MICROBEAST PLUS
FLYBARLESS SYSTEM
INSTRUCTION MANUAL
使 用 說 明 書

HEGBP301T

ALIGN

For Quickstart Guide V5.0
主程式V5.0 快速導覽版本專用

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

BEASTX

QUICKSTART GUIDE V5.0

Thank you for buying ALIGN Products. Please read this manual carefully before assembling. We recommend that you keep this manual for future reference regarding tuning and maintenance.

承蒙閣下選用亞拓系列產品,謹表謝意。進入遙控世界之前必須告訴您許多相關的知識與注意事項,以確保您能夠在使用的過程中較得心應手。在開始操作之前,請務必詳閱本說明書,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,以作為日後參考。

Compatible with helicopter of all sizes from T-REX 250 to T-REX 800 MICROBEAST PLUS Flybarless System. Here we use T-REX 700L DOMINATOR as an example .

MICROBEAST PLUS 無平衡翼系統電子設備相容小型直昇機至大型直昇機T-REX 250～T-REX800。
在此我們以T-REX 700L DOMINATOR作為操作範例。

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Radio Control (R/C) multicopters are not toys. R/C multicopters utilize various high-tech components to achieve superior performance. Improper use of this product can result in serious injury or even death. Please read this manual carefully before operating, and make sure to be conscious of your own personal safety and the safety of others nearby 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 aircraft at legal flying fields. After the sale of this product we cannot be held liable over its operation or usage.

We recommend that you seek 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. This product requires a certain degree of skill to operate, and is an expendable 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 the use, setup, 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.

In addition, R/C multicopters and its components are precision electronics susceptible to interferences from external forces such as magnetic field and radio signal. Should the multicopter or any onboard photographic equipment suffers loss or crash damage as result of external magnetic or radio interferences, Align cannot be held liable as the cause is beyond our control.

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

遙控飛行機包括遙控直昇機與多軸飛行機（以下簡稱遙控飛行機）並非玩具，它是結合了許多高科技產品所設計出來的休閒用品，所以商品的使用不當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，勿輕忽並注意自身安全。注意！任何遙控飛行機的使用，製造商和經銷商是無法對使用者於零件使用的損耗異常或組裝不當所發生之意外負任何責任，本產品是提供給有操作過遙控飛行機經驗的成人或有相當技術的人員在旁指導，並於當地合法遙控飛行場飛行，以確保安全無虞下操作使用。產品售出後本公司將不負任何操作和使用控制上的任何性能與安全責任。

遙控飛行機屬於需高操作技術且為消耗性之商品，如經拆裝使用後，會造成不等情況零件損耗，任何使用情況所造成商品不良或不滿意，將無法於保固條件內更換新品或退貨，如遇有使用操作維修問題，本公司全省分公司或代理商將提供技術指導、特價零件供應服務。對使用者的不當使用、設定、組裝、修改、或操作不良所造成的破損或傷害，本公司無法控制及負責。且遙控飛行機與配件之精密電子產品，易受外力、磁場、訊號干擾，在使用過程中如外力、磁場、訊號干擾，導致飛行機本身、及其搭載之攝影設備、器材之損壞或滅失，本公司亦無法控制及負責。

做為本產品的使用者，您，是唯一對於您自己操作的環境及行為負全部的責任之人。

WARNING LABEL LEGEND
標誌代表涵義

⊘ FORBIDDEN 禁 止	Do not attempt under any circumstances. 在任何禁止的環境下，請勿嘗試操作。
⚠ WARNING 警 告	Mishandling due to failure to follow these instructions may result in serious damage or injury. 因為疏忽這些操作說明，而使用錯誤可能造成財產損失或嚴重傷害。
⚠ CAUTION 注 意	Mishandling due to failure to follow these instructions may result in danger. 因為疏忽這些操作說明，而使用錯誤可能造成危險。

- Fly only in safe areas, away from other people. Do not operate R/C aircraft indoors or 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 of a result of R/C aircraft models.

- Prior to every flight, carefully check all parts such as blades, screws, frame, arms, etc; ensure they are firmly secured and show no unusual wears, or unforeseen danger may happen.

- 遙控飛行機屬高危險性商品，飛行時務必遠離人群，禁止於室內飛行。人為組裝不當或未定期檢修造成的機件損壞、電子控制設備不良，以及操控上的不熟悉、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，並需了解自負疏忽所造成任何意外之責任。

- 每趟飛行前須仔細檢查機身各部位之零/配件/電子設備之性能是否正常，及無損耗老化現象，並確實將螺絲鎖緊才能升空飛行。並做好定期檢修，避免零件或電子產品異常所造成不可預期意外。

⊘ FORBIDDEN 禁止 LOCATE AN APPROPRIATE LOCATION
遠離障礙物及人群

R/C aircraft can 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. Avoid location with magnetic and radio interferences. Please choose a legal flying field. Do not fly your model in inclement weather, such as rain, wind, snow or darkness.

遙控飛行機飛行時具有一定的速度，相對的也潛在著危險性，場地的選擇也相對的重要，請需遵守當地法規到合法遙控飛行場地飛行。必須注意周遭有沒有人、高樓、建築物、高壓電線、樹木等等，避免磁場干擾、外力訊號干擾及操控的不當造成自己與他人財產的損壞。請務必選擇在空曠合法專屬飛行場地。請勿在下雨、打雷、沙塵等惡劣天候下操作，以確保本身及機體的安全。

⚠ CAUTION 注意 KEEP AWAY FROM HEAT
遠離熱源

R/C aircraft are made of various forms of plastics, such as carbon fiber and polyethylene. Plastics are very susceptible to damage or deformation from extreme heat and cold climate. Make sure not to store the model near any source of heat such as oven or heater. It is best to store the model indoors, in a climate-controlled, room temperature environment.

遙控飛行機多半是以碳纖維、PA纖維或聚乙烯、電子商品為主要材質，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。

⊘ FORBIDDEN 禁止 PREVENT MOISTURE
遠離潮濕環境

R/C aircraft 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.

遙控飛行機內部也是由許多精密的電子零組件組成，所以必須絕對的防止潮濕或水氣，避免在浴室或雨天時使用，防止水氣進入機身內部而導致機件及電子零件故障而引發不可預期的意外！

⊘ FORBIDDEN 禁止   PROPER OPERATION
勿不當使用本產品

Do not attempt to modify the aircraft to alter its intended design. Please use only designated replacement parts listed in the manual to ensure its design structure integrity. Operate this product within its intended design parameters; do not overload it with excess cargo. This product is limited to personal hobby use, and pilot should be proficient with operation of this model. Follow all local law and ordinances when operating. Do not use this product for purposes which may violate others' personal privacy, and respect other's intellectual properties. Do not use this product for illegal purposes or beyond the bonds of common safety.

請勿自行改造加工,任何的升級改裝或維修,請使用亞拓產品目錄中的零件,以確保結構的安全。請確認於產品限界內操作,請勿過載使用,本產品為休閒娛樂專用之精密電子遙控飛行產品,僅限熟練遙控飛行器之個人使用,使用時請遵守當地法律規定,並嚴禁在任何違反公共安全區域操作,請勿利用本產品侵犯他人隱私/公開權、並遵重他人智慧財產權、著作權,且勿用於安全、法令外之其它非法用途。並充分了解您任何的使用與操作必須負完全的責任。

⚠ WARNING 警告   DO NOT FLY ALONE
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 experienced pilots or with computer-based flight simulator firstly.)

至飛行場飛行前,需確認是否有相同頻率的同好正進行飛行,因為開啓相同頻率的發射機將導致自己與他人立即干擾等意外危險。遙控飛行機操控技巧在學習初期有著一定的難度,要盡量避免獨自操作飛行,需有經驗的人士在旁指導,才可以操控飛行,否則將可能造成不可預期的意外發生。(勤練電腦模擬器及老手在場指導是入門必要的選擇)

⚠ WARNING 警告   SAFE OPERATION
安全操作

Operate this unit within your ability. Do not fly while feeling impaired, as improper operation may result in danger. Never take your eyes off the model or leave it unattended while it is turned on. Immediately turn off the model and transmitter when you have landed the model.

請於自己能力內及需要一定技術範圍內操作這台遙控飛行機,過於疲勞、精神不佳或不當操作,意外發生風險將可能會提高。不可在視線範圍外飛行,降落後也請馬上關掉遙控飛行機和遙控器電源。

⚠ CAUTION 注意   ALWAYS BE AWARE OF THE ROTATING BLADES
遠離運轉中零件

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

遙控飛行機主旋翼/螺旋槳運轉時會以高轉速下進行,在高轉速下的主旋翼/螺旋槳會造成自己與他人在身體上或環境上的嚴重損傷,請勿觸摸運轉中的主旋翼/螺旋槳,並保持安全距離以避免造成危險及損壞。

MICROBEAST PLUS SAFETY NOTES
MICROBEAST PLUS安全注意事項

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CAUTION 注意

Radio controlled (R/C) helicopters are not toys! The rotor blades rotate at high speed and pose potential risk . They may cause severe injury due to improper usage . It is necessary to observe common safety rules for R/C models and the local law . You can gather information from your local R/C model club or from your national modelers association .

遙控直昇機不是玩具！螺旋槳高速旋轉帶來的潛在風險相當高，它們可能會導致嚴重的傷害，一切的使用要符合並遵守共同的安全規則，並且遵守當地的無線電遙控模型協會制度規定。您可以從當地的模型俱樂部或從您的國家航模運動協會取得相關資訊。

CAUTION 注意

Pay attention to your own safety and the safety of other people and property in your vicinity when using our product . Always fly in areas away from other people . Never use R/C models in close proximity to housing areas or crowds of people . R/C models may malfunction or crash due to several reasons like piloting mistakes or radio interference, and cause severe accidents . Pilots are fully responsible for their actions, and for damage or injuries caused by the usage of their models .

注意自己與他人以及財物的安全，在您使用我們的產品時，請您遠離建築與人群。遙控直昇機可能在飛行中出現任何意外，可能是飛行員的操控失誤，或者是無線電干擾，並導致嚴重事故的發生。飛行員必須為自己的行為負完全責任，以及所造成的任何損害。

CAUTION 注意

Please read the following instructions thoroughly before the first use of your MICROBEAST PLUS and setup the system carefully according to this manual . Allow sufficient time for the setup procedure and check each step carefully . Watch for a mechanically clean and proper build of your helicopter . A wrong system setup can lead to a serious accident and damage to the model .

設置MICROBEAST時請仔細閱讀以下說明，並且一定要留出足夠的時間來仔細設定，並小心檢查每一個步驟。除此之外，也要特別注意無平衡翼旋翼頭的組裝是否正確，稍有差錯或機械故障，可能導致嚴重的事故發生。

CAUTION 注意

Radio controlled (R/C) models consist of several electrical components . It is therefore necessary to protect the model from moisture and other foreign subtances . If the model is exposed to moisture this may lead to a malfunction which may cause damage to the model or a crash . Never fly in the rain or extremely high humidity .

無線遙控模型，是藉由許多電子零件組裝而成，因此有必要保護這些脆弱的電子零件，例如防水、防塵等工作。如果遙控模型受潮可能導致故障，請絕對不要在雨天或濕度極高的氣候中飛行。

CAUTION 注意

When operating the helicopter with a MICROBEAST PLUS ensure there is a sufficiently large and stable receiver power supply . Because of the direct coupling of the rotor blades to the servos, without the use of a flybar mixer, the servos are exposed to increased actuating forces . In addition, because of the intermediary electronic gyro system, the servos are driven more often than with traditional use . These factors can make the power consumption increase a lot compared to a flybar helicopter . When the supply voltage falls below 3,5 volts for a short amount a of time, the system will power off and reboot . In this case a crash of the helicopter is unavoidable .

操控您的直昇機時，請確保MICROBEAST PLUS 有一個充足、穩定的接收器電源。由於十字盤伺服器直接連接十字盤、主旋翼，不像傳統貝爾希拉混控旋翼頭那樣的省力，所以請特別注意！無平衡翼直昇機使用的伺服器會顯得特別的耗電，請務必確定您的供電系統有足夠的供電能力。若電壓低於3.5V，即使是很短暫的時間，系統將關閉並重新啟動。在這種情況下，墜機是很難避免的。

CAUTION
注 意

Do not expose the MICROBEAST PLUS system to extreme variations in temperature . Before powering up the system, wait some time so that the electronics can acclimatize and any accumulated condensation is able to evaporate .

請勿讓 MICROBEAST PLUS 在極端溫度變化的環境下飛行，例如從溫暖的室內短時間帶到寒冷的室外，環境轉換至少需有 20 分鐘以上的緩衝適應，讓電子零件上的水氣凝結揮發掉，才能夠通電開機。

CAUTION
注 意

The sensors of MICROBEAST PLUS consist of highly sensitive electomechanical components . These can be damaged due to moisture or mechanical or electrical impact . Do not continue using this product, if it hase been exposed to such influences, e .g . dure to a crash of the model or due to overvoltage caused by a defective receiver power supply . Otherwise a failure may happen any time .

MICROBEAST PLUS 包括高度敏感的電子元件，它可能在潮濕的環境中、機械或電子的衝擊中受到損害。如果您的模型已經遭受到撞擊，或者接收器的電源供應不穩定等等，請不要繼續使用 MICROBEAST PLUS，否則故障會不斷發生。

CAUTION
注 意

When operating electric helicopters make sure that the electric motor cannot start inadvertently during the setup procedure . Particularly pay attention if using a single-line receiver and if the ESC is connected directly to the MICROBEAST PLUS . We recommend disconnecting the electric motor from the ESC during the setup procedure . Prior the first usage please slide the motor/pinion away from the main gear, then check that the motor does not to start inadvertently when the receiver is switched on .

操作電動直昇機時，請確保電動馬達不會在安裝過程中無意間啓動。尤其要特別注意，如果您使用的是單線連接接收器，且 ESC 直接連接到 MICROBEAST PLUS。我們建議在安裝過程中 ESC 不要連接電動馬達。在第一次使用之前，請滑動馬達/齒輪以遠離主齒輪，然後檢查馬達不會在開啓接收器時被啓動。

CAUTION
注 意

When operating the RPM Governor feature of MICROBEAST PLUS it is essential to ensure that the motor cannot start by accident when making adjustment or performing preparations to start the engine . Carefully read this manual and make sure you fully understand how the RPM Governor feature is operated before making any adjustments . Also make sure the motor does not start when the radio link is interrupted or when you switch on the transmitter initially. With electric driven models do not dock the motor to the main gear unless all necessary adjustment procedures have been finished. Always maintain sufficient safety distance to the motor and other rapidly rotating components of the helicopter.

操作 MICROBEAST PLUS 的 RPM定速模式時，請確保馬達不會在調整或準備啓動引擎過程中無意間被啓動。調整前請仔細閱讀本說明書了解 RPM定速模式的操作特性。並請確保在開啓或關閉遙控器時，馬達不會被啓動。使用電動直昇機時請不要連接馬達跟主齒輪，除非確定所有必要的調整已經完成。直昇機內的馬達及其他快速轉動的零件必須保持足夠的安全間隙。

CAUTION 注意

MICROBEAST PLUS with AttitudeControl can be used as a flying aid for beginners as the reaction of the helicopter to stick inputs can be limited and as an electronic control circuit can help to stabilize the helicopter. However, this does not provide that the helicopter can always be flown safely! By incorrect control inputs the helicopter still may crash or be placed in a position in which the pilot becomes disoriented even when using AttitudeControl. In addition, the helicopter can drift due to external influences and it is not guaranteed that the artificial horizon of the device can stabilize the helicopter at any time and recover from any orientation. Influences such as temperature fluctuations or vibrations may cause incorrect results and distort the position calculation of the system in consequence . There is no guarantee that the system will always work correctly . Only the pilot is responsible for the control of the helicopter and thus also for the use of the system . You must always be able to turn off the system immediately and be able to take over full control of the helicopter .

