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.

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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**IMPORTANT NOTES**

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.

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**WARNING LABEL LEGEND**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td><img src="null" alt="Forbidden Icon" /></td>
<td>Do not attempt under any circumstances.</td>
</tr>
<tr>
<td><img src="null" alt="Warning Icon" /></td>
<td>Mishandling due to failure to follow these instructions may result in serious damage or injury.</td>
</tr>
<tr>
<td><img src="null" alt="Caution Icon" /></td>
<td>Mishandling due to failure to follow these instructions may result in danger.</td>
</tr>
</tbody>
</table>

*In any prohibited environments, please do not attempt operation.*

*Failure to follow these instructions may result in serious damage or injury.*

*Failure to follow these instructions may result in danger.*
SAFETY NOTES

安全注意事項

• 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 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查造成的機件損壞、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，並需了解自身誤差所造成任何意外之責任。

• 每次飛行前須仔細檢查機身各部位之螺絲/螺母/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。並做好定期檢查，避免零件或電子產品異常所造成不可預期意外。

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.

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.

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.

遠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！
PROPER OPERATION

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.

WARNING

DO NOT FLY ALONE

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.)

SAFE OPERATION

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.

CAUTION

ALWAYS BE AWARE OF THE ROTATING BLADES

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.

Remote flying operators should ensure that they keep sufficient distance to avoid any potential risk of injury or damage. Always fly the model within your field of vision.

Beer

Remote flying operators should ensure that they keep sufficient distance to avoid any potential risk of injury or damage. Always fly the model within your field of vision.
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 modeling association.

遙控自旋機不是玩具！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。

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，請遠離建築與人群。遙控自旋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。

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.

請詳讀 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螺旋槳的組裝是否正確，稍有差錯或機械故障，可導致嚴重的事故發生。

Radio controlled (R/C) models consist of several electrical components. It is therefore necessary to protect the model from moisture and other foreign substances. 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。

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 of time, the system will power off and reboot. In this case a crash of the helicopter is unavoidable.

操控您的直升機時，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，不像傳統貝爾希拉遙控螺旋槳那樣的省力，所以請特別注意！無平衡螺旋槳使用電容伺服器會顯得特別的耗電，請務必確認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，系統將關閉並重新啓動。在這種情況下，墜機是很難避免的。
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.

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

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 to the first usage please slide the motor/pinion away from the main gear, then check that the motor does not start inadvertently when the receiver is switched on.

When operating the RPM Governor feature of MICROBEAST PLUS Pro-Edition, it is essential to ensure that the motor cannot start by accident when making adjustment or preparing 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.

When operating the RPM Governor feature of MICROBEAST PLUS Pro-Edition, the RPM Governor feature is essential to ensure that the motor cannot start by accident when making adjustments or preparing 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.
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。只有飛手能負責任時的控制，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，並取回直昇機操控權。

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 模擬器可以幫助您飛行更加簡單，更有樂趣。若您有任何技術支援或系統使用的問題，請與當地代理連絡。

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衡的直昇機。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，即使如此，該直昇機仍可能會忽視系統恢復時或之前摔機。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，造成系統計算失真。我們無法保證此系統總是能正常工作。只有飛手能負責任時的控制，以及正確使用本系統。請確保您能隨時立即開閉此平衡系統，並取回直昇機操控權。
Dear customer,

Thank you for purchasing our product.

MICROBEAST PLUS is a high-end flybarless system for RC helicopters that has been developed in Germany using latest technology and setting high standards. This system can be used with nearly any size and type of RC helicopters and besides using it as flybarless stabilization system it offers additional features that can make flying helis even easier and comfortable.

To program MICROBEAST PLUS we consciously decided against using a tiny display that might be hard to read or using an external programming device such as a smart phone or PC software. The "EasySetup" concept allows to setup the helicopter in a very short amount of time and without the need of additional devices which you might have forgotten at home when on the flying field. You can setup your helicopter anytime and anywhere 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 a lot more details, tips, tricks and notes about the product please visit WIKI.BEASTX.COM

StudioX allows to edit, save and load the device setup by using a PC. Additionally it can be used to register your device and acquire optional features. Also it allows to perform very special setups like such as a virtual swashplate rotation for multiblade rotorheads. To connect your MICROBEAST PLUS to the computer the optional available USB2SYS interface is required.

