

TREX 800E PRO INSTRUCTION MANUAL 使用說明書

RH80E16XT

ALIGN

Pure extreme **3D**
ultimate edition
純粹暴力3D血統

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MICROBEAST PLUS
6-AXIS MEMS SENSOR SYSTEM FOR RC-MODELS

Thank you for purchasing Align products. Please read the manual carefully before installing and be sure to retain the manual for future reference. All pictures shown are for illustration purpose only. Actual product may vary due to product enhancement. Specifications, contents of parts and availability are subject to change, ALIGN RC is not responsible for inadvertent errors in this publications.

承蒙閣下選用亞拓遙控世界系列產品，謹表謝意。使用前，請務必詳讀本說明書，相信一定能夠給您帶來相當大的幫助，也請您妥善保管這本說明書，以備為日後參考。本公司將不對此印刷物之異動負責，也無法主動通知消費者任何更新或異動。所有圖片僅用於展示目的。產品可能因改良而有些不同。本說明書內記載的材質、規格或零件包裝之內容物如有異動，請依亞拓官網公佈為主。

Thank you for buying Align products. The T-REX 800E PRO helicopter is special edition for extreme 3D flight, as same as other T-REX sibling, full featured Helicopter R/C model capable of all forms of rotary flight. Please read the manual carefully before assembling the model, and follow all precautions and recommendations located within the manual. Be sure to retain the manual for future reference, routine maintenance, and tuning. The T-REX 800E PRO is a new product developed by ALIGN. It features the best design available on the Micro-Heli market to date, providing flying stability for beginners, full aerobatic capability for advanced fliers, and unsurpassed reliability for customer support.

感謝您選購艾比斯產品，為了讓您容易方便的使用 T-REX 800E PRO 直昇機，請您詳細的閱讀完這本說明書之後再進行組裝以及操作這台直昇機，同時請您妥善的保存這本說明書，作為日後進行調校以及維修的參考。T-REX 800E PRO 是由艾比斯自行研發的新產品，不僅您能需求飛行穩定性的初學者或是追求性能的飛行愛好者，T-REX 800E PRO 將是您最佳選擇。

WARNING LABEL LEGEND 標誌代表涵義



Do not attempt under any circumstances.
在任何禁止的情況下，請勿嘗試操作。



Mishandling due to failure to follow these instructions may result in damage or injury.
因為誤讀這些操作說明，而使用錯誤可能造成財產損失或嚴重傷害。



Mishandling due to failure to follow these instructions may result in danger.
因為誤讀這些操作說明，而使用錯誤可能造成危險。

IMPORTANT NOTES 重要聲明

R/C helicopters, including the T-REX 800E PRO are not toys. R/C helicopter utilize various high-tech products and technologies to provide superior performance. Improper use of this product can result in serious injury or even death. Please read this manual carefully before using and make sure to be conscious of your own personal safety and the safety of others and your environment when operating all ALIGN products. Manufacturer and seller assume no liability for the operation or the use of this product. This product is intended for use only by adults with experience flying remote control helicopters at a legal flying field. After the sale of this product we cannot maintain any control over its operation or usage.

As the user of this product, you are solely responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

T-REX 800E PRO 遙控直昇機並非玩具，它結合了許多高科技產品所設計出來的系統用品，所以產品的使用不謹慎或不熟悉都可能會造成嚴重傷害甚至死亡，使用之前請務必詳讀本說明書，勿輕信並注意自身安全。注意！任何遙控直昇機的使用，製造商和經銷商是無法對使用者於零件使用的消耗異常或錯誤不當所發生之意外負任何責任。本產品是提供給有操作過模型直昇機經驗的成人或持有相當技術的人員在符合當地合法遙控飛行場所飛行，以確保安全與適度操作使用，產品售出後本公司將不負任何操作或使用控制上的任何性能與安全責任。

做為本產品的使用者，您，是單一對於您自己操作的環境及行為負全部的責任之人。

We recommend that you obtain the assistance of an experienced pilot before attempting to fly our products for the first time. A local expert is the best way to properly assemble, setup, and fly your model for the first time. The T-REX 800E PRO requires a certain degree of skill to operate, and is a consumer item. Any damage or dissatisfaction as a result of accidents or modifications are not covered by any warranty and cannot be returned for repair or replacement. Please contact our distributors for free technical consultation and parts at discounted rates when you experience problems during operation or maintenance. As Align Corporation Limited has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

模型商品屬於高操作技術且為消耗性之商品，如經新裝使用後，會造成不等情況零件損耗，任何使用情況所造成產品不良或不滿意，將無法於保固條件內更換新品或退貨，如適用使用操作說明書，本公司全權分公司或代理商將提供技術指導、特價零件供應服務。對使用者之不當使用、設定、組裝、修改、或操作不良所造成的損壞或傷害，本公司無法控制及負責。任何使用、設定、組裝、修改、或操作不良所造成的損壞、意外或傷害，使用者應承擔全部責任。

SAFETY NOTES 安全注意事項



- Fly only in safe areas, away from other people. Do not operate R/C aircraft within the vicinity of homes or crowds of people. R/C aircraft are prone to accidents, failures, and crashes due to a variety of reasons including, lack of maintenance, pilot error, and radio interference. Pilots are responsible for their actions and damage or injury occurring during the operation or as a result of R/C aircraft models.
- Prior to every flight, carefully check rotorhead spindle shaft screws and tail blade grip screws, linkage balls and screws, ensure they are firmly secured.
- 遙控模型飛機、直昇機屬高危險性商品，飛行時務必遠離人群，人為組裝不當或操作損壞、電子控制設備不良，以及操作上的不熟悉，都有可能導致飛行失控損傷等不可預期的意外，請飛行者務必注意飛行安全，並需了解自負其責造成任何意外之責任。
- 每趟飛行前須仔細檢查，主要與旋翼軸螺絲、尾翼與旋翼螺絲，以及機身各部球頭、螺絲，確實上緊螺絲才能安全飛行。



LOCATE AN APPROPRIATE LOCATION 遠離障礙物及人群

R/C helicopters fly at high speed, thus posing a certain degree of potential danger. Choose a legal flying field consisting of flat, smooth ground without obstacles. Do not fly near buildings, high voltage cables, or trees to ensure the safety of yourself, others and your model. For the first practice, please choose a legal flying field. Do not fly your model in inclement weather, such as rain, wind, snow or darkness.

直升機飛行時會有一定的速度，相對的也潛在著危險性。場地的選擇也相對的重要，請遵守當地法規到合法飛行場飛行，請勿選擇在建築物、高壓電線、樹木等附近飛行，以免對他人、房屋、建築物、高壓電線、樹木等造成危險，並避免造成自己與他人財產的損害。請勿在下雨、打雷等惡劣天氣下操作，以確保本身及飛機的安全。



NOTE ON LITHIUM POLYMER BATTERIES 鋰聚合物電池注意事項

Lithium Polymer batteries are significantly more volatile than alkaline or Ni-Cd/Ni-MH batteries used in RC applications. All manufacturer's instructions and warnings should be followed closely. Mishandling of Li-Po batteries can result in fire. Always follow the manufacturer's instructions when disposing of Lithium Polymer batteries.

鋰聚合物電池一般用在RC使用的鹼性電池、鎳鎘電池、鎳氫電池比較起來要相對危險的。請嚴格遵守鋰聚合物電池說明書之使用注意事項，不恰當使用鋰聚合物電池，可能造成火災並造成生命財產安全，切勿大意！



PREVENT MOISTURE 遠離潮濕環境

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

直升機內部也是由許多精密的電子零件所組成，所以必須絕對防止濕氣或水氣，避免在浴室或雨天時使用，防止水氣進入機身內部而導致零件及電子零件故障而引發不可預期的意外！



PROPER OPERATION 勿不當使用本產品

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

請勿自行改造加工，任何的升級改裝感維修，請使用原廠產品目錄中的零件，以確保品質的安全。請勿隨意拆解機身內部零件，請勿隨意使用，並勿用於安全、法外其它非法用途。



OBTAIN THE ASSISTANCE OF AN EXPERIENCED PILOT 避免獨自操控

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

在飛行場飛行前，應先確認是否有相同頻率的飛機正在飛行，因為頻率的干擾將會導致自己與他人立即墜落意外。由於飛機飛行技巧在學習初期有着一定的難度，建議盡量尋求有經驗飛行員，能夠從經驗上在旁指導，才可以避免操作飛行，否則將會造成不可預期的意外發生。(建議電腦模擬駕駛及新手選擇入門必學的選擇)



SAFE OPERATION 安全操作

Make sure to always be aware to keep your eyes and body away from blades rotation. Do not attempt to grab or make contact with the helicopter while the main blades are in motion. During take-off, landing, and flight, be sure to keep the helicopter away from all obstacles. Operators must stand at least 10 meters away from the helicopter. Never take your eyes off the model or leave it unattended while it is turned on, and immediately turn off the model and transmitter when you have landed the model. Operate this unit within your ability, do not fly under tired condition, improper operation may cause danger, and always to avoid injury caused by loose parts due to improper assembly or any unforeseen dangers.

請隨時注意，無論在任何時候，都不能將視線中的飛機對準眼睛，嚴格用手控制運行中的直升機，當主旋翼轉動後，或旋翼/尾槳時，務必遠離障礙物。站立位置必須距離 10 公尺以上，不可在視線範圍外進行飛行。降陸後也請馬上關掉引擎機和遙控電源，操作時切勿再換舞臺，一定後投機及能力，避免因人力不足不當或零件鬆動，而造成不可預期的意外發生，並遠離機身與機翼，過於疲勞，精神不佳或不當操作，都可能引起不可預期的意外發生。



ALWAYS BE AWARE OF THE ROTATING BLADES 遠離旋轉中零件

During the operation of the helicopter, the main rotor and tail rotor will be spinning at a high rate of speed. The blades are capable of inflicting serious bodily injury and damage to the environment. Be conscious of your actions, and careful to keep your face, eyes, hands, and loose clothing away from the blades. Always fly the model a safe distance from yourself and others, as well as surrounding objects.

當飛機主槳與尾槳旋轉時會以高速度下運行，在旋轉下的旋翼會造成自己與他人在身體上或環境上的嚴重傷害，請時刻遠離旋轉中的主旋翼與尾槳，並保持安全距離以免造成危險及損壞。



KEEP AWAY FROM HEAT 遠離熱源

R/C models are made of various forms of plastic. Plastic is very susceptible to damage or deformation due to extreme heat and cold climate. Make sure not to store the model near any source of heat such as an oven, or heater. It is best to store the model indoors, in a climate-controlled, room temperature environment.