MICROBEAST PLUS 的姿態模式可以輔助初學者飛行，因為此模式可限制直昇機的搖桿輸入反應，且電子控制電路有助於穩定直昇機。但是，這並不保證直昇機可以安全飛行！不正確的指令輸入，即使是在姿態模式下，直昇機仍可能會摔機或者迷失方向。此外，直昇機可能受外部影響而漂移，我們無法保證可以隨時讓直昇機能從任何方向恢復並自平。其他如氣溫的變化或振動都可能影響系統而會導致不正確的結果，造成系統計算失真。我們無法保證此系統總是能正常工作。只有飛手能負責直昇機的控制，以及正確使用本系統。請確保您能隨時立即關閉此平衡系統，並取回直昇機控制權。

CAUTION 注意

We suggest you to seek the support of an experienced helicopter pilot before you undertake the first flight of your model . Additionally, flight training with a R/C simulator can help make flying easier and more enjoyable . Ask your local dealer if you need technical support or if you observe problems during the usage of our system .

我們建議您尋求具有足夠經驗的遙控直昇機玩家，然後再進行第一次的 MICROBEAST PLUS 搭配飛行。此外，飛行訓練用的 R/C 模擬器可以幫助使飛行更簡單，更有樂趣。如果您有任何技術支援或系統使用的問題，請與當地代理連絡。

CAUTION 注意

AttitudeControl can help to facilitate flying of model helicopters by briefly passing over control to the system if the pilot becomes disoriented . By using the built-in artificial horizon the helicopter can be brought to a nearly horizontal position so that the pilot gains time to reorient . Thus there can be no assurance that the model is saved from a crash in general . Depending on the current attitude and the speed of the model and depending on how fast the AttitudeControl is activated, the model may crash before or while the system tries to recover. In addition, the helicopter can drift due to external influences and it is not guaranteed that the artificial horizon of the device can stabilize the helicopter at any time and recover from any orientation . Influences such as temperature fluctuations or vibrations may cause incorrect results and distort the position calculation of the system in consequence . Strictly observe the general safety rules for dealing with RC models and do not totally rely on the system . The pilot is responsible for the control of the helicopter and thus also for the use of the system . You must always be able to turn off the system immediately and be able to take over full control of the helicopter .

如果飛手在飛行中迷失方向，姿態模式可以快速控制系統，幫助操控直昇機。藉由使用內建自平功能，使直昇機接近水平位置，讓飛手有時間重新調整正確的方向。但仍不保證可以拯救失控的直昇機，系統介入的速度及反應主要是根據直昇機當時的姿態和速度而定，即便如此，該直昇機仍可能會在系統嘗試恢復時或之前摔機。此外，直昇機可能受外部影響而漂移，且無法保證可以隨時讓直昇機能從任何方向恢復並自平。其他如氣溫的變化或振動都可能影響系統而會導致不正確的結果，且造成系統計算失真。我們無法保證此系統總是能正常工作。只有飛手能負責直昇機的操控，以及正確使用本系統。請確保您能隨時立即關閉此平衡系統，並取回直昇機控制權。

Dear customer,

Thank you for purchasing our product.

MICROBEAST PLUS is a high-end gyro system for RC helicopters that has been developed in Germany using latest technology and setting high standards. It can be used with many different types of helicopters like 3D aerobatic helis, F3C competition helicopters as well as scale helicopters with 2 or more rotorblades.

The system comes with BASIC flybarless stabilization functionality and can be upgraded by paid update to the PROEDITION. This enables additional features like AttitudeControl for recue bailout or constant leveling and a feature called ?Bank Switching " which allows to switch between parameter presets in flight to serve different flight conditions or flying styles.

To setup MICROBEAST PLUS there is no need for any additional devices. All you need is your radio system and your helicopter. Thanks to the well proven "EasySetup" concept you can do all the necessary adjustment directly at the device and you 're ready for take off within a few minutes.

This Quickstart Guide is a clearly arranged guide that will lead you step-by-step through the basic flight setup. Please follow this guide carefully and make sure to read the attached safety notes. For a detailed instruction manual and further details, tipps, tricks and notes about the product please visit

WIKI.BEASTX.COM

親愛的客戶:

感謝您使用MICROBEAST PLUS無平衡翼控制系統!

MICROBEAST PLUS採用德國最新技術和最高標準，可適用於多種直升機類型，像是3D飛行、F3C競賽或是雙旋直升機搭載像真機殼等，不僅有基本的無平翼穩定系統，還有進階付費升級功能，此進階功能有姿態模式，可作為失控保護救援功能，在飛行時開啓姿態模式，系統會在不同的操作模式和應用程式之間進行選擇，然後精確地穩定直升機的飛行。

設定MICROBEAST PLUS不需要任何其它設備，您只需要遙控器和你的直升機，透過"EasySetUp" 的概念您可以直接在無平衡翼控制系統上做任何設定，使您的直昇機能在幾分鐘之內迅速升空。

本快速入門指南將以非常簡單且明確的方法，一步一步帶領您完成基本的飛行設定，並請務必仔細閱讀其安全注意事項。關於詳細的使用說明書和更多的細節、技巧和注意事項，請瀏覽以下網站。

WIKI.BEASTX.COM

Designed for **STUDIOX**

If you like to get more insight into the system and like to have a more visualized type of setup you can use the StudioX App for PC/mac or StudioXm for your smartphone/tablet in combination with the USB2SYS interface (PC/mac) or BLE2SYS interface (smartphone/tablet) (optional available).

These apps are the source to get even more out of your device like saving/restoring paramaters, firmware updates, loading preset heli configurations and making advanced adjustment to fully customize your MICROBEAST PLUS to your needs.

StudioX can be downloaded from: STUDIOX.BEASTX.COM

STUDIOX設計理念

如果您希望更進一步瞭解系統設定內容或過程，以下選配功能可供使用，您可連接USB2SYS介面透過StudioX App在PC/MAC上設定，或連接BLE2SYS介面透過StudioXm在手機/平板上設定。以上Apps系統提供儲存參數、韌體升級、下載參數和進階功能設定等，能更符合您使用MICROBEAST PLUS的需求。

StudioX下載點: STUDIOX.BEASTX.COM

This guide is intended to be used with MICROBEAST PLUS firmware version 5.0.x only! After power up when the Status-LED lights red, for a few seconds in the left row menu LEDs A and C indicate major version "5". In the right row no LED lights up.

本快速指南所描述的調整內容，只適合 MICROBEAST PLUS Version 5.0.x 版本！

開機後，Status-LED燈亮紅色，幾秒之後，在左排選單中LED燈號A和C顯示了主程式的版本"5"，右排選單LED無燈號。
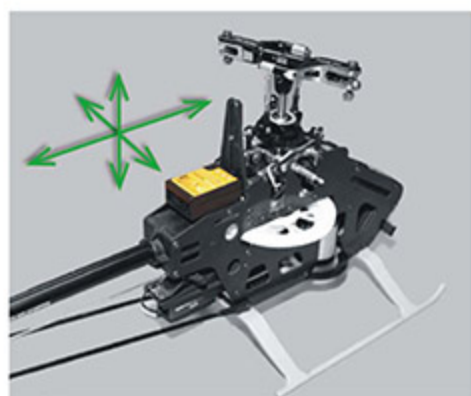
You can position MICROBEAST PLUS flat or upright on the helicopter. The large socket must point to the front or to the rear of the helicopter.

MICROBEAST PLUS 可以平放或倒置安裝於直昇機上。最大的插口必須對準直昇機的前方或後方。最小的白色插口需對準 X 軸。

The small white socket must be aligned with the longitudinal axis. The sensor axis (housing edges of the device) must be aligned exactly parallel to all three rotation axis of the helicopter. However, it is allowed to position the device offset from the rotation axis.

傳感器軸(MICROBEAST PLUS 的殼體邊)必須準確地平行於直昇機的三個旋轉軸(主軸、橫軸、尾傳動齒輪軸)。然而，其安裝位置在旋轉軸的範圍內即可。

In summary there are 8 mounting orientations possible:
1.flat, sticker on top, socket pointing to front*
2.upright, button up, socket pointing to front
3.flat, sticker showing to ground, socket pointing to front
4.upright, button down, socket pointing to front
5.flat, sticker on top, socket pointing to rear
6.upright, button up, socket pointing to rear
7.flat, sticker showing to ground, socket pointing to rear
8.upright, button down, socket pointing to rear

總共有八種不同安裝方向供您選擇：
1.平放 / 貼紙朝上側 / 插口朝飛行方向*。
2.垂直/按鈕朝上側/插口朝飛行方向。
3.平放倒置/貼紙朝底部/插口朝飛行方向。
4.垂直倒置/按鈕朝底部/插口朝飛行方向。
5.平放/貼紙朝上側 /插口朝尾管。
6.垂直/按鈕朝上側/插口朝尾管。
7.平放倒置/貼紙朝底部/插口朝尾管。
8.垂直倒置/按鈕朝底部/插口朝尾管。

1.

2.

Flight Direction
飛行方向

3.

4.

5.

6.

7.

8.

Use one of the supplied 3M gyro pads to stick the device to your helicopter. The device housing must not directly touch the chassis of the helicopter. When connecting and laying out the servo and receiver wiring later onwards please make sure the wires do not pass tension to the MICROBEAST PLUS. It is not recommended to bundle or tie down the leads close to the MICROBEAST PLUS device.

請使用隨貨附贈的 3M 陀螺儀專用泡棉來固定 MICROBEAST。安裝 MICROBEAST PLUS 時，請勿將連接線拉得太緊，請確保 MICROBEAST PLUS 本體能保持足夠的晃動空間，這樣才不會因為連接線太緊而將震動傳遞到感應器。也不建議在靠近 MICROBEAST PLUS 本體的地方綑綁或繫緊束帶。另一方面，所有線材皆須確實接好，以避免飛行時 MICROBEAST PLUS 因離心力而脫落。特別是，請不要在接近 MICROBEAST PLUS 的連接線上使用任何熱縮套管、保護套管來捆綁連接線。這會使電線僵硬不靈活，引起振動，進而影響到 MICROBEAST PLUS 的功能。

2 CONNECTING THE RECEIVER
接收器連接

ALIGN
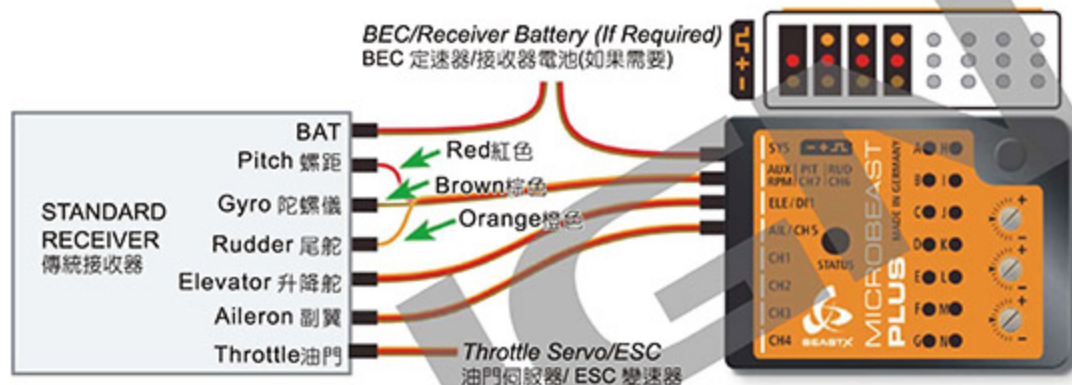
The illustrations are only intended as examples!
The function assignment of the transmitter determines which channel on the receiver controls which function.

此圖僅供參考
遙控器通道分配決定了個別接收器在遙控器通道上的控制功能。

The assignment of functions to the radio channels is mentioned in the manual of your radio system. Also you may find out the function assignment by checking your transmitter's servo monitor. The connectors of MICROBEAST PLUS are assigned to the functions as follows:

AIL|CH5 = Aileron, ELE|DI1 = Elevator, RUD (orange wire) = Rudder, PIT (red wire) = Thrust, Aux (brown wire) = Gyro gain

The wires for aileron and elevator additionally transfer the power between MICROBEAST PLUS and receiver.

Using a Single-Line receiver all channels/functions are transferred by one single connection wire. This allows to use even more than 5 channels, i. e. for controlling the headspeed Governor, AttitudeControl function and additional output channels.

遙控器的通道分配，請參考遙控器說明書。您也可以在遙控器的伺服器螢幕上查看功能分配。MICROBEAST PLUS 的通道功能分配如下：

AIL|CH5 = 副翼： ELE|DI1 = 升降舵： RUD (橙色線) = 尾舵： PIT (紅色線) = 油門： Aux (棕色線) = 陀螺感度

副翼和升降舵的連接線有額外的供電功能，可提供 MICROBEAST PLUS 及接收器電源。

使用單線連接接收器時，所有通道/功能都是由一條連接線來傳送。它允許超過 5 個以上的通道分配，可分配功能如：頭轉速 RPM 定速模式，姿態模式和 額外的輸出通道。
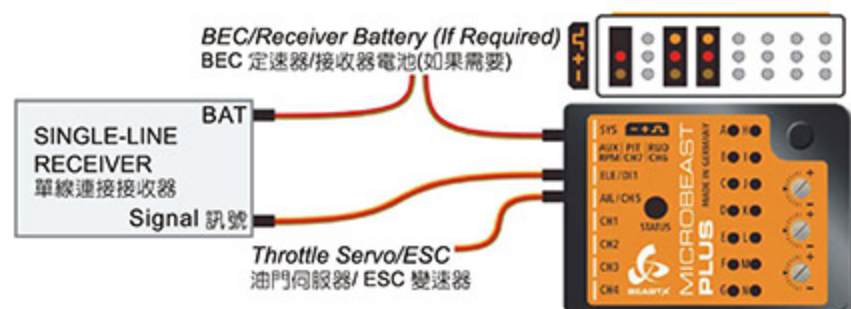
Supported receivers/transmission protocols:
- SRXL: JR XBus (Mode B), Multiplex SRXL (V1+V2), Jeti UDI, Graupner/SJ HOTT SUMD, Spektrum SRXL
- Futaba SBUS
- Remote astellite(Spektrum DSM2/DSMX, JR RJ-01 DMSS)
- Jeti EXBUS
- ALIGN/ FlySky iBUS
- PPM serial signal (SPPM)

BEC/Receiver Battery (If Required)
BEC 定速器/接收器電池(如果需要)

BAT

SINGLE-LINE RECEIVER
單線連接接收器

Signal 訊號

Throttle Servo/ESC
油門伺服器/ ESC 變速器
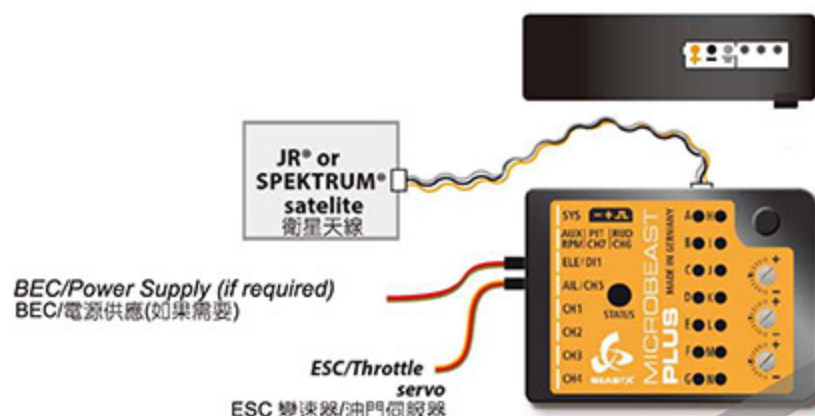
支援接收器/遙控器類型：
- SRXL: JR XBus (Mode B), Multiplex SRXL (V1+V2), Jeti UDI, Graupner/SJ HOTT SUMD, Spektrum SRXL
- Futaba SBUS
- 衛星天線(Spektrum DSM2/DSMX, JR RJ-01 DMSS)
- Jeti EXBUS
- ALIGN/ FlySky iBUS
- PPM 系列 信號(SPPM)

JR® or SPEKTRUM® satelite
衛星天線

BEC/Power Supply (if required)
BEC/電源供應(如果需要)

ESC/Throttle servo
ESC 變速器/油門伺服器

Using a single remote satellite is only recommended for 450 size helis or smaller! For larger helis please use a SRXL compatible Single-Line receiver for your radio brand.