StudioX can be downloaded from:

STUDIOX.BEASTX.COM

親愛的客戶:

感謝您使用 MICROBEAST PLUS 無平衡翼控制系統！

MICROBEAST PLUS 採用德國最新的技術和最高標準，是專為遙控直升機設計的無平衡翼控制系統。

此系統供應商可以供應任何尺寸和類型的遙控直升機，不僅作為無平衡翼穩定系統，它還提供額外的功能，讓直升機飛行更加輕鬆及自在。

在編輯MICROBEAST PLUS 的過程中，我們發現若程式必須透過一個小型的顯示器，如 PC 軟體或手機 APP 介面來設定，可能會很難讓初學者理解，所以我們決定使用 "EasySetup" 的概念來簡化設定編程。

這樣的設計是為了讓您在很短的時間內，即使在飛行場中，沒有相關的設備，也可以輕鬆、簡單地依照您的需求隨時更改設定，使您的直升機能在幾分鐘之內迅速升空。

本快捷入門指南是以非常容易且明確的方式，一步步指導您完成基本的飛行設定，請務必仔細詳閱此安全注意事項。關於詳細的使用說明書和更多的細節、技巧和注意事項，請參閱以下網站。

WIKI.BEASTX.COM

StudioX 允許您透過 PC 來編輯、保存此無平衡翼系統的設定。它可以用來註冊您的設備和獲得更多的功能選項。此外，透過這個裝置，能允許您執行非常特別的設定，例如多旋翼的虛擬十字盤，同時您需要一條 USB2SYS (免購品) 來連接電腦及 MICROBEAST PLUS。

請至以下連結下載 StudioX

STUDIOX.BEASTX.COM

This guide only is intended to be used with MICROBEAST PLUS firmware version 4.1.x!

You can see what firmware version your MICROBEAST PLUS is running when it is powered on. First the device carries out a brief LED test. Then for about 3 seconds the Status-LED lights red while the Menu-LEDs A - G display the first digit of the firmware version and the LEDs H - N the second digit of the firmware version.

本快速指南所描述的調整內容，只適合 MICROBEAST PLUS Version 4.1.x 版本！

當開機時，您可以透過 MICROBEAST PLUS 得知當前的主程式版本，首先，系統會執行簡單的 LED 驗證測試。約 3 秒後，Status-LED 會亮起紅燈，而Menu-LED 燈號 A-G 顯示第一位軟體版本，燈號 H-N 顯示了次要版本(第二位數)。

這僅為 V4.1.x

在左側顯示中，LED 燈號 C 顯示了主程式版本 "4.1.0"，右側 LED燈號 H 表示次要版本為 "1.0"。
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.

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

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 可以平放或倒置安装於直昇機上。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。

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
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 本體的地方綁綁或繫繫束帶。另一方面，所有線材皆須確實接好，以避免飛行時 MICROBEAST PLUS 因斷口力而脫落。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

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 nitro RPM Governor, AttitudeControl function and/or additional servo 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頁面上查看功能分配。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) = 陀螺儀功能

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：引擎 RPM 定速模式，姿態模式或額外的伺服輸出通道。
Using a single remote satellite is only recommended for 450 size helis or smaller! For larger helis you may use a SRXL compatible Single-Line receiver.

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. 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. The additional supply cables may be connected to free receiver ports. We recommend to use MICROBEAST PLUS HD which offers a low resistant high-power input and which is well suited for larger model helicopters.

To initiate bind procedure on a single Spektrum remote satellite connect the Spektrum bind plug to SYS port. When using a DSMX 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 H on the MICROBEAST PLUS. When binding a DSM2 remote satellite do not touch the button but only power on the device. The LED on the satellite will flash together with Menu LED N. 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.
**3 - MICROBEAST PLUS HD**

**MICROBEAST PLUS HD**

Input voltage range: 3.5 - 8.4 Volts.

MICROBEAST PLUS HD in first line was designed for 550 size servos and larger which use standard size servos with high current consumption. Here you can connect the power supply directly to the additional high-power input which reduces voltage loss due to contact and wiring resistance significantly when high currents are flowing. Always use the supplied power cable as connector between battery and MICROBEAST PLUS HD. It is not recommended to directly plug in the battery at the device. Continuous plugging and unplugging can cause the overlying servo plugs getting unplugged accidentally or cause the adhesive gyro pad to get loose!