遙控飛機多半是以 PA 纖維或聚乙之類，電子零件為主要材質，因此要盡量遠離熱源、日曬，以避免因高溫而變形甚至熔毀損壞的可能。



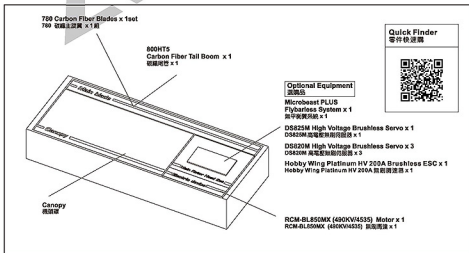
RADIO TRANSMITTER AND ELECTRONIC EQUIPMENT REQUIRED FOR ASSEMBLY 自備遙控及電子設備

 Transmitter (6-channel or more, Helicopter system) 發射器 (六或以上道昇空機模式遙控器)	 Receiver (6-channel or more) 接收器 (六或以上) or  Remote Receiver 遙控天線
 Intelligent Balance Charger RCC-6CX 智慧型平衡充電器 RCC-6CX	 RCC-300 Intelligent Battery Charger RCC-300 智慧型充電器  22.2V 6S 4500-5200mAh Li-Po Battery x 2 pcs 22.2V 6S 4500-5200mAh Li-Po 電池 x 2  Receiver Battery 7.4V 2S 1900-2300mAh Li-Po x 1 pcs 接收器電池 7.4V 2S 1900-2300mAh Li-Po x 1

ADDITIONAL TOOLS REQUIRED FOR ASSEMBLY 自備工具

 [H70118] Swashplate Leveler 十字盤校正器	 [HET80001] AP800 Digital Pitch Gauge AP800 數位傾斜尺	 [HETMT901] Multi-function Tester 多功能檢測計
 Phillips Screw Driver 十字螺絲起子 φ 3.0 / φ 1.6mm	 Cutter Knife 刀子	 Hexagon Screw Driver 六角螺絲起子 3mm/2.5mm/ 2mm/1.6mm
 Needle Nose Pliers 尖嘴鉗	 Oil 潤滑油	 CA Glue 瞬間膠
		 Grease 潤滑油

PACKAGE ILLUSTRATION 包裝說明



There are many versions of T-REX 800E PRO for your choice. The Super Combo includes additional electronics and other equipment. The Instruction Manual will refer to the T-REX 800E PRO Super Combo. You may purchase any additional items referenced in the instruction manual or any spare parts for other 800E PRO version by referring to more product information in this manual.

T-REX 800E PRO 系列產品有多種版本可作為選擇，除標準配備會包含購買的商品版本而有些微不同，在組裝、設定上都是一致的，在此我們以 Super Combo作為操作範例，您也可依照書面上的商品圖標來增添其他選購商品。



T-REX 800E PRO SUPER COMBO STANDARD EQUIPMENT				T-REX 800E PRO SUPER COMBO標準配備 [RH80E16XT]		
						
800HC2	700FLH	800HB6	700HB11A	800HB8	700HB13	700HB14
						
Repair Towel x 1 維修毛巾 x 1	800HT1	800HT8	800HT5 Carbon Fiber Tail Boom x 1 碳纖維尾杆 x 1	800HG1	780 Carbon Fiber Blades x 1set 780 碳纖維主旋翼 x 1組	
						
850MX Brushless Motor (490KV/453S) x 1 850MX 無刷馬達 (490KV/453S) x 1	M4x4 Set Screw x 2 M4x4 止咬螺絲 x 2	Microbeast PLUS Flybarless System x 1 飛中飛系統 x 1	DS820M High Voltage Brushless Servo x 3 DS820M 高電壓無刷伺服馬達 x 3	DS825M High Voltage Brushless Servo x 1 DS825M 高電壓無刷伺服馬達 x 1	Hobby Wing Platinum HV 200A Brushless ESC x 1 Hobby Wing Platinum HV 200A 無刷調速器 x 1	

CAREFULLY INSPECT BEFORE REAL FLIGHT 請嚴格執行飛行前之檢查義務

- Before flying, please check to make sure no one else is operating on the same frequency for the safety.
- Before flight, please check if the batteries of transmitter and receiver are enough for the flight.
- Before turn on the transmitter, please check if the throttle stick is in the lowest position. IDLE switch is OFF.
- When turn off the unit, please follow the power on/off procedure. Power ON- Please turn on the transmitter first, and then turn on receiver. Power OFF- Please turn off the receiver first and then turn off the transmitter. Improper procedure may cause out of control, so please to have this correct habit.
- Before operation, check every movement is smooth and directions are correct. Carefully inspect servos for interference and broken gear.
- Check for missing or loose screws and nuts. See if there is any cracked and incomplete assembly of parts. Carefully check main rotor blades and rotor holders. Broken and premature failures of parts possibly cause a dangerous situation.
- Check all ball links to avoid excess play and replace as needed. Failure to do so will result in poor flight stability.
- Check if the battery and power plug are fastened. Vibration and violent flight may cause the plug loose and result in out of control.
- 每次飛行前應先確認所使用的頻率是否會干擾他人，以確保自身與他人的安全。
- 每次飛行前請確定發射器與接收器電池的電量充足足夠飛行的需要。
- 開機時應確認方向搖桿是否位於最低點，熄火桿落開關，定速開關 (IDLE) 是否於關閉位置。
- 開機時必須遵守電路開關機的操作，開機時應先開啟發射器後，再開接收器電源；關機時應先關閉接收器後，再關閉發射器電源。不正確的操作可能會造成失控的現象，影響自身與他人的安全，請養成正確習慣。
- 開機前應先確定直昇機的各個動作是否正確，並檢查伺服器的動作是否有干涉或磨損的情形，使用故障的伺服器將導致不可預期的危險。
- 飛行前確認沒有缺少或鬆脫的螺絲與螺帽，確認沒有組裝不完善或磨損的零件，仔細檢查主旋翼是否有損壞，特別是接近主旋翼交匯的部位，損壞或組裝不完全的零件不僅影響飛行，更會造成不可預期的危險。注意：每次飛行前的安全檢查、保養、及更換損耗零件，請確實嚴格執行以確保安全。
- 檢查所有的連接頭是否有鬆脫的情形，過鬆的連接頭應先更新，否則將造成直昇機無法操控的危險。
- 確認電池及電源插頭是否固定牢靠，飛行中的震動或激烈的飛行，可能造成電源插頭鬆脫而造成失控的危險。

When you see the marks as below, please use relative glue or grease to ensure flying safety.

標有以下符號之組裝步驟，請配合上膠漿上油，以確保鋼制零件使用之可靠性。



• CA : Apply small amount of CA Glue to fix.
黏結膠：使用適量黏結膠固定

• R48 : Apply small amount of Anaerobic Retainer to fix.
鎖結膠：使用適量鎖結膠固定

• T43 : Apply small amount of Thread Lock to fix.
螺絲膠：使用適量螺絲膠

• OIL : Add small amount of OIL.
潤滑油：添加適量潤滑油

• Grease : Add small amount of Grease.
潤滑膏：添加適量潤滑膏

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

在裝配球桿桿頭扣緊時，"A"字請朝外。



Keep plastic parts away from heat.
塑膠件避免靠近熱源。



CA Glue
黏結膠



Anaerobic
Retainer
鎖結膠



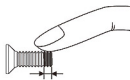
Thread Lock
螺絲膠



Grease
潤滑膏



Oil
潤滑油



T43 Glue width : approx. 1mm
T43 上膠寬度約 1mm

- Anaerobic Retainer (R48) is green penetrating threadlocker and is used to fix the metal tube before assembly at temperatures up to +189°C.
- Thread Lock (T43) is blue low strength threadlocker and is applied to the small screw (threads) or metal parts before assembly to prevent loosening. Ensure to apply only a small amount and wipe surplus off. When disassembling, recommend to heat the metal joint about 15 Seconds.
- Grease is kind of lubricant additive which is applied to the one-way bearings or thrust bearing.

Based on parts physical attributes, please apply small amount of the relative glue or grease accordingly to prevent any parts damage or loosening or unexpected danger happened.

- 鎖結膠 (R48) 為綠色高強度快速固化的鎖結膠，適合於金屬管狀固定用，可耐高溫至 189°C。
- 螺絲膠 (T43) 為藍色低強度螺絲膠，適合小型螺絲；使用於金屬內外型螺絲或各類螺絲，請務必適量使用，必要時請用手去除去多餘膠量，欲拆卸時可於金屬接合部位加熱約 15 秒。
- 潤滑膏 (Grease) 為膏狀潤滑油，適用於單向軸承或止推軸承。

以上各組裝步驟 (請) 依零件屬性需求自行準確掌握黏膠其用量，以達到最佳組裝狀態，避免因使用不當造成零件損壞或不可預期的意外發生。

3D & F3C MAIN ROTOR HOLDER ARM FINE CONTROL ACCURACY 3D & F3C 主旋翼夾座臂細微的控制精準度

The Instruction Manual will refer to the T-REX 800E PRO Super Combo with 3D main rotor holder arm. you may purchase any additional items referenced in the instruction manual or any spare parts for other T-REX 800E PRO version by referring to more product information in this manual.

在此我們以 Super Combo 搭配 3D 主旋翼夾座臂作為操作範例，您也可依照書面上的商品圖錄來增添其他選購商品。

3D Main Rotor Holder Arm 3D 主旋翼夾座臂

[H76H001XXW]

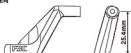
3D Main Rotor Holder Arm
3D 主旋翼夾座臂

The 3D main rotor holder arm has excellent rigidity and toughness, suitable for extreme 3D flight, features with more direct and faster response, also enhance the flight stability, allowing to stimulate the infinite possibilities.

3D 主旋翼夾座臂擁有極佳的剛性與韌性，適用於極端暴力 3D 飛行，操控上更直接與更快反應外，更提升飛行穩定，讓你想發出無限可能。

F3C Main Rotor Holder Arm F3C 主旋翼夾座臂

[H76H002XXW]

F3C Main Rotor Holder Arm
F3C 主旋翼夾座臂Optional Equipment
選購品

The new F3C main rotor holder arm, effectively doubling the flight stability, and the excellent fine control accuracy; not only in the static flight has more advantages in the dynamic flight also has more outstanding control feeling.

全新的 F3C 主旋翼夾座臂，有效加倍飛行穩定性能，與網球級單的控制精準度，不僅在靜態飛行有更加優勢，在動態飛行上也有更優良的操控手感。

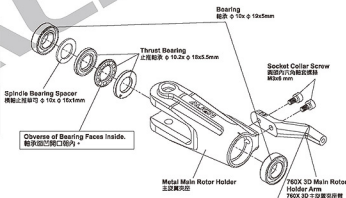
700FLH16



注意

Thrust bearing and washer for radial bearing are wear items; therefore, it is recommended to inspect after every 20 flights and replaced as necessary. For flights with high headspeed, the inspection interval should be reduced to ensure flight safety.

止推軸承及徑向軸承屬於飛行消耗品，建議每 20 趟定期檢查及更換，高主旋翼轉速飛行，請縮短定期檢查之週數，以確保飛行安全。

Thrust Bearing
止推軸承 (φ 10.2x φ 10x5.5mm) x 2Bearing
軸承 (φ 10x φ 10x5mm) x 4Spindle Bearing Spacer
滑軸止推墊圈 (φ 10x φ 10x1mm) x 2Socket Collar Screw
圓錐內六角軸承鎖絲 (M3x6mm)x4

注意

Apply Grease on Thrust Bearing.
止推軸承塗上潤滑脂

THRUST BEARING 止推軸承

Metal Main Rotor Holder
金屬主旋翼夾座

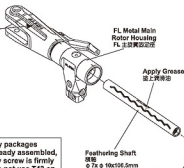
禁止

The Rotor Holder is specialized for F3C or 3D flight only. Make sure to switch or replace the whole F3C or 3D main rotor holder arm completely. Strongly recommend not to apply F3C & 3D main rotor holder arm together on the helicopter at the same time.