若您使用的是單線衛星天線，建議只使用在 450 級或更小的直昇機上!若您的直昇機是較大的機型，建議使用 SRXL 相容單線連接接收器來搭配您的遙控器。

Always make sure the power supply is stable and dimensioned sufficiently for the intended application. If possible always connect the power source directly to MICROBEAST PLUS (not at port [AUX|PIT|RUD]) but additional supply cables can be plugged into free receiver ports, too. Especially when using standard size servos it is recommended to use more than one power supply cable in parallel to preserve a stable voltage and to reduce power loss due to connection resistance.

請確定使用的電源規格符合系統要求。如果可能，請給 MICROBEAST PLUS 一個直接的電源。(不必透過 AUX/PIT/RUD端口，連接線可插到一個開置的接收機端口)。尤其是在使用標準伺服器時，建議您使用一個以上的供電連接線，並使其保持平行而穩定的電壓，以減少因電流傳輸產生電阻而損耗功率。

3 PREPARING YOUR TRANSMITTER
準備遙控器
ALIGN

Create a new helicopter model memory in your transmitter that supplies different flight modes for controling throttle, pitch and the tail gyro gain in different flight situations.

在您的遙控器上設置並儲存一個新的直昇機模式，它支援不同的飛行模式，在不同的情況下，控制油門，螺距和尾舵陀螺儀感度。

Model Select
Shape S8
TRex 450 Sport
TRex 450L Dominator
TRex 600N
TRex 700E
TRex 700L Dominator
< Add New Model >

Model Name   BACK
Name: My Model ▲

Model Type   LIST
Airplane   Helicopter   Sailplane
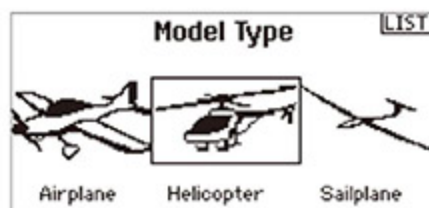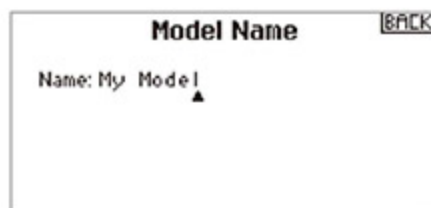
You must not use any mixing functions on the output channels! Especially it is not allowed to use mixing functions for the swashplate servos. Deactivate all output channels that are not used. In the basic configuration we only need pitch, aileron, elevator, rudder, throttle and one channel to adjust the tail gyro gain.

請注意！您不能在輸出通道上使用任何混控功能！特別要注意的是，十字盤的伺服器不允許使用混控功能。請關閉任何閒置的輸出通道。系統對基本通道的配置，只需要螺距、副翼、升降舵、方向舵、油門和一個通道來調整尾陀螺感度。
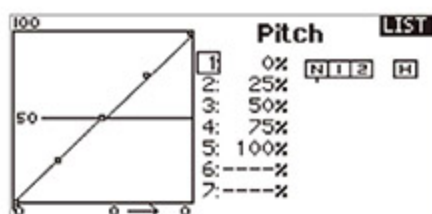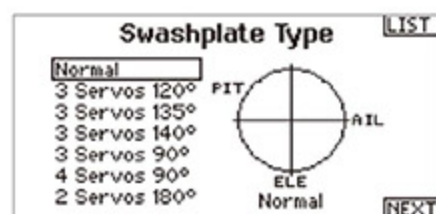
Each control function must exactly control one output channel. Initially the servo throws must be set to 100% and all trims and sub trims must be zero. For the basic setup do not change the pitch curves yet. The throttle curves and throttle servo settings can be adjusted as necessary for this model in case you do not intend to use the internal Headspeed Governor function of MICROBEAST PLUS.

每個輸出通道必須精確對應到一個控制功能。首先伺服輸出必須設置為100%，所有微調和輔助微調必須為零。基本設定並不會改變螺距曲線。油門曲線和油門伺服的設定，可以根據需要來調整，但前題是您不可改變MICROBEAST PLUS的頭轉速定速功能。

Only the pitch channel must be controled when moving the thrust stick. The same applies to aileron, elevator and rudder.

移動螺距搖桿時，只需控制螺距通道。
同樣應用於副翼、升降及尾舵。

⚠ **CAUTION** 注意
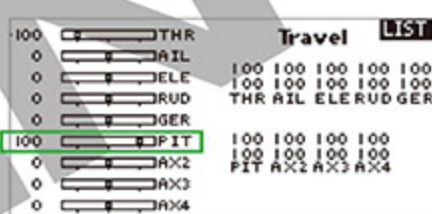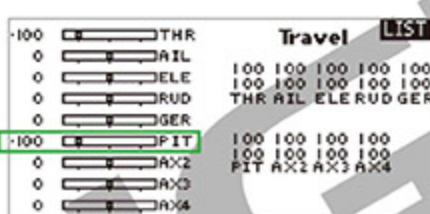
With electric driven models remove the motor from the main gear when performing the basic setup for safety reason! Additionaly deactivate the throttle by using the "Throttle HOLD" switch, so the motor won't start to turn when moving the thrust stick.

When flying a **nitro or gasser heli** remove the servo horn from the throttle servo before first power up to prevent jamming of the servo due to wrong servo setup.

基於安全理由，電動直升機在初始設定時，請移除主齒輪上的馬達驅動齒輪，以策安全！此外，請使用遙控器上的「Throttle HOLD」開關，來關閉油門，以確保在移動油門搖桿時馬達不會轉動。

飛行引擎直昇機，在第一次點燃引擎前，請先將油門伺服器臂移除，以免不小心或錯誤的設定而發動引擎，造成危險。

To initiate bind procedure on a single Spektrum remote satellite connect the Spektrum bind plug to [SYS] port. When using a DSM2 remote satellite, push and hold the button and turn on power while still holding the button down. The LED on the satellite will flash together with Menu LED N on the MICROBEAST PLUS. When binding a DSMX remote satellite do not touch the button but only power on the device. The LED on the satellite will flash together with Menu LED H. Initiate the bind procedure on the transmitter. Power off and remove the bind plug when finished successfully.

To bind the JR RJ01 remote satellite initiate the bind procedure on the transmitter and power on the MICROBEAST PLUS. The remote satellite will bind instantly. Connecting a bind plug or similar is not necessary.

若使用 Spektrum 衛星接收天線，初始對頻時，請將 SPEKTRUM 的對頻金鑰插入 MICROBEAST PLUS 的〔SYS〕插槽。若使用 DSM2 衛星天線時，進入對頻模式後，請長按 MICROBEAST PLUS 上的按鈕並接通電源，直到接收器的LED 燈和 MICROBEAST PLUS 設定選單第N 點旁的 LED 燈同時閃爍，此時可鬆開按鈕，然後對頻接收器和遙控器，對頻成功後接收器的 LED 燈將保持恆亮。若使用 DSMX 衛星接收天線，進入對頻模式後，請不要按按鈕，只需開啟電源即可，直到衛星天線的 LED 燈和 MICROBEAST PLUS 設定選單第 H 點旁的 LED 燈同時閃爍，此時鬆開按鈕，然後對頻接收器和遙控器，對頻成功後，接收器的 LED 燈將保持恆亮。這是在遙控器的對頻過程，完成後，請關閉電源並移除對頻金鑰。

若使用 JR RJ01衛星接收天線、遙控器和 MICROBEAST PLUS，初始對頻時，衛星接收天線會保持對頻，對頻金鑰或類似的工具是不需要的。

To enter RECEIVER MENU MICROBEAST PLUS must be switched off completely. Push and hold the button before and while powering on. The menu LEDs will start to cycle from A to N. Now you can release the button.

Make sure your transmitter is on and sending signals to the receiver. At menu point A you can start automatic receiver type detection by briefly pressing the button once. The color and state of the Status LED indicates which type is currently scanned for. When the receiver has been detected the menu will skip to point B; when there was some error the Status LED will flash in red color and the menu stays at A. In this case please make sure you 've connected the receiver correctly and try again!

在進入接收器選單前，必須將 MICROBEAST PLUS 完全關閉。進入接收器選單時，請長按按鈕開機，此時選單LED會由第 A 點至第N點循環亮燈，即可放開按鈕。

請確認您的遙控器與接收器運作正常，在設定選單第A點，您可以輕壓按鈕一次，系統將自動偵測接收器類型，LED 狀態指示燈的顏色表示當前的選擇。當完成接收器偵測後，設定選單會跳至第B點。如接收器偵測有問題，則Status LED紅燈會閃爍，且停留在第A點，接著請確認您的接收器是否安裝正確後再重覆以上偵測程序。

| Press and hold button 長按按鈕 | Release button 放開按鈕 | Press briefly 輕按按鈕 |

Switch on transmitter

Switch on power supply 開啓電源

Menu LEDs cycling 選單LED由第A-N點循環亮燈

Menu LED Ⓐ flashes Menu LED 燈第 A 點閃爍

Status LED changes color (scanning for receiver) Status LED顏色改變 (自動偵測接收器類型)

Single-Line receiver (Status LED off, purple or red at menu point A)

When at menu point B press and hold the button for 2 seconds to load the default function assignment that has been preset for the detected radio system. Alternatively you may program a different function assignment manually in case the default assignment does not match to your transmitter 's function layout. How this works in detail you can read from the detailed instruction manual which you can get at wiki.beastx.com.

Preset function assignment for the different single-line receiver protocols (indicated by Status LED color at A):

單線連接接收器(Status LED 燈熄滅，第A點紫/紅燈)

請長按第B點按鈕2秒，開始載入系統所預設之遙控器通道分配功能，如果系統預設的通道分配不符合您遙控器的需求，您也可以用手動的方式來分配遙控器通道之功能。更多的詳情，請參閱說明書，或瀏覽wiki.beastx.com.

不同的單線連接接收器預設之通道分配功能(依Status LED第A點燈號顯示所選擇之接收器)

● **Spektrum DSM2/DSMX or JR RJ-01 DMSS remote satelite** 衛星天線

THR	AIL	ELE	RUD	GER	PIT	AX2	AX3
Throttle[CH5] 油門[CH5]	Aileron 副翼	Elevator 升降舵	Rudder 尾舵	Gyro Gain 感度	Pitch 螺距	Aux[CH6] 輔助通道[CH6]	Governor* 定速模式*

PPM serial signal(SPPM) 複合信號

CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Pitch 螺距	Aileron 副翼	Elevator 升降舵	Rudder 尾舵	Aux[CH6] 輔助通道[CH6]	Throttle[CH5] 油門[CH5]	Gyro Gain 感度	Governor* 定速模式*

Futaba SBus/SBus2 or BEASTXFASST compatible receiver 相容的接收器

CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Aileron 副翼	Elevator 升降舵	Throttle[CH5] 油門[CH5]	Rudder 尾舵	Gyro Gain 感度	Pitch 螺距	Aux[CH6] 輔助通道[CH6]	Governor* 定速模式*

CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Aileron 副翼	Elevator 升降舵	Rudder 尾舵	Pitch 螺距	Throttle[CH5] 油門[CH5]	Gyro Gain 感度	Aux[CH6] 輔助通道[CH6]	Governor* 定速模式*

☀ **Graupner SUMD**

CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Pitch 螺距	Aileron 副翼	Elevator 升降舵	Rudder 尾舵	Aux[CH6] 輔助通道[CH6]	Throttle[CH5] 油門[CH5]	Gyro Gain 感度	Governor* 定速模式*

☀ **Spektrum SRXL**

THR	AIL	ELE	RUD	GER	PIT	AX2	AX3
Throttle[CH5] 油門[CH5]	Aileron 副翼	Elevator 升降舵	Rudder 尾舵	Gyro Gain 感度	Pitch 螺距	Aux[CH6] 輔助通道[CH6]	Governor* 定速模式*

*Governor channel is used to set headspeed for governor function with nitro or gas driven helicopters
*定速模式通道是用於引擎直昇機頭轉速定速功能使用。

Press and hold button for 2 seconds 長按按鈕2秒	Release button 放開按鈕		Press briefly 輕按按鈕

Menu LED **B** flashes
Status LED is **solid blue**

選單LED燈第B點閃爍
Status LED藍燈恆亮

Menu LED **N** flashes
Status LED flashes **red/blue**

選單LED燈第N點閃爍
Status LED紅/藍燈同時閃爍

Make sure throttle is in motor stop/failsafe position

請確認油門搖桿是在馬達停止/失控保護位置

⚠ **WARNING 警告**

WARNING: At menu point N the throttle output CH5 is active, when using a electric helicopter the motormay start to run! Move the throttle to the desired failsafe position which will be set in case the receiver connection is interupted oder gets disconnected.

警告！在選單第 N 點，通道 5 [CH5] 油門輸出已經被開啟！當使用電動直升機，馬達將可能會開始轉動，請將油門搖桿移到您理想的位置，這裡就是油門失控保護的位置，如果使用接收器，這裡就是中斷油門指令的位置。

When pushing the button after setting throttle failsafe position all the receiver settings will be stored. Then all menu LEDs will flash repeatedly and the system will reboot after 3 seconds.

Receiver with "Standard" 5-wire layout (Status LED blue at menu point A)

Here the function assignment is simply determined by the order of physical connection of the wires to the receiver outputs. Assignment by software is not provided and will not appear when choosing this type of receiver. When a "Standard" receiver (Status LED blue at menu point A) was detected the receiver setup is finished and the system will reboot immediately. Menu point B will not appear!

完成油門失控保護的位置設定後，按下按鈕，接收器的設定將會被儲存紀錄。所有的選單LED將會重覆閃爍，系統將會在3秒後重新啟動。

5通道的傳統接收器(選單第A點Status LED亮藍燈)

若使用「傳統接收器」，只能利用接收器連接線的物理順序來決定通道功能。如果您選擇使用傳統接收器，系統所提供的通道分配功能和接收機類型將不會出現。因此當選單第 A 點選擇 "Standard" 後(第A點Status LED亮藍燈)，接收器的設定就等於完成了，系統將會馬上重新開機。選單第B點將會消失。

After power up or finishing RECEIVER MENU adjustment wait until the system has initialized
開機或完成接收機選單調整後，等待系統初始化

Firmware version: 5.0.x
主程式 V 5.0.x：

Calibration of radio channels
遙控器通道校正

Calibration of sensor rest positions
感應器位置校正

Operation mode
操作模式

Do not move sticks on the radio!
請勿移動遙控器搖桿

Do not move the helicopter!
請勿移動直昇機

Status LED lights up blue or purple
Status LED 燈亮起 藍色或紫色

Then enter SETUP MENU for making the basic adjustments
然後進入設置選單進行基本調整

Press and hold (!) Button
長按按鈕

Keep button pressed for 2 seconds
持續按著按鈕2秒

Release button when LED A stops flashing
放開按鈕

Operation mode
(Status LED blue or purple)
操作模式
(Status LED 燈藍色或紫色)

Menu LED A flashes
(= PARAMTER MENU A)
設定選單 LED 燈第 A 點閃爍
(=參數選單)

Menu LED A lights solid
(= SETUP MENU A)
設定選單 LED 燈第 A 點恆亮
(=設定選單第 A 點)

SETUP MENU POINT A - DEVICE ORIENTATION (MENU LED A SOLID LIT UP)
設定選單第 A 點–放置方位(設定選單 LED 燈第 A 點恆亮)

Check the selected device orientation and change it if necessary by (repeatedly) moving the rudder stick into one direction until the Status LED color corresponds to the real device orientation. Then briefly push the button to save the setting and to proceed to the next menu point.

請檢查 MICROBEAST 所放置的方位是否正確,您可以將尾舵搖桿重複往一個方向移動,直到 Status-LED 燈號對應到 MICROBEAST 的方位為止 。然後短按按鈕保存設定,並進入下一個選單點。

Status LED Changes Color/State
(= Changing Device Orientation)
Status LED 燈改變顏色/狀態
(=改變十字盤伺服器方位)

Move Rudder Stick
Left or Right
向左或向右移動尾舵搖桿

Press Button Briefly
短按按鈕

Status LED Shows Currently
Selected Device Orientation
Status LED 燈顯示當前
MICROBEAST 的放置方位

Status LED Shows Currently
Selected Device Orientation
Status LED 燈顯示當前
MICROBEAST 的放置方位

Menu LED B solid
(= Setup menu point B)
設定選單 LED 燈第 B 點恆亮
(設定選單第 B 點)

Large Socket Points to
Nose of The Heli
最大插口朝機頭方向

Flight Direction
飛行方向

Large Socket Points to
Tail of The Heli
大插口朝向直昇機尾部

Status LED Off*
Status-LED 燈熄滅*

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/藍色同時閃爍

SETUP MENU POINTS B, C AND D
設定選單第 B、C、D 點

Adjust swashplate update rate (B), rudder servo pulse width (C) and rudder update rate (D) again by moving the rudder stick to one or another direction until the Status LED lights in the correct color necessary for the servos used in your helicotper. Briefly pressing the button will store the selected option and skip to the next menu point.

