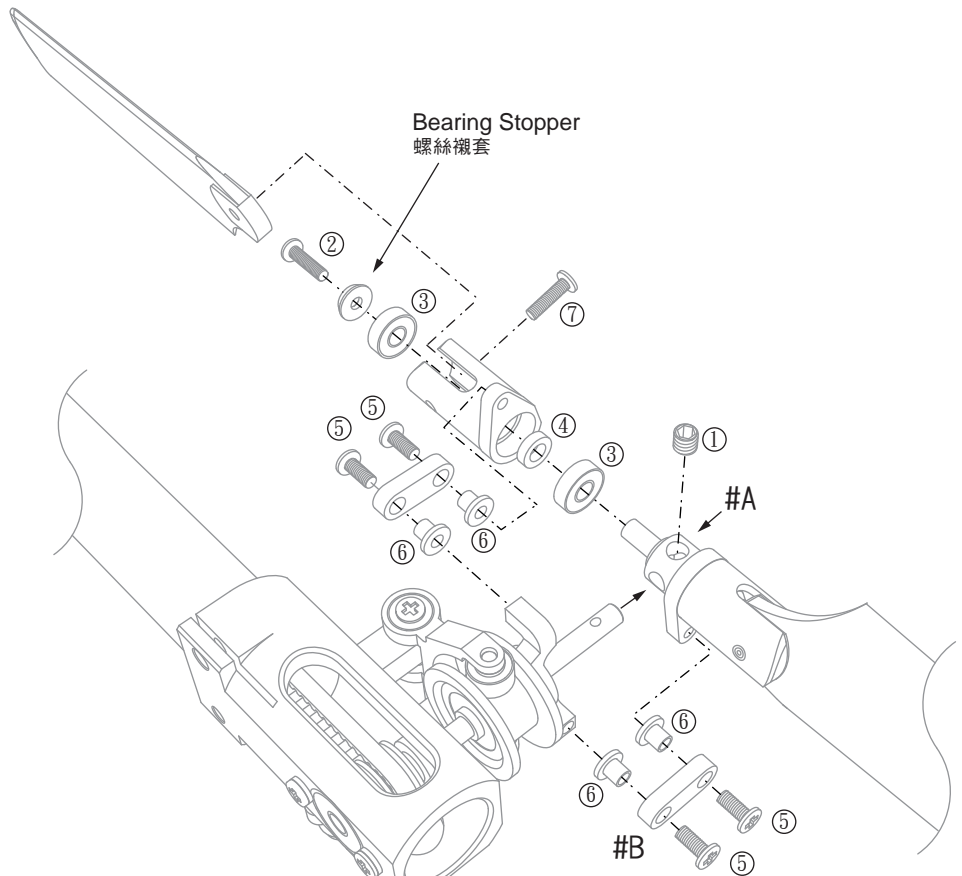
尾部組裝注意事項：

組裝①時請適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，並確認①螺絲是否確實上膠。

IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

- #A #207020 Tail Hub Set 尾旋翼頭
- #B #203596 CNC Tail Pitch Link Set CNC尾螺距推桿組
- #C #207048 High Performance Tail Rotor Blades Pack (45mm) 高性能尾旋翼片組 (45mm)
- ① M2X2 Socket set screws 止付螺絲
- ② M1.4X5 Machine Screw 公制螺絲
- ③ B2X5X1.5 Bearing 軸承
- ④ P2X3.5X1 Tube 柱狀體
- ⑤ M1.4X4 Machine Screw 公制螺絲
- ⑥ P1.4X1.7X2 Tube 柱狀體
- ⑦ M1.4X7 Machine Screw 公制螺絲



Note For Tail Assembly:

Do not tighten the screw ⑤ too much that break the thread of parts or screw, make sure to use the thread-lock or locktite adhesive on the screw.

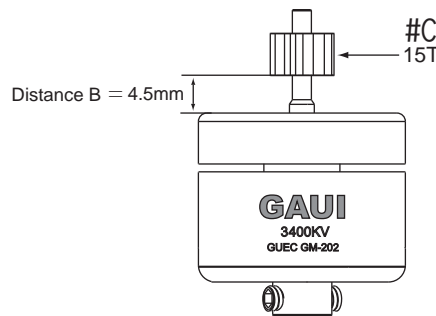
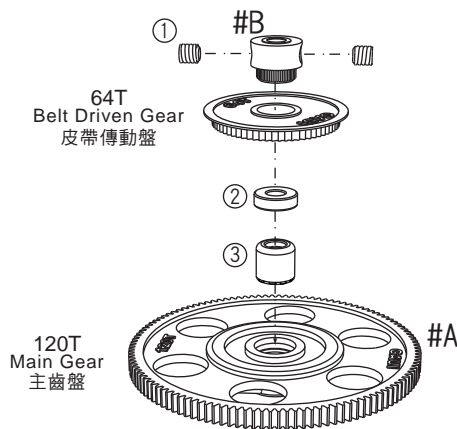
尾部組裝注意事項：

組裝⑤時請適度控制螺絲起子的扭力，以避免螺絲或零件滑牙造成損壞，並確認⑤螺絲是否確實上膠。

- #A #203542 Auto-rotation Main Gear Set
高性能同步自旋主齒盤
- #B #203232 Main Pulley Collars
主皮帶輪固定環
- #C #901503 15T Pinion Gear
15T馬達齒
- ① M3X3 Socket set screws
止付螺絲
- ② B3X7X2 Bearing
軸承
- ③ B3X6.5X6 One Way Bearing
單向軸承

Use Lockite 609, 680, or similar material to adhere the long neck pinion gear to the motor shaft. (Make sure the distance B is correct.)

請注意馬達齒之正確安裝位置，並以缺氧膠將馬達齒固定於馬達軸心。
並靜置30分鐘以上以確保黏合密實。



③ Both ends of the one way bearing come with different shape, one end come with arc edge, another end come with flat edge, make sure the flat edge end should be assembled downward.
單向軸承兩端有一端為凸緣，另一端為平面，安裝時平面的一端需朝下。

Fin and Tail Assembly

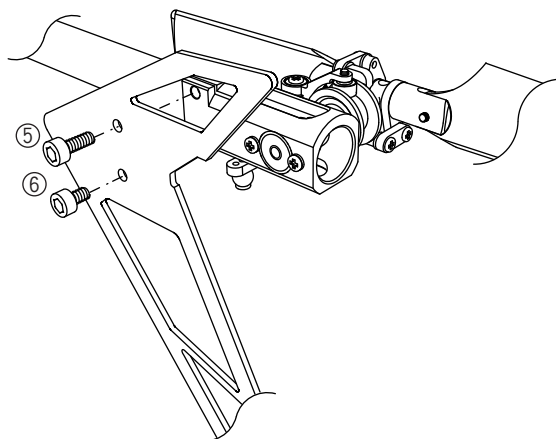
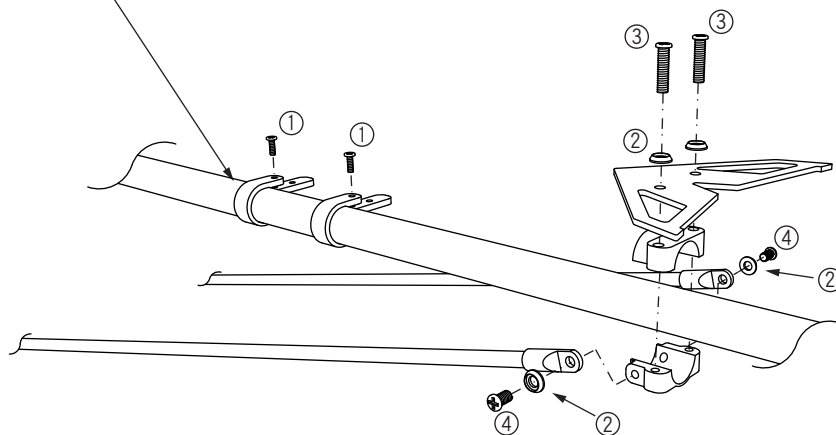
尾翼組裝

IMPORTANT 請注意

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全！
Use the thread-lock adhesive on the tip of screw for 1mm width.
螺絲止鬆劑上膠位置約為螺紋前端 1mm寬度。

After the tail servo was installed and adjusted properly, use CA. to adhere the servo mount onto tail boom.
伺服器安裝完畢確認連桿長度後，請上瞬間膠固定。

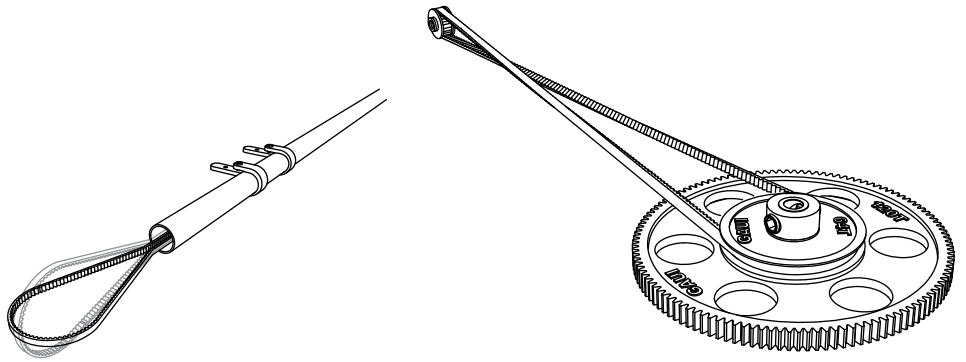
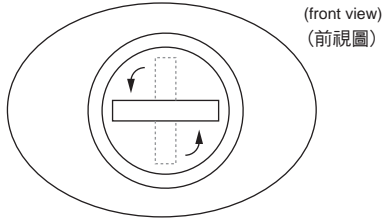
- #A #207045 CF Fin & Tail(A Type-Black)-Black
碳纖尾翼組(A型-黑)
- ① Ø1.4X6 Self tapping screws
粗牙螺絲
- ② CountsunkWasher
螺絲襯套
- ③ M2X8.4 Tiny head machine screw
公制小頭螺絲
- ④ M2X3.2 Tiny head machine screw
公制小頭螺絲
- ⑤ M2X5 Socket head machine screws
公制六角螺絲
- ⑥ M2X3 Socket head machine screws
公制六角螺絲
- ⑦ Ø2X5 Self tapping screws
粗牙螺絲



IMPORTANT 請注意

Make sure both sides of the belt are parallel in the tail boom, turn the front end of the belt 90 degrees counter-clockwise (front view).