組裝或替換 F3C/ 3D 飛行專用夾座臂時，須整組更替，嚴禁 F3C 主旋翼夾座臂與 3D 主旋翼夾座臂混合使用。



ALLEN
Logo on The Top
字樣朝上



FL Metal Main
Rotor Housing
FL主旋翼固定座

Apply Grease
塗上潤滑油

Feathering Shaft
傾舵
Φ 7x Φ 10x106.5mm

Spindle Bearing Spacer
傾舵止定桿(Φ 10x Φ 16x1mm) x 2

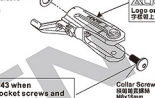
Collar Screw
傾舵鎖緊螺絲(M6x15mm) x 2

Feathering Shaft Sleeve
傾舵套筒(Φ 16.2x Φ 17x21mm) x 2

Head Damper
傾舵壓圈(Φ 10x Φ 17x7mm) x 2

Head Damper
傾舵壓圈
Φ 10x Φ 17x7mm

Spindle Bearing Spacer
傾舵止定桿
Φ 10x Φ 16x1mm



ALLEN
Logo on The Top
字樣朝上

Collar Screw
傾舵鎖緊螺絲
M6x15mm



Original manufacturer packages contains product already assembled, please confirm every screw is firmly secured with T43. Do not use T43 on any plastic part.

原廠零件包裝包裝如果已組裝產品，請確認每顆螺絲是否都緊上膠。請注意T43不可用在任何塑膠材質上。

The feathering shaft and feathering shaft socket screws are wear items, and thus should be inspected for replacement after every 100 flights. For flights with high head speed, the inspection interval should be reduced to ensure flight safety.

主旋翼傾舵組、傾舵和傾舵螺絲屬於飛行消耗品，建議每100趟定期檢查及更換。若主旋翼轉速為行時，請縮短定期檢查之週數，以確保飛行安全。



Please apply a small amount of T43 when tightening the feathering shaft socket screws and make sure to tighten firmly, but not over tighten. Suggest using a torque wrench or torque lock when tightening screws. Torque value 20.0kg.cm
傾舵螺絲鎖附時請注意鎖附之緊度與使用適量的傾舵膠，建議搭配扭力扳手或扭力鎖緊傾舵螺絲，鎖正扭力值為20.0kg.cm。

700FLH16

Bearing
軸承(Φ 2x Φ 7x3mm) x 4

Bearing
軸承(Φ 2x Φ 5x2.3mm) x 4

Washer
墊圈(Φ 3x Φ 4.8x8.3mm) x 2

Collar
傾舵鎖緊螺絲(Φ 3x Φ 4.8x1.5mm) x 2

700FLH16A

Socket Screw
鎖頭內六角螺絲(M2x5mm) x 4

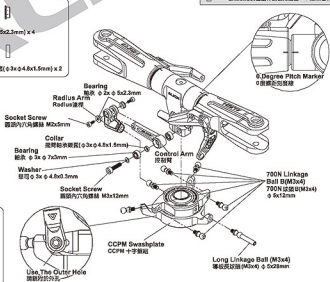
Socket Screw
鎖頭內六角螺絲(M3x12mm) x 2

700FLH13

700N Linkage Ball B(M3x4)
700N 球頭B(M3x4)(Φ 5x12mm) x 6

Long Linkage Ball (M3x4)
球頭長球頭(M3x4)(Φ 5x28mm) x 1

Apply a small amount of T43 thread lock when fixing a metal part.
螺絲鎖附於金屬件時使用適量T43(傾舵膠)。



Bearing
軸承(Φ 2x Φ 5x2.3mm)
Radius Arm
傾舵臂

Socket Screw
鎖頭內六角螺絲 M2x5mm

Collar
傾舵鎖緊螺絲(Φ 3x Φ 4.8x1.5mm)

Bearing
軸承(Φ 3x Φ 7x3mm)

Washer
墊圈(Φ 3x Φ 4.8x8.3mm)

Socket Screw
鎖頭內六角螺絲 M3x12mm



Use The Outer Hole
鎖頭外孔

700N Linkage Ball B(M3x4)
700N 球頭B(M3x4)
Φ 5x12mm

Long Linkage Ball (M3x4)
球頭長球頭(M3x4) Φ 5x28mm

700FLH16A



注意



Linkage Rod (A)
連桿 A (M3x35mm) x 2



Linkage Ball (B) (M3x4)
球頭 B (M3x4) (φ 5x10.5mm) x 2



Socket Collar Screw
圓頭內六角鎖緊螺絲 (M4x24mm) x 2



M4 Nut
M4 的螺帽 x 2



Washer
華司 (φ 4xφ 8x1mm) x 2



Collar
連桿套 x 2



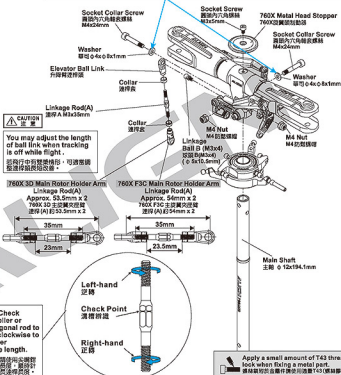
Elevator Ball Link
升降臂連桿頭 x 2



Socket Screw
圓頭內六角螺絲 (M3x5mm) x 1

1. While assembling T-REX 700X/700L V2 FL Rotor Housing, please be sure to include a φ 4xφ 8x1 mm washer between Socket Collar Screw and M4 Nut. Confirm the main shaft is firmly assembled on rotor housing. This will ensure main shaft longevity and flight safety.
2. Main rotor head and main shaft are wear items; it is recommended to inspect after every 200 flights and replace as necessary. For high headspeed flights, the inspection interval should be reduced to ensure flight safety.
3. Make sure to check and change the parts if any failure due to normal deterioration or mechanical wear to prevent expected danger during high headspeed flight.

1. T-REX 700X/700L V2 FL 旋翼安裝組裝時，請於主旋翼固定座螺絲的軸套螺絲及旋翼螺絲之陸地上一片 φ 4xφ 8x1mm 華司，可確保主旋翼固定座螺絲確實緊於主軸上，請試用于上下左右搖動，不可有鬆動或搖晃的情形發生。
2. 旋翼座及主軸屬於飛行消耗品，建議每 200 組定檢檢查及更換，請縮短定檢檢查之週數，並確實檢查並更換零件，以確保飛行安全。
3. 若發生人為組裝不當或零件損壞造成模型飛機損壞時，請務必詳細檢查，強烈建議更換損壞的零件，並避免主旋翼轉速飛行時，發生不可預期的意外。



注意

You may adjust the length of ball link when tracking is off while flight.

若飛行中有變速情形，可適當調整連桿長度改善。



注意

Already assembled by Factory. Before flying, please check if the screws are fixed with glue.

廠家組裝完成品，每一次飛行前請先檢查螺絲是否已上膠不會鬆動。



注意

For installation, make sure the "Check Point" is face upward, then use pillar or wrench grasp the center of hexagonal rod to adjust its suitable length, turns clockwise to decrease the length, turns counter clockwise to increase the linkage length.

組裝時請確認中防有螺絲頭朝上，請使用尖嘴鉗或手轉動連桿中防六角螺絲調整長度，旋轉時請面向調槽折痕；逆時針轉動為減短連桿長度，逆時針轉動為增長連桿長度。

MAIN ROTOR GRIP ARM AND LINKAGE ROD

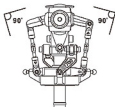
主旋翼連桿與夾座臂

SYMMETRICAL PITCH, THE BEST PRECISION

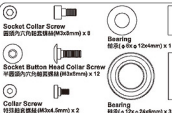
動作穩定對稱，精準度更好

Main Rotor Grip Arm and Linkage Rod is at 90-degree angle symmetrically, allow to keep the best precise flight performance.

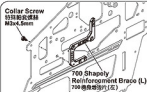
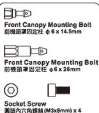
主旋翼連桿與夾座臂 90 度設計，使螺距動作成對稱比例，讓直昇機動作更精準更穩定。



800HB8



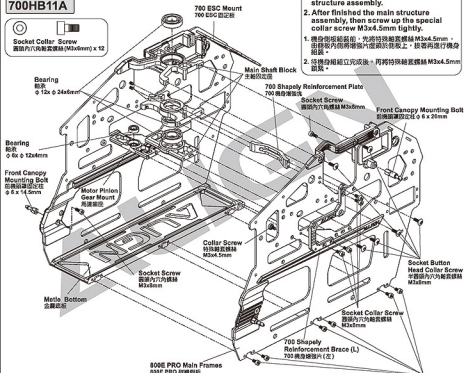
800HB7



1. Before assemble the main structure, please roughly bolt the special collar screw M3x4.5mm inside the main frame, and then go into next process of main structure assembly.

2. After finished the main structure assembly, then screw up the special collar screw M3x4.5mm tightly.
- 機身側板組裝前，先將特製鎖緊螺絲 M3x4.5mm，由螺絲內側看增強片虛線於基板，接著再進行機身組裝。
- 待機身組裝完成後，再將特製鎖緊螺絲 M3x4.5mm 鎖緊。

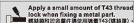
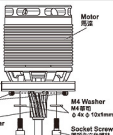
700HB11A



700HZ11



Make sure the motor mount is fully fastened before fasten the motor pinion gear mount.
先將馬達固定座鎖緊固定，再將齒輪座鎖緊。



Original manufactory packages contains product already assembled please confirm every screw is firmly secured with T43. Do not use T43 on any plastic part.

原裝零件出廠包裝如果是組裝品，請再確認各螺絲是否鎖緊上膠。請注意 Y43 不可塗在任何的塑膠材質上。

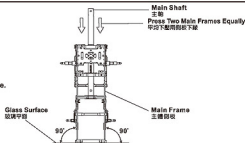


Main frame assembly key point :

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

攝身側要組立重點：

側板螺絲先不完全鎖緊，放入主軸貫穿二顆前承頂膠上下移動必需滑順，主體基板必須與水平桌座（玻璃平面）確實緊貼；請保持主軸滑順與基板平行桌面後慢慢鎖緊螺絲，正確側板的組裝對動力與運行極有顯著幫助。



700HB13



Socket Button Head Self Tapping Screw
圓頭內六角自攻螺絲(T3x12mm) x 2

800HB7



Socket Collar Screw
圓頭六角型鋼索螺絲(MJ-100mm) x 1



Socket Screw
圓頭內六角螺絲(M3x20mm) x 2

700HB11A



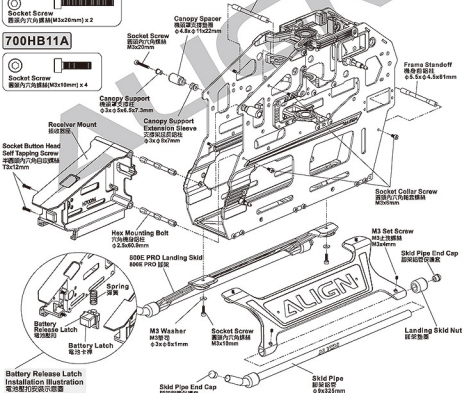
六角螺絲(M3x30mm) x 4



M3 Washer
M3ワッシャー(φ3xφ8x1mm) x 4



M3 Set Screw
M3止动螺钉(M3x4mm) x 4



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原裝零件出廠包裝如果是組裝品，請需再確認各螺絲是否裝緊上膠，請注意 T43 不可塗在任何的塑膠材質上。

700HZ9

Linkage Ball C
球頭 C(M2.5x3.5) (φ 5x8.5mm) x 1

Linkage Ball C
球頭 C(M2.5x4) (φ 5x12mm) x 3

700HB12

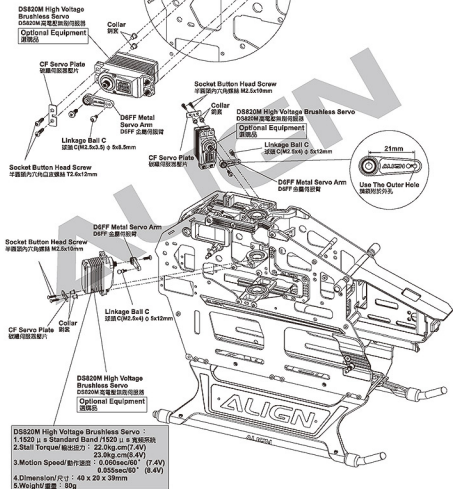
Socket Button Head Screw
半圓頭內六角螺絲 (M2.5x10mm) x 6

Apply a small amount of T43 thread lock when fixing a metal part.
鎖緊零件時請塗用適量T43(螺絲膠)。

CAUTION
注意

Original manufactory packages contains product already assembled, please confirm every screw is firmly secured with T43. Do not use T43 on any plastic part.