設定十字盤伺服器的更新速率(B)，尾舵中心頻寬(C) 和尾舵更新速率(D)，請左右移動尾舵搖桿到一個方向，直到此選單點Status LED的顏色根據您的伺服器來選擇符合的燈號，然後短按按鈕，儲存您的選項，並移動到下一個選單點。

Status LED Changes Color/State
(Changing Swash Servo Frame Rate)
Status-LED燈改變顏色/狀態
(=改變十字盤伺服器速率)

Press Button Briefly
短按按鈕

Move Rudder Stick
Left or Right
向左或向右移動尾舵搖桿

Status LED Shows Current
Swashplate update frequency
Statu-LED燈顯示目前十字盤最新頻率

Status LED Shows
Current Swashplate
Servo Frame Rate
Statu-LED燈顯示目前
十字盤伺服器速率

Setup Menu Point C
設定選單第 C 點

...

Status-LED Status-LED燈	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈
B Swashplate update rate B 十字盤伺服器更新速率	50 Hz*	65 Hz	120 Hz	120 Hz	200 Hz
C Rudder Servo pules width C 尾舵中心頻寬	760 μs	——	960 μs	——	1520 μs*
D Rudder Update Rate D 尾舵更新速率	50 Hz*	120 Hz	270 Hz	333 Hz	(560 Hz)

⚠ CAUTION
注 意

If you don't know the which update rate is best for your servos never use more than 50Hz.

The higher the update rate the better it is for the flight performance of MICROBEAST PLUS but you must check the servo specifications before increasing the update rate. Otherwise the servos may get damaged! For a list with parameter examples for most common servo types see WIKI.BEASTX.COM.

Always use 1520 μs rudder servo pulse width except you're using a very special type of rudder servo with reduced pulse width (only these servo can be used with an increased update rate of 560 Hz!). Check the servo data sheet!

如果您不知道您伺服器的更新速率，請最好不要設定超過 50Hz

較高的更新速率能讓MICROBEAST PLUS 有較好的飛行表現，但您必須先檢查所使用伺服器的規格是否符合系統要求。否則，錯誤的選擇會導致伺服器損壞！請瀏覽WIKI.BEASTX.COM 查看更多符合無平衡翼直昇機常用的伺服器類型與參數表。

只有較特別的尾舵伺服器需要用較低的頻寬(只有這種特別的尾舵伺服器會使用較高的更新速率560Hz)，其它的尾舵伺服器請務必將尾舵中心頻寬設定在 1520 μs。詳見伺服器Data資料表。

SETUP MENU POINT E - RUDDER SERVO LIMIT
設定選單第 E 點-尾舵伺服器極限

Plug the rudder servo connector into CH4 output of MICROBEAST PLUS. Put the servo arm on the servo so that it forms roughly an angle of 90 degrees with the rudder linkage rod and adjust the length of the linkage rod as described in the helicopter manual.

請將尾舵伺服器連接線插入 MICROBEAST PLUS 的 [CH4] 輸出通道，接著裝上伺服器臂，使其大約和尾舵連桿成 90度垂直，並請依直昇機說明書來調整連桿頭的長度。
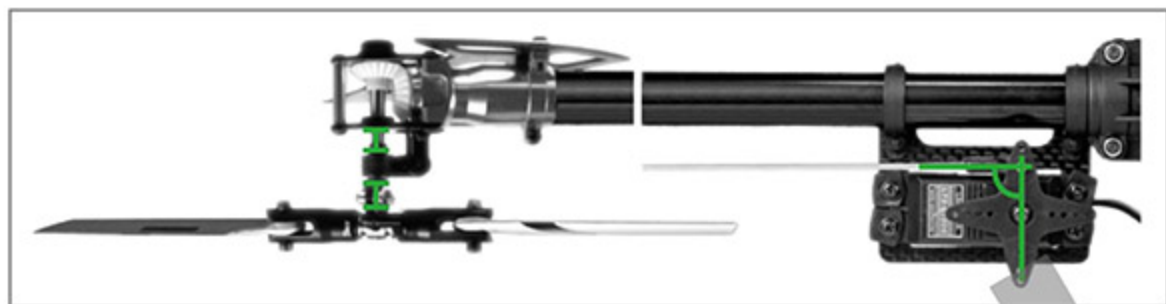
Push and hold the rudder stick into one direction to move the rudder servo and release the stick when the servo reaches the maximum or mimimum allowed servo throw. Using the rudder stick you can reposition the servo at any time to adjust the exact servo limit. If you do not touch the rudder stick for several seconds the current servo position will be saved as maximum or minimum (the Status LED will flash and then light up solid in blue or red color). Then move the servo to the opposite direction adjust as described above and wait until also this position gets stored (Status LED becomes purple).

握住尾舵搖桿往左或右一邊方向移動，然後放開搖桿，使尾舵伺服器的行程量達到最大或最小。您可以利用尾舵搖桿隨時調整伺服器極限行程的精確位置。如果放開尾舵搖桿幾秒鐘，當前位置將被設定為最大或最小行程量，此時，Status-LED 燈會閃爍，然後恆亮為藍色或紅色。同樣，如上所述移動搖桿往反向設定，等待燈號恆亮為紫色並儲存即可。

Menu LED E Solid Status LED Off
設定選單 LED 燈第 E 點恆亮 且 Status-LED 燈熄滅

Use rudder stick to move the servo to the maximum allowed deflection
利用尾舵搖桿來移動伺服器，使其達到尾舵的最大 容許偏轉率。

Release Rudder Stick
放開尾舵搖桿

Status LED Blue or Red
Status-LED 燈藍色或紅色

Press Button Briefly
短按按鈕
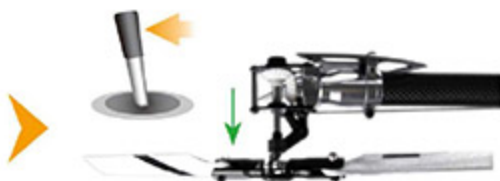
Use rudder stick to move the servo to the minimum allowed deflection
移動尾舵搖桿來調整伺服器至最小偏轉率。

Release Rudder Stick
放開尾舵搖桿

Status LED Purple
Status-LED 燈紫色

Menu LED F Solid (= Menu Point F)
設定選單 LED 燈第 F 點恆亮 (= 設定選單第 F 點)

SETUP MENU POINT F - TAIL GYRO DIRECTION
設定選單第 F 點-尾陀螺儀方向

1. Move the rudder stick and check the rudder direction on the helicopter.

1. 將尾舵搖桿往一個方向移動，確認直升機尾舵方向是否正確。

Correct
正確

Wrong
錯誤

Rudder stick
to the right
尾舵搖桿往右

Tail rotor pushes tail left,
so heli turns to right.
尾旋翼向左移，所以直升機會轉向右

Tail rotor pushes tail right,
so heli turns to left.
尾旋翼向右移，所以直升機會轉向左

If the stick is moving the servo into the wrong direction use
the servo reverse function of your transmitter and reverse the
rudder channel to change stick control direction.

移動尾舵搖桿來檢查尾舵伺服器移動的方向是否正確，如果方向不正
確，請利用遙控器的反向功能來調整即可。
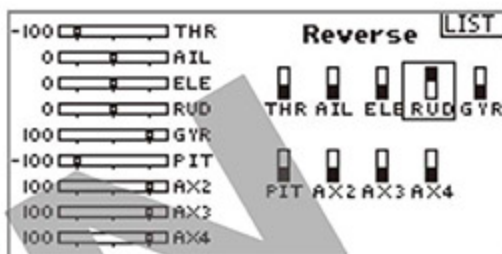
2. Now set the rudder direction of the MICROBEAST PLUS gyro

When you move the rudder stick to the right, the Status LED must light up or flash in blue color.
When you move the rudder stick to the left, the Status LED must light up or flash in red color.
When the display is inverted (red = right and blue = left) reverse the display (internal control
direction) by tapping the aileron(!) stick once.

2. 設定MICROBEAST PLUS尾陀螺儀方向

當您將尾舵搖桿往右時，Status LED 燈號藍燈會閃爍，當尾舵搖桿往左時，Status LED 燈號紅燈會閃爍。如果燈號反
向顯示(紅燈=往右/藍燈=往左)，請輕推副翼(!)搖桿一次，即可反向設定燈號(內定控制方向)。

Correct
正確

Wrong
錯誤

Rudder stick to the right
尾舵搖桿往右

Status LED blue
Status LED藍燈

Tap aileron stick to
swap colors
輕推副翼搖桿反向設定燈號

Status LED red
Status LED紅燈

Always set servo direction in the transmitter first, then check the display on the MICROBEAST
PLUS or in the software and change the internal control direction if it does not match the real
direction. Do not change the internal direction in order to change the servo direction! This is only
used for telling the gyro in which direction it must move the servo. Be very conscientious when
doing this setup step, as wrong gyro direction will cause loss of control during takeoff and you
probably crash the helicopter!

請優先在搖控器設定伺服器方向，然後確認MICROBEAST PLUS上或介面上的伺服器方向顯示是否正確，如有
異請修正並設定反向，確保方向正確。請不要更改內定控制方向來修正伺服器移動方向，因為內定控制方向是下
指令給陀螺儀要它將伺服器移動到某一個方位。所以請務必小心此設定，陀螺儀芳向錯誤將可能造成起飛失控、
甚至可能會造成摔機。

3. **Optional:** When you move the rudder stick to full deflection, the Status LED should light solid, not just flash. If this is not the case, increase the servo throw/endpoint of the rudder channel in the transmitter just as far so that the Status LED changes from flashing to solid when the rudder stick reaches the end position. Note: Do not increase the endpoint too much in the transmitter. We need an exact match of full stick position and stick end position, the Status LED should just change from flashing to solid when reaching the end position.

3. 補充: 當尾舵搖桿移動至極限行程，Status LED會恆亮，並不會閃爍。如果燈號顯示異常，請在搖控器中的尾舵通道。

SETUP MENU POINT G - SWASHPLATE MIXING TYPE
設定選單第 G 點-十字盤混控類型

Status LED changes color/state Press button briefly (= changing mixing type)
輕按按鈕改Status LED燈顏色/狀態(=改變混控類型)

Press button briefly
輕按按鈕

Status LED shows currently selected mixing type
Status LED燈顯示目前選擇的混控類型

Move rudder stick left or right
向左或向右移動尾舵搖桿

Status LED shows currently selected mixing type
Status LED燈顯示目前選擇的混控類型

Status-LED Status-LED燈	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈
G Swashplate mixing type G 十字盤混控類型	Mechanical 機械	90°	120°	140°	135°140°(1:1)

For ALIGN T-REX helicopters you can keep the default setting of 120 degrees electronic swash mixing (Status LED solid red).

使用ALIGN T-REX直升機，建議可以使用十字盤混控類型系統預設120度(Status LED燈紅色恆亮)。

⚠ CAUTION
注 意

Never use any swashplate mixing in your transmitter even when electronic mixing is required!
Deactivate the swashplate mixing in your transmitter or set it to mechanical mixing (which is often called " normal","H1" or "1 servo" mixing), so that each stick function only moves one receiver output channel. The swashplate mixing is all done by MICROBEAST PLUS!

請勿使用遙控器中的任何十字盤混控功能，即使電動混控是必須的。
請關閉您遙控器中十字盤混控功能或設定為機械混控(簡稱"Normal"或"H1"或"1 Servo"混控)，保持每一搖桿僅能控制單一接收通道。所有的十字盤混控會由MICROBEAST PLUS控制/完成。

In the following connect the servos to the outputs marked with CH1 to CH3 (CH7) as shown below. With electronic swashplate mixing the two aileron servos have to be connected to CH2 (=left) and CH3 (=right). With a mechanical mixed head (H1) the aileron servo connects to CH2 and collective pitch servo to CH3. Plug the the elevator servo into CH1 port. When using a scale helicopter with 90 degrees eCCPM you can connect a second elevator servo to CH7 output on the MICROBEAST PLUS. Note that CH7 only is a signal output, so you must power the servo from elsewhere, i.e. by getting power from the SYS-port or CH5 using a Y-adapter (for + and - only!).

請勿使用遙控器中的任何十字盤混控功能，即使電動混控是必須的。
請關閉您遙控器中十字盤混控功能或設定為機械混控(簡稱"Normal"或"H1"或"1 Servo"混控)，保持每一搖桿僅能控制單一接收通道。所有的十字盤混控會由MICROBEAST PLUS控制/完成。
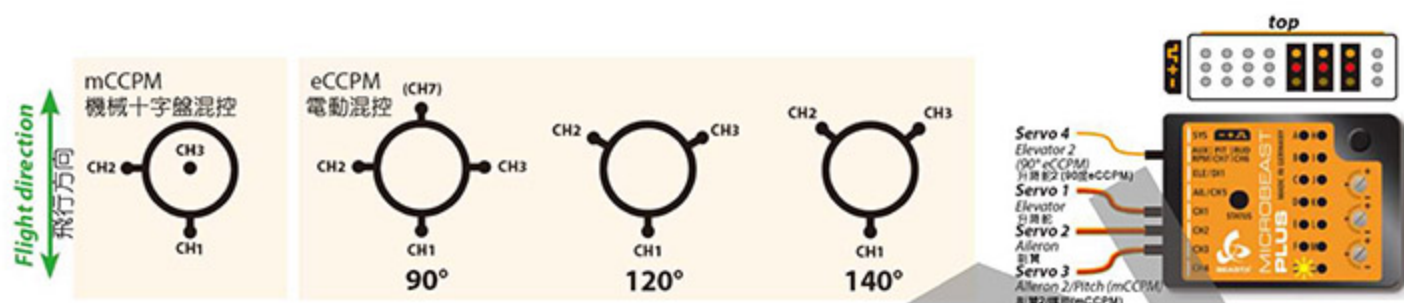
When you route the wire leads in your model make sure that there is no tension passed to the MICROBEAST PLUS. Make sure that MICROBEAST PLUS is able to move freely, so no vibrations get passed onto the unit by the wire leads. Do not use any shrink tubing or fabric hose to bundle or encase the wiring in close proximity to the point at which the cables are plugged into the MICROBEAST PLUS. This makes the cables stiff and inflexible and can cause vibrations being transmitted to MICROBEAST PLUS.

安裝接線時，請適度保留線材的連接長度，確保連接至MICROBEAST PLUS時不可過緊，留有可調空間，避免震動影響MICROBEAST PLUS。連接線材靠近MICROBEAST PLUS的位置，請勿使用任何收縮管或布料軟管固定/紮線材，因為這會使線材變得僵硬且不靈活，並可能導致震動、影響MICROBEAST PLUS。
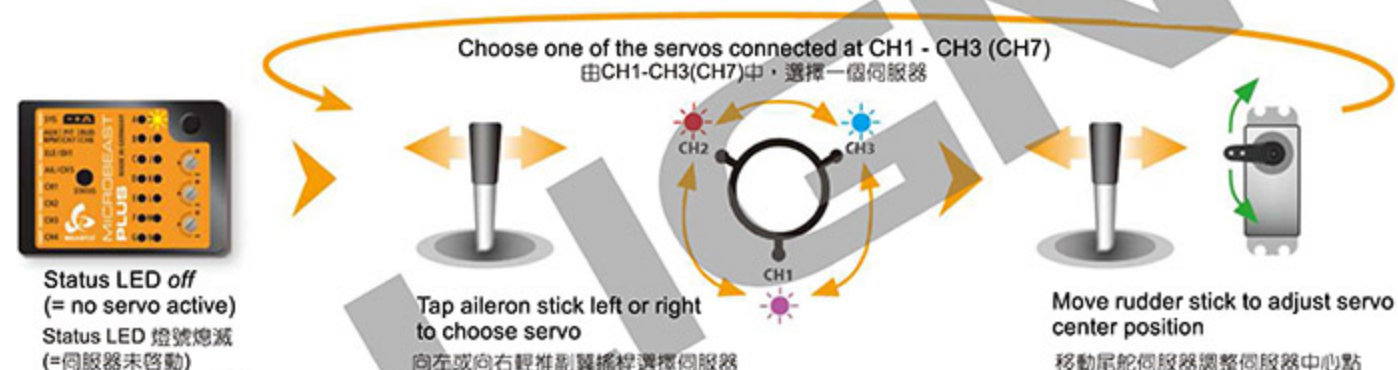
SETUP MENU POINT H - SWASHPLATE SERVO TRIM
設定選單第 H 點–十字盤伺服器微調

At SETUP MENU point H we trim the servo center positions so that each servo horn forms an exact 90 degrees angle with the adjustment linkage. This is necessary as usually you will not be able to attach the servo horns in exact center position to the servo. After all servos have been trimmed do not proceed to the next menu point yet. With active trimming adjust the linkage rods according to your helicopter's manual.