請先檢視皮帶是否垂直(不可捲繞)並逆時針旋轉90度。



IMPORTANT 請注意

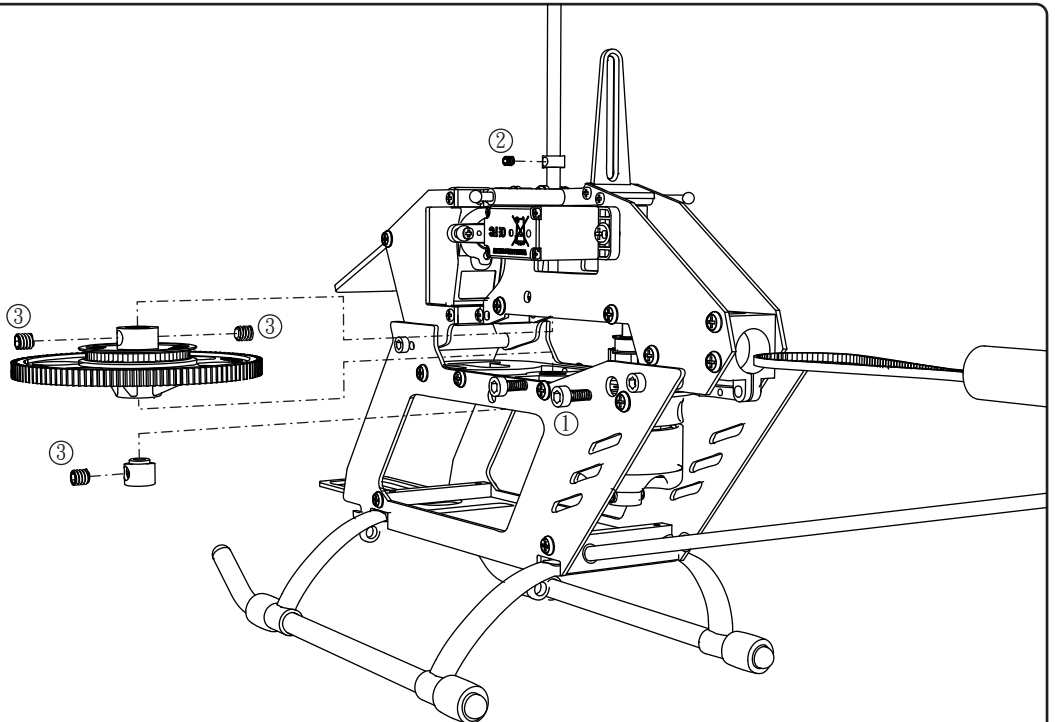
After assembled the boom, install the main gear set, insert the Mast and tighten the lower collar and main gear collar, pull up the Mast and Main gear assembly, then install and tighten the upper mast collar, set the belt tension properly and tighten the M2x3.2 screws of main frame.

將尾管總成裝入機身，安裝主齒盤及皮帶齒盤，再將主軸插入定位，將小襯套套入主軸並鎖緊，再將主軸上推鎖緊皮帶齒盤最後在鎖緊上輪檔，確認轉動滑順再依序鎖緊側板之M2x3.2螺絲。

Belt tension:
The motor should be driven if we rotate the tail blades by hand. Tighten the ① screw of boom holder(M2x5).

調整皮帶緊度：裝入後將皮帶總成往後適度拉緊(若用手轉動尾旋翼，馬達應可被皮帶帶動旋轉)，將機身後方的①螺絲旋緊固定尾管。

Use the thread-lock adhesive if the screws are tightened to the metal parts.
組裝時如遇螺絲鎖於金屬件，請適量使用 螺絲止鬆劑 以確保飛行安全!

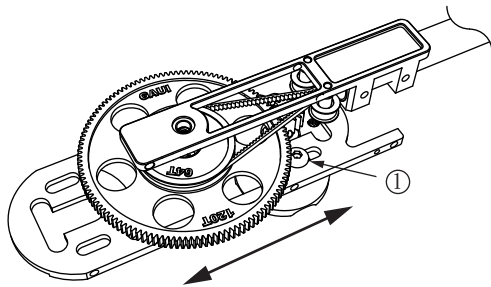


- ① M2X5 Socket head machine screws 公制六角螺絲
- ② M2X2 Socket set screws 止付螺絲
- ③ M3X3 Socket set screws 止付螺絲

- ① M3X4 Socket head machine screws 六角螺絲

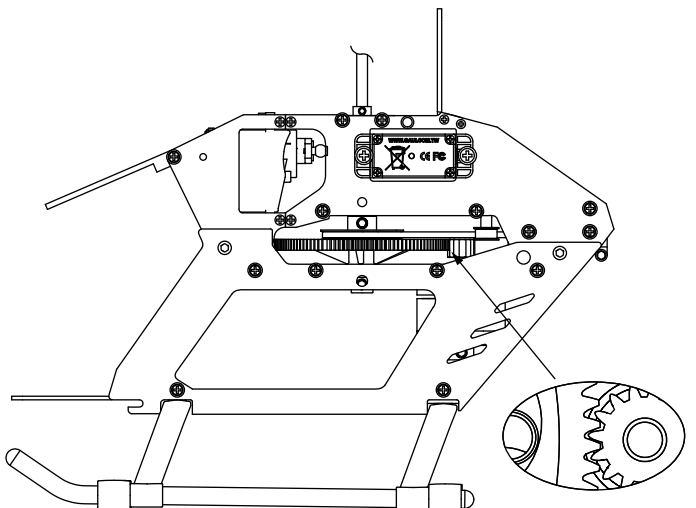
The gear mesh should be set properly. (0.1mm approx.)

注意馬達齒與主齒盤間隙約0.1mm不宜過緊。適當的間隙可提高效能、減少動力損失。



Move the motor forward and backward to adjust the gear mesh properly(0.1mm approx.), then tighten both ① screws.

前後移動調整馬達與主齒盤間隙，再鎖緊①螺絲。



Example of Installing
(It may vary according to the equipment used)

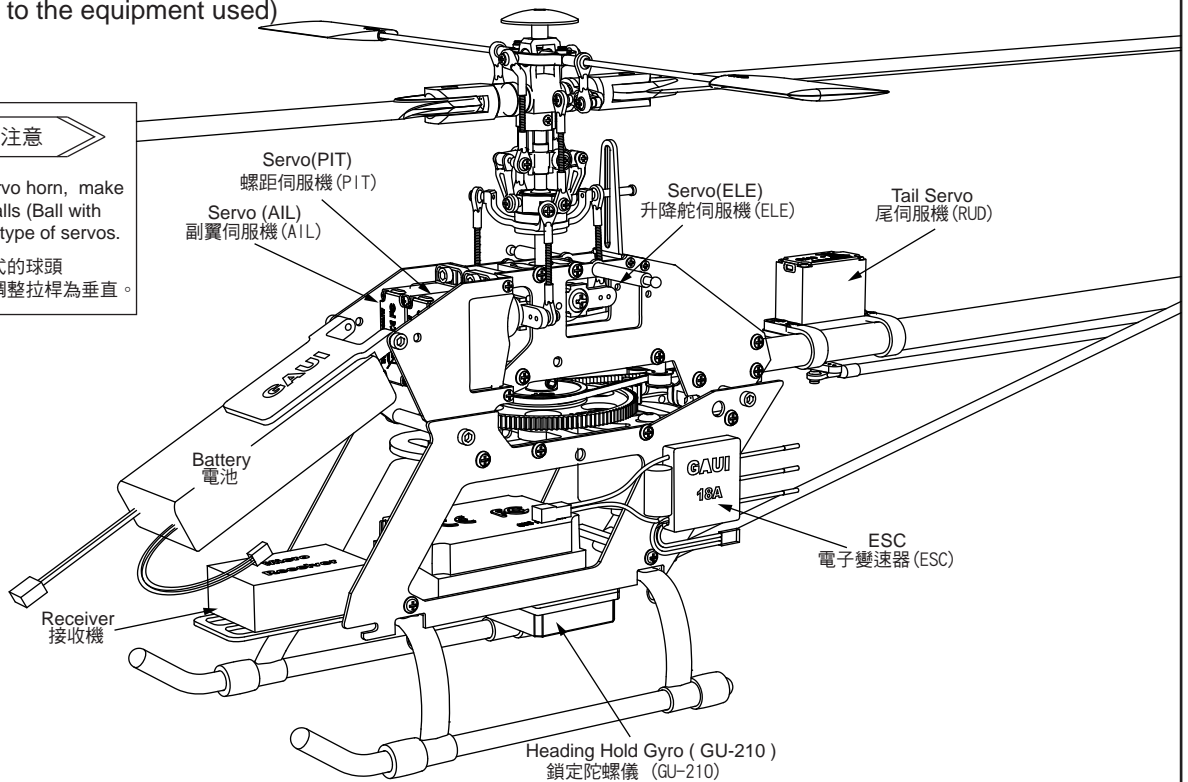
電裝配置範例

(個人電裝不同請依需求調整)

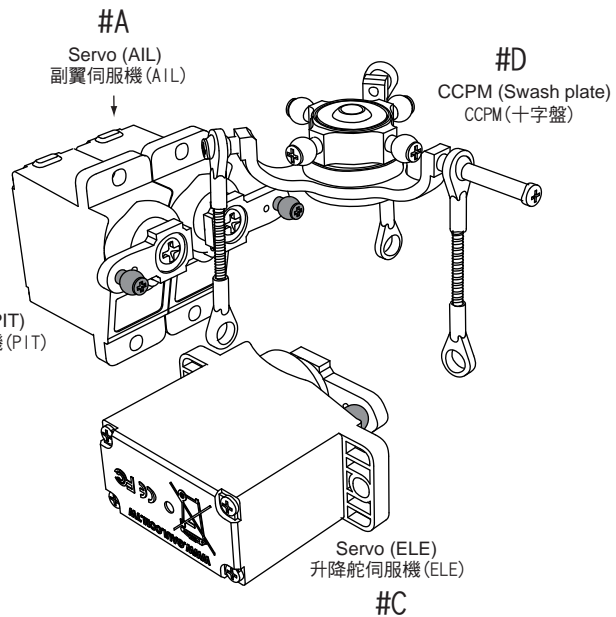
IMPORTANT 請注意

When install the ball onto the servo horn, make sure to use the correct type of balls (Ball with Stand or w/o Stand) for different type of servos.