Receiver and servo plugs are connected to the ports on top of the unit, similar as described for the standard (non-HD) MICROBEAST PLUS.

```
Input voltages: 3.5 - 8.4 Volts.
```

```
MICROBEAST PLUS HD is designed for high-current servos. It is not recommended to use this device for servos with lower current requirements.
```

```
Using the switch is optional. The device can also be operated without the switch.
```

```
Anyhow, never connect anything else than the switch to the switch port!
```

**CAUTION**

When switched off MICROBEAST PLUS HD consumes a very low amount of standby current. Therefore always completely disconnect the battery from the system if you do not use the model for a extended period of time to prevent the supply battery from getting discharged and damaged in consequence.

```
Whenever MICROBEAST PLUS HD is switched off, it continues to draw a very low amount of current. This can be critical if the battery is left connected for a long time.
```

**CAUTION**

MICROBEAST PLUS HD does not supply an internal voltage regulation! The voltage that is applied to the high power connection port will directly be passed to the servo and receiver connections. Only use electronic components (servos and receiver) that are designed for your power source.

```
MICROBEAST PLUS HD does not provide voltage regulation. It is recommended to use components that are specifically designed for high current applications.
```

**CAUTION**

Using the high power connection port is not a must. You can also use MICROBEAST PLUS HD in a conventional manner by powering the unit from the receiver ports in the top row. However, using the electronic power switch system is not possible then.

```
Using the switch to power the unit is not recommended. It is recommended to use the receiver ports instead.
```

---

*Page 12*
Create a new helicopter model memory in your transmitter that supplies different flight modes for controlling 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升機模式，它支援不同的飛行模式，在不同的情況下，控制油門、螺距和尾陀螺螺桿感度。

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.

講注意！您不能在輸出通道上使用任何混控功能！特別要注意的是，十字輪的伺服器不允許使用混控功能。請關閉任何開置的輸出通道。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. 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 RPM Governor function of MICROBEAST PLUS. If you want to use the integrated RPM Governor function also do not touch the throttle settings yet.

每個輸出通道必須精確對應到一個控制功能。司機輸出必須設置為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。如果您無意使用傳統定電流來取代MICROBEAST PLUS內建的RPM 定電流模式，也請您先不要改變油門設定。

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

移動推桿時，只有控制螺距通道。同樣適用於副翼、升降及尾舵。

With electric driven models remove the motor from the main gear when performing the basic setup for safety reason! Additionally 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 in order 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，請先將油門伺服器鼻移除，以免不小心或錯誤的設定而發動引擎，造成危險。
5 RECEIVER SETUP

To enter Receiver menu MICROBEAST PLUS must be switched off completely. Push and hold the button before and while powering on. Menu LED A will start to flash instantly.

At menu point A choose which type of receiver/transmission protocol is used. The color and state of the Status LED indicates which type is currently selected. By repeatedly pressing and holding the button you can switch between the receiver types. Briefly pushing the button will skip to menu point B or to the menu end in case you selected the "Standard" type.

In the receiver select menu, you can select MICROBEAST PLUS and turn it off. In the receiver select menu, you can set a button B or to the menu end in case you selected the "Standard" type.

When setting point A, there are options such as "Receiver Type" or "Transmission Protocol". LED status indicates the color and state of the current selection. By repeatedly pressing and holding the button, you can switch between the receiver types. Briefly pressing the button will skip to menu point B, or directly to setting point B, if you are using "Transmission Protocol". Please select the last option.

<table>
<thead>
<tr>
<th>BEC/Receiver Battery (If Required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEC 內置接收器電池 (如需要)</td>
</tr>
</tbody>
</table>

**Single-Line receiver (Status LED not Off)**

If the correct receiver type has been selected and transmitter and receiver are bound and switched on and if the receiver is sending a valid signal on the Single-Line output, the Status LED must light up in blue color at menu point B. Again press and hold the button here to load the default function assignment that has been preset for the selected radio system (see next page).

Alternatively you may program a different function assignment manually in case the default assignment does not work with your transmitter's function layout. How this works in detail you can read from the instruction manual which you can get from wiki.beastx.com.

**Single-Line connector (Status LED 無熄滅)**

If you have selected the correct receiver type, the transmitter and receiver must be connected. When selecting blue, if the receiver is not connected, it is effective. If the receiver has been selected, B point Status LED must light up in blue color. Please press and hold the button to load the selected protocol (please refer to the instructions for more information).

If the line is not connected, you may use the manual function assignment directly. More details can be found in the instruction manual, or on wiki.beastx.com.

**WARNING**

Warning! At menu point N (Throttle failsafe position) the throttle output CHS is activated! Move the throttle to the desired failsafe position which will be set in case the Single-Line connection is interrupted or gets disconnected.

Briefly push the button to save all the receiver settings now. Then the end of menu is reached which is indicated by all menu LEDs flashing.

**Warning**

In the menu point N (Throttle failsafe position), the throttle output CHS is activated! Move the throttle to the desired failsafe position which will be set in case the Single-Line connection is interrupted or gets disconnected.