Initially when the trimming is 0 on all servos the Status LED will be off. Attach the servo horns in center position as good as possible. By tapping the aileron stick you can select one servo after another. Every color of the Status-LED is corresponding to a specific servo channel that is indicating its selection by a short up and down move. Use the rudder stick to change the servo trimming/adjust the center position. You can switch back and forth between the servos as often as you need.

設定選單第H點是調整伺服器中心位置，使每一伺服臂和伺服器連桿精確地定位於90度的位置。這是必須的調整過程，因為您通常無法精確地將伺服器臂定位至伺服器中心點。當所有伺服器都已調整完成後，請不要跳至下一個設定選單，請再根據您直升機說明書內容微調伺服器連桿。

首先，當所有伺服器微調為0時，Status LED燈熄滅，接著請盡可能將伺服器臂調至中心點，移動副翼搖桿選擇要調整的伺服器組合。一個Status LED燈代表一個伺服器組合，快速上下移動顯示目前選擇的伺服器設定。移動尾舵搖桿向前/向後調整/校正中心位置。

Choose one of the servos connected at CH1 - CH3 (CH7)
由CH1-CH3(CH7)中，選擇一個伺服器

Status LED *off*
(= no servo active)
Status LED 燈號熄滅
(=伺服器未啟動)

Tap aileron stick left or right to choose servo
向左或向右輕推副翼搖桿選擇伺服器

Move rudder stick to adjust servo center position
移動尾舵伺服器調整伺服器中心點

When you've perfectly adjusted the servos now adjust the linkage rods going from servos to the swashplate and from the swashplate to the blade grips. The swashplate must be leveled and centered on the main shaft and the bladegrips should be set to 0° of pitch.

當伺服器調整完成時，接著調整伺服器連桿在十字盤和主旋翼夾座的移動是否順暢。十字盤的位置必須置中垂直於主輪，主旋翼夾座的螺距必須為0度。

0° pitch

Anti-rotation guide leveled horizontally and twisted correctly
FL金屬控制臂膀影響正確的水平校正和扭力調整

Swashplate leveled horizontally
十字盤水平校正

Swashplate centered vertically on main shaft
十字盤置中垂直於主軸

If necessary adjust the swashplate anti-rotation so that the swashplate phasing is not shifted (only applies to 2-blade rotorheads).

必要時可調整十字盤的控制臂，使其無十字盤定相 (swashplate phasing)(僅適用於雙螺旋槳旋翼頭直昇機)。

Linkage balls of swashplate outer ring and blade grips must be on one line
十字盤球頭外環與主旋翼連桿必須在同一行
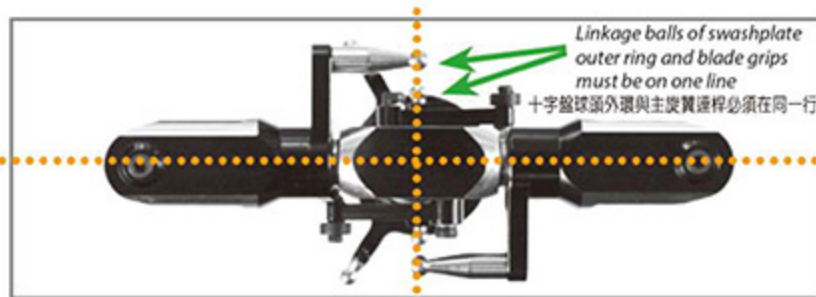
Hint: To reset the servo trims push and hold the button for at least 10 seconds.
提示:長按按鈕至少10秒，可重返伺服器微調系統預設值。

SETUP MENU POINT I - SWASHPLATE SERVO DIRECTIONS
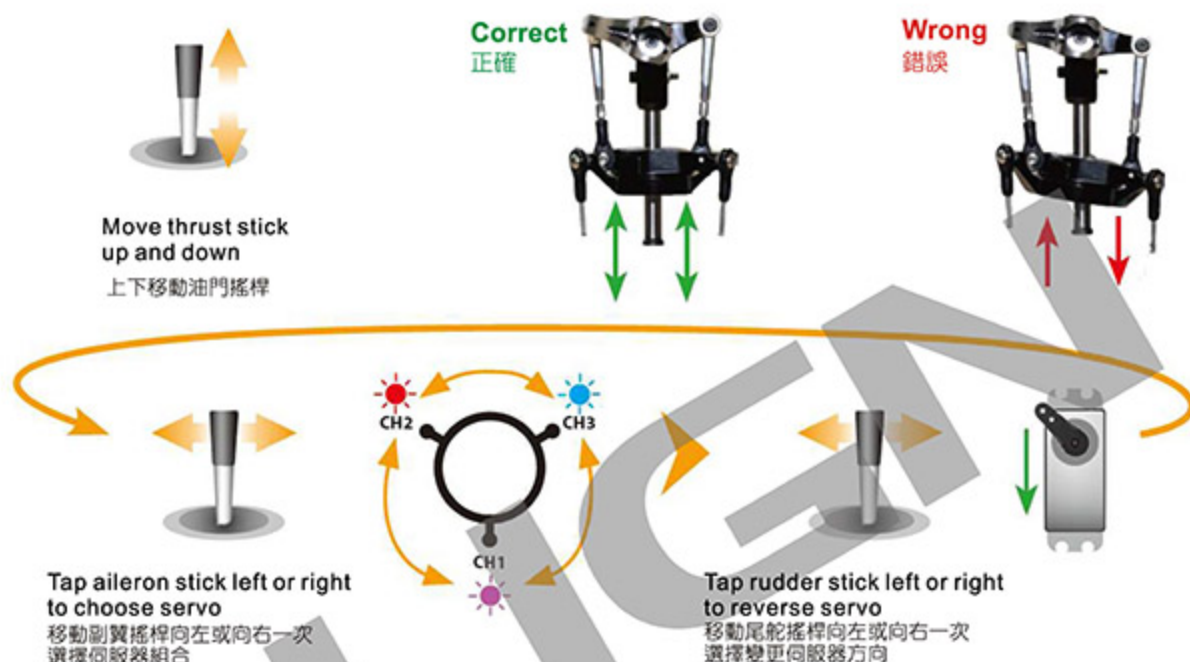設定選單第 I 點-十字盤伺服器方向

Move the thrust stick and check whether all servos push the swashplate up and down simultaneously. If this is not the case by tapping the aileron stick you can select one servo after another. Every color of the Status-LED is corresponding to a specific servo channel that is indicating its selection by a short up and down move. Tap the rudder stick once to change the servo direction. You can switch back and forth between the servos as often as you need.

移動油門搖桿來檢查伺服器行程是否正確，請將十字盤向上或向下推動。如果動作不正確，可移動副翼搖桿切換伺服器組合，一個Status LED燈代表一個伺服器組合，快速上下移動顯示目前選擇的伺服器設定。輕推尾舵搖桿一次來變更伺服器方向，根據您的需求，您可重覆以上搖桿切換動作。

Move thrust stick up and down
上下移動油門搖桿

Correct 正確

Wrong 錯誤

Tap aileron stick left or right to choose servo
移動副翼搖桿向左或向右一次
選擇伺服器組合

Tap rudder stick left or right to reverse servo
移動尾舵搖桿向左或向右一次
選擇變更伺服器方向

After adjusting servo directions make sure that the pitch direction is correct! You can either do this by setting the servo directions correctly right from the beginning or by changing the direction of the pitch channel in the transmitter later.

完成伺服器方向設定後，請再確認螺距方向是否正確。您可以一開始就正確地設定伺服器方向，或待一會兒在遙控器上變更螺距通道方向。

Please note: It's not possible to reverse the servos with the servo reverse function of your transmitter! The transmitter only controls the functions of MICROBEAST PLUS, not the servos! Reversing a channel in the transmitter will reverse the control function in total, not the direction of a single servo (except when using mCCPM swashplate mixing).

請注意：您無法在遙控器上使用反向功能變更伺服器方向！遙控器只能控制MICROBEAST PLUS，無法控制伺服器！所以遙控器反向功能會將所有設定值都設為反向，並不會只改變單一伺服器方向。(如您使用的是mCCPM十字盤混控類型，則另當別論。)

Align rotorhead and rotorblades in parallel to the helicopter's longitudinal axis. Attach a pitch gauge/level meter to one of the rotor blades or to a blade grip in order to **measure aileron pitch.** Use your smartphone to scan QR Code or link to Align website for more complete instruction:
http://shop.align.com.tw/index.php?cPath=11_35_351&page=1&language=tw。

Align 直昇機的頭速和旋翼頭的設計是平行於直昇機的 X 軸，並且提供螺距規和十字盤校正器(另購品)，可以用來校正螺距，非常方便好用，請參考相關網頁。手機掃描 QR Code 將會有更完整的亞拓產品介紹。若手機無法掃描 QR Code 請上亞拓官網
http://shop.align.com.tw/index.php?cPath=11_35_351&page=1&language=tw。

At SETUP MENU point J we adjust the internal servo throw so that MICROBEAST PLUS has a reference on how far it must move the servos when controlling the helicopter. To set the throw you have to align one rotorblade on the longitudinal axis (in parallel to the tail boom) and measure the cyclic pitch with a digital pitch gauge on this rotorblade.

設定選單第 J 點是設定伺服器行程量，如此 MICROBEAST PLUS 在控制直升機、推動伺服器時才有依據。設定伺服器行程量時，您必須將主旋翼保持水平(與尾管水平對齊)，並使用電子螺距規校正螺距。

[HET80001]

Menu LED J Solid Status Led Off

Menu-LED 燈第 J 點恆亮，
Status-LED 燈熄滅

Tap aileron stick to switch to measure Position

輕推副翼搖桿切換測量位置

Use rudder stick to adjust blade pitch to exact exact +6 or -6 degrees

使用尾舵搖桿校正螺距，
直到螺距達到 +6 或 -6 度

Status LED *should* be solid *blue* (see instruction manual for further details on the LED colors)

Status-LED 燈須恆亮藍色
(參考說明書的LED燈號介紹)

SETUP MENU POINT K - COLLECTIVE PITCH
設定選單第 K 點-集體螺距

1. Set internal control direction
1.設定內部控制方向

Correct
正確

Wrong
錯誤

Move thrust stick to
maximum *positive* pitch
and let it stay there

移動螺距搖桿到最大正螺距並停留。

Status LED *blue*
Status-LED燈藍色

Tap aileron stick
once to swap colors

輕推副翼搖桿一次切換顏色

Status LED *red*
Status-LED燈紅色

2. The Status LED must light solid, not just flash. If this is not the case, increase the servo throw/endpoint of the pitch channel in the transmitter just as far so that the Status LED changes from flashing to solid when the rudder stick reaches the end position. But do not increase the endpoint too much in the transmitter!

We need an exact match of full stick position and stick end position, the Status LED should just change from flashing to solid when reaching the end position.

2. Status-LED必須要恆亮，不可以閃爍。如果燈號顯示不正確，請增加伺服器行程量或將遙控器上的螺距端點盡可能設大一些，直到尾舵搖桿打到端點(Endpoint)時，Status-LED燈由閃爍轉恆亮。但遙控器上的端點請勿設過大!只要搖桿動作打到端點時，Status-LED剛好可以由閃爍轉恆亮即可。

-100	THR		Travel	LIST
0	AIL		100 100 100 100 100	
0	ELE		100 100 100 100 100	
0	RUD		THR AIL ELE RUD GYR	
0	GYR			
104	PIT		104 100 100 100	
0	AX2		100 100 100 100	
0	AX3		PIT AX2 AX3 AX4	
0	AX4			

3. Now use rudder stick to adjust maximum positive collective pitch (i. e. +12)

3. 移動尾舵搖桿調整最大正集體螺距(例如 +12°)

+12°
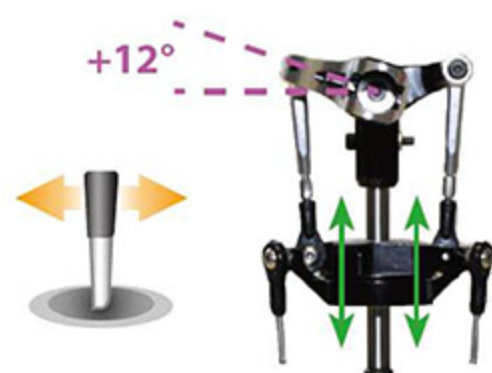
4. Finally move thrust stick to full negative position and repeat steps 2. and 3. for the negative pitch.

4. 最後，移動油門搖桿至最大負值位置，接著重覆第2和3的動作直到螺距為負。

Do not change control direction anymore!
請勿再變更控制方向。

SETUP MENU POINT L - SWASHPLATE SERVO LIMIT
設定選單第 L 點-十字盤伺服器極限

You can remove the pitch gauge now! Simultaneously move the sticks for thrust, aileron and elevator to the maximum deflection and check if the servos, swashplate or linkages get jammed in a certain position. By pushing and holding the rudder stick left or right you can increase or decrease the limit for the servos! Adjust the limit so that the servos just don't get jammed in any possible stick position but don't limit the servos more than necessary.

現在，您可以移除螺距規！同時，請移動油門搖桿，副翼和升降舵到最大偏轉的位置，接著檢查螺距，十字盤或連桿是否會在某個位置卡卡的。利用向左或向右移動尾舵搖桿，您可以增加或減少伺服器行程！此調整是為了提高搖桿在控制伺服器時的順暢度，但也沒必要超過極限。

Press Button Briefly
短按按鈕

Menu LED L solid Status

Menu-LED 燈第 L 點恆亮

Move thrust, aileron and elevator sticks carefully to maximum deflection!
小心地移動螺距、副翼和升降搖桿到最大偏轉！

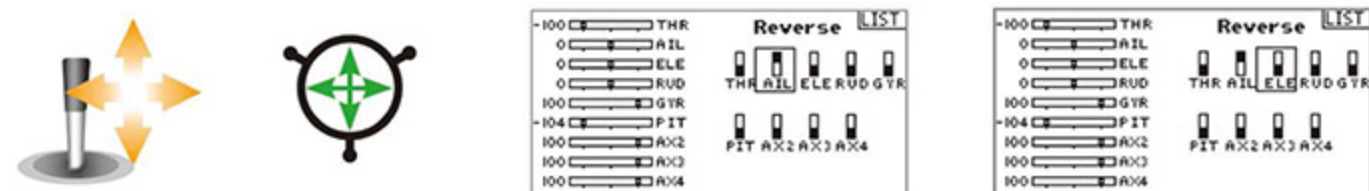Move rudder stick to adjust the servo limit
移動尾舵搖桿調整伺服器極限

Status LED should be solid blue (See instruction manual for further details)
Status-LED 燈需恆亮藍色 (參考說明書的燈號介紹)

SETUP MENU POINT M - SWASHPLATE CONTROL DIRECTIONS
設定選單第 M 點-十字盤控制方向

1. If not already done, move the stick(s) for aileron and elevator on the radio and check whether the swashplate is moved in the correct directions on the helicopter. The swashplate must follow the stick movement: pushing elevator forward will tilt the swashplate forwards, adding aileron to the right will move the swash to the right and so on. If the stick is moving the swashplate into the wrong direction use the reverse function of your transmitter and reverse the aileron and/or elevator channel to set stick control direction correctly.