請依伺服機的不同，選擇不同型式的球頭 (有頸或無頸球頭) 或增加柱狀體調整拉桿為垂直。



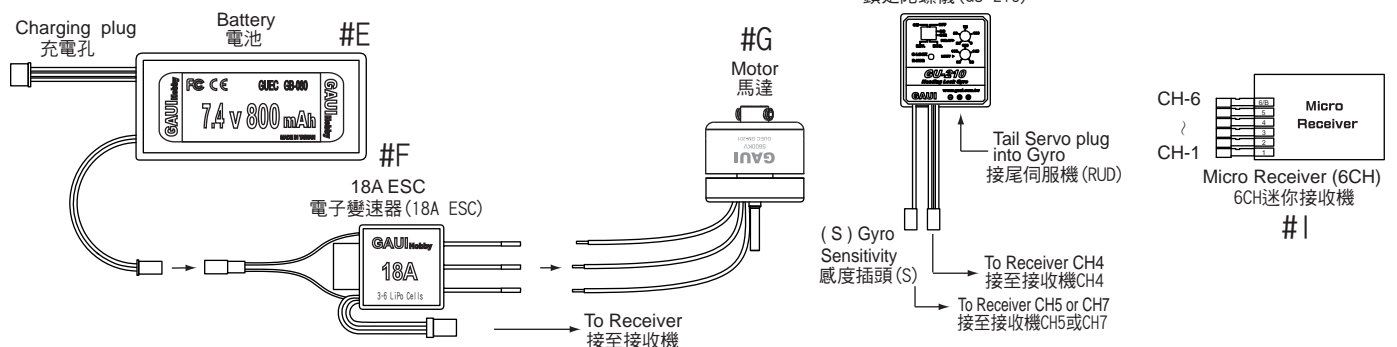
- #A Servo (AIL) 副翼伺服機 (AIL)
- #B Servo (PIT) 螺距伺服機 (PIT)
- #C Servo (ELE) 升降舵伺服機 (ELE)
- #D CCPM (Swash plate) CCPM (十字盤)
- #E Li-Po Battery (7.4v 800mah) 鋰聚電池 (7.4V 800mah)
- #F ESC 18A 電子變速器 (18A ESC)
- #G Motor 馬達
- #H Heading Hold Gyro (GU-210) 鎖定陀螺儀 (GU-210)
- #I Micro Receiver (6CH) 6CH迷你接收機



IMPORTANT 請注意

Make sure the ball position on each servo horn for CCPM come with the same distance from horn screw.

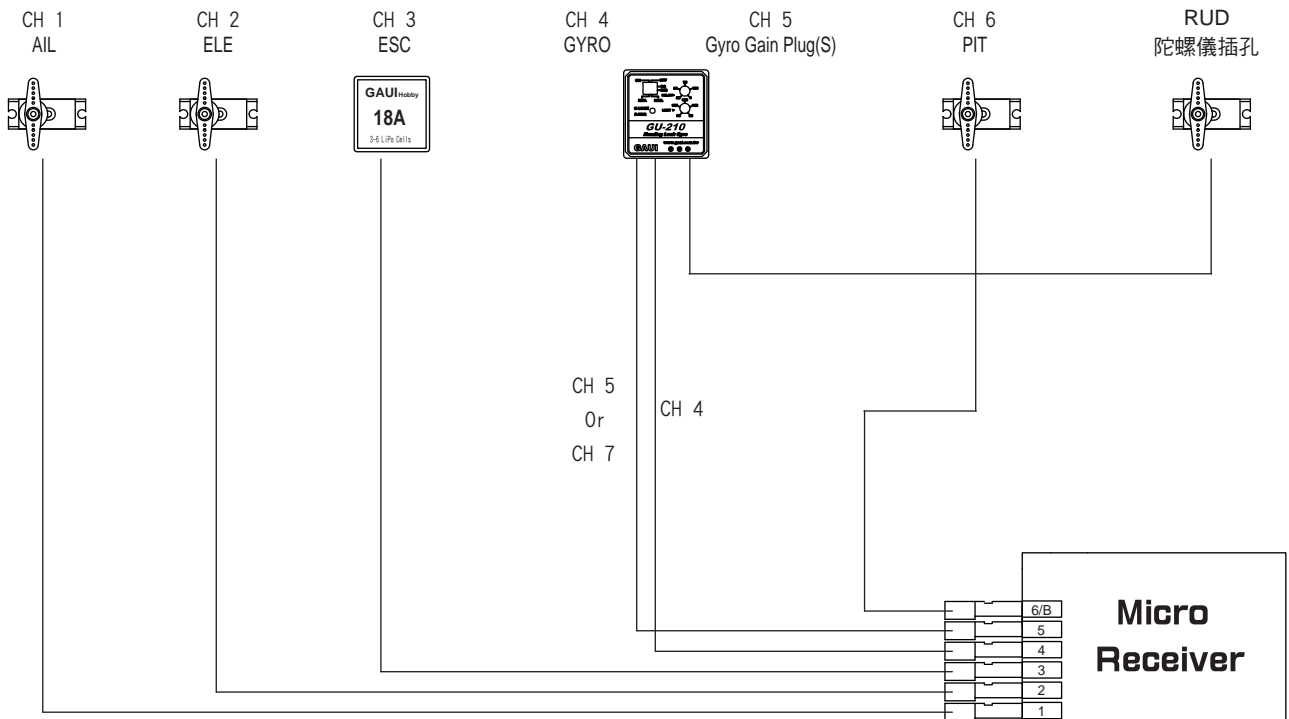
安裝拉桿之前請先確認CCPM的3個伺服機舵角片之球頭固定位置是否相同。



	Futaba	Hitec	GAUI Servo	ESC	GYRO (GU210)	GYRO Gyro Gain
CH 1	AIL 副翼伺服機	AIL 副翼伺服機				
CH 2	ELE 昇降伺服機	ELE 昇降伺服機				
CH 3	ESC 電子變速器	ESC 電子變速器				
CH 4	GYRO 陀螺儀	GYRO 陀螺儀				
CH 5	Gyro Gain Plug(S) 感度插頭 (S)	Gyro Gain Plug(S) 感度插頭 (S)				
CH 6	PIT 螺距伺服機	PIT 螺距伺服機				
陀螺儀插孔	RUD 方向伺服機	RUD 方向伺服機				
Signal 訊號線顏色 (S)	White 白	Yellow 黃	White 白	Orange 橙	White 白	Yellow 黃
Positive 正極線顏色 (+)	Red 紅	Red 紅	Red 紅	Red 紅	Red 紅	
Negative 負極線顏色 (-)	Black 黑	Black 黑	Black 黑	Brown 棕	Black 黑	