Briefly push the button to save all the receiver settings now. Then the end of menu is reached which is indicated by all menu LEDs flashing.

![Receiver Setup Diagram](image)

### Receiver Type

<table>
<thead>
<tr>
<th>A Receiver Type</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Receiver Type</td>
<td>Standard</td>
</tr>
</tbody>
</table>

### Status-LED

<table>
<thead>
<tr>
<th>Status-LED</th>
<th>Off</th>
<th>Flashing Purple</th>
<th>Purple</th>
<th>Flashing Red</th>
<th>Red</th>
<th>Flashing Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status-LED</td>
<td>Off</td>
<td>Flashing Purple</td>
<td>Purple</td>
<td>Flashing Red</td>
<td>Red</td>
<td>Flashing Blue</td>
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### Receiver Types

<table>
<thead>
<tr>
<th>Receiver Type</th>
<th>JR</th>
<th>RJ01</th>
<th>Satellite</th>
<th>Spektrum</th>
<th>Satellite</th>
<th>S-Bus</th>
<th>SRXL</th>
<th>SPPM</th>
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</thead>
</table>
### SRXL

<table>
<thead>
<tr>
<th>Channel*</th>
<th>Function</th>
<th>Function</th>
<th>Function</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aileron</td>
<td>Aileron</td>
<td>Pitch</td>
<td>Throttle [CH5]</td>
</tr>
<tr>
<td>2</td>
<td>Elevator</td>
<td>Elevator</td>
<td>Aileron</td>
<td>Pitch</td>
</tr>
<tr>
<td>3</td>
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</tr>
<tr>
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<td>Gyro Gain</td>
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<tr>
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<td>Pitch</td>
<td>Pitch</td>
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<tr>
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<td>AttitudeControl</td>
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</tr>
<tr>
<td>7</td>
<td>RPM Governor***</td>
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### BEASTRX

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### Multiplex SRXL

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### Graupner SUMD

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### Spektrum SRXL

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</table>

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When using SRXL the preset channel assignment is based on the receiver's protocol version. MICROBEAST PLUS will detect automatically which brand of receiver is used and will choose the appropriate channel assignment accordingly.

* Channel designation of Spektrum transmitters: THR, AIL, ELE, RUD, GER, PIT, AX2, AX3, AX4
** only applicable with ProEdition firmware otherwise this channel by default controls CH6 Auxiliary output instead of channel 9
*** only for models with nitro or gas engine

When using a receiver with "Standard" 5-wire layout 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. Here the AttitudeControl function (optional) will be controlled using the tail gyro gain channel. The RPM Governor function can’t be used in combination with this type of receiver. After choosing "Standard" (Status LED off) at menu point A and briefly pushing the button receiver setup is finished.

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SRXL 預設通道路徑是根據接收機的通道路徑版本來分配的。 MICROBEAST PLUS 會自動檢測不同品牌的接收機來選擇合適的通道路徑分配。

*Spektrum 通路線通路分配：THR、AIL、ELE、RUD、GER、PIT、AX2、AX3、AX4
**更改僅適用於 ProEdition 主程式，請注意原廠將 [CH6] 預設為輔助通道，而不是通道 9 [CH9]
***僅適用於引擎啟動

若使用「傳統接收器」，接收器的通路分配只能有 5 個功能，且只能使用接收器通路線的物理順序來決定通路功能。如果您選擇使用傳統接收器，系統所提供的通路分配功能和接收器模型將不會出現，在選項中，當然可選擇使用模式，但系統僅提供個別通路功能。請注意，RPM 定義模式不支援傳統接收器。在選單A點選 "Standard" 後，此時 Status LED將會熄滅，接著按下按鍵，接收器的設定便完成了。
6 SETUP MENU

Entering Setup Menu

Press and Hold Button
Keep Button Pressed Down
Release Button

Operation Mode
((Status LED is Blue or Purple)
(Setup menu point A)
Menu LED A Flashes
Menu LED A lights up solid

Firmware version: 4.1.x
Calibration of Radio Channels
Calibration of sensor rest positions
Operation Mode

Switch on Transmitter
Switch on Power Supply
Status LED Lights Up Red → Blue → Purple

Do not move sticks on the radio!
Do not move the helicopter!
Status LED Lights Up Blue or Purple
Status LED lights up blue or purple
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。
SETUP MENU POINTS B, C AND D
設定選單第 B、C、D 點

The currently selected swashplate servo update rate (B), rudder servo update rate (D) and rudder servo center pulse (C) are indicated by the color and state of the Status LED at each menu point. By moving the rudder stick to one or another direction you can change between the available options (if necessary). Briefly pressing the button will save the selected option and move to the next menu point.