1. 如果此動作還未完成，請移動升降舵和副翼搖桿來確認直升機的十字盤方向是否正確。十字盤動作必須遵循搖桿動作指令:將升降舵搖桿往前移，十字盤會向前傾，再將副翼搖桿往右，十字盤也會跟著向右傾。如果十字盤動作和搖桿動作方向不一致，請在遙控器上設定反向功能，轉換升降舵和副翼搖桿的動作方向，使搖桿與十字盤動作方向一致。

2. Now set the internal control direction of the MICROBEAST PLUS gyro
2. 現在設定MICROBEAST PLUS的內部控制方向。

Correct 正確

Wrong 錯誤

Wrong 錯誤

Elevator forward Aileron to the right
移動升降舵搖桿往前、副翼搖桿往右

Status LED blue
Status-LED燈藍色

Tap rudder stick until color is correct
輕推尾舵搖桿直到燈號顏色正確

Status LED red
Status-LED燈紅色

Status LED purple
Status LED燈紫色

There are four possible options, only one is correct!
共有4種可能的選項，僅有1個是正確的。

SETUP MENU POINT N - INTERNAL HEADSPEED GOVERNOR
設定選單第 N 點-內建頭轉速定速模式

This menu point is only accessible if you're not using a Standard type receiver! Otherwise pressing the button at menu point M will exit the menu and lead back to operation mode.

Enable the Headspeed Governor function by choosing the type of drive system of your helicopter. If you're using the governor function of the ESC or an external governor or if you want to fly without headspeed governing at all, select "Governor off".
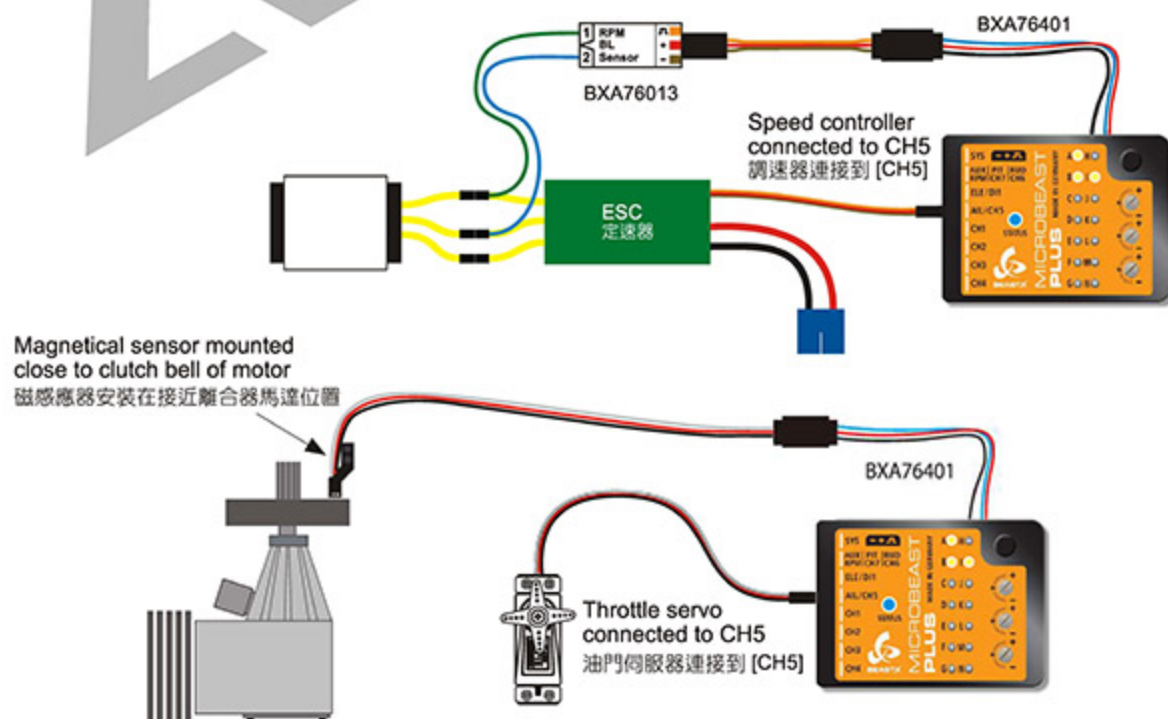
如果您不是使用傳統接收器,可略過此選單點!在選單第 M 點按下按鈕,退出選單回到操作模式。

選擇您直昇機的傳動方式,來開啟系統內建的 頭轉速定速模式。如果您使用的是 ESC 變速器,或外接一個定速器,或不使用調速器等等,都請選擇「定速模式關閉」。

Status LED changes color
(= changing RPM Governor mode)
Status-LED 燈改變顏色/狀態
(=改變 RPM 定速模式)

Press Button Briefly
短按按鈕

Status LED shows current RPM Governor mode
Status-LED 燈顯示目前 RPM 定速模式

Move rudder stick left or right
向左或向右移動尾舵搖桿

Status LED shows current RPM Governor mode
Status-LED 燈顯示目前 RPM 定速模式

Status-LED Status-LED燈	Off 熄滅	Red 紅燈	Bule 藍燈
N Internal Governor N 內建定速模式	Governor Off* 定速模式關閉*	Electric Heli 電動直昇機	Nitro/Gas Heli 引擎直昇機

When you're using the Headspeed Governor of MICROBEAST PLUS now connect the RPM sensor (i. e. magnetical, optical or brushless phase sensor) or the wire for RPM signal of your ESC to the white sensorport on the long side. For this you may need the optional available BXA76401 adapter.

如果您要使用 MICROBEAST PLUS 的 頭轉速定速模式,請連接一個轉速感應器(磁,光或無刷三相感應器) 來發送 ESC 的轉速訊號給系統,連接端口在 MICROBEAST PLUS 側邊的白色插槽(如圖示)。您需要另購 BXA76401 連接線。

BXA76401

1	RPM
	BL
2	Sensor

BXA76013

Speed controller connected to CH5
調速器連接到 [CH5]

ESC
定速器

Magnetical sensor mounted close to clutch bell of motor
磁感應器安裝在接近離合器馬達位置

BXA76401

Throttle servo connected to CH5
油門伺服器連接到 [CH5]

GOVERNOR MENU POINT A - TEST MODE (MENU LED A FLASHING SLOWLY)
定速模式設定選單第 A 點-測試模式(Menu LED 燈第 A 點慢速閃爍)

If the Governor was activated at Setup menu point N (set to "electric" or "nitro/gas" heli) you will access the Governor menu immediately afterwards. At point A we check if the speed sensor is functioning properly and if the sensor wire is connected correctly.

如果在設定選單第 N 點開啓定速模式(設定 "電動" 或"引擎" 直昇機),即可立即進入選單。在第 A 點,我們要檢查的是轉速感應器的功能是否正常,接線是否正確。

Electric Heli With Brushless Phase Sensor
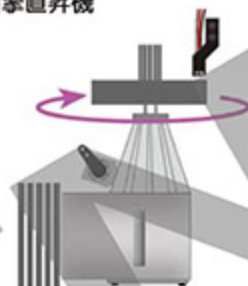電動直昇機含無刷相位感應器

Nitro/Gas heli
引擎直昇機

Menu LED A flashes
Status LED off
Menu LED 燈第 A 點
閃爍 Status-LED 燈熄滅

Rotate the motor by hand.
The Status LED must light red
請小心增加微量油門直到馬達轉動、
Status-LED 燈恆亮紅色

Turn clutch bell by hand
用手轉動離合器

Status LED solid blue
when magnet triggers
sensor
當磁鐵觸發感應器,
Status-LED 燈恆亮藍色。

When using a helicopter with combustion engine adjust the throttle servo positions in the transmitter (servo throw and servo center) and setup the throttle on the heli (throttle linkage rod length and servo arm position) if necessary. Attach the servo horn at thrust mid stick position. The throttle linkage must form a right angle with the servo horn.

Adjust the length of the linkage according to the instructions of the helicopter so that it also is positioned perpendicular to the linkage lever at the carburetor. The carburetor must be opened halfways (note the markings on the carburetor!). Then adjust the servo throw so the carburetor can be fully opened and fully closed without jamming the throttle servo.

若您使用的是引擎直昇機,可在遙控器調整油門伺服器的位置(伺服輸出和伺服中立點),如果有必要,也可以調整直昇機的油門伺服器的連桿長度和伺服臂位置。伺服器臂要在油門中立點的位置,它和伺服器連桿頭必須成直角,請參考下圖。

請根據直昇機的結構來調整連桿球頭的長度,必須讓它的位置垂直於化油器的連桿控制臂。調整化油器控制臂時,請將化油器開啓至一半的位置(請注意化油器的標記!)。然後調整伺服器輸出的最大及最小行程量,並注意其順暢度。

Thrust in Mid Stick Position
螺距搖桿在中立點位置

Servo arm and throttle lever
in parallel and perpendicular
to linkage rod
伺服器臂及油門控制臂經由
連桿互相平行並垂直
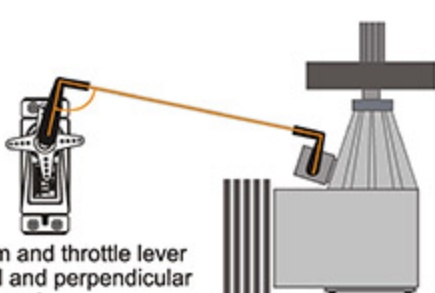
GOVERNOR MENU POINT B - MOTOR OFF/IDLE POSITION
定速模式選單第 B 點-馬達開啓/關閉位置

Using an electric heli move the throttle to the position at which the motor is just before to start running, i.e. by adding throttle until the motor starts to turn and then reducing the throttle a little. With a nitro/gas heli move the throttle to a stable idle position.
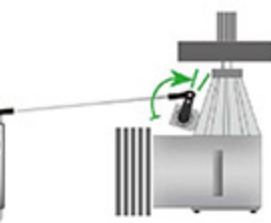
使用電動直昇機請將油門移動到開啓馬達前的位置，接著慢慢增加油門，直到馬達開始轉動，然後稍微降低一點油門。當使用引擎直昇機時，請將馬達開啓/關閉位置移動到油門怠速位置。

Press Button Briefly
短按按鈕

Menu LED B flashes
Status LED off
Menu-LED 燈第 B 點閃爍
Status-LED 燈熄滅

Move throttle to position at which the motor is just before to start running (electric heli) or idle position (nitro/gas heli)
移動油門到馬達開啓前的位置(電動直昇機)或油門怠速位置(引擎直昇機)

Status LED blue when throttle position registered
開啓油門位置時，
Status-LED 燈亮藍色
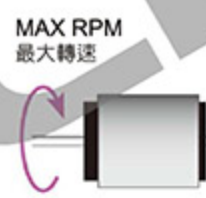
GOVERNOR MENU POINT C - FULL THROTTLE POSITION
定速模式選單第 C 點-油門最大行程量

Move throttle to maximum position. Note: In electric governor mode the throttle input will not be passed to CH5 output to prevent from motor damage by running the motor without load! Thus, you have to check before that the full throttle position runs the motor at maximum speed in reality, i.e. by correctly programming your throttle end points in the transmitter or ESC.
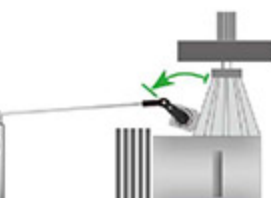
將油門推到最大行程的位置。請注意：在電動直昇機變速器(ESC)的模式下，為了防止空載而損壞馬達，油門輸入將不會經由 [CH5] 傳輸出來！因此，您必須在馬達實際運轉前，檢查最大行程量，請直接操作遙控器或變速器油門的最大及最小行程量。

MAX RPM
最大轉速

Press Button Briefly
短按按鈕

Menu LED C flashes
Status LED off
Menu-LED 燈第 C 點閃爍
Status-LED 燈熄滅

Move throttle to maximum position
移動油門到最大行程量

Status LED blue when throttle position registered
啓動油門位置時，
Status-LED 燈亮藍色

GOVERNOR MENU POINT D - TRANSMITTER SETUP
定速模式選單第 D 點-遙控器設定

Here we can set the desired rotor headspeed and throttle curves. The Status LED can be used to verify the transmitter setup.

Governor off = off, Autorotation = purple, Gov active = red or blue (at max. RPM).

When using an electric heli the throttle is completely independent from the thrust stick. The throttle curves are set to horizontal lines which stand for a certain headspeed and governor operation mode. Using the flight mode switch you can switch between the different curves/rpm presets in the transmitter.

在這裡我們可以設置想要的旋翼頭轉速和油門曲線。Status-LED 燈，可以驗證遙控器的設定是否正確：
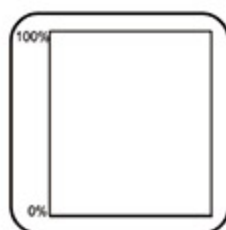定速模式關閉＝熄滅，自動＝紫色，定速模式啓動＝紅色/藍色(最大 RPM 值)
當使用電動直昇機時，油門是完全獨立於油門搖桿。油門曲線是根據旋翼頭轉速和定速模式來決定水平位置。請使用飛行模式開關，以便您在遙控器上切換不同曲線和轉速。

Motor off
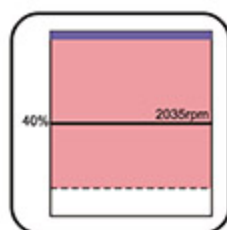· Throttle 0% over
  the entire range

馬達關閉
· 全部範圍的油門 =0%

Idle Up
· Throttle set between 15% and
  100% equals headspeed of
  800-5000rpm
· +5% =+247rpm

Idle Up
· 油門設定在 15% 和 100% 之間等於
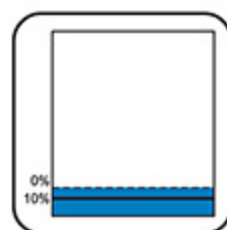 頭速 800-5000rpm
· +5% = +247rpm

Autorotation
· Throttle greater 0% and smaller 15%
· Motor off
· When switching back to idle up motor
  will restart quickly

熄火（降落）
· 當油門介於0%-15%之間
· 馬達關閉
· 當切換回 Idle Up，馬達會快速重新啓動

Status LED Off
Status-LED 燈熄滅

2035rpm

Status LED Red or Blue
Status-LED 燈紅色或藍色

Status LED Purple
Status LED 燈紫色

The Governor for nitro/gas models can be operated in two different ways: One possibility is to operate the governor using the throttle channel similar to the electric mode. Only difference here is that the the range below 50% throttle is used to manually control the throttle servo, i. e. for starting the motor. The range above 50% activates the governor and presets a specific rotor headspeed just like in electric mode.
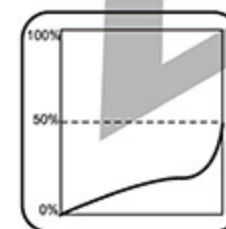
引擎直昇機的頭轉速定速模式有兩種不同的操作方式。其中一種是使用油門通道，這和電動模式的定速方法相同。唯一不同的是，它在油門 50% 以下的範圍內，能允許手動控制模式來操控油門伺服器。當馬達運轉高於50%時，將會啓動定速模式並有特定的旋翼頭速，就像電動模式一樣。

Manual control
· Range between 0% und 50%
  directly controls the throttle servo
  from idle to fully opened position

手動控制模式
· 從Idle到全開放位置，0% 至 50% 範圍
  內直接控制油門伺服器

Idle Up
· Throttle set between 50% and
  100% equals headspeed of
  500 - 3000rpm
· +5% =+250rpm

Idle Up
· 油門設定在 50% 與 100% 之間，等
  於頭速 500 - 3000rpm
· +5% =+250rpm
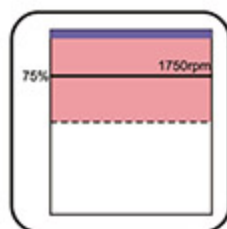
Autorotation
· Throttle in idle position
· When switching back to idle up
  (>50%) motor will restart quickly
· Switching back to manual control
  (<40%) will disable governor

熄火（降落）
· 油門在 Idle 位置
· 當切換回 idle up(>50%)，馬達會快速重新啓動
· 切換回手動控制(<40%)，會禁用定速模式

Status LED Off
Status-LED 燈熄滅

1750rpm

Status LED Red or Blue
Status-LED 燈紅色或藍色
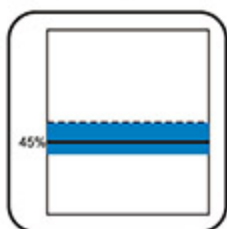
Status LED Purple
Status LED 燈紫色

The second option to control the Governor for nitro/gas helicopters is to use a separate switch channel. Here the throttle curves/throttle channel is used for manual throttle servo control only. The Governor is activated and the headspeed is set by using the additional channel. When the throttle channel is above 25% and a headspeed is set, the Governor will activate and control the headspeed. Moving the throttle channel below 25% will switch to Autorotation mode.