GAUI equipment are recommended

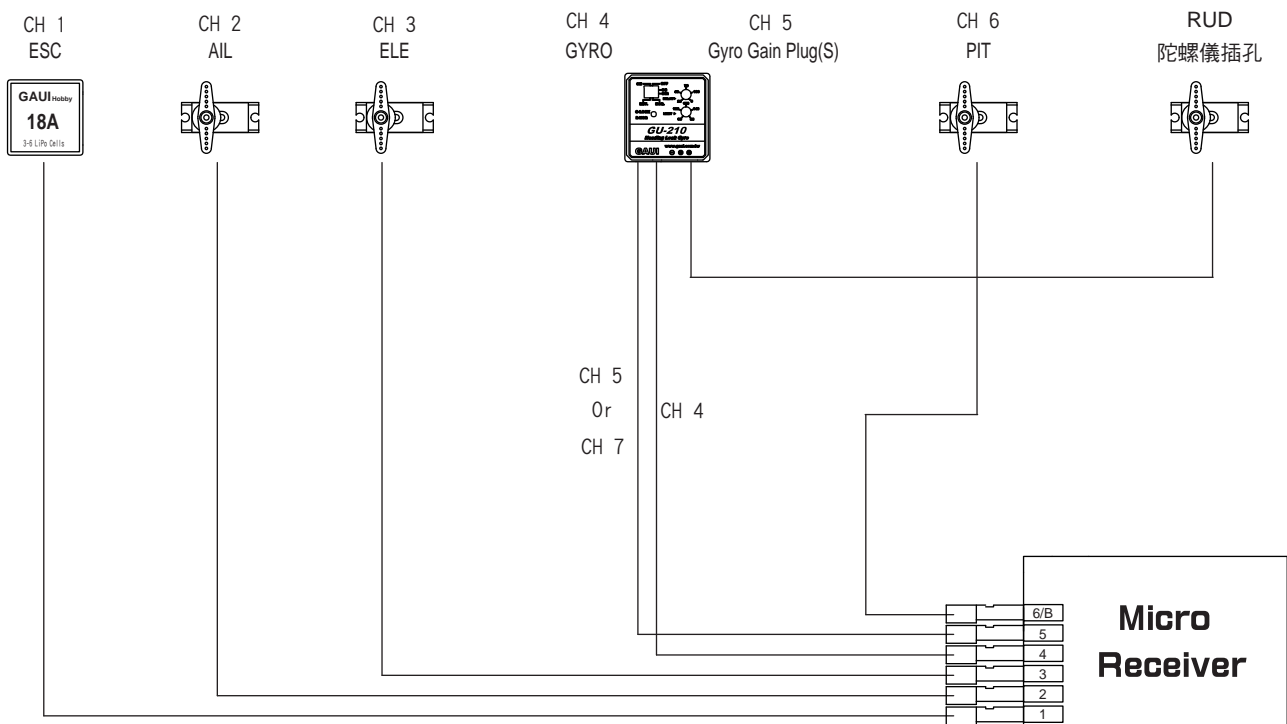
建議使用原廠配備



	JR	Sanwa	Blue Bird	ESC	GYRO (GU210)	GYRO Gyro Gain
CH 1	ESC 電子變速器	ESC 電子變速器				
CH 2	AIL 副翼伺服機	AIL 副翼伺服機				
CH 3	ELE 升降伺服機	ELE 升降伺服機				
CH 4	GYRO 陀螺儀	GYRO 陀螺儀				
CH 5	Gyro Gain Plug(S) 感度插頭(S)	Gyro Gain Plug(S) 感度插頭(S)				
CH 6	PIT 螺距伺服機	PIT 螺距伺服機				
陀螺儀插孔	RUD 方向伺服機	RUD 方向伺服機				
Signal 訊號線顏色(S)	Orange 橙	Blue 藍	Orange 橙	Orange 橙	White 白	Yellow 黃
Positive 正極線顏色(+)	Red 紅	Red 紅	Red 紅	Red 紅	Red 紅	
Negative 負極線顏色(-)	Brown 棕	Black 黑	Brown 棕	Brown 棕	Black 黑	

GAUI equipment are recommended

建議使用原廠配備

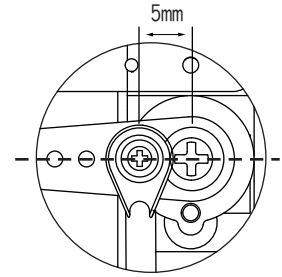
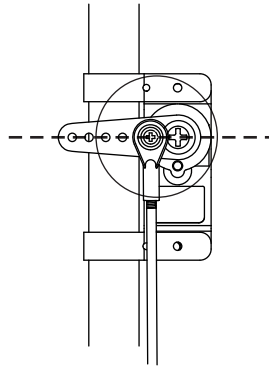


1. Install the Gyro and the tail servo.
安裝陀螺儀與尾伺服機。
2. Connect the tail pushrod to the servo. Make sure the servo arm is 90 degrees to the tail pushrod.
The ball link is recommended to install at the position as shown in figure.

安裝尾伺服機拉桿，需確認伺服機在中立點位置時，舵角片需與尾管保持90°垂直。(圖一)

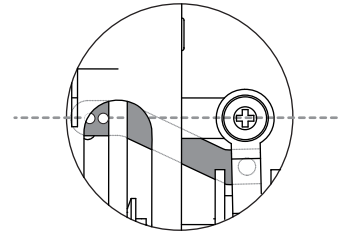
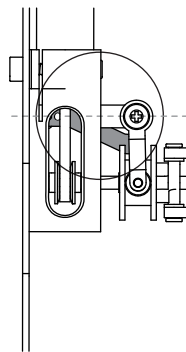
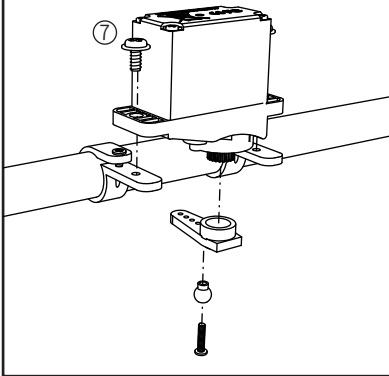
3. Slide the servo mount and the tail servo along the tail boom until the tail pitch lever is parallel to the tail output shaft or slightly forward.

往前或往後移動尾伺服機座，使尾螺距舵柄與尾軸平行或些微向前。(圖二)



(圖一)
(Fig. 1)

The servo #922095 is recommended to be used for Tail.
尾伺服機建議使用#922095



(圖二)
(Fig. 2)

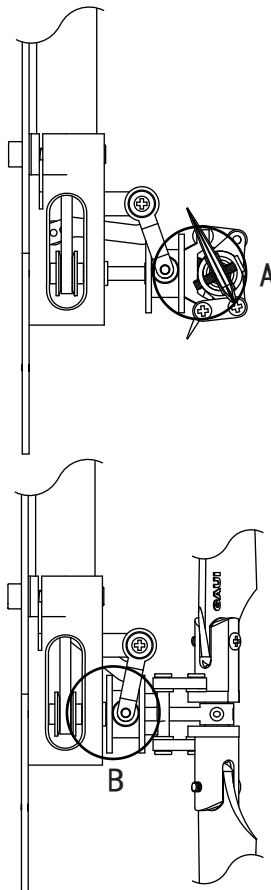
4. Set the Gyro "limit" properly, make sure the tail pitch yoke do not touch the tail pitch lever mount and the tail rotor hub when the tail servo moves to the left and the right maximum travel volumn. If the Gyro you used do not have the function of Limit", set the function of "ATV / End Point / Travel Adjust on transmitter to adjust the proper travel volumn of the tail servo.

調整陀螺儀上的行程極限 (Limit) 以設定適當的尾伺服機行程，需確認伺服機在左右最大行程位置時，尾螺距推桿座不會碰到尾螺距舵柄舵座或尾旋翼頭而產生干涉的現象。

若您使用的陀螺儀沒有設定行程極限 (Limit) 的功能，可調整發射機上的伺服機行程功能 (ATV / End Point / Travel Adjust) 來調整尾伺服機的左右最大行程位置。

5. If the tail oscillates or wags at less than 60% gain, you will need to move the ball link to the hole which is closer to the serve Gyro limit properly. The ideal gain setting is around 70%.

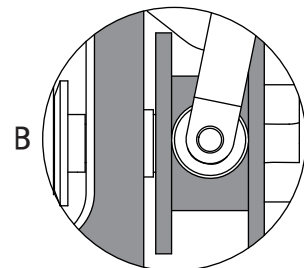
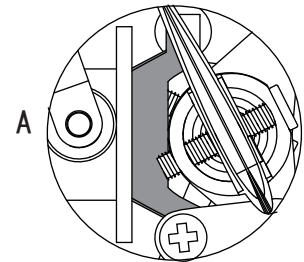
若停懸時陀螺儀感度在60%以下尾部就有追蹤現象而左右搖擺，請將球頭在伺服舵角片的位置向內移，並重新調整陀螺儀上的行程極限 (Limit)，理想的陀螺儀感度應在70%左右。



IMPORTANT 請注意

Do not touch the tail pitch lever mount and the tail rotor hub.

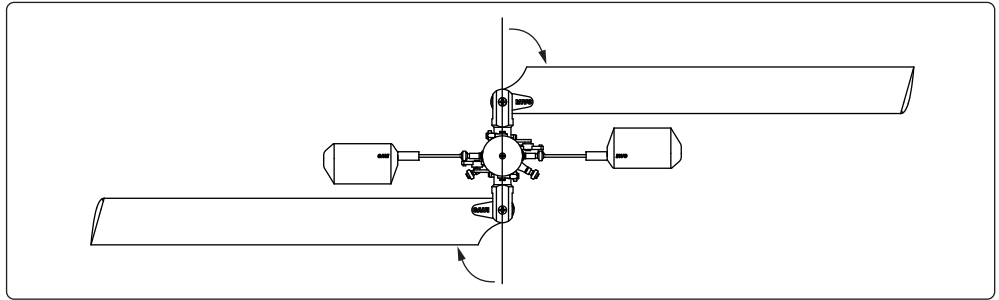
勿接觸到尾螺距舵柄舵座或尾旋翼夾頭而產生干涉現象。



IMPORTANT 請注意

Rotate each blade clockwise until the blades are parallel to the flybar. (Top View)

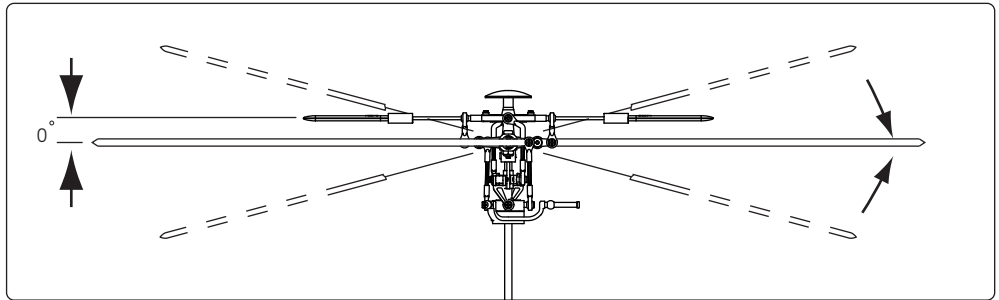
將左右主旋翼各依順時針方向旋轉90度，使之與平衡桿在上視方向平行。



IMPORTANT 請注意

Slide the swashplate up or down until the blades are parallel to the flybar (Left View). The collective pitch angle is zero at this position.

調整十字盤高度，當主旋翼在側視方向與平衡桿平行時，此時螺距角度為0度。



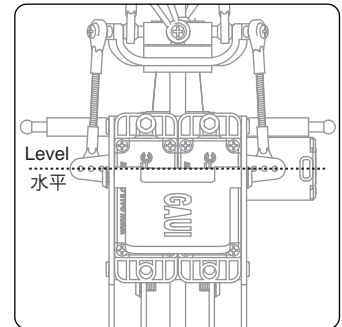
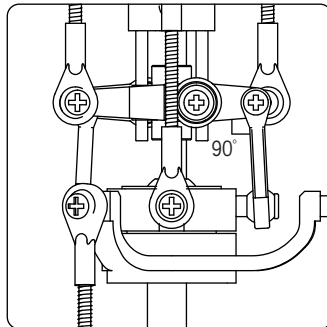
IMPORTANT 請注意

1. Adjust the length of the control linkages as figure below. Make sure that the servo arms for CCPM swashplate are all in the same length.