當前旋翼伺服器的更新速率(B)，尾舵伺服速率(D)和尾舵中心脈衝(C)會以每個選單點旁的狀態指示燈的颜色來表示，請左右移動尾舵搖桿到一個方向，接著根據下表來選擇符合的燈號，然後短按按鈕，儲存您的選項，並移動到下一个選單點。

<table>
<thead>
<tr>
<th>Status-LED</th>
<th>Off</th>
<th>Purple</th>
<th>Flashing Red</th>
<th>Red</th>
<th>Flashing Blue</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Swashplate Servo</td>
<td>User Defined</td>
<td>50 Hz*</td>
<td>65 Hz</td>
<td>120 Hz</td>
<td>120 Hz</td>
<td>260 Hz</td>
</tr>
<tr>
<td>C Rudder Servo Center Pulse</td>
<td>User Defined</td>
<td>960 μs</td>
<td>——</td>
<td>760 μs</td>
<td>——</td>
<td>1520 μs</td>
</tr>
<tr>
<td>D Rudder Servo Update Rate</td>
<td>User Defined</td>
<td>50 Hz*</td>
<td>120 Hz</td>
<td>270 Hz</td>
<td>333 Hz</td>
<td>560 Hz</td>
</tr>
</tbody>
</table>

**CAUTION 注意**

If you don't know what the maximum update rate that is tolerated by 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! See WIKI.BEASTX.COM for a list with parameter examples for most servo types commonly used in flybarless helicopters.

如果您不知道您伺伺服器的最大更新速率，請勿設定超過 50Hz，此為伺服器的最大極限，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主棄機常用的伺伺服器類型與參數表。
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.

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 minimum 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 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極端位置。如果放開尾舵搖桿幾分鐘，當前位置將會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，移動搖桿往反向設定，等看到號號恆亮為紫色並儲存即可。

Menu LED E Solid
Status LED On
設定選單 LED 燈點恆亮

Status-LED 燈點亮

Use rudder stick to move the servo to Release rudder stick the maximum allowed deflection
利用搖桿搖桿來移動尾舵，使其達到尾舵的最大偏轉率。

Press Button Briefly
短按鈕

Release Rudder Stick
放開尾舵搖桿

Status LED Blue or Red
Status-LED 景色電或紅色

Menu LED F Solid
設定選單 LED 燈點恆亮

(= Menu Point F)

(= 設定選單第 F 點)

Status LED Purple
Status-LED 燈紫色

When moving the rudder stick check if the servo is moved into the correct direction so that the helicopter will be moved correctly in flight. If this is not the case use the servo reverse function of your transmitter and reverse the channel output that controls the rudder function.

移動尾舵搖桿來檢查尾舵伺服器移動的方向是否正確，這樣直昇機在飛行時移動的方向才會正確。如果方向不正確，請利用搖控器的反向功能來調整即可。
SETUP MENU POINT F - TAIL GYRO DIRECTION

Lift the helicopter at the rotorhead and turn it on the vertical axis by hand. Observe in which direction the rudder servo moves the tail rotor when turning the helicopter. The tail rotor must produce thrust against the direction of movement so that the rotation will be stopped by the gyro in flight. For example, if you move the helicopter’s nose to the left the gyro must steer to the right similar as you would move the rudder stick to the right manually.

Note: These pictures are only exemplary. Check your helicopter’s manual to find out which direction your tail rotor has to move.

If necessary reverse the tail gyro direction by briefly pushing the rudder stick into one direction at menu point F (Status LED color will change). Then briefly push the button to proceed with setting up menu point G.

SETUP MENU POINT G - SWASHPLATE SERVO TRIM

Plug all three swashplate servos to the outputs marked with CH1 to CH3 in the order as shown below. Then put the servo arms on the servos so that they form roughly an angle of 90 degrees with the linkage rods.

Note: The above diagram is for reference only. Refer to your helicopter’s manual for the correct setup.

Diagram:
- Mechanical Swash Mixing
- eCCPM
- Flight Direction
- Servo 1 Elevator
- Servo 2 Aileron
- Servo 3 Pitch/Aileron

Diagram Image:
- Top View of the Receiver
- Connector Layout

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By moving the rudder stick into one direction repeatedly select one servo after another and adjust each servo's center position by moving the elevator stick forwards or backwards so that the servo arm is positioned exactly 90 degrees to the linkage rod. The servo number that is currently selected and that can be trimmed at the moment is indicated by the Status LED color.