第二個方法是將定速模式分配在一個獨立的控制通道。這樣油門曲線可完全手動控制油門伺服器。 開啓定速模式，利用獨立的通道預設旋翼頭速。當油門高於 25% 且已預設頭速時，定速模式會介入控制頭速。移動油門低於 25%，系統會轉入熄火降落模式。

Manual Control
- Throttle curve controls servo
- Governor off
- Governor channel below 5% (-90)

手動控制模式
- 油門曲線控制伺服器
- 定速模式關閉
- 定速模式通道低於 5% (-90)
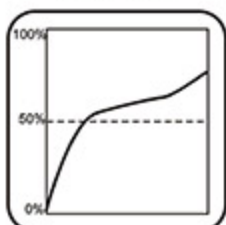
Idle Up
- Governor channel set between 5% and 100% (or -90 and +100 on some transmitters) equals headspeed of 500-3000rpm
- +5% (or 10 clicks) =+131rpm
- throttle channel must stay above 25%

Idle Up
- 定速模式通道設定在 5% 至 100% 之間(或一些遙控器是 -90 至+100)等於頭速 500-3000rpm
- +5% (or 10 clicks) = +131rpm
- 油門曲線需高於 25%

Throttle Curve
(Throttle Channel)
油門曲線
(油門通道)
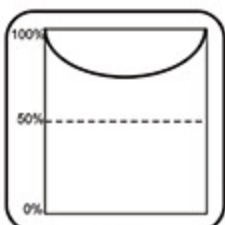
Governor Control
Channel
定速模式
控制通道

Status-LED off
Status-LED 燈熄滅

Throttle Curve
(Throttle Channel)
油門曲線
(油門通道)

Governor Control
Channel
定速模式
控制通道

Status LED Red or Blue
Status-LED 燈紅色或藍色
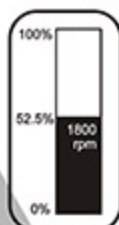
Which nitro governor mode you 're using depends on whether you 've assigned a switch channel to control the governor at the RECEIVER MENU function assignment or not. You can find out which mode you 're using by watching the Status LED display here while moving the throttle!

您所使用的引擎直升機定速模式取決於您在接收器選單中分配的控制通道，透過移動油門搖桿，Status-LED燈號會顯示目前所使用的定速模式。

For proper governing the headspeed should not be set higher than 80% of the maximum possible headspeed of the helicopter. When using the nitro governor, make sure that slow rampup speed and fast rampup speed are not set too high in PARAMETER MENU. Otherwise the throttle may be opened too quick and may lock in at full throttle position.

建議適當的定速模式，直升機頭轉速最高不可高於80%。當使用引擎直升機定速模式，請確保在參數選單中緩升速度與緩降速度不可設過高。否則油門啟動會過快且在全速時會被鎖定。

GOVERNOR MENU POINT E - SIGNAL DIVIDER
定速模式選單第 E 點-轉速訊號分配表

Electric helicopter with brushless phase sensor or phase signal from ESC: signal divider = motor pole count : 2

Nitro/Gas helicopter with magnetical or optical sensor: signal divider = number of triggers (i.e. magnets or optical markers)

電動直昇機搭配無刷相位感應器或 ESC 相位訊號：轉速訊號分配表=馬達極速：2

引擎直昇機磁或光感應器：訊號分配表 = 觸發 (如磁鐵或光學標記)的數量

Status-LED Status-LED燈	Off 熄滅	Flashing Purple 紫燈閃爍	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈
E Signal Divider 訊號分配表	1	2	3	4*	5	6	7

GOVERNOR MENU POINTS F G H - MAIN GEAR RATIO
定速模式選單第 F / G / H 點之主齒輪比

When the helicopter has a single stage main gear: Main gear ratio = Main gear tooth count : Motor pinion tooth count

Set the Status LED color/state at each of the menu points F, G and H so that the main gear ratio can be calculated as sum of the three menu points, i. e. 8.55:1 = F flashing purple + G purple + H flashing red

若使用單一主齒輪的直昇機時，主齒輪比=主齒輪齒數：馬達齒輪齒數

在設定選單中第 F/G/H 點的狀態指示燈來代表齒輪比，例如 8.55：1= 選單第 F 點閃爍紫色 +選單第 G點紫色+ 選單第 H 點為紅色閃爍

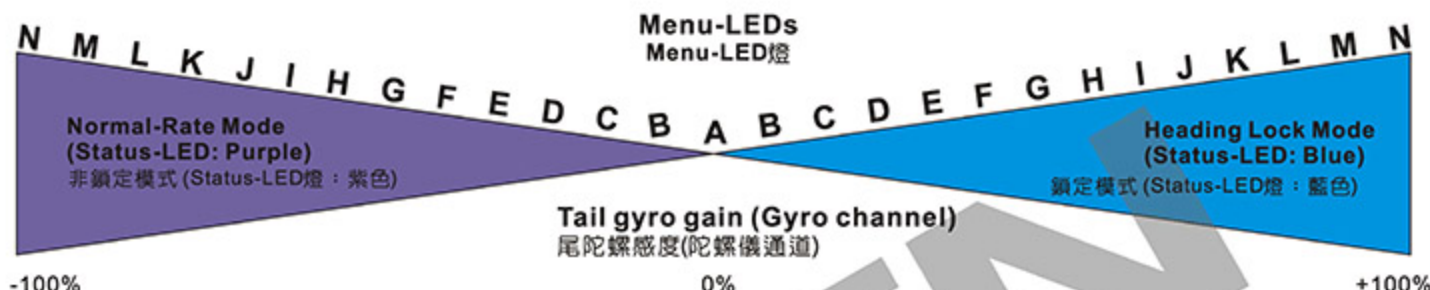| Status-LED Status-LED燈	Off 熄滅	Flashing Purple 紫燈閃爍	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈	Red / Blue 紅色/藍色
F	Custom 自訂	8.00	9.00*	10.00	11.00	12.00	13.00	14.00
G	———	+0.00	+0.20	+0.40*	+0.60	+0.80	———	———
H	———	+0.00	+0.05	+0.10*	+0.15	———	———	———

The **tail gyro gain** is adjusted by one of the transmitter's auxiliary channels. The more servo throw this channel produces, the higher the tail gyro gain will be. The direction of servo throw determines whether the gyro works in Normal-Rate mode or in Heading Lock mode. The color of the Status-LED indicates the selected mode when MICROBEAST PLUS is operation . Purple means Normal-Rate and blue indicates Heading Lock mode. When changing the gain and after initialization squence the amount of gain is displayed by one of the menu LEDs for 4 seconds.

您可以利用遙控器的輔助通道來調整尾陀螺儀感度。在這個通道發射越多伺服訊號，就會有越高的尾陀螺儀感度。伺服訊號輸出的方向決定陀螺儀的工作模式，分別為「鎖定模式」或「非鎖定模式」。Status-LED 燈的顏色表示在目前的工作模式下，MICROBEAST PLUS 已準備就緒。紫燈表示「非鎖定模式」，藍燈表示「鎖定模式」。調整好感度的初始化後，請輕推一下搖桿，當前感度值會在一個設定選單的 LED 燈顯示約 4 秒。

Menu-LEDs
Menu-LED燈

N M L K J I H G F E D C B A B C D E F G H I J K L M N

Normal-Rate Mode
(Status-LED: Purple)
非鎖定模式 (Status-LED燈：紫色)

Heading Lock Mode
(Status-LED: Blue)
鎖定模式 (Status-LED燈：藍色)

Tail gyro gain (Gyro channel)
尾陀螺感度(陀螺儀通道)

-100%　　　　　　　　　　　　　0%　　　　　　　　　　　　　+100%

For the first flight we suggest to to use HeadingLock mode (Status LED blue) and start with medium gain (not higher than LED G). In case the tail of the helicopter starts to osscilate with high frequency in flight, immediately reduce the gain! If on the other hand the rudder control feels inprecise and the gyro doesn 't hold position very well, increase the gain. Most radio systems provide an automatic switching for the tail gyro gain depending on flight modes. In the flight mode with the lowest rotor headspeed you can use the most gain. Reduce the gain the higher the headspeed is. Before the first flight make sure the tail gain is set correctly and is also set when switching flight modes. Use the LED display to see how the gyro is setup and do not rely upon the values of your transmitter as signs and percentages may vary depending on radio brand and radio type!

Before the first take off make a stick direction check and check if swash and tail gyro are correcting to the right direction when you tilt, roll or yaw the helicopter by hand. Just before lift-off make sure that the swashplate is horizontal and that the tail pitch slider is close to center position. Avoid excessive steering during lift-off otherwise the helicopter may tip over! The best way is to give a fair and direct collective pitch input to lift the helicopter quickly up into the air.

Adjusting the three dials on top of MICROBEAST PLUS you can optimize the control loop and customize it to your helicopter. For the first flight all three dials should be centered. If necessary only adjust one dial at a time and only in little steps. Turning a dial clockwise will increase the effect, turning it counter-clockwise will decrease the effect of the parameter.

在鎖定模式下 (Status-LED 燈亮藍色)的首次飛行時，我們建議您將感度設在 50% (以不超過 LED 燈 G 以上，請參考上圖)。假使在飛行時尾部有劇烈震動，請立即降低感度，如果尾部控制不精準或陀螺儀鎖尾效果不佳，請增加感度。大多數品牌的遙控器在某種飛行模式下，可自動切換尾陀螺儀感度。在飛行模式下使用最低的頭轉速設定，建議您用最高感度，相反地，使用較高頭轉速，可降低感度。首次飛行前，請務必檢查尾陀螺儀感度，以及飛行模式的切換是否正確。請透過Status-LED燈號顯示檢查陀螺儀的設定，切勿依賴遙控器上顯示的設定值與比例，因為不同品牌的遙控器其設定值與比例可能會有差異。

在首次飛行前，最好再做一次搖桿檢查，例如用手撥動搖桿，看十字盤運動方向是否正確，左右或前後傾斜直昇機，看伺服器是否會做出確的方向補償。請記住，在升空前十字盤是呈水平的位置，尾舵感度接近中立點。請注意，起飛時請不要轉向過度，否則直升機可能會傾倒，最好的方式是先打一個少量且直接的循環螺距，讓直升機可以快速的升空。

調整 MICROBEAST PLUS 面板上的三個旋鈕，可以優化您直昇機的飛行效果。首次飛行時，面板上的三個旋鈕的感度應在水平位置。如有必要，請一次只調整一個旋鈕。若順時針方向轉動旋鈕，感度會增加。反之，逆時針方向旋轉旋鈕，感度會降低。

1 - Cyclic gain

The higher the gain the harder the helicopter will stop after cyclic moves and the more stable and precise the helicopter will fly. If the gain is too high the helicopter will tend to shake (especially on the elevator axis) as the system overcompensates. With low gain the helicopter does not stop precisely and overshoots after a cyclic movement. Additionally it is unstable and control feels sluggish. Due to their low mass small helicopters typically do not need as much gain as large helicopters.

1-循環螺距感度

感度越高，在循環螺距變化後，直昇機的剎車就會比較緊，這樣會使得停懸較穩定。但是，如果感度太高，直昇機在上下飛行時會有回彈追尾的現象產生，並容易抖動。由於這些現象大多發生在較小型的直昇機上 (450級含以下)，所以，小型直昇機的主旋翼感度一般來說要比大型直昇機來得低。但如果感度太低，直昇機的煞車動作將不準確，執行循環動作(滾轉及俯仰)後會失準，此外，直線快速飛行和停懸時也會感覺遲鈍不穩定。

2 - Cyclic feed forward

Feed forward connects the servo movements with your stick inputs, bypassing the control loop. This will give a more natural control feel and quicker reactions to stick inputs. But if the cyclic feed forward is too high, stick control will fight against the control loop. The heli will bounce back when stopping from a cyclic movement and it will react over sensitive and pitch up easily in fast forward flight.

2-十字盤直接輸出量

如果十字盤直接輸出量過高，當在打舵時，過大的十字盤反應，會使得直昇機有停頓回彈的現象產生，也會覺得直昇機的反應過度敏感，同時，當增加感度時，直昇機會快速向前飛。反之，如果十字盤直接輸出量過低，會出現延遲現象和感覺非常機械化和不自然。

3 - Tail gyro response

Increasing the tail gyro response will cause harder stopping and more aggressive response to rudder stick inputs. If response is set too high, the tail will bounce back when doing a hard stop (especially when turning against rotor torque). If the dynamic is set too low, the rudder control feels dull and stopping is very soft. Ideally the tail should stop perfectly to the point without making any flapping noises.

3-尾舵動態反應

增加「尾舵動態反應」的感度，會影響到直昇機在自旋剎車時的動作及敏感度。如果感度設定太高，直昇機在自旋剎車時，會感到直昇機有過度靈敏的反應及追尾現象，在快速變化方向時又會感覺鬆軟無力。如果感度設定太低，在打舵時，會感到遲鈍和軟力。理想情況是直昇機在自旋剎車時，尾部要完美停止，沒有任何拖泥帶水的干擾。

The Parameter menu allows you to further customize the flight characteristics of the helicopter and the reaction of the system to control inputs. You can find a detailed description for each parameter in the MICROBEAST PLUS instruction manual.

參數選單，方便您調整直昇機的飛行特性及控制反應。您可以在 MICROBEAST PLUS 說明書中找到每個參數的詳細說明。

Entering Parameter Menu
進入參數選單

Press and Hold Button
長按按鈕

Release Button
放開按鈕

Operation Mode
(Status LED is Blue or Purple)
操作模式(Status LED燈藍色或紫色)

Menu LED A Flashing
Menu LED燈第 A 點閃爍

Menu LED A Flashing
(= Parameter menu point A)
Menu LED燈第 A 點閃爍(=參數第 A 點)

MENU POINT A - SWASHPLATE QUICK TRIM (MENU LED A FLASHING)
MENU LED燈第 A 點-十字盤快速微調(=選單第 A 點閃爍)

Move the stick(s) for aileron and elevator to trim the swashplate into the desired direction. With rudder you can trimm the collective up/down. When using the tail gyro in Normal-Rate mode you can trim the rudder servo with the rudder stick. To delete all trimming push and hold the button for at least 10 seconds.

移動副翼和升降搖桿來微調十字盤到所需的方向。移動尾舵搖桿可以校正上/下集體螺距。當在非鎖定模式下使用尾陀螺儀，移動尾舵搖桿可校正尾舵。只要按住按鈕約10秒鐘，即可將先前的微調記錄刪除。

MENU POINTS B TO K
選單第 B-K 點

Color and state of the Status LED indicate which option is currently selected at each menu point. By pushing the rudder stick repeatedly you can cycle through the available options at each menu point and change the setting if necessary. Briefly pushing the button will skip to the next menu point. After the last menu point the system will exit Parameter menu and change back to operation mode.