原廠零件包裝包裝如果裝配成品，請確認每顆螺絲是否都裝上膠。請注意 T43 不可塗在任何的塑膠材質上。



800HB8



Collar Screw
特形鎖緊螺絲 (M3x5.5mm) x 2

700HB13



Socket Button Head Screw
半圓頭內六角螺絲 (M2.5x10mm) x 4



Socket Button Head Screw
半圓頭內六角螺絲 (M2.5x9mm) x 4

700HZ9



Linkage Ball C (M2x4)
球頭C (M2x4) (φ5x3mm) x 1



M2 Nut
M2 螺帽 x 1

700HZ11

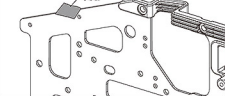


Washer
華司 (φ4xφ9x0.5mm) x 1

Recommend sanding the marked position as below illustration with a waterproof abrasive paper (#600-1000) to avoid the wires of electric parts to be cut.

建議於下圖色塊標示處，使用#600-1000水砂紙打磨，可防止電子設備電路被割破。

Waterproof Abrasive Paper
水砂紙



Apply a small amount of T43 thread lock when fixing a metal part.
鎖絲鎖付此金屬件時使用微量T43(鎖絲膠)。



CAUTION
注意

Original manufactory packages contains product already assembled, please confirm every screw is firmly secured with T43. Do not use T43 on any plastic part.

原裝零件出版包裝如果是組裝品，請確認每顆鎖付螺絲是否鎖緊上膠。請注意T43不可塗在任何的塑膠材質上。



CAUTION
注意

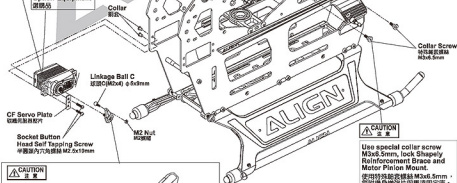
1. While assembling the motor mount, please make sure to properly loose M4 Set screw on 12T motor gear first, after fully fasten the motor mount with the motor pinion, then fasten back the M4 Set screw completely.
2. Make sure the motor mount is fully fastened before fasten the motor pinion gear mount.

1. 安裝馬達座時，請先將 12T 馬達齒主齒的 M4x4mm 止咬螺絲適當放鬆，然將馬達座和馬達座座固定鎖緊後，再將馬達止咬螺絲鎖緊。
2. 將馬達座固定鎖緊固定後，再將馬達座座鎖緊。

- D5825M High Voltage Brushless Servo :
1. 1520 μ s Standard Band / 1520 μ s 寬頻系統
 2. Stall Torque/ 輸出扭力 : 10.0kg.cm (7.4V)
12.5kg.cm (8.4V)
 3. Motion Speed/ 動作速度 : 0.03sec/60° (7.4V)
0.028sec/60° (8.4V)
 4. Dimension/ 尺寸 : 40 x 20 x 39mm
 5. Weight/ 重量 : 72g

D5825M High Voltage
Brushless Servo
D5825M 高壓無刷馬達

Option Equipment
選購品



CF Servo Plate
伺服馬達固定板

Socket Button
Head Self Tapping Screw
半圓頭內六角螺絲 M2.5x13mm

Linkage Ball C
球頭C (M2x4) φ5x3mm

M2 Nut
M2 螺帽

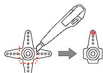
Collar Screw
特形鎖緊螺絲 M3x5.5mm



CAUTION
注意

Please trim away the other servo horns, and fasten linkage ball on the outer hole.

請先將原則上零件角片切除多餘的角三溝，並將球頭鎖付於最外孔。

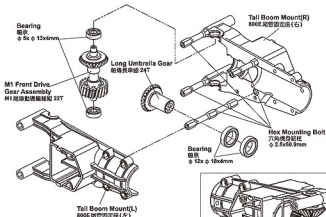


CAUTION
注意

Use special collar screw M3x5.5mm, lock Shapely Reinforcement Brace and Motor Pinion Mount.

使用特形鎖緊螺絲 M3x5.5mm，鎖付機身增強片與馬達座座座。

800HT1



Bearing

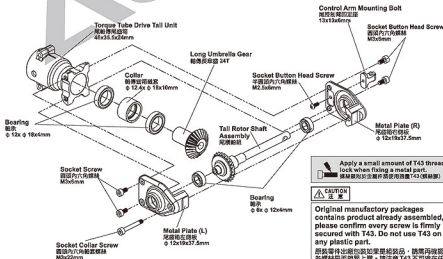
轴承 (φ 5x φ 13x4mm) x 2

Bearing

轴承 (φ 12x φ 18x4mm) x 2

Assembling Umbrella Gear :
Please note to push the gear to the end at a fixed position, to make sure the gears mesh with each other smooth.
安装伞齿轮：注意伞齿轮推到固定位置，以免啮合时不顺畅。

800HT8



Apply a small amount of T43 thread lock when fixing a metal part.
安装金属件时请使用少量T43(螺纹锁固剂)。

CAUTION 注意

Original manufacturer packages contains product already assembled, please confirm every screw is firmly secured with T43. Do not use T43 on any plastic part.

原裝零件包裝內如果已是組裝品，請再次確認每顆螺絲都牢固鎖上膠。請注意 T43 不可塗在任意的塑膠件上。

800HT8

Collar Screw
軸套螺絲-組 (M2x8mm) (牙長 3mm) x 2

Collar Screw
軸套螺絲 (M2x8mm) (牙長 4.3mm) x 2

Socket Screw
圓頭內六角螺絲 (M2x8mm) x 2

Collar A
尾座彈簧鋼套 A (φ 2x φ 3x6mm) x 2

Bearing
軸承 (φ 8x φ 12x3.5mm) x 2

Slide Shaft
尾軸滑套 x1

Bearing
軸承 (φ 2.5x φ 7.1x2.6mm) x 6

Socket Button Head Screw
半圓頭內六角螺絲 (M2.5x5mm) x 6

Socket Collar Screw
圓頭內六角軸套螺絲 (M3x8mm) x 2

Thrust Bearing
止推軸承 (φ 5x φ 10x4mm) x 2

Bearing
軸承 (φ 8x φ 10x3mm) x 4

Washer
華司 (φ 3x φ 8x1mm) x 2

M4 Set Screw
M4 止鎖螺絲 (M4x6mm) x 1

Washer
華司 (φ 8x φ 10x3mm) x 2

Socket Button Head Screw
半圓頭內六角螺絲 (M3.5x5mm) x 1

Linkage Ball C (M2x4)
球頭 C (M2x4) (φ 5x9mm) x 1

800HT9

Socket Collar Screw
圓頭內六角軸套螺絲 (M3x13mm) x 2

M3 Nut
M3 尼龍螺帽 x 2



Apply Grease on Thrust Bearing.
止推軸承塗上潤滑油

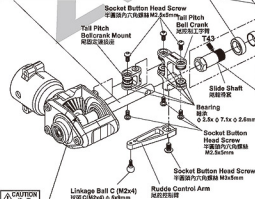


THRUST BEARING 止推軸承

Please tighten M2x8mm collar screw firmly but not over tightened. Over tighten the screw will cause the operation of control link unsmoothly.
鎖緊 M2x8mm 軸套螺絲時請使用適力適，過緊則會造成尾座控制連桿運動不順。



Aim tail rotor hub at the concave of tail rotor shaft and fix it, please apply a little glue on the set screw.
尾座螺絲 T 型控制連桿尾座螺絲的凹面安裝上，請在螺絲上塗抹少量潤滑油。



Assembling Umbrella Gear: Please note to push the gear to the end at a fixed position, to make sure the gears mesh with each other smoothly.
安裝傘齒輪，請注意務必將齒輪推到底定位，以避免齒輪咬合不順暢。

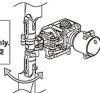


Apply a small amount of T43 thread lock when fixing a metal part.
螺絲鎖緊時在金屬零件間塗抹 T43 (螺絲鎖)。

While assembly the slide shaft, please use suitable amount of T43 on the thread. Please do not use R48 anaerobics retainer or other high strength glue to avoid damages while maintenance or repairs.
組立尾軸滑套時，請使用適量的 T43 螺絲鎖在螺絲上，嚴禁使用 R48 無膠合性黏膠防止膠合過緊，以免日後所需維修零件之毀壞。



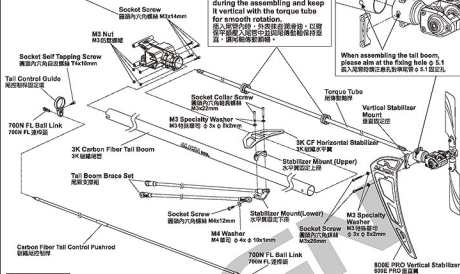
After complete the tail rotor assembly, please check if it rotates smoothly.
組裝完尾座螺絲後，請檢查尾座螺絲是否旋轉順暢。



Already assembled by factory, please note to check again.
已裝完成，請務必自行再檢查。

When assembling into the tail boom, please apply some oil on the surface, to make it smooth during the assembling and keep it vertical with the torque tube for smooth rotation.
插入尾管時，外表面應塗油，以便保持順滑插入尾管中並與尾管軸保持垂直，請同時檢查動靜。

When assembling the tail boom, please aim at the fixing hole $\phi 5.1$ 裝入尾管時請注意孔對準尾管 $\phi 5.1$ 固定孔。



700NT1A



800HT4A

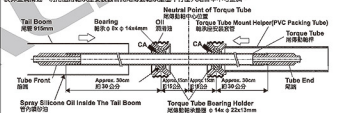


800HT8

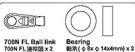


TIP TO FIX THE TORQUE TUBE 傳動軸軸承固定位置

Please apply some CA glue to fix bearing on the torque tube, avoid CA glue from the dust or may cause the bearing stuck. When assembling into the tail boom, please apply some oil and use the attached torque tube mount helper to press the bearing holder of the torque tube into the tail boom horizontally. 請以少量 CA 高黏度固定於尾管傳動軸上，避免 CA 達到軸承的防護蓋而導致軸承卡死，插入尾管時，尾管軸承座應水平並與尾管垂直，利用尾管軸承座安裝器將尾管軸承座壓入尾管中不可歪斜。



800HT5



800HT6



CAUTION 注意

After moving the tail control rod adjustment sleeve to recommended position, glue the sleeve to carbon tail control rod with instant glue. 尾管控制桿固定調整套至建議位置後，再將尾管控制桿固定環與碳纖維控制桿用瞬乾膠固定以避震與調整固定。



Apply a small amount of T43 thread lock when fixing a metal part.
鎖絲鎖於金屬件時請使用適量 T43 (鎖絲膠)

800HB8



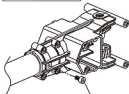
Socket Button Head Screw
半圓頭內六角螺絲 (M2.5x14mm) x 2

Socket Button Head Screw
半圓頭內六角螺絲 (M2.5x14mm)

Socket Button Head Collar Screw
半圓頭內六角鎖圈螺絲 (M3x8mm)