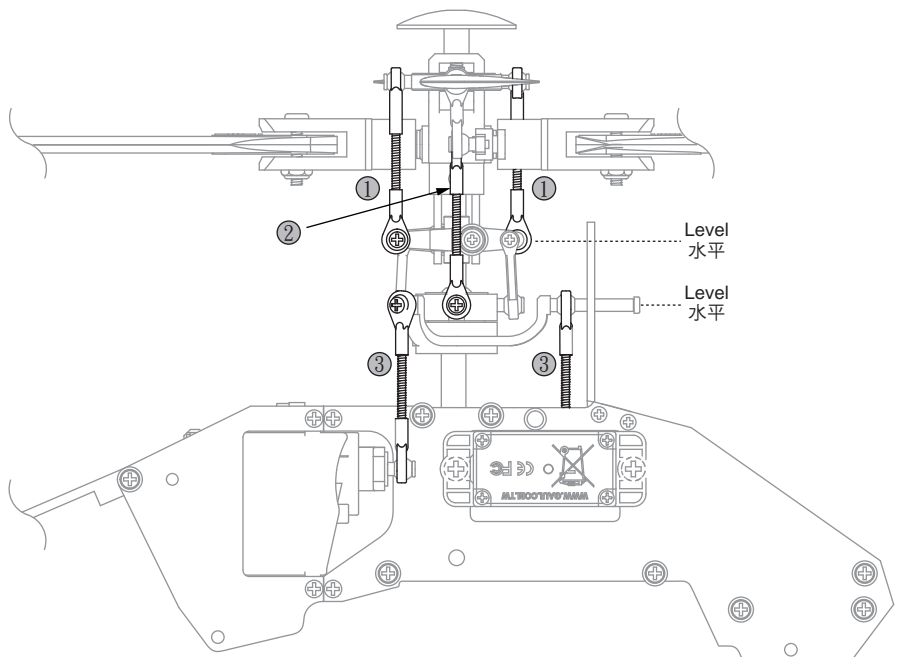
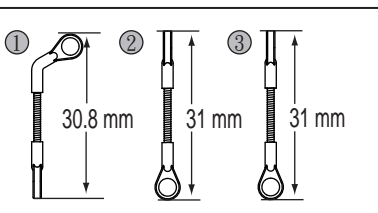
先將舵角片裝在伺服機上，需確認連接CCPM十字盤的三個伺服機舵角片長度都相等並保持在水平位置。

2. The servos at neutral should have the servo arms at level position, and the arm should be 90 degrees to the control linkage. At this point, the swashplate and the scissor arms should be level, and the pitch should be set at 0 degrees.

請參考下圖說明調整各連桿長度並安裝至正確位置，各伺服機在中立點位置時，連接CCPM十字盤的三個伺服機舵角片球頭孔位應相同並配合各伺服機與連桿垂直，當十字盤及剪形臂保持在水平狀態時，依本頁上方圖示檢查螺距是否為0度。



① ② ③ which all use the 16mm thread rod 皆使用16mm之全牙螺桿

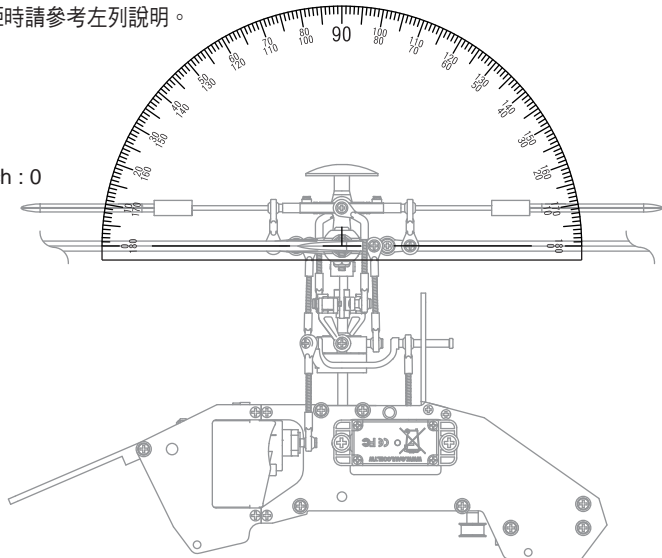


IMPORTANT 請注意**Head speed and pitch settings
主旋翼轉速與螺距設定**

- Total collective pitch range for 3D should be approx 30 degrees (-15 ~ +15).
Normal flight should be about +15 to -3 degrees.
3D飛行時螺距行程約為 -15 ~ +15 度，
一般飛行約為 -3 ~ +15 度。
- The recommended hovering head speed should be at least 3000rpm. This can be checked with a tachometer.
If the helicopter is unstable in a hover, reduce the pitch at this throttle setting to gain more head speed. If this does not solve the problem, increase the throttle curve.
主旋翼停懸轉速建議勿低於3000rpm
(可用轉速計測量)，戶外飛行或有風的狀況時，需適當增加停懸轉速。
- Refer to the next page for getting more informations about setting.
請參考下頁說明設定螺距與油門曲線。
- The CF blades are highly recommended for 3D flight. Be sure to balance your blades before flying.
建議使用碳纖維以獲得較佳3D性能，每對槳在第一次使用前需先做好配重平衡。
- Maximum pitch : -15 degrees to +15 degrees.
螺距最大值分別為 ± 15 度

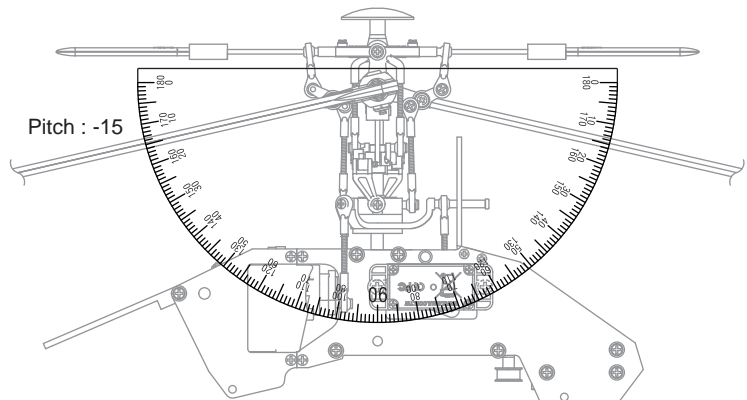
設定螺距時請參考左列說明。

Pitch : 0



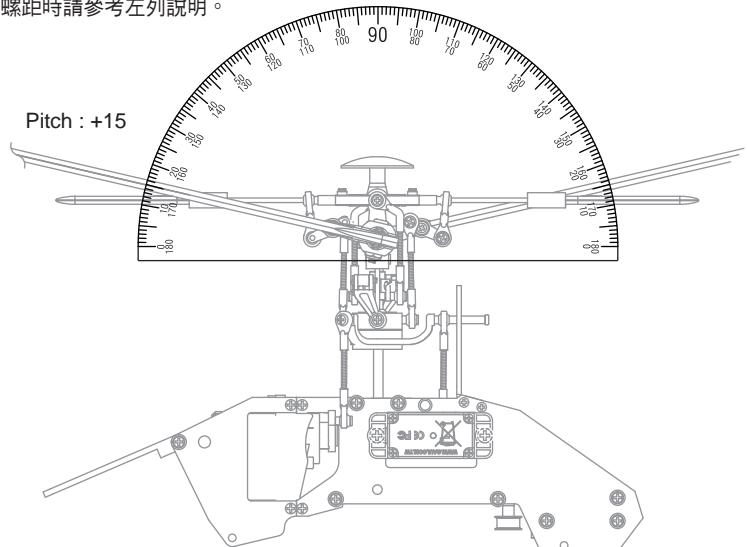
設定螺距時請參考左列說明。

Pitch : -15



設定螺距時請參考左列說明。

Pitch : +15



Normal Mode Normal 設定		Suggested Flight Time with 11.1v / 900 mah battery : 4 ~ 5 Min. 建議飛行時間(電池使用11.1v / 900 mah): 4 ~ 5 分鐘			
Throttle 油門	Stick position 油門推桿位置	Low to High	Pitch 主旋翼角度	Current 消耗電流	Head speed 主旋翼轉速
100 %	High position 全油門推桿	High	+14.5 Degrees 度	23.2 A Instantaneous 瞬間電流	3350 RPM
78 %		3 / 4			
68 %	Hovering position 停懸油門推桿	1 / 2	+6 Degrees 度	10.1 A Instantaneous 瞬間電流	3200 RPM
54 %		1 / 4			
0 %	Low position 最低油門推桿	Low	- 3 Degrees 度	0 Instantaneous 瞬間電流	0 RPM

IDLE Mode IDLE 設定		Suggested Flight Time with 11.1v / 900 mah battery : 3 ~ 4 Min. 建議飛行時間(電池使用11.1v / 900 mah): 3 ~ 4 分鐘			
Throttle 油門	Stick position 油門推桿位置	Low to High	Pitch 主旋翼角度	Current 消耗電流	Head speed 主旋翼轉速
100 %	High position 全油門推桿	High	+14.5 Degrees 度	24.1 A Instantaneous 瞬間電流	3600 RPM
95 %	Hovering position 停懸油門推桿	9 / 16	+4 Degrees 度	14.4 A Instantaneous 瞬間電流	4240 RPM
100 %	Low position 最低油門推桿	Low	- 14 Degrees 度	24.0 A Instantaneous 瞬間電流	3650 RPM

◀ IMPORTAMT 請注意 ▶

The information above varies according to types of main blades, motor, pinion gear, and battery pack.