Status-LED 燈的顏色顯示您在每個選單中的當前選項。利用反覆朝一個方向推動尾舵搖桿，直到 Status-LED 燈出現需要的顏色為止。短按按鈕就會跳到下一個選單點。到達最後一個選單點後，系統將退出參數選單，回到操作模式。

Status-LED Status-LED燈	Off 熄滅	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈
B Control Style B 控制風格	Custom 自訂	Normal 普通	Sport* 運動*	Pro 緩和	Extreme 極限	Tx Mode 遙控器
C Speed Flight Stability C 高速飛行穩定性	Custom 自訂	very low 極低	Low 低	Medium* 普通*	High 高	Very High 極高
D RUDDER RATE CONSISTENCY D 尾舵率一致性	Custom 自訂	very low 極低	Low 低	Medium* 普通*	High 高	Very High 極高
E Stick Deadzone E 搖桿死區	Custom 自訂	very small 極小	Small* 小*	Medium 普通	Large 大	very large 極大
F Torque Precompensation F 反扭力補償	Custom 自訂	Off	low - nor. 低-正	High - Nor. 高-正	Low - Inv. 低-逆	High - Inv. 高-逆
G Cyclic Response G 循環反應	Custom 自訂	Normal* 普通*	Slightly Increased 增加一點	Increased 增加	Aggressive 激進	Very Aggressive 極激進
H Pitch Boost H 螺距增強	Custom 自訂	Off*	Low 低	Medium 普通	High 高	Very High 極高
I Throttle Response I 油門反應	Soft 緩和	Normal* 普通*	Slightly Increased 增加一點	Increased 增加	Aggressive 激進	Very Aggressive 激進
J Slow Rampup Speed J 緩啟動率率	Custom 自訂	50 rps	100 rps	200 rps*	300 rps	400 rps
K Fast Rampup Speed K快速啟動速率	Custom 自訂	Using Slow Rampup Speed 採用緩啟動速率	300 rps	500 rps*	700 rps	900 rps

Setup Menu(Menu LED Solid)
設定選單(Menu-LED 恆亮)

*Factory Setting ＊出廠預設值

		Off 熄滅	Flashing Purple 紫燈閃爍	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈	Red / Blue 紅色/藍色
A	Device Orientation 陀螺固定方向	horizontal pins to front 水平插座在前面	vertical pins to front 垂直插座在前面	hor. inv. pins to front 水平.逆插座在前面	vert. inv. pins to front 垂直.逆插座在前面	horizontal pins to back 水平插座在後面	vertical pins to back 垂直插座在後面	hor. inv. pins to back 水平.逆插座在後面	vert. inv. pins to back 垂直.逆插座在後面
B	Swashplate frequency 十字盤速率	Custom 自訂	—	50 Hz*	65 Hz	120 Hz	165 Hz	200 Hz	
C	Rudder pulse width 尾舵中心頻寬	Custom 自訂	—	760 μs		960 μs		1520 μs*	
D	Rudder frequency 尾舵速率	Custom 自訂	—	50 Hz*	165 Hz	270 Hz	333 Hz	(560 Hz)	
E	Rudder limits 尾舵機極限	Use rudder to move servo to one endpoint and wait until LED flashes, then move to the other endpoint and wait.							
F	Rudder direction 尾舵陀螺儀方向	—	—	—	—	Left 左	—	Right 右	—
G	Swash mixing 十字盤混控類型	Custom 自訂	—	no mixing 不混控	90˚ (3/4 servos)	120° *	140°	135° /140° (1:1)	
H	Servo trim 十字盤伺服器微調	No trim* 不須微調	—	Servo Ch1 伺服器CH1		Servo Ch2 伺服器CH2		Servo Ch3 伺服器CH3	(Servo Ch7) 伺服器CH7
I	Servo directions 十字盤伺服器方向			Servo Ch1 伺服器CH1		Servo Ch2 伺服器CH2		Servo Ch3 伺服器CH3	(Servo Ch7) 伺服器CH7
J	Cyclic throw (set to 6 degrees) 十字盤伺服器行程量(螺距設6度)	No trim* 不須微調		not good 差		OK 可		Perfect 好	
K	Collective pitch 集體螺距	—			check throw! 確認行程量!	Negative 負	check throw! 確認行程量!	Positive 正	
L	Servo limit 十字盤伺服器極限	—		not good 差		OK 可		Perfect 好	
M	Cyclic directions 十字盤控制方向					Left/back 左/後		Right/forward 右/前	
N	Headspeed Governor 頭轉速定速模式	Governor Off* 定速模式關閉	—	—	—	Electric Heli 電動直昇機	—	Nitro/Gas Heli 引擎直昇機	—

Governor Setup Menu(Menu LED Flashing Slowly)
定速模式選單(Menu-LED燈緩慢閃爍)

*Factory Setting ＊出廠預設值

		Off 熄滅	Flashing Purple 紫燈閃爍	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈	Flashing Red/Blue 紅色/藍色閃爍
A	Test Mode 測試模式	"Nitro/gas Heli": Status-led Blue When Magnet Passes Sensor "Electric Heli" : Status-led Red When Motor Is Running "引擎直昇機"模式:磁鐵經過感應器 Status-LED燈亮藍燈 "電動直昇機"模式: 馬達啟動時Status-LED亮紅燈							
B	Motor Off/Idle Position 馬達關閉/Idle位置	"Nitro/gas Heli": Throttle Servo To (increased) Idle Position "Electric Heli" : Throttle In"motor Off" Position, Just Before Motor Starts (⚠ throttle unlocked!) "Nitro" 模式:磁鐵經過藍光感應器 Status-LED燈亮藍燈"Electric" 模式: 馬達啟動時Status-LED亮紅燈(⚠油門解鎖)							
C	Full Throttle Position 最大油門位置	Set full throttle position (Electric heli: motor speed does not change anymore - nitro/gas heli: servo at maximum) 設定全油門位置 (電動直昇機:馬達轉速不會變動：引擎直昇機:伺服器在最大值)							
D	Transmitter Setup 遙控器設定	Governor off 定速模式關閉	—	Autorotation 自動		Governor on 定速模式啟動		Governor on max. RPM 定速模式設在最大轉速	
E	Signal Divider 轉速訊號分配表	1	2	3	4*	5	6	7	
F	Main Gear Ratio(sum of F + G + H If Not " custom) 主馬達-齒輪比(F + G + H總和，如果不是則為"自訂")	Custom 自訂	8	9*	10	11	12	13	14
G		—	+0.00	+0.20	+0.40*	+0.60	+0.80		
H		—	+0.00	+0.05	+0.10*	+0.15			

Enter SETUP MENU by pressing button for at least 2 seconds in operation mode. Skip to next Menu Point by pressing button briefly, after last point menu will exit.

R Use rudder to adjust value/choose setting.　A Use aileron to switch menu option.　T Set throttle to desired position if you like to change the setting.

* Default setting: hold button for 10 seconds at any Menu Point (except H) to reset setup and parameter data. Holding button at H only the trims will be reset!

長按按鈕2秒進入設定選單，輕按按鈕一次切換至下一個選單，最後一個選單之後會跳出設定選單。
R 移動尾舵搖桿設定／校正調整。　A 移動副翼搖桿切換設定選單選項。　T 移動油門搖桿希望的設定位置。
＊預設值：除了"H" 設定選單外，可長按按鈕10秒回復出廠預設值。在H選單，長按10秒，僅微調數值會重設。

Paramete Menu(Menu-LED is Flashing Quickly)
參數功能表(Menu-LED 快速閃爍)

*Factory Setting *出廠預設值

		Off 熄滅	Purple 紫燈	Flashing Red 紅燈閃爍	Red 紅燈	Flashing Blue 藍燈閃爍	Blue 藍燈
A	Quick Trim 快速微調	Gyro in HL mode: Trim aileron and elevator with stick, use rudder to trim collective. Gyro in Rate Mode: Rudder stick trims rudder. Attitude Control active: Adjust roll and pitch angle of horizon with aileron and elevator stick. Any mode: Reset all servo trims by holding button for 10 seconds. 陀螺儀在鎖尾模式：移動搖桿微調副翼和升降舵，移動尾舵微調螺距。 陀螺儀在非鎖尾模式：移動尾舵搖桿微調尾舵。 啟動姿態模式：移動副翼和升降舵搖桿，調整橫滾(Roll)和螺距(Pitch)的水平角度。 任何模式：長按按鈕10秒，所有伺服器微調回復出廠設定值。					
B	Control Style 控制風格	Custom 自訂	Normal 普通	Sport* 運動*	Pro 專業	Extreme 極限	TX Mode 遙控器
C	Speed Flight Stability 高速飛行穩定性	Custom 自訂	Very Low 極低	Low 低	Medium* 普通*	High 高	Very High 極高
D	Rudder Rate Consistency 尾舵速率一致性	Custom 自訂	Very Low 極低	Low 低	Medium* 普通*	High 高	Very High 極高
E	Stick Deadzone 搖桿死區	Custom 自訂	Very Small 極小	Small* 小*	Medium 普通	Large 大	Very Large 極大
F	Torque Precompensation 反扭力補償	Custom 自訂	Off* 關閉*	Low - Inv. 低-逆	High - Inv. 高-逆	Low - nor. 低-正	High - nor. 高-正
G	Cyclic Response 循環反應	Custom 自訂	Normal* 普通	Slightly Increased 增加一點	Increased 增加	Aggressive 激進	Very Aggressive 極激進
H	Pitch Boost 螺距-增強	Custom 自訂	Off* 關閉*	Low 低	Medium 普通	High 高	Very High 極高
I	Throttle Response 油門反應	Soft 緩和	Normal* 普通	Slightly Increased 增加一點	Increased 增加	Aggressive 激進	Very Aggressive 極激進
J	Slow Rampup Speed 緩起動速率	Custom 自訂	50 rps	100 rps	200 rps*	300 rps	400 rps
K	Quick change rate 快速啟動速率	Custom 自訂	= slow spool up 緩啟動速率	300 rps	500 rps*	700 rps	900 rps
L	Attitudecontrol Mode 姿態模式	Disabled* 失效	Angular mode 角度模式	Bail Out Rescue 救援	Bail out w. Pitch 救援-螺距	3D Mode 3D模式	3D Mode w. Pitch 3D模式-螺距
M	Attitudecontrol Pitch (姿態模式螺距)	> 0%	> 30%	——	> 50%	——	> 70%

Enter PARAMETER MENU by pressing button briefly in operation mode. Use rudder to adjust value/choose setting (except at A).
Skip to next Menu Point by pressing button briefly, after last point menu will exit.
* Default setting - hold button for 10 seconds when in SETUP MENU (!) to to reset everything to default (except receiver settings)
短按按鈕進入參數選單，（除了第A點外）可移動尾舵搖桿調整設定數值／選擇設定值。
短按按鈕可切換至下一個選單，最後一個選單之後，則跳出此選單。
*預設值　在設定選單中，長按按鈕10秒，所有設定值可回復出廠預設值（除了接收器設定外）。

RECEIVER SETUP MENU(Menu-LED is flashing)
接收器設定選單(Menu-LED 燈閃爍)

*Factory Setting *出廠預設值

		Off 熄滅	Purple 紫燈	Red 紅燈	Blue 藍燈
A	Receiver Type 接收器類型	Spektrum/JR Satlite 衛星天線	Analog serial input 類比輸入	Digital serial input 數位輸入	Standard RX 傳統型
B	Pitch channel 集體螺距				
C	Aileron channel 副翼	Move the stick/channel on transmitter you want to assign. The Status-LED will flash in blue color when channel was detected. When Status-LED flashes red, two or more channels have been moved!			
D	Elevator channel 升降舵				
E	Rudder channel 尾舵	Menu points H, I and J can be skipped in case you don't want to use the specific function or if you want to use the nitro RPM Governor or Attitude Control without separate switch channel.			
F	Gyro channel 感度	To load the default assignment common to your radio system keep the button pressed for 2 seconds and release. You will directly jump to menu point N.			
G	Throttle channel 油門	在遙控器上，移動搖桿／切換通道，選擇您所希望的設定。偵測通道Status LED燈藍色會閃爍，當 Status LED燈紅色閃爍，則2個以上的通道會被移除。			
H	Aux channel (Ch6) 輔助通道（CH6）	您可略過選單第H、I、J點，如果您不需要此選單的功能。或者您使用引擎直升機/姿態模式，也 可略過第H、I、J選單。			
I	Governor channel 定速模式	如果您的遙控器希望下載/使用預設值，則長按按鈕2秒再放開，您則會直接跳至第N點選單。			
J	AttitudeControl channel 姿態模式				
N	Throttle failsafe 失控保護位置	Move throttle to failsafe position (throttle unlocked!) and push button to save and exit. 將油門搖桿移至失控保護位置(油門解鎖)，然後按下按鈕儲存並離開。			

Enter RECEIVER MENU by pressing and holding button before (!) and while power up. Skip to next Menu Point by pressing button briefly (at Menu Point A short button press will initiate automatic receiver detection). When Standard RX is used menu will exit after detection!
長按按鈕後開機，即可進入接收器選單，短按按鈕可切換至下一個選單，(在選單第A點，短按按鈕會自動初始化並開始偵測接收器類型)，如您使用傳統型接收器，在自動偵測後，將會自動跳至下一個選單。

Please note: AttitudeControl options are only accessible when PROEDITION firmware upgrade is installed.
請注意: 僅有系統升級至PRO版本才有姿態模式功能。

1 - To reset the device you have to enter SETUP MENU firstly:

When in operation mode (Status LED blue or purple) push and hold the button for at least 2 seconds. Release button. LED A should light solid now.

1-首先，進入SETUP MENU設定選單

開機後，狀態顯示燈亮藍或紫燈，長按按鈕至少2秒，然後放開按鈕，LED A燈會恆亮，此時進入設定選單。

System Operational
系統執行中

Parametermenu
參數選單

Setupmenu
設定選單

Press and Hold Button
長按按鈕

Keep pressed
持續長按

··· now release button
...現在放開按鈕

Status LED blue/purpleNo Menu LED
狀態指示LED燈亮藍/紫燈Menu LED不亮

Menu LED A Flashing
Menu LED燈第 A 點閃爍

Menu LED A solid
Menu LED A燈恆亮

2 - Now to initiate the reset:

Again push and hold the button, this time for at least 15 seconds. You can see the reset happening by all LEDs A to N cycling quickly one after another.

2-現在重設初始化 ：

再長按按鈕至少15秒，接著開始重設，LED燈A-N 會快速循環亮燈，完成後放開按鈕。。

Reset
重設預設值

Press and Hold Button for 15 seconds
長按按鈕15秒

Release Button
放開按鈕

System Operational
系統執行中

⚠ **DO NOT FLY!** All settingsare reset to default!
注意! 請不要飛行! 現在所有設定值已回復出廠預設值!

Menu LEDs Cycling
Menu LED燈循環亮燈

Status LED blue/purpleNo Menu LED
狀態指示燈LED亮藍/紫燈Menu LED沒有亮

A FEW NOTES

1. Reset will not work when the system is not operational! When in calibration mode (Status LED red and LED rows A-G or H-N cycling up and down) pushing the button will have no significant effect. It will only change the display but won't enter any menu or reset anything.

2. The reset procedure as described above will work with any BEASTX device: MICROBEAST, MICROBEAST PLUS, Spektrum AR7200BX, Spektrum Ar7210BX and with any firmware Version. With early MICROBEAST PLUS firmware 5.0.x the reset was not indicated by menu LEDs by accident. But it will happen when you push and hold the button in SETUP MENU long enough. Just you won't get any visual feedback. This issue was fixed in the meantime already (firmware 5.1.2).

3. With Microbeast PLUS Firmware 5.x.x and latest StudioXm App/PC Software, also you can reset the device from the app. You will find this in the section "Backup/Restore" inside the app.

其他注意事項

1. 關機狀態下執行重設初始化無效! 在校正模式(Calibration Mode)下LED狀態顯示燈會亮紅燈，兩排Menu LED燈A-G / H-N會循環亮燈，此時按下按鈕，僅頁面轉換但不會進入設定選單或進行系統重設初始化。

2. 以上重設初始化步驟可適用任何BEASTX設備、版次，包括：MICROBEAST, MICROBEAST PLUS, Spektrum AR7200BX, Spektrum Ar7210BX。請注意，MICROBEAST PLUS V5.0.X以前的版本初始化時，Menu LED燈號顯示並不會循環亮燈，僅需要在設定選單下長按按鈕數秒即可，系統不會有其他燈號顯示反應，V5.1.2版次已解決此問題。

3. 如使用Microbeast PLUS V5.X.X搭配最新的StudioXm APP/電腦軟體，可直接由APP上重設初始化。APP可進到Backup/Restore(備份/重設)選單內進行初始化設定。

Memo

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