700 Pro Metal Anti Rotation Bracket
700 Pro 十字型固定架

Tail Boom Fixing Screw
尾翼固定螺絲



Socket Screw
圓頭內六角螺絲 (M4x8mm)

M4 Washer
M4 墊圈
φ 4x φ 10x1mm

Socket Screw
圓頭內六角螺絲 (M4x14mm)

700NT1A



Socket Screw
圓頭內六角螺絲 (M4x8mm) x 1



Socket Button Head Collar Screw
半圓頭內六角鎖圈螺絲 (M3x8mm) x 5

700HB11A



Socket Screw
圓頭內六角螺絲 (M4x14mm) x 2



M4 Washer
M4 墊圈
φ 4x φ 10x1mm) x 2

700HB14



Bearing
軸承 (φ 15x φ 21x6mm) x 2



One-way Bearing
單向軸承 (φ 15x φ 23x11mm) x 1



Spacer
700 導向垫片
φ 18x φ 22.7x0.7mm x 1



Socket Screw
圓頭內六角螺絲 (M2.5x8mm) x 6



Washer
墊圈
φ 3x φ 4.8x0.8mm x 6

Socket Screw
圓頭內六角螺絲 (M3x8mm)

Washer
墊圈
φ 3x φ 4.8x0.8mm

CNC Slant Thread
Main Drive Gear
CNC 斜齒主齒 1:127

One-way Bearing Cover
單向軸承上蓋
φ 21x φ 15.8x26mm

One-way Bearing
單向軸承
φ 15x φ 21x4mm

One-way Bearing
單向軸承
φ 15x φ 23x11mm



Please fasten the screws to the φ 3.0 holes of the slant main gear.
螺絲鎖於斜齒主齒的 φ 3.0 孔位

One-way Bearing Shaft
單向軸承外殼
φ 12x φ 15x41.5mm

Spacer
700 導向垫片
φ 18x φ 22.7x0.7mm

One-way Bearing Collar
單向軸承外圈
φ 6x φ 20x11.8mm

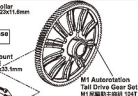
One-way Bearing Mount
單向軸承下座
φ 21x φ 6.5x33.1mm

Socket Screw
圓頭內六角螺絲 (M2.5x8mm)



CAUTION
Original manufactory packages contains product already assembled, please confirm every screw is firmly secured with T43. Do not use T43 on any plastic part.
原廠零件包裝包裝內產品是組裝品，請再確認每顆螺絲是否鎖緊上膠。

Before tightening the screw, please rotate the bearing and check the concentricity of the bearing in order to have the screw firmly secured, to avoid the bearing stuck or heavy load at one side and cause slip.
上緊螺絲前請旋轉軸承檢查同心度，才能將螺絲牢固鎖緊，以避免造成軸承卡死或單向負荷可能產生的打滑。



M1 Auterotation Tail Drive Gear Set
M1 尾驅動主齒 1:147

Apply a small amount of T43 thread lock when fixing a metal part.
鎖緊零件於金屬件面使用適量 T43 (鎖固膠)。

When tightening the main blade fixing screw, please tighten it firmly, but not over tighten, or it may cause the damage of main blade holder and result in danger.
鎖緊主旋翼螺絲時請適量鎖緊即可，過緊可能導致主旋翼夾座受損，飛行意外發生。

Socket Collar Screw
鎖頭內六角鉗緊螺絲 M5x32mm

780 Carbon Fiber Blades
780 碳纖維主旋翼

Linkage Rod(A)
連桿 A M3x41mm
Collar
連桿套
Elevator Ball Link
升降臂連桿

M5 Nut
M5 防鬆螺帽

Linkage Rod(A)
Approx. 58mm x 3
連桿 (A) 約 58mm x 3
41mm
28mm

Standard Equipment:
Main Shaft Spacer(1)
標準件：主軸墊片 (1) $\phi 12 \times \phi 16 \times 5$ mm

Spare part: Main Shaft Spacer(1,2)
Main Shaft Spacer(0,8)
Main Shaft Spacer(0,5)
備品：主軸墊片 (1,2) $\phi 12 \times \phi 16 \times 2$ mm
主軸墊片 (0,8) $\phi 12 \times \phi 16 \times 0.8$ mm
主軸墊片 (0,5) $\phi 12 \times \phi 16 \times 0.5$ mm

700FLH16A

Main Blade Fixing Screw
主旋翼螺絲

Socket Collar Screw
鎖頭內六角鉗緊螺絲 (M5x32mm) x 2

M5 Nut
M5 防鬆螺帽 x 2

700HZ18

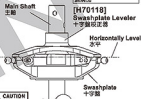
Elevator Ball Link
升降臂連桿 x 6

Collar
連桿套 x 6

Linkage Rod(A)
連桿 A (M3x41mm) x 3

Optional Equipment
選購品

[H70118]
Swashplate Leveler
十字盤校正器



CAUTION
注意

While using Flybarless system, please use the swashplate leveler to calibrate swashplate. Adjust the length of servo linkage rod to make sure the swashplate is leveled before start setting up to ensure the gyro provides the best performance.

使用無鋼系統，請務必使用十字盤調整器校正十字盤，調整伺服連桿長度，確保十字盤達到水平狀態，再進行基本調校設定，這樣才能確保飛行性能達到最佳效果。

Socket Collar Screw
鎖頭內六角鉗緊螺絲 M4x27mm

M4 Nut
M4 防鬆螺帽

M1 Slant Thread Main Drive Gear Set
M1 斜主齒輪組

The lower edge of main gear need to be lined up with lower edge of pinion gear. This will ensure smooth meshing, and avoid interference between pinion's base and main gear which can lead to unusual wear.

馬達齒下緣必須與小齒輪下緣水平咬合，如此才能確保齒輪順暢咬合，避免馬達主齒輪與小齒輪齒基干涉磨損。



Washer
墊圈 $\phi 6 \times \phi 8 \times 0.6$ mm

800HB5

Socket Collar Screw
鎖頭內六角鉗緊螺絲 (M4x27mm) x 1

M4 Nut
M4 防鬆螺帽 x 1

Apply a small amount of T43 thread lock when fixing a metal part.
鎖絲固定於金屬件時使用適量T43(鎖絲膠)。

CAUTION
注意

Original manufacturer packages contains product already assembled, please confirm every screw is firmly secured with T43. Do not use T43 on any plastic part.

原廠零件包裝盒內產品是組裝品，請確認每個螺絲是否鎖緊上膠。請注意T43不可塗在任何的塑膠材料上。

MOUNTING ORIENTATION OF MICROBEAST PLUS

MICROBEAST PLUS的安裝方向



Please visit Align download area to get the completed instruction manual at Align website.

更多詳細的設定操作說明請至官網下載專區下載。
<http://www.align.com.tw/beastx/>

Microbeast PLUS provides 8 different direction choices can be installed on any position of helicopter.

Microbeast PLUS 提供8種不同方向選擇，可以安裝在機體的任何一個位置。

THE COLOR OF THE STATUS-LED SHOWS THE CURRENTLY SELECTED ORIENTATION:
LED指示燈狀態顯示安裝方向。



Status LED Off*
Status-LED 熄燈滅*



Status LED Flashing Purple
Status-LED 燈
紫色閃爍



Status LED Purple
Status-LED 燈紫色



Status LED Flashing Red
Status-LED 燈
紅色閃爍



Status LED Red
Status-LED 燈紅色



Status LED Flashing Blue
Status-LED 燈藍色閃爍



Status LED Blue
Status-LED 燈藍色

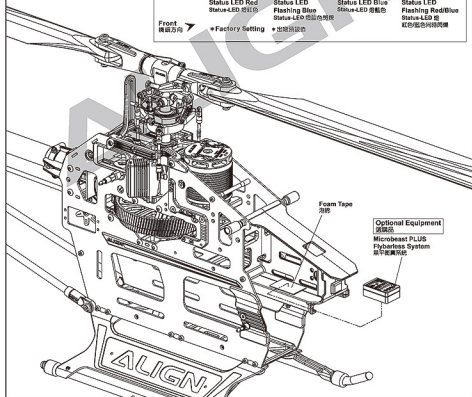


Status LED Flashing Red/Blue
Status-LED 燈
紅色/藍色閃爍同時

Front
機頭方向

*Factory Setting

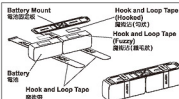
●出廠預設值





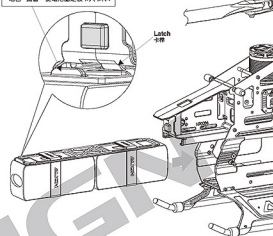
Please fix the 2 batteries on the battery mount evenly.

2 顆電池請平均固定於電池板上。



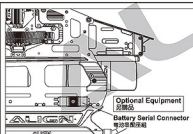
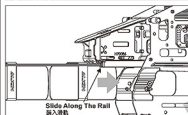
Slide the battery mounting plate along the rail until a "click" is heard to make sure the battery mounting plate is latched.

將電池固定板順著電池滑軌插入至發出 "喀嗒" 聲響，使電池固定板卡入卡榫。



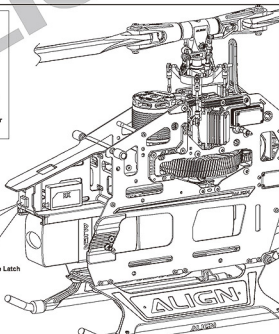
INSERT THE BATTERY FROM THE FRONT

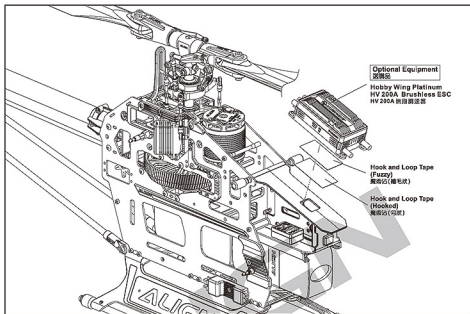
電池從前方置入



Press this latch to allow the battery to slide out along the rail.

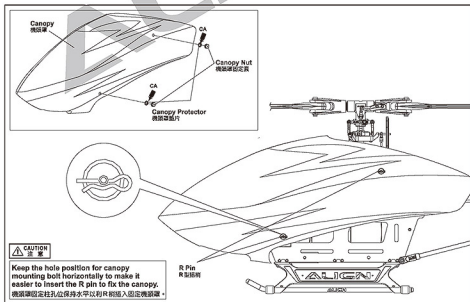
電池推出前請先將電池壓扣往內壓，順著滑軌推出。

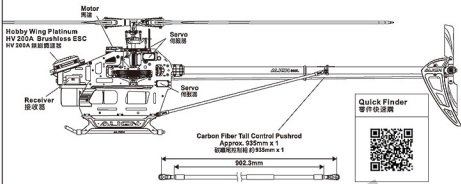




CANOPY ASSEMBLY

機頭罩安裝





MICROBEAST PLUS FLYBARLESS MANUAL

無平衡翼系統使用說明

ALIGN

ALIGN helicopter must equip with Flybarless System, please refer to ALIGN Helicopter standard equipment for flight and setup instruction in this manual.