您可以將尾舵搖桿往一個方向重複移動，來調整每個伺服的中心點，將升降搖桿向後或向前重複移動，使伺服臂和伺服器連桿精確地定位於90度的位置。目前所顯示的伺服器編號是可以調整的，請依 照Status-LED 燈的顏色來調整編號。

Check all servo positions by selecting each servo once even when the servo arms are perfectly positioned when Status LED is off.
即使是伺服臂和伺服器連桿已經完全定位好，Status-LED 燈熄滅的情況下，也請您再一次檢查所有伺服器的位置是否正確。

When the servos are adjusted perfectly let one servo selected (only the electrical trim positions are important and are used in the further steps) and 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 blade grips should be set to 0° pitch. Then briefly push the button to get to menu point H.

當伺服器調整完成時，請透過遙控器選擇其中一個伺服器來檢查它的連桿在十字盤和主旋翼夾座的移動是否順暢，請逐步仔細檢查，從伺服器到十字盤，再從十字盤到主旋翼夾座（電動機調同伺服器的位置是很重要的，接下來會有很多地方用得到此步驟）。請注意，十字盤的位置必須置中垂直於主軸，主旋翼夾座的螺距必須為 0°。接著，短按按鈕進入設定選單第 H 點。

If necessary adjust the swashplate anti-rotation guide so that there is no swashplate phasing (only applies to 2-blade rotorheads).
必要時可調整十字盤的 FL 金屬控制臂，使其無十字盤定相 (swashplate phasing) (僅適用於雙螺旋槳旋翼頭直昇機)。
SETUP MENU POINT H - SWASHPLATE MIXING TYPE
設定選單第 H 點-十字盤混控類型

Status LED changes color/state
(Status-LED 燈改變顏色/狀態)
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 currently selected mixing type
Status-LED 燈顯示目前選取的混控類型

Status-LED 模 

<table>
<thead>
<tr>
<th>Status-LED</th>
<th>Off</th>
<th>Purple</th>
<th>Red</th>
<th>Flashing Blue</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>H Swashplate Mixing Type</td>
<td>User Defined</td>
<td>Mechanical cm</td>
<td>90°</td>
<td>120°</td>
<td>140°</td>
</tr>
</tbody>
</table>

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

Only move the thrust stick and check if all servos push the swashplate up and down simultaneously. If this is not the case move the rudder stick into one direction once to switch to the next servo configuration and try again. Repeat this until the servos move the swashplate correctly. There are four possible configurations and only one will be correct.

移动油門搖桿來檢查伺服器行程是否正確，請將尾舵搖桿向一個方向移動一次，按著再滑到另一個伺服器組合，再重複這個步驟，直到伺服器能正確移動十字盤，有四種可能的伺服器組合，但只有一個是正確的。

Status LED changes color/state
(Status-LED 燈改變顏色/狀態)
Move Rudder Stick Left or Right
向左或向右移動尾舵搖桿
Status LED shows currently selected servo configuration
Status-LED 燈顯示目前伺服器設定
Move thrust Stick Up and Down
上下移動油門搖桿
Status LED shows currently selected servo configuration
Status-LED 燈顯示目前伺服器設定

Now also check if the sticks are moving the swashplate in the correct directions. If one or more directions are wrong use the servo reverse function of your transmitter to reverse the channel output for the channel which controls the specific function. Do not use the servo reverse function of MICROBEAST PLUS to change stick directions!

When the swashplate can be controlled by the sticks correctly, briefly push the button to skip to menu point J.

接下來用油門搖桿檢查十字盤移動的方向是否正確，如果其中有一個或多個方向是錯誤的，請使用遙控器上的反向功能，來反向通道，請勿使用 MICROBEAST PLUS 的伺服器反向功能來改變方向。

當搖桿可以正確的控制十字盤後，按一下按鈕跳到選單第 J 點。
SETUP MENU POINT J - SWASHPLATE SERVO THROW

Align rotorhead and rotor blades 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:


SETUP MENU POINT K - COLLECTIVE PITCH

Move thrust stick to maximum positive pitch and let it stay there. 移動力桿到最大正集體螺距並停留。

Move aileron stick to adjust maximum positive collective pitch (i.e., +12°) 移動副翼桿調整最大正集體螺距(例如 +12°)

Status LED must be blue when collective pitch is positive! 當集體螺距為正時，Status LED 燈必須亮藍色

Move thrust stick to full negative pitch and let it stay there 移動油門桿到最大負集體螺距並停留。

Move aileron stick to adjust maximum negative collective pitch (i.e., -12°) 移動副翼桿調整最大負集體螺距(例如 -12°)