以上數值需隨選用配備如主旋翼、馬達齒、馬達、電池等不同而改變。

Instruction

There is a built-in Battery Management function in the speed controller. The power cut off timing is based on the cell number and continuous current drains of the battery.

Flying Mode

The flying mode function offers you four options for different aircrafts. You could choose from Airplane, Glider, Helicopter without governor and Helicopter with governor.

Battery Protection

The battery management allows you to protect your batteries from over discharge and moreover to extend the lifetime of your batteries.

Set Up Procedure

1. To enter set up mode and throttle calibration
Due to the signal differentiation amount different remote control brands, it is strongly recommended to run the throttle curve initiation process whenever set up a new aircraft.
 - I. Shifting the throttle position to the full throttle/full speed.
 - II. Power on the transmitter
 - III. Power on the speed controller, the motor will come up with acknowledge tones ♪♪♪♪♪♪
 - IV. Moving the throttle position to the minimum/stop position, the motor will come up with acknowledge tones ♪♪♪♪♪♪
 The speed controller recognized the exactly throttle range then optimizes the throttle curve after this progress. When finish the calibrating process, you could simply shutdown the power to leave the other settings unchanged. If not, simply waiting for 1 second. The speed controller will enter the set up mode.
2. Battery Management

The first section of setup is battery management. This section offers 2 options for using with either NiMH or Li-Polymer battery. The motor will come up the corresponding tones as indicator. The following is the indication with graphic reference.

- o Standard discharge protection for Li-Polymer (Factory Default) ♪♪
- o +5V cut-off protection for Ni-MH ♪♪

 When intending to choose one of above options, simply push throttle stick from minimum/stop to maximum/full throttle after the indication tone, then pull throttle stick back to the minimum/stop position to confirm after the acknowledge tone. You could simply shut down the power if you don't need any further settings. If you want to skip this section and leave current setting unchanged, just keep throttle stick in minimum position and wait the speed controller to enter next section.

3. Flying Mode
The following section is flying mode setting. This section offers 4 options. They are Airplane, Glider and Helicopter without Governor/with Governor. The motor will come up the corresponding tones as indicator. The following is the indication with graphic reference.

o Aircraft ♪♪♪ o Glider ♪♪♪♪ o Helicopter with Governor ♪♪♪♪♪ o Helicopter without Governor (Factory Default) ♪♪♪♪♪

When intending to choose one of above options, simply push throttle stick from minimum/stop to maximum/full throttle after the indication tone, then pull throttle stick back to the minimum/stop position to confirm after the acknowledge tone. Shutdown the power, and now the speed controller is ready to fly.

More about Battery Management System

This section gives you more details of the smart design of battery management in order to help you to utilize the function. Technically the power cut off timing was based on the cell number and continuous current drains of the battery. The speed controller will calculate the timing and cut the power off with two steps. Because the last stage of each battery discharge cycle has a quick voltage drop, such function will provide a safe process during the operation.

- 1st step: enabled when the single cell reaches the low point, the motor will be forced to lower the RPM by microprocessor
- 2nd step: enabled when the single cell reaches the lowest point defined in the system, the motor will be completely cut off. To regain the power, the user needs to adjust the throttle stick to the "stop" position until the battery voltage comes back to the safe level. The following are the detailed definition of each option in battery management.

- o NiMH battery +5.0 volt cut off
- o Li-Polymer standard discharge (Factory Default)
- 1st step voltage @ 2.9V
- 2nd step voltage @2.6V

For Li-Po and MiMH Battery

There are two options defined in the battery management, one is for Li-Polymer batteries and another for using with NiMH battery.

Caution

Caution!!
High power motor systems could be very dangerous. High current could generate heat on wires, batteries, and motors. Always follow the instruction and use proper tools to set up the system within safe range. Always fly at a designed field with caution even though this controller is equipped with safety arming program.

Specifications of BL Motor	
KV value	3400 rpm/v
Maximum Current(Instantaneous)	7V-25A · 12V-15 A
Efficiency	81%
Voltage Range	7 V ~ 12 V
Motor Weight	39 g ± 1g
Motor Diameter	25.5 mm
Motor Length	21 mm ± 0.5mm
Motor Output Shaft Diameter	2.3 x 12(L) mm
Bearings	3 x 8 x 4
Poles	6

Specifications of 18A ESC	
Working Voltages(Maximum)	5.5 V ~ 16.8 V(Maximum)
Maximum Current(Instantaneous)	24 A
Continual Current	18 A
Low Battery Protect	3.1 V ~ 2.9 V / cell
Temperature Overload	120
Built-in BEC	Maximum Input 12.6 V Output 5 V / 2 A

產品特色介紹

四種飛行模式：

1. 飛機模式。
2. 滑翔機模式。
3. 直昇機模式，有定速。(with governor)
4. 直昇機模式，無定速。(without governor)

啟動飛行模式

1. 將無刷速控器連接到無刷馬達與主電池電源。
2. 聽到嗶-嗶-嗶(♫-♫-♫)三個上昇聲響，油門控制桿撥至全收油位置或最低點後速控器會發出嗶-嗶-嗶-嗶(♫-♫-♫-♫)4聲單音之應答聲，代表完成油門校正動作。

放電電壓保護

標準鋰離子電池模式：

- 單Cell 2.9V 啟動第一階段斷續收油保護程序(Soft cut)
- 單Cell 2.6V 啟動第二階段直接斷電保護程序(Hard cut)
- 直昇機模式無此選項

鎳氫電池模式：

- 5.0V直接斷油保護程序 (Cut Off)

進入設定模式

1. 開啟遙控發射器電源，將油門控制桿推至全速，並且將其保持不動狀態。將無刷速控器連接到主電池，聽到嗶-嗶-嗶-嗶-嗶-嗶(♫-♫-♫-♫-♫-♫)6聲單音之後進入設定模式，接著請將油門控制桿撥至全收油位置或最低點。
2. 油門控制桿撥至全收油位置或最低點後，速控器會發出嗶-嗶-嗶-嗶(♫-♫-♫-♫)4聲單音之應答聲完成。
3. 速控器會進入模式1-1(♫-♫)之答詢程序，並且發出1長音與1短音表示為模式1-1(♫-♫)答詢中。若使用者欲設定模式1-1為工作模式，請於此時將油門往加速方向全開即可，速控器接獲指令後會發出嗶-嗶-嗶-嗶(♫-♫-♫-♫)4聲單音之應答音表示模式1-1設定完成。若使用者不欲設定模式1-1，只需靜待數秒後速控器進入模式1-2，1長音與2短音，(♫-♫♫)答詢程序即可。
4. 以下為操作模式之解釋：

功能1：電池保護模式：

1-1 ... 標準鋰離子電池模式(出廠設定值)	♫-♫
1-2 ... 鎳氫電池模式	♫-♫♫

功能2：操作模式

2-1 ... 飛機模式(出廠設定)	♫♫-♫
2-2 ... 滑翔機模式	♫♫-♫♫
2-3 ... 直昇機模式，有定速 (with governor)	♫♫-♫♫♫
2-4 ... 直昇機模式，無定速 (without governor)	♫♫-♫♫♫♫
5. 於模式設定完成後，請關閉無刷速控器電源開關後再重新開啟電源開關即用。

2種電池保護程序：

標準鋰離子電池，
鎳氫電池保護模式

警告

高功率的馬達系統是非常危險的，高電流能加熱電線和電池導致火災或燙傷皮膚，請跟著指示說明小心使用，配有高功率馬達的遙控模型會造成傷害，一定要在標準的賽車場/飛行場，並且不能穿越或接近人群，即使你已經有了安全的配套措施，當你連接上電池，你還是必須要小心操作。

無刷馬達規格諸元

KV 值	3400 rpm/v
最大電流	7V-25A, 12V-15 A
效率	81%
適用電壓	7 V ~ 12 V
重量	39 g ± 1g
馬達外徑	25.5 mm
馬達長度	21 mm ± 0.5mm
馬達輸出軸心直徑	2.3 x 12(L) mm
極數	3 x 8 x 4
軸承尺寸	6

18A 電子變速器規格諸元

工作電壓	5.5 V ~ 16.8 V(Maximum)
瞬間最大電流	24 A
連續電流	18 A
弱電保護	3.1 V ~ 2.9 V / cell
溫度過載	120 °C
內建BEC電壓及電流	最大輸入電壓 12.6 V 輸出 5 V / 2 A

Simulator 請事先熟練模擬飛行

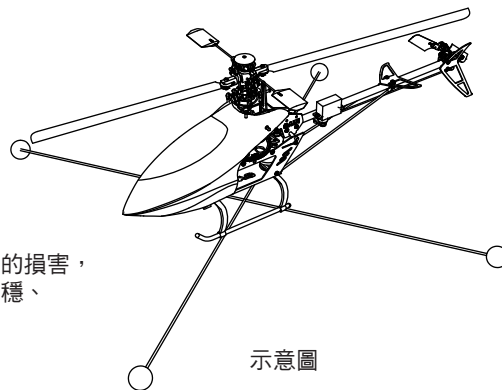
For beginners, it is highly recommended to use the simulator at beginning.

初學者請事先熟悉遙控器操作並能熟練的反應各動作，再實機飛行。
建議透過市售販賣模擬軟體進行模擬器練習如此提高飛行安全、降低損耗，以增加實機飛行的樂趣。

Training gear 初學者建議加裝練習腳架

For beginners, it is highly recommended to use the training gear.

初學者實機飛行前建議加裝練習腳架，可避免初次上機因緊張、壓力等因素造成不等的損害，初次飛行時請勿離地過高，一驚覺有危險請將油門推至低點，練習腳架可預防重心不穩、輕降落等問題降低對機身的損害。
並持續練習油門手感到操縱自如後再練習副翼跟方向舵。



示意圖

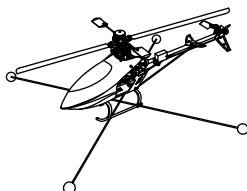
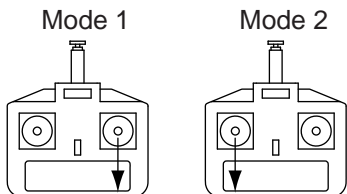
Real flight 實機飛行

Make sure to check that your frequency is not interfere with others in the same field.