ALIGN helicopter 須搭配無平衡翼系統，請使用ALIGN直升機標準配件與飛行操作、設定指示。

USER NOTICE 使用注意事項



1. If assembling and operating the helicopter without using ALIGN standard equipment, including electronic equipment & blades...etc, please make sure there is a sufficiently large and stable power supply to your helicopter. If any abnormal voltage or insufficient power supply, suggest to upgrade the flybarless system to MICROBEAST PLUS HD (Optional) for better power back up.
 2. Please refer to BEASTX MICROBEAST PLUS/HD website for MICROBEAST PLUS/HD assembly and setup instruction.
 3. Any over use, incorrect setup, assembly, modification or misuse will lead to abnormal voltage, electronic devices damage, structural interference, and insufficient power supply. Make sure to carefully check every assembly and setup refer to the manual instruction prior to every flight to prevent any unforeseen danger.
1. 安裝、操控您的直升機時，如不使用ALIGN標準配件(含電子配件、主旋翼等)，請務必確定您的供電系統有足夠的供電能力，如發現電壓異常、供電不足，建議您升級使用 MICROBEAST PLUS HD 無平衡翼系統(選配)，以確保供電充足、穩定的接收器電壓。
2. MICROBEAST PLUS/HD 使用、設定、接線，請參閱 BEASTX MICROBEAST PLUS/HD 官方說明。
3. 任何電子配件、零件的設定、組裝、修改或操作不良所造成之電壓異常、電子零件損壞，即可能造成供電不穩定等問題，每趟飛行前請注意仔細檢查，防止機件及電子零件故障而引發不可預期的意外。

MANUAL LINK 設定操作連結

MICROBEAST PLUS Flybarless System is the V4.2 version out of the factory, please feel at ease using it. You can also link to BEASTX MICROBEAST PLUS/HD website to get the latest version and the latest news. And please refer to MICROBEAST PLUS V3.2.x and V4.1.5 instruction manual for operating and setting.

MICROBEAST PLUS 無平衡翼系統，出廠時主程式為V4.2版本，您也可以連結至BEASTX MICROBEAST PLUS/HD官網查詢，隨時更新最新版本及各項最新訊息。操作設定請同時參閱V3.2.x版及V4.2版使用說明書。



Please visit Align download area to get the completed instruction manual at Align website.

更多詳細的設定操作說明請至官網下載專區下載。
<http://www.align.com.tw/beastx/>



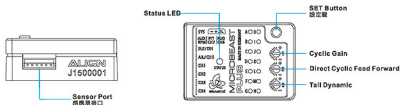
MICROBEAST PLUS

FLYBARLESS SYSTEM (OPTIONAL) FOR MICROBEAST

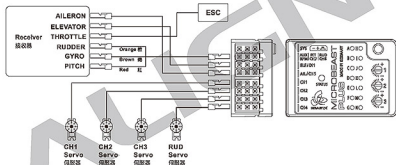
Optional Equipment
 選購品

PARTS IDENTIFICATION 各部位名稱

MICROBEAST PLUS FLYBARLESS SYSTEM 無平衡翼系統



MICROBEAST PLUS FLYBARLESS SYSTEM WIRING DIAGRAM 無平衡翼系統接線示意圖



For detail connectivity, please scan QR Code then follow MICROBEAST PLUS manual.

詳細接線方式，請掃描QR Code連結至MICROBEAST PLUS說明書。



MICROBEAST PLUS HD Flybarless System(Optional) MICROBEAST PLUS HD無平衡翼系統(選配)



Optional Equipment
選購品

If assembling and operating the helicopter without using ALIGN standard equipment, including electronic equipment & blades...etc, please make sure there is a sufficiently large and stable power supply to your helicopter. If there is any abnormal voltage or insufficient power supply, suggest to upgrade the flybarless system to MICROBEAST PLUS HD (Optional) for better power back up. Please refer to BEASTX website for MICROBEAST PLUS HD assembly and setup instruction.

安裝、操控您的直升機時，如非使用ALIGN標準配件(含電子配件、主旋翼等)，請務必確認您的供電系統有足夠的供電能力，如發現電壓異常、供電不足，建議您升級使用MICROBEAST PLUS HD無平衡翼系統(選配)，以確保供電充足、穩定的接收器電源。MICROBEAST PLUS HD使用、設定、接線，請參照MICROBEAST PLUS HD官方說明。

To set this option is to turn on the transmitter and connect to BEC power.

Note: For the safety, please do not connect ESC to the brushless motor before the setting in order to prevent any accident caused by the motor running during the setting.

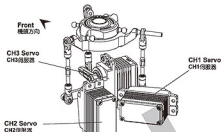
此項設定只適用於發射器，接上BEC電源即可進行操作。

注意：為了安全起見，設定前請先不要將飛控調速器與無刷馬達三條線接上，以免調整時啟動馬達而發生危險。

SERVO CONFIGURATION 伺服器配置

Following the servo configuration diagram on right, plug the servos to Gyro.

請依照右圖顯示的伺服器名稱，將伺服器接到陀螺儀。



ADJUSTMENTS FOR GYRO AND TAIL NEUTRAL SETTING

陀螺儀與尾翼中立點設定調整

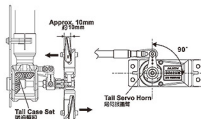
Turn off Revolution mixing (RVMX) mode on the transmitter, then set the gain switch on the transmitter and the gyro to non-head lock mode, or disable gain completely. After setting the transmitter, connect the helicopter power and proceed with rudder neutral point setting. **Note:** When connecting to the helicopter power, please do not touch tail rudder stick and the helicopter, wait for 3 seconds for gyro to enable, and the rudder servo horn should be 90 degrees to the tail servo. Tail pitch slider should be half way on the tail output shaft. This will be the standard rudder neutral point. After completing this setting, set the gain switch back to heading lock mode, with gain at around 70%.

發射器內陀螺儀設定請關閉混合控制模式，並將發射器上的感度開關與陀螺儀切至“非鎖定模式”或將感度開關關閉。發射器設定完成後接上飛機電源，即可進行尾舵中立點設置。注意：當接上飛機電源時請勿碰動尾舵搖桿或旋轉機體，待3秒陀螺儀啟動完成後，尾舵感度開關與尾翼舵機約成90度，尾翼翼控制組須正確置於尾翼舵的中間位置，即為標準尾舵中立點設定，設定完成後，切回至“鎖定模式”，感度設約70%左右。

TAIL NEUTRAL SETTING 尾中立點設定

After the gyro is enable and under non-head lock mode, correct setting position of tail servo and tail pitch assembly is as photo. If the tail pitch assembly is not in the middle position, please adjust the length of rudder control rod to trim.

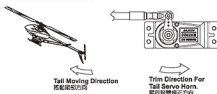
陀螺儀啟動後，在非鎖定模式下，尾翼舵機與尾Pitch控制組正確位置位置。若尾Pitch控制組未量中時請調整尾舵控制桿的長度來修正。



HEAD LOCK DIRECTION SETTING OF GYRO 陀螺儀鎖定方向設定

To check the head lock direction of gyro is to move the tail clockwise and the tail servo horn will be trimmed counterclockwise. If it trims in the reverse direction, please switch the gyro to "REVERSE".

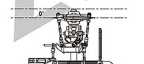
陀螺儀鎖定方向確認，當手搖尾舵順時針旋轉，尾翼舵機應反時針修正，反時針時請切換陀螺儀上“鎖定反向”開關修正。



GENERAL FLIGHT 一般飛行模式

Stick Position at High/Throttle 100%/Pitch+12°
選擇高速/油門100%/Pitch+12°Stick Position at Hovering/Throttle 70%/Pitch+5°
選擇停滯/油門70%/Pitch+5°Stick Position at Low/Throttle 0%/Pitch-2°~0°
選擇低速/油門0%/Pitch-2°~0°

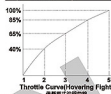
3D FLIGHT 3D特技飛行模式

Stick Position at High/Throttle 100%/Pitch+12°
選擇高速/油門100%/Pitch+12°Stick Position at Middle/Throttle 50%/Pitch 0°
選擇中速/油門50%/Pitch 0°Stick Position at Low/Throttle 100%/Pitch-12°
選擇低速/油門100%/Pitch-12°

1. Pitch range : Approx. ± 15 degrees.
2. If the pitch is set too high, it will result in shorter flight duration and poor motor performance.
3. Setting the throttle to provide a higher speed is preferable to increasing the pitch too high.
1. 傾正 (Pitch) 飛行範圍 $\pm 15^\circ$
2. 過大傾正設定，會導致動力與飛行時間降低。
3. 動力提升以較高轉速的設定方式，優於傾正過大的設定。

GENERAL FLIGHT 一般飛行模式

Throttle 油門	Pitch 傾正
5 100% High Speed 100% 高速	+12°
4 85%	
3 60%~65% Hovering 60%~65% 停滯	+5°
2 40%	
1 0% Low Speed 0% 低速	0°~2°

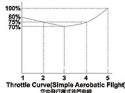
Throttle Curve (Hovering Flight)
停滯模式油門曲線

PITCH AND ROTATION SPEED PITCH與轉速關係

TIP: It is recommended to use a lower pitch setting when using higher RPM/head speed. This will allow for better power. 搭配雙領：如果使用較高轉速這兩連動力建議搭配傾正 Pitch，將獲得最佳動力效能。

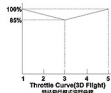
IDLE 1: SPORT FLIGHT

Throttle 油門	Pitch 傾正
5 100%	+10°~+12°
4 75%	
3 70%	+5°
2 75%	
1 80%	-5°

Throttle Curve (Simple Aerobatic Flight)
空中飛行模式油門曲線

IDLE 2: 3D FLIGHT

Throttle 油門	Pitch 傾正
5 100% High 100% 高	+12°
3 80% Middle 80% 中	0°
1 100% Low 100% 低	-12°

Throttle Curve (3D Flight)
特技飛行模式油門曲線

SPECIFICATIONS

產品規格

Model 型號	Main Applications 應用範圍	Input Voltage 輸入電壓	Cont./Peak Current 持續/峰值電流	BEC Voltage BEC
Hobby Wing Platinum HV 200A	For 700-800 Class Helicopter (Propeller: 700-800mm) 700-800級電直升機 (槳 長: 700-800mm)	6-14S LiPo Battery (22.2V-51.8V) 6-12S 鋰電池 (22.2V-51.8V)	200A/300A	Switch-mode, 5V-8V Adjustable Voltage (Step: 0.1V), 10A/30A Cont./Peak Current 開關模式BEC, 輸出電壓5V-8V可調(步 長0.1V), 輸出電流持續 10A, 瞬間30A
	Throttle Signal/BEC Output & RPM Signal Transmission Wire 油門信號/BEC輸出及RPM信號傳輸線		Size/Weight 尺寸/重量	Separate Parameter Programming Port 獨立參數程式設計介面
	White/Red/Black: Throttle Signal Wire ; Red/Brown/Yellow: BEC Output & RPM Signal Transmission Wire 白、紅、黑三色線為油門信號線; 紅、棕、黃三色線為 BEC輸出及RPM信號傳輸線		106x50x36mm/325g	For connecting ALIGN ASBOX Multifunction Programmer, WIFI module, or cooling fan. 用於連接ALIGN ASBOX多功能設定 盒或WIFI模組, 可為解熱散熱風扇供 電

USER GUIDE

使用說明書



The default throttle range of this ESC is from 1100 μ s to 1940 μ s, so you need to re-calibrate the throttle range when the first time you use this ESC or after you replace the transmitter.

電子调速器的油門行程出廠預設值為1100 μ s-1940 μ s, 當首次使用電子调速器或者更換其他遙控器使用時, 均需要重新設定油門行程。

I. Connections 接線示意图

- RPM Signal Wire (Yellow) & BEC Output Wire (Red/Brown):** plug it into the RPM input channel on the flybarless system. (This wire can be used for providing RPM signal data when using external speed-governing device, plug it into the battery channel or any uncoupled channel on the receiver. (For better BEC power supply, we recommend plugging this wire into the battery channel or any uncoupled channel on FBL system if the FBL system is permitted.
- Throttle Signal Wire (White/Red/Black):** plug it into the throttle channel on the receiver or the corresponding channel on the FBL system, such as RX B channel on the VBAR system. For which channel you should plug it in, it depends on what kind of receiver and FBL system you use. The White wire is for transmitting throttle signals, the Red & Black cables are parallelly connected in the BEC output wire, which means BEC voltage output wire and ground cable.