Status LED red when collective pitch is negative! 當集體螺距為負時，Status LED 燈亮紅色
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，請將油門桿、副翼和升降舵桿推動到最大偏轉的位置，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桿，您可以增加或減少伺服器行程！此調整是為了防止桿在控制伺服器時的順暢度，但也必須避免超過極限。

- Menu LED L solid Status LED shows the amount of limiting
- Move thrust, aileron and elevator sticks carefully to maximum deflection
- Move rudder stick to adjust the servo limit
- Status LED should be solid blue
  (See instruction manual for further details on the LED colors)

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

Lift the helicopter at the rotor head and tilt it by hand forwards and sideways. Watch how the gyro is correcting the swashplate. The system has to steer against the movement of the helicopter keeping the swashplate level. If the swashplate tilts into the direction of movement you have to reverse the compensation direction for this axis.

舉起直昇機的旋翼頭，用手使其向前和向側邊傾斜。觀察陀螺儀修正十字盤是否正確。系統必須做出修正補償，讓直昇機的十字盤保持水平。如果十字盤往一邊傾斜，必須做出反向修正。

- Status LED shows current swashplate gyro directions
- Move Rudder Stick Left or Right
- Press Button Briefly
SETUP MENU POINT N - INTERNAL RPM GOVERNOR
設定選單第 N 點-內建 RPM 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 internal RPM 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".

Press Button Briefly

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

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

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

<table>
<thead>
<tr>
<th></th>
<th>Status-LED</th>
<th>Off</th>
<th>Red</th>
<th>Bule</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Internal RPM Governor</td>
<td>N內建 RPM 定速模式</td>
<td>Governor Off*</td>
<td>Electric Hel</td>
<td>Nitro/Gas Hel</td>
</tr>
<tr>
<td>N內建 RPM 定速模式</td>
<td>定速模式關閉*</td>
<td>電動直昇機</td>
<td>電動直昇機</td>
<td>氮/汽油直昇機</td>
</tr>
</tbody>
</table>

When you're using the RPM 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 RPM 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。
GOVERNOR SETUP MENU

GOVERNOR MENU POINT A - TEST MODE (MENU LED A FLASHING SLOWLY)

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

Electric Hel With Brushless Phase Sensor

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

Carefully add throttle until motor starts to turn Status LED is solid red as long as motor turns

Motor Off Position
馬達關閉位置
Status-LED 燈熄滅

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

Press Button Briefly
按短按鈕

Stop 停止

Nitro/Gas Helo

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

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 燈呈亮藍色

Status LED off when no magnet under sensor or when second magnet is passed (this may vary)
當感應器沒有接收到磁力訊號或感應器第二個磁力訊號會改變 (這可能隨部分)
Status-LED 燈熄滅

Additionaly when using a helicopter with combustion engine you may 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 servor arm position) if necessary. Attach the servor horn at thrust mid stick position. The throttle linkage must form a right angle with the servor 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 servor throw so the carburetor can be fully opened and fully closed without jamming the throttle servo.

若使用的是引擎直升機，可在遙控器調整油門同伺服器的位置（伺服輸出和伺服中立點），如果有必要，也可以調整油門的油門連接鈕的油門連接鈕於油門中立點的位置。伺服器位置在油門中立點的位置，它和油門鈕的連接頭必須呈直角，請參考下圖。

請根據引擎機的結構來調整連接桿的長度，必須讓它的位置垂直於化油器的連接控制桿。調整化油器控制桿時，請將化油器開到一半的位置（請注意化油器的標記！）。然後調整油門鈕的輸出的最大及最小行程，並注意其角度。
GOVERNOR MENU POINT B - MOTOR OFF/IDLE POSITION

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.

GOVERNOR MENU POINT C - FULL THROTTLE POSITION

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.

GOVERNOR MENU POINT D - TRANSMITTER SETUP

Here we can set the desired rotor headspeed and throttle curves. The Status LED can be used to verify the transmitter setup. 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 in the transmitter.
The RPM Governor for nitro/gas models can be operated in two different ways. One possibility is to operate the governor using the throttle channel just like in electric mode. Only difference is that the the range below 50% throttle can be used to manually control the throttle servo, i.e. for starting the motor. When the motor is running you can switch in the area above 50% which is used to enable the governor and preset a specific rotor headspeed.