請先確認該飛行場地是否有其他遙控型飛機的飛友，如有請向對方確認彼此之間的頻率，並向對方告知自己所用之頻率，以避免相同頻率互相干擾造成損害。

Make sure the throttle stick is at the lowest position and turn on the power of transmitter.
將發射機電源開啟，油門搖桿推至低點。

Turn on the power of receiver.
接上直昇機電源



Landing immediately when the power is not enough when hovering, replace a battery before next flight.

當飛行感覺出力不穩時請更換電池，關上電源時請依上述操作反執行

Blade Tracking 主旋翼雙槳平衡調整

Make sure to keep away from the spinning blades when tracking them.

1. Mark on the tip of one blade.
2. Increase the throttle little by little to check the tracking.
3. Adjust the linkage of one Main Grip if both blades is not even with each other when spinning.
4. Adjust linkage #2 for a good tracking.

The heli will be unstable if the tracking is not set properly, especially for the heli with FES rotor head.

The collective pitch for hovering is 5 or 6 degrees approximately.

調整主旋翼雙槳時請保持安全距離。

1. 調整前請在其中一支主旋翼的翼端，畫上明顯記號或貼有色貼紙，方便調整時辨識。
2. 慢慢推起油門桿，直升機離地前從側邊側視觀察直升機主旋翼雙槳。
3. 注意雙槳轉動時產生的軌跡，雙槳軌跡相同則不需調整，如遇不同軌跡請立即調整。
4. 調整2號連桿使雙槳軌跡相同。

主旋翼轉動時高軌跡代表主旋翼PITCH過大請調短2號連桿使PITCH一致。

主旋翼轉動時低軌跡代表主旋翼PITCH過小請調長2號連桿使PITCH一致。

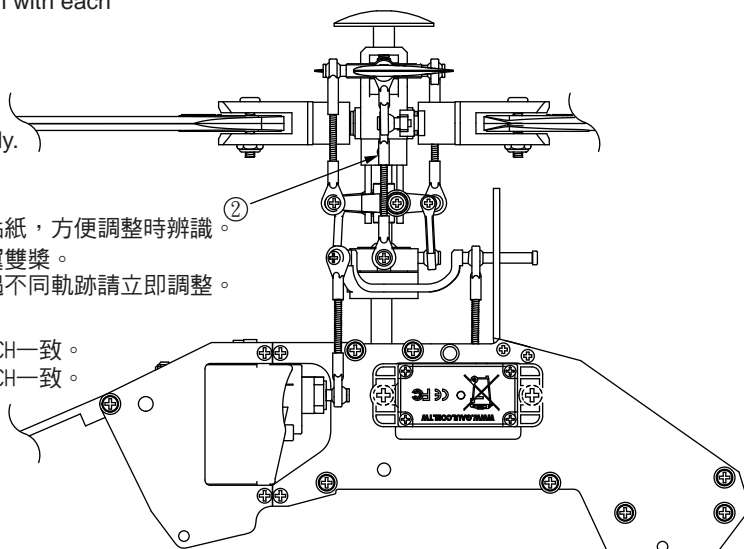
過高的軌跡容易使電池與馬達產生過熱現象。

過低的軌跡容易造成浮力不足耗電量增大。

飛行時軌跡不一致會產生振動造成飛行上的不安定，

如為FES機時請仔細調整。

調整完成後請確認停旋時Pitch角度約+5° ~ +6°。



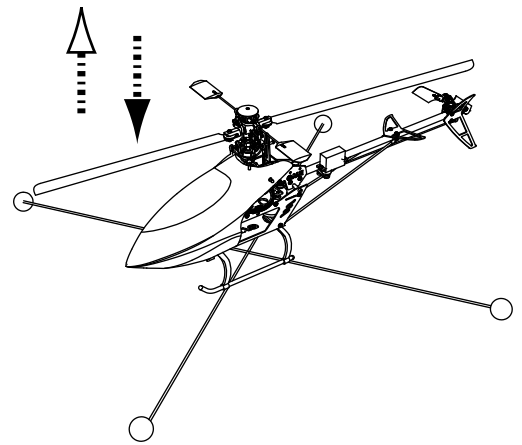
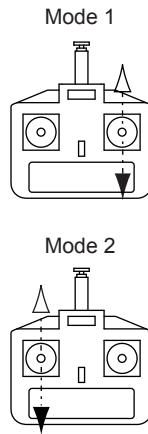
Throttle Control 油門控制練習

Keep 5 meters away behind the heli when hovering, keep the head toward to the front outside.

熟悉停旋練習，是提高安全的基本功，練習時請先保持直升機尾部朝向自己及確認距離於直升機後方約5公尺並保持之。

Increase the throttle little by little until the heli lifts slowly and decrease the throttle slowly to land it smoothly, practice it in both steps for a better control skill.

當直升機開始離地時，慢慢降低油門使直升機降落持續並反覆練習之以提高熟練、熟悉度。

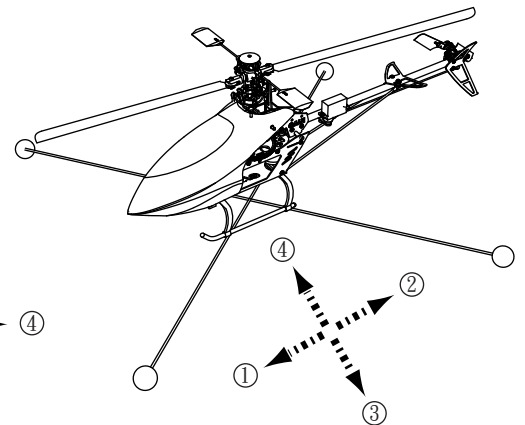
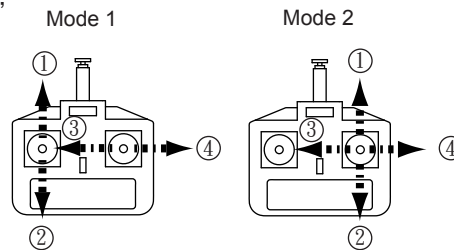


Aileron and Elevator Control 副翼及升降練習

Increase the throttle little by little until the heli lifts slowly and practice to move it to 4 directions(Forward / Backward / Left / Right), practice it in each step for a better control skill.

慢慢推起油門桿

使直升機依指示移動：向後 向前 向右 向左，並反覆練習之以提高熟練、熟悉度。

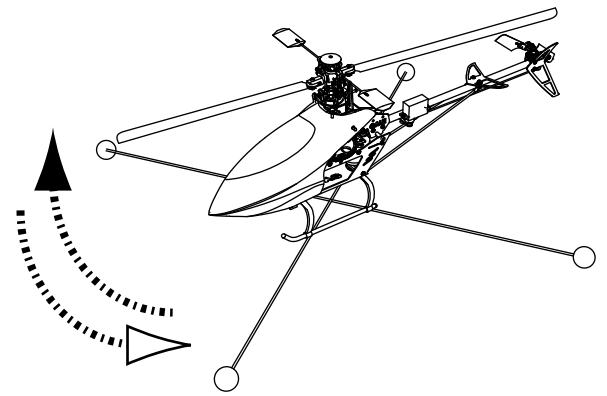
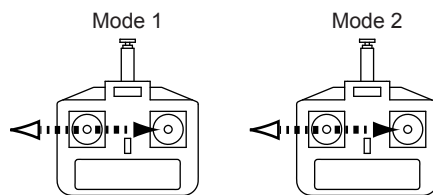


Rudder Control 方向舵練習

Increase the throttle little by little until the heli lifts slowly and practice to move the head to Left or Right side, practice it in each step for a better control skill.

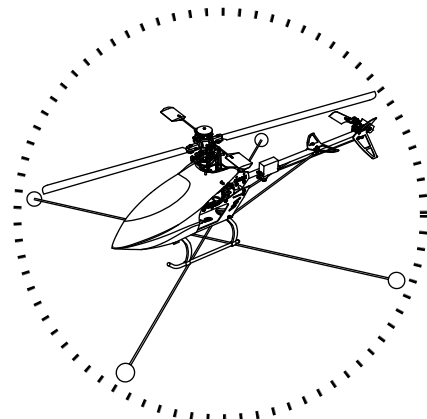
慢慢推起油門桿

將直升機機頭移動左、右，並慢慢朝反方向移動方向舵桿直到直升機回正於原位，並反覆練習之以提高熟練、熟悉度。



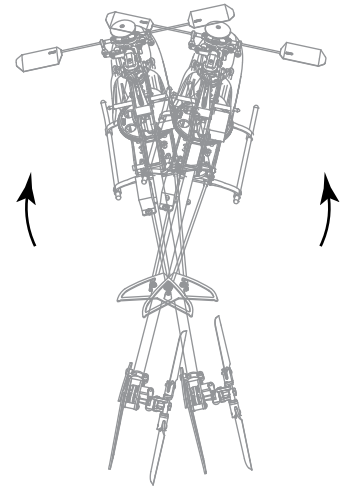
Practice to Control the heli in a specific area to get the quick response about it.

確認操控無誤並熟練後可在地上畫單一範圍限制飛行空間，提高練習反應。



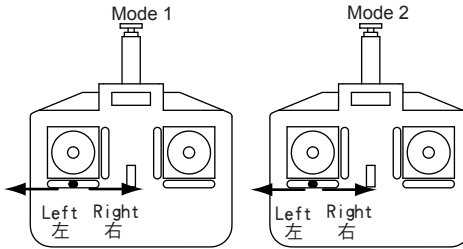
Trim - Rudder 飛行動作微調-方向舵

Use the trim function on transmitter to adjust the drift when hovering.
各操控桿皆有微調撥鈕，如遇直昇機剛離地便開始偏移時請微調以修正直升機動作



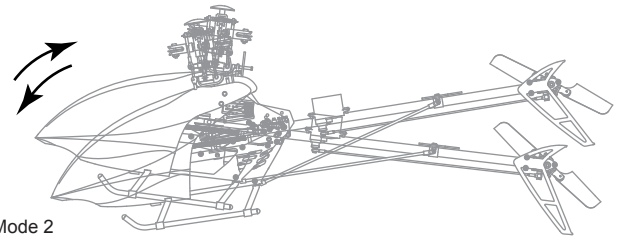
Use the Rudder trim to adjust the yawing when the tail drifts to right or left in hovering.