- RPM信號線(黃)及BEC輸出線(紅、棕):** 插入飛平平衡系統轉速輸入通道; (當使用外部設定時, 可使用RPM信號線提供轉速信號輸入, 這類線外的BEC輸出線插入接收機電池專用通道或任意閒置通道。(為獲得更好的BEC供電效果, 在飛平平衡系統允許的情況下, 建議將BEC線插入飛平平衡系統的電池專用通道或任意閒置通道。)
- 油門信號線(白、紅、黑):** 插入接收機油門通道或飛平平衡系統對應通道, 如VBAR系統的RX B通道, 依據接收機類型及飛平平衡系統類型而定。其中白線用於傳遞油門信號, 而紅線和黑線分別並聯在內部BEC的輸出端(即BEC電壓輸出線和地線)。

II. Throttle Range Calibration 油門行程校準操作方法



During the ESC/Radio calibration, please set the throttle curve to NORMAL and ensure the corresponding throttle amounts to the maximum throttle endpoint and the minimum throttle endpoint on your transmitter are respectively 100% and 0%.

進行油門行程校準時, 請將油門曲線設置為NORMAL, 並確保遙控器油門最高點對應的油門值為100%, 油門最低點對應的油門值為0%。

Turn on the transmitter and move the throttle stick to the top position.
開啟遙控器, 將油門杆打到最高點。

Connect the ESC to a battery. The motor will emit "123" indicating the ESC is powered on normally.
電子调速器接電池, 馬達鳴叫"123"指示音, 表示供電正常。

5 seconds later, the motor will emit two short beeps indicating the maximum throttle position has been successfully calibrated and accepted.
等待5秒, 馬達發出"嗶-嗶"雙短鳴音, 表示油門最高點校準成功。

Move the throttle stick to the bottom position. 1 second later, a short beep will emit indicating the minimum throttle position has been accepted.
將油門杆打到底, 等待1秒, "嗶"一聲提示音, 油門最低點校準成功。

The ESC will keep beeping indicating the number of LiPo cells you have plugged in. (A long beep represents 5, a short beep represents 1. E.g. The ESC will beep two long beeps and two short beeps to indicate a 12S LiPo pack.
馬達將繼續鳴叫提示當前電池電壓數(長音響一次5, 短音響一次1, 例如: 12S電池將鳴叫"嗶-嗶-嗶-嗶")

The motor will beep a long beep to indicate the calibration is completed, the power system is ready to go.
馬達鳴叫"長音響"代表校準成功, 系統準備就緒, 可隨時起飛。

PLEASE PRACTICE SIMULATION FLIGHT BEFORE REAL FLYING 飛行前請先熟練電腦模擬飛行

A safe and effective practice method is to use the transmitter flying on the computer through simulator software sold on the market. Do a simulation flight until you familiarize your fingers with the movements of the rudders, and keep practicing until the fingers move naturally.

1. Place the helicopter in a clear open field (Make sure the power OFF) and the tail of helicopter point to yourself.
2. Practice to operate the throttle stick (as below illustration) and repeat practicing "Throttle high/low", "Aileron left/right", "Rudder left/right", and "Elevator up/down".
3. The simulation flight practice is very important, please keep practicing until the fingers move naturally when you hear operation orders being call out.

在運送與解飛機各動作之操作方式前，最實際應飛行，請先進行電腦模擬飛行的練習，一種最有效、最安全的練習方式，就是透過市面販售的模擬軟體，以遙控器在電腦上模擬飛行，熟悉各種方向的操控，並不斷的重複，直到手指可熟練的控制各個動作及方向。

1. 將直升機放在空曠的地方(保證電認為關機)，並將直升機的機尾對準自己。
2. 練習操作遙控器的各桿件(各動作的操作方式如下圖)，並反覆練習油门高/低、副翼左/右、升降前/後及方向左/右操作方式。
3. 模擬飛行的練習相當重要，請重複練習直到不覺思索，手指能自然隨著喊出的指令移動控制。

Mode 1	Mode 2	Illustration 圖示	
		Move Left 左移	Move Right 右移
		Rotate Left 左轉	Rotate Right 右轉
		Fly Forward 前進	Fly Backward 後退
		Forward Rotate 前翻	Backward Rotate 後翻
		Ascent 上升	Descent 下降
		Turn Right 右旋	Turn Left 左旋

FLIGHT ADJUSTMENT AND NOTICE 飛行調整與注意



- Check if the screws are firmly tightened.
- Check if the transmitter and receivers are fully charged.
- 再次確認一機機是否鎖緊？
- 發射器和接收器電池是否足電？



If there are other radio control aircraft at the field, make sure to check their frequencies and tell them what frequency you are using. Frequency interference can cause your model, or other models to crash and increase the risk of danger. 假使飛行場有其他遙控飛機，請確認他們的頻率，並告知他們您正在使用的頻率，相同的頻率會造成干擾導致失控和大大地增加風險。

STARTING AND STOPPING THE MOTOR 啟動和停止馬達



First check to make sure no one else is operating on the same frequency. Then place the throttle stick at lowest position and turn on the transmitter.

首先確認附近沒有其他相同頻率的機，然後打開發射器將油门桿樣推到底點。

- Check the movement.
- 動作確認



ON! Step1
First turn on the transmitter.
先開發射器

ON! Step2
Connect to the helicopter power
接上面昇機電源



Check if the throttle stick is set at the lowest position.
油门桿是否在最低的位置。

- Are the rudders moving according to the controls?
- Follow the transmitter's instruction manual to do a range test.
- 方向舵是否隨著控制方向移動？
- 根據發射器說明書進行距離測試。



Mode 1 Mode 2

OFF! Step3
Reverse the above orders to turn off.
隨喊電認為關機上述操作動作反執行。

This procedure is best performed on soft surfaces such as grass. The use of rubber skid stopper is recommended on hard surface to prevent vibration feedback from the ground to Gyro, resulting in over-corrections.

將直升機置於柔軟地面上。建議硬地應將腳架裝上避震墊圈。避免升空前腳架與過硬的地面震動太大反映至機身上的Gyro，影響無平衡系統直升機過修正。

Rubber Skid Stoppers
Installed
裝上避震墊圈



If swashplate should tilt prior to lift off, do not try to manually trim the swashplate level. This is due to vibration feedback to the Gyro, and will disappear once helicopter lifts off the ground. If manual trim is applied, helicopter will tilt immediately after liftoff.

直升機離地前，十字盤可能會因Gyro受震動的反應，使十字盤有傾斜的情形，此時請勿刻意將十字盤修正為水平狀態，此現象只要離地升空後立即解除，可平衡升空；否則應將十字盤修正為水平時，反而會造成感應器過修正，一離地即偏往修正方向的危險。

MAIN ROTOR ADJUSTMENTS 主旋翼雙槳平衡調整

1. Before adjusting, apply a red piece of tape on one blade, or paint a red stripe with a marker or paint to identify on blade.
2. Raise the throttle stick slowly and stop just before the helicopter lifts off ground. Look at the spinning blades from the side of the helicopter.

3. Look at the path of the rotor carefully. If the two blades rotate in the same path, it does not need to be adjustment. If one blade is higher or lower than the other blade, adjust the tracking immediately.

1.調整前先在其中一支主旋翼的葉面，貼上有顏色的貼紙或畫上顏色記號，方便觀察調整所需。

2.慢慢拉起油门桿得到高度位置且停止，在飛機離地前，從飛機側面觀察主旋翼轉動。

3.仔細觀察旋翼軌跡(從側面看旋翼移動都是相同軌跡，則不需調整；可見如果一支旋翼較高或較低產生「雙槳」的情形時，則必須立刻調整軌跡)。

a. When rotating, the blade with higher path means the pitch is too big. Please shorten DFC ball link for regular trim.

b. When rotating, the blade with lower path means the pitch is too small. Please lengthen DFC ball link for regular trim.

a. 旋翼轉動時較高軌跡的主旋翼表示槳距(PITCH)過大，請縮短DFC連接桿修正。

b. 旋翼轉動時較低軌跡的主旋翼表示槳距(PITCH)過小，請延長DFC連接桿修正。



Tracking adjustment is very dangerous, so please keep away from the helicopter at a distance of at least 10m.

調整軌跡非常危險，請於距離飛機最少10公尺的距離。

Incorrect tracking may cause vibrations. Please repeat adjusting the tracking to make sure the rotor is correctly aligned. After tracking adjustment, please check the pitch angle is approx. $+5^{\circ}$ ~ -6° when hovering.

不正確的旋翼軌跡會導致震動，請不斷重複調整軌跡，使旋翼軌跡精準正確。

在調整軌跡後，確認一下Pitch角度在停機時應為大約 $+5^{\circ}$ ~ -6° 。

Color Mark 有標示記號的主旋翼



FLIGHT ADJUSTMENT AND NOTICE 飛行調整與注意



Ⓢ Do not attempt to grab or make contact with the helicopter while the main blades are in motion and keep your eyes away from the helicopter. During take-off, landing, and flight, be sure to keep the helicopter away from all obstacles. Operators must stand at least 10 meters away from the helicopter to avoid injury caused by loose parts due to improper assembly or any unforeseen dangers.

Ⓢ 嚴禁用手抓取運行中的直升機，並禁止將直升機對著眼睛，當主旋翼轉動後，或起飛/試飛時，務必遠離飛機，站立位置必須距離10公尺以上，避免因人為組裝不當造成零件脫落，而引發不可預期的財產或人員損傷。



Ⓢ Make sure that no one or obstructions in the vicinity.

Ⓢ For flying safety, please carefully check if every movement and directions are correct when hovering.

Ⓢ 確認附近地區沒有人和障礙物。

Ⓢ 為了飛行安全，您必須先確認停機時各項操縱動作是否正常。



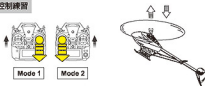
Do not attempt to fly until you have some experiences with the operation of helicopter.

嚴禁無熟練操控飛行經驗者強迫飛行。

STEP 1 THROTTLE CONTROL PRACTICE 油門控制練習

- ③ When the helicopter begins to lift-off the ground, slowly reduce the throttle to bring the helicopter back down. Keep practicing this action until you control the throttle smoothly.

③ 當直昇機開始離地時，慢慢降低油門將飛機降下。持續練習飛機從地面上升和下降直到您能將油門控制自如。



STEP 2 AILERON AND ELEVATOR CONTROL PRACTICE 副翼和升降控制練習

1. Raise the throttle stick slowly.
2. Move the helicopter in any direction back, forward, left and right, slowly move the aileron and elevator sticks in the opposite direction to fly back to its original position.

1. 慢慢升起油門桿。

2. 使直昇機依指示：移動向後/向前/向左/向右，慢慢的反向移動副翼和升降桿並將直昇機回到原來位置。



④ If the nose of the helicopter moves, please lower the throttle stick and land the helicopter. Then move your position diagonally behind the helicopter 10M and continue practicing.

④ If the helicopter flies too far away from you, please land the helicopter and move your position behind 10M and continue practicing.

④ 當直昇機機頭偏移時，請降低油門並且降落。然後移動自己的位置到直昇機的正後方10公尺再繼續練習。

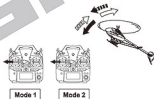
④ 假如直昇機飛離你太遠，請先降落直昇機，並到直昇機後10公尺再繼續練習。

STEP 3 RUDDER CONTROL PRACTICING 方向舵操作練習

1. Slowly raise the throttle stick.
2. Move the nose of the helicopter to right or left, and then slowly move the rudder stick in the opposite direction to fly back to its original position.

1. 慢慢升起油門桿。

2. 將直昇機機頭移動至左右，然後慢慢反向移動方向舵桿並將直昇機飛回原本位置。



STEP 4

After you are familiar with all actions from STEP1 to 3, draw a circle on the ground and practice within the circle to increase your accuracy.

當你覺得 STEP1-3 動作熟悉了，在地上畫個圈並在這個圓圈的範圍內練習飛行，以增加你操控的準確度。

⑤ You can draw a smaller circle when you get more familiar with the actions.

⑤ 當你更加習慣操作動作，你可以畫更小的圓圈。



STEP 5 DIRECTION CHANGE AND HOVERING PRACTICE 改變直昇機方向和練習停旋

After you are familiar with STEP1 to 4, stand at side of the helicopter and continue practicing STEP1 to 4. Then repeat the STEP1 to 4 by standing right in front of the helicopter.

當你覺得STEP1-4動作熟悉了，站在直昇機側面練習STEP1-4，之後，站在直昇機機頭正前方重複步驟練習。



	Problem 狀況	Cause 原因	Solution 對策
Blade Tracking 雙槳平衡	Tracking is Off 變差	Pitch linkage rods are not even length PITCH連桿長度調整不平均	Adjust length of Linkage rod A. 調整連桿A長度
Hover 停懸	Headspeed too low 主旋翼轉速偏低	Excessive pitch 主旋翼的PITCH偏高	Adjust ball link to reduce pitch by 4 to 5 degrees. Hovering headspeed should be around 1700-1800RPM. 調整連桿球頭Pitch約-4~5度 (停懸時主旋翼轉速為約1700-1800RPM)
		Hovering throttle curve is too low 停懸點油门曲線過低	Increase throttle curve at hovering point on transmitter (around 60%) 提高停懸點油门曲線(約60%)
	Headspeed too high 主旋翼轉速偏高	Not enough pitch 主旋翼的PITCH偏低	Adjust ball link to increase pitch by 4 to 5 degrees. Hovering headspeed should be around 1700-1800RPM. 調整連桿球頭Pitch約+4~5度 (停懸時主旋翼轉速為約1700-1800RPM)
		Hovering throttle curve is too high 停懸點油门曲線過高	Decrease throttle curve at hovering point on transmitter (around 60%) 降低停懸點油门曲線(約60%)
Rudder Response 舵舵反應	Drifting of tail occurs during hovering, or delay of rudder response when centering rudder stick. 停懸時尾翼向某一邊偏航，或撥動方向舵杆回中位點時，尾翼產生延遲，無法停航在所控制位置上。	Rudder neutral point improperly set 尾中位點設定不當	Reset rudder neutral point 重設尾中位點
	停懸時尾翼向某一邊偏航，或撥動方向舵杆回中位點時，尾翼產生延遲，無法停航在所控制位置上。	Rudder gyro gain too low 尾舵陀螺儀增益偏低	Increase rudder gyro gain 增加尾舵陀螺儀增益
	Tail oscillates (hunting, or wags) at hover or full throttle 停懸或全油门時尾翼左右來回搖擺。	Rudder gyro gain too high 尾舵陀螺儀增益偏高	Reduce rudder gyro gain 降低尾舵陀螺儀增益

If above solution does not resolve your issues, please check with experienced pilots or contact your Align dealer.

如果在做完以上調整後，仍然無法改善情況時，應立即停止飛行並向有經驗的飛手諮詢或連繫您的經銷商。

一、遙控無人機產品標示

本產品最大起飛重量： 5.76公斤	(1)
☒ 應 ☐ 免 依遙控無人機管理規則至民航局「遙控無人機規範管理系統」(https://drone.caa.gov.tw/) 進行線上註冊，註冊號碼應標明於機身顯著處。	(2)
☒ 應 ☐ 免 具備航空站或飛行場圖資軟體功能。	(3)
☐ 具型式檢驗(認可)標籤且應向民航局申請辦理實體檢驗。 ☒ 免辦理檢驗或認可。	(4)(5)
操作人口免持操作證 ☒ 應持普通操作證 ☐ 應持專業操作證。	(6)
操作本產品前，經檢查確符合飛航安全條件後從事活動，並禁止飲酒或使用影響精神之藥物，亦不得於公告禁止或限制區域飛航，其餘請詳參見本產品所附操作手冊說明。	(7)(8)
違反上述規定者，中央及地方主管機關得依民航法禁止其活動，並處以新臺幣1萬至150萬元罰鍰，情節重大者沒入遙控無人機。	(9)(10)
本標示依據遙控無人機管理規則第17條第1項規定辦理。	(11)

二、遙控無人機相關法規說明：

- 遙控無人機管理規則(以下稱管理規則)第6條第1項：自然人所有之最大起飛重量250公斤以上之遙控無人機及政府機關(構)、學校或法人所有之遙控無人機，應由該所有人向民航局申請註冊，並將註冊號碼標明於遙控無人機上顯著之處後，始得操作。
- 管理規則第8條：註冊號碼應依下列方式標明於遙控無人機上顯著之處：一、以標籤、鐫刻、噴漆或其他能辨識之方式標明，且應確保每次飛航活動時不至脫落並保持清晰、明顯使用辨識。二、標明位置應為遙控無人機之固定結構外側。三、其顏色應與註冊號碼與背景明顯反差，且以內視部能檢視。
- 管理規則第12條第1項：最大起飛重量1公斤以上且裝置導航設備之遙控無人機，應具備防止遙控無人機進入禁航區、限航區及航空站或飛行場四周之一定範圍之圖資軟體系統，其圖資應符合本法第4條第1項及第99條之13第1項公告之範圍。
- 管理規則第13條：遙控無人機之設計、製造、改裝，應由設計者、製造者或改裝者於前申請書向民航局申請型式檢驗，經型式檢驗合格者，發給型式檢驗合格證，並登載於型式檢驗證書。自國外進口之遙控無人機，應由進口者依第一項規定向民航局申請型式檢驗，或檢附申請書向民航局申請認可，經認可者，發給認可證明文件及認可標籤。前二項之遙控無人機，其型式檢驗簡章經民航局公告者，應免辦理檢驗或認可。
- 管理規則第15條第1項：最大起飛重量25公斤以上之遙控無人機，為確保遙控無人機符合設計、製造、改裝之性能標元，應由該所有人檢附申請書向民航局申請實體檢驗，經檢驗合格者，發給實體檢驗合格證。
- 管理規則第20條：遙控無人機操作證分類、申請者年齡及其他規定如下：
A. 學習操作證：申請者應年滿16歲，經申請後，由民航局發給。
B. 普通操作證：申請者應年滿18歲，經學科測驗合格後，由民航局發給。
C. 專業操作證：申請者應年滿18歲並符合相關經歷規定後，經體格檢查及學、術科測驗合格後，由民航局發給。
前項各類操作證之操作證限如下：一、學習操作證：得於持有遙控無人機普通或專業操作證之操作人在旁指導監下，學習指導者操作證所載四項週知最大起飛重量未達15公斤之遙控無人機。二、普通操作證：得操作由自然人所有之最大起飛重量2公斤以上、未達15公斤且裝置導航設備之遙控無人機。三、專業操作證：得操作政府機關(構)、學校或法人所有之遙控無人機及自然人所有之最大起飛重量15公斤以上之遙控無人機。
- 管理規則第25條：操作人操作遙控無人機應遵守下列事項：一、血液酒精濃度不得超過百分之0.02或吐氣中酒精濃度不得超過每公升0.1毫克。二、不得受藥物作用或影響，導致行為能力受到阻礙。三、不得對任何生命財產造成或造成危險之操作行為。
- 管理規則第26條：操作人從事遙控無人機飛航活動前，應依遙控無人機製造者所提供之維修指引對遙控無人機系統進行檢查，符合安全飛航條件後始得活動。
- 民用航空法遙控無人機專章第118條之1：遙控無人機之所有人或操作人有下列情事之一者，由民航局廢止其操作證，並處新臺幣30萬元以上150萬元以下罰鍰，並得沒入遙控無人機：一、違反第99條之13第1項規定，於禁航區、限航區及航空站或飛行場四周之一定範圍範圍內從事飛航活動。二、違反第99條之14第1項規定，逾距地面或水面高度400呎從事飛航活動。
- 民用航空法遙控無人機專章第118條之2：遙控無人機之所有人或操作人有下列情事之一者，禁止其活動，並處新臺幣6萬元以上30萬元以下罰鍰；情節重大者，並得沒入遙控無人機：一、違反第99條之10第2項規定，未領有操作證而操作遙控無人機。二、違反第99條之15第3項規定，未投保或未投保投保責任保險而從事遙控無人機活動。遙控無人機之所有人或操作人有下列情事之一者，禁止其活動，並處新臺幣3萬元以上15萬元以下罰鍰；情節重大者，並得沒入遙控無人機：一、違反第99條之10第1項有關遙控無人機註冊之規定。二、違反第99條之13第2項有關遙控無人機註冊之規定。(市)政府公告範圍、時間及其他管理事項之規定。三、違反第99條之14第1項第2款至第10款遙控無人機飛航活動應遵守之規定。本條規定之公罰，除同時違反第99條之13第1項及第99條之14第1項第1款由民航局處罰外，由直轄市、縣(市)政府處罰之。
- 民用航空法遙控無人機專章第118條之3：違反第99條之17所定規則有關禁航識別、檢驗、認可、維修與檢查、飛航活動之活動許可及內容、製造者與進口者之登錄及責任、飛航安全相關事件之通報等事項規定者，禁止其活動，並處新臺幣1萬元以上150萬元以下罰鍰；情節重大者，並得沒入遙控無人機。

※有前後編遙控無人機法規最新資訊，請詳見：<https://drone.caa.gov.tw/>，或掃描右方QR Code連結。



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- 亞拓E1組合昇昇機、M4/M6組合多軸機、M470L/M480XL/M690L多功能無人機、屬「衛星導航無人機」，民航局已預先登錄資料，操作者可直接往交通部民用航空局無人機專區註冊完成，登錄系統下拉選擇型號即可快速完成註冊程序。
- 亞拓T-REX系列/E1空拍版/IR25XP穿越機/多旋翼空拍機系列商品，其屬於「自製無人機(含空拍機模型)」，飛友需自行辦理型號登錄作業。
- 相關型號、構造、尺寸(長×寬×高)、飛機翼展/直昇機旋翼半徑/多旋翼軸距、使用動力、導航方式等詳細資訊，請逕洽各型QR Code「亞拓無人機註冊資料」，或參閱「亞拓無人機註冊教學」進行登錄註冊。



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Specifications & Equipment/規格配備:

Length/機身長:1490mm

Height/機身高:402mm

Main Blade Length/主旋翼長:780mm

Main Rotor Diameter/主旋翼直徑:1740mm

Tail Rotor Diameter/尾旋翼直徑:301mm

Motor Drive Gear/馬達主齒:12T

Main Drive Gear/傳動主齒:112T

Autorotation Tail Drive Gear/尾驅動主齒:104T

Tail Drive Gear/尾翼傳動齒:22T

Drive Gear Ratio/齒輪傳動比:9.33 : 1 : 4.73

Flying Weight(Without battery)/全配重(不含電池):Approx. 4100g