直昇機正起飛離地時，機頭朝左或右偏移時左偏移請將微調撥鈕往右撥，並重複微調之右偏移請將微調撥鈕往左撥，並重複微調之直到離地起飛無偏移現象即微調完成。



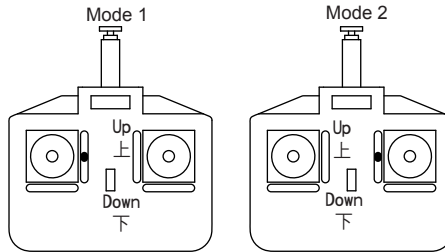
Trim - Elevator 飛行動作微調-升降舵

Use the trim function on transmitter to adjust the drift when hovering.
各操控桿皆有微調撥鈕，如遇直昇機剛離地便開始偏移時請微調以修正直升機動作



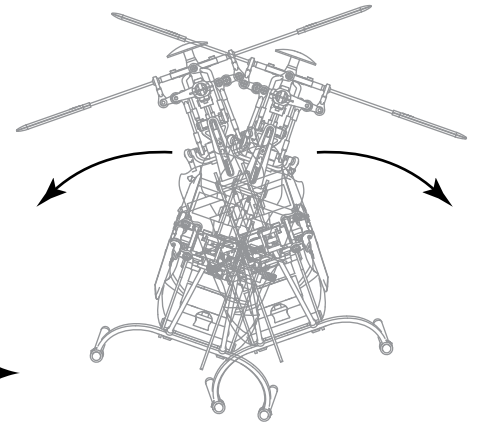
Use the Elevator trim to adjust the pitching if the nose moves up or down when hovering.

直昇機正起飛離地時，機頭朝前或後傾時，前傾時請將微調撥鈕往下撥，並重複微調之後傾時請將微調撥鈕往上撥，並重複微調之直到離地起飛時無傾現象即微調完成。



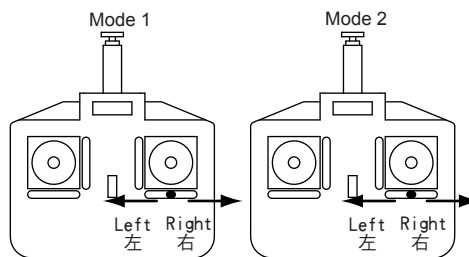
Trim - Aileron 飛行動作微調-副翼

Use the trim function on transmitter to adjust the drift when hovering.
各操控桿皆有微調撥鈕，如遇直昇機剛離地便開始偏移時請微調以修正直升機動作

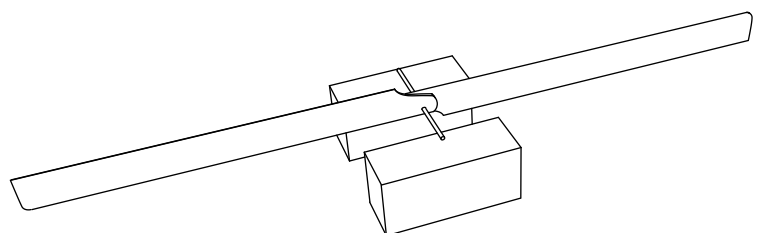


Use the Aileron trim to adjust the rolling if the heli tilts to right or left when hovering.

直昇機正起飛離地時，機身朝左或右偏移時右偏移請將微調撥鈕往左撥，並重複微調之左偏移請將微調撥鈕往右撥，並重複微調之直到離地起飛無偏移現象即微調完成。



Both blades should be blanced before flight.
旋翼配重:配重時請注意平衡，保持雙槳重量一致。



The Hurricane 255 heli product is not a toy, for the consideration of safety and performance, it is necessary to check and maintain after each flight.

請維持良好習慣：颶風255電動遙控直升機為高科技精密零組件構成之休閒用品，玩家請時常注意確保機體的保養及維持機構組件之性能，於飛行時展現其優異的性能，不當的保養維護，會導致飛行時的安全度降低。

When spinning, if the blades are unbalanced or the tracking of both blades is not even with each other, Check or replace the Blades / Mast / spindle shaft to fix the problem.

主旋翼運轉發生異常時，請檢查主旋翼、橫軸；主軸是否有變形或平衡不良，必要時請更新異常機構零件。

Check the mechanism and bearings after 100 normal flights for safety.

主軸軸承：主軸軸承經長期負載運作，正常飛行約100趟後必須檢查各部機構、軸承性能狀況，如有異常請更換新品以保持運作順暢。

Check and replace the damaged parts after crash of hard 3D flight.

如經常進行3D飛行或嚴重撞擊，建議你必須時常檢查機構、零件、軸承等，如發現異常狀態或間隙、異音或是轉動有明顯干涉等都必须更換新品。

When hovering, decrease the collective pitch or adjust the hovering throttle curve higher if the head speed is too slow, increase the collective pitch or adjust the hovering throttle curve lower if the head speed is too high.

停旋：主旋翼轉速偏低，請注意主旋翼的PITCH是否偏高或停旋點油門曲線過低。

停旋：主旋翼轉速偏高，請注意主旋翼的PITCH是否偏低或停旋點油門曲線過高。

Check the Rotor head assembly / main grip screws / mixing arms / flybar after crash (even in slightly compact), replace the damaged parts before next flight.

飛行時不慎觸地，請優先檢查旋翼頭零件及橫軸螺絲、混控臂、平衡桿等。

Make sure the length of each linkage should be adjust properly and the blade should be balanced.

雙槳平衡：請檢查連桿長度是否平均及雙槳的配重須一致。

Remove the one way bearing after 50 flights, clean it and grease it with oil.

單向軸承飛行50趟後請卸下來清潔與重新上油。

Replace the belt if there is any fissure on it.

皮帶：長期運轉會使皮帶造成老化、斷齒等狀況為了維護飛行安全請更換新品。

Increase the gyro gain if the tail is drifting to one side when hovering.

陀螺儀感度：停旋時陀螺儀朝某一方偏移，或撥方向舵柄回復到中立點時，尾翼產生延遲，無法停頓在控制點上，請增加陀螺儀感度。

Decrease the gyro gain if the tail wags in hovering.

陀螺儀感度：停旋或全油門時尾翼左右來回搖擺，請降低陀螺儀感度。

203848	O Ring(Hardness 90) and Paper washer for 3mm Main Rotor Spindle 3mm 橫軸用O型環(硬度90)及紙墊片組
203565	CNC Swashplate Guide CNC十字盤滑軌
207000	H255 CNC Main Grips set for H255(Titanium anodized) 颶風255 CNC主旋翼夾頭組(鈦色)
207001	H255 Main Rotor Yoke with Stop Plate(Titanium anodized) 颶風255 CNC附煞車盤主旋翼頭組(鈦色)
207002	H255 Spindles 颶風 255 橫軸包
207003	H255 Canopy Posts 颶風 255 艙罩支柱
207005	H255 CNC Universal Battery Plate 颶風 255 CNC萬用電池座
207006	H255 CNC Integrated Middle Mount 颶風 255 CNC一體成型主軸及尾管座
207008	Long Flybars Pack(154mm) 高性能長平衡桿包(154mm)
207010	H255 Tail Output Shaft (for belt version) 颶風 255 尾軸組(皮帶版用)
207020	H255 Tail Hub Set 颶風 255 尾旋翼頭
207025	H255 CNC Tail Pitch Slider 颶風 255 CNC雙推尾滑套
207026	H255 Arc Tail Lever Set 颶風 255 雙推尾舵柄組
207028	H255 Tail Support Clamp 颶風255 水平尾翼及尾支撐桿座
207029	CNC Integrated Tail Gear Case(Black anodized) 一體成型尾殼座組(電鍍黑)
207030	H255 CNC Tail Rotor Grips(Titanium anodized) 颶風 255 CNC尾旋翼夾頭組(鈦色)
207040	H255 CF Upper Frames 颶風 255 碳纖上側板組
207043	H255 CF Lower Frames 颶風 255 碳纖下側板組
207044	H255 High Rigidity Landing Gear Brace Set 颶風 255 高剛性腳架組
207045	H255 CF Fin & Tail(A Type-Black) 颶風 255 碳纖尾翼組(A型-黑)
207046	H255 Tail Servo Mount Set 颶風 255 尾伺服機座
207047	H255 Tail Boom Support Set 颶風 255 尾支撐桿組
207048	H255 High Performance Tail Rotor Blades(45mm) 颶風 255 高性能尾旋翼片組(45mm)
207050	CF Main Rotor Blades (255L-Black) 碳纖槳 255L(黑色)
862001	Tail Rotor Belt(for H255 Series) 尾傳動皮帶(颶風 255系列用)
852020	Gold Plated Connectors (1.8mm) with Heat Shrink Tubing 馬達用24K金接頭附熱縮套(1.8mm)
929020	Gold Plated connectors (1.8mm) with polarized housings(for Battery) 電池用24K金接頭(1.8mm)
944001	Micro Pitch Gauge(for 100~400 class) 微型螺距規(100~400級通用)
852202	(GUEC GM-202)Brushless Motor with connector (200W-kv3400) 無刷馬達附接頭及螺絲(200W-kv3400)

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TSH_{obby} **GAUI**
TAI SHIH HOBBY CORPORATION
TEL: +886-2-86305567
FAX: +886-2-26105567
Website : www.gai.com.tw
E-mail : gai@gai.com.tw

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