The second option to control the RPM Governor for nitro/gas helicopters is to use a separate switch channel. Here you can use the throttle curves to manually control the throttle servo completely. The RPM Governor is activated and the headspeed is preset by using the additional channel. When the throttle channel is above 25% and a headspeed is preset, the RPM Governor will control this headspeed. Moving the throttle below 25% will set Autorotation mode while the RPM Governor is still activated in the background.
### GOVERNOR MENU POINT E - SIGNAL DIVIDER

**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)**

<table>
<thead>
<tr>
<th>Status-LED</th>
<th>E Signal Divider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>1</td>
</tr>
<tr>
<td>Flashing</td>
<td>2</td>
</tr>
<tr>
<td>Purple</td>
<td>3</td>
</tr>
<tr>
<td>Flashing</td>
<td>4*</td>
</tr>
<tr>
<td>Red</td>
<td>5</td>
</tr>
<tr>
<td>Flashing</td>
<td>6</td>
</tr>
<tr>
<td>Blue</td>
<td>7</td>
</tr>
</tbody>
</table>

### GOVERNOR MENU POINTS F G H - MAIN GEAR RATIO

When the helicopter has a single stage main gear: **Main gear ratio = Main gear 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

<table>
<thead>
<tr>
<th>Status-LED</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Defined</td>
<td>8.00</td>
<td>+0.00</td>
<td>+0.00</td>
</tr>
<tr>
<td>Flashing</td>
<td>9.00*</td>
<td>+0.20</td>
<td>+0.05</td>
</tr>
<tr>
<td>Purple</td>
<td>10.00</td>
<td>+0.40*</td>
<td>+0.10*</td>
</tr>
<tr>
<td>Flashing</td>
<td>11.00</td>
<td>+0.60</td>
<td>+0.15</td>
</tr>
<tr>
<td>Red</td>
<td>12.00</td>
<td>+0.80</td>
<td></td>
</tr>
<tr>
<td>Flashing</td>
<td>13.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>14.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**FLYING AND OPTIMIZATION**

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. Additionally, 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 ready for operation. Purple indicates Normal-Rate mode and blue indicates Heading Lock mode. While adjusting the gain and shortly after the first power up the current amount of gain is displayed by one of the menu LEDs for 8 seconds.

For the first flight we suggest to start with medium gain (not higher than LED G) and using Heading Lock mode (Status LED blue). In case the tail of the helicopter starts to oscillate in flight immediately reduce the gain! If the tail rotor control feels weak and imprecise and the tail does overshoot when stopping and doesn't hold position increase the gain. Most radio controls 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 tail 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.

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.

In the Normal-Rate mode, we suggest you start with a medium setting of 50% (0% not recommended, LED G is recommended). The tail rotor control feels weak, and the tail might overshoot when stopping and does not hold position. Increasing the gain is recommended. Most radio controls provide 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 tail 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.
1- Cyclic Gain

In general 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 oscillate at high frequency especially on the elevator axis. Due to their low mass this behavior will occur sooner on small helicopters, so typically these do not need as much gain as large helicopters. With low gain the helicopter does not stop precisely and overshoots after a cyclic movement. Additionally it is unstable and control feels sluggish in fast forward flight and when hovering.

1-循環螺距感度

一般來說，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的低。但如果感度太低，直昇機的剎車動作將不準確，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

If the cyclic feed forward is too high the stick input will over control the cyclic input. The heli will bounce back stopping from a cyclic movement. Also the helicopter will react over sensitive and it will pitch up easily a stick input is applied in fast forward flight. If the cyclic feed forward is too low on the other hand the control appears delayed and feels very robotic and unnatural.

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 lead to harder stopping and more aggressive response to rudder stick inputs . If the response is too high the tail will bounce back shortly after a hard stop and feels spongy when making fast direction changes. If the dynamic is set too low the rudder control feels dull and stopping might be too 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。理想情況是直昇機在自旋剎車時，尾部要完美停止，沒有任何搖晃帶水的干擾。

Before the first take off, make a stick direction check and again make sure that the sensors 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 near center. You can shortly switch the tail gyro to Normal-Rate mode, in this mode the rudder servo will center itself if the rudder stick is released. Avoid excessive steering during lift-off, otherwise the helicopter may tip over as it can’t move as long as it’s still standing on the ground! The best way is to give a fair and direct collective pitch input to lift the helicopter quickly up into the air.

在首次飛行前，最好再做一次校正，例如用手動動搖桿，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正確的反應補償。請記住，在升空前十字盤是呈水平的位置，尾渦感度接近中立點。您可簡單的將尾渦伺服器移動到非設定模式，在此模式下，放開尾渦桿後，尾渦伺服器會自行回中。請注意，起飛時請不要過度傾斜，否則，只要直昇機無法起飛，就有可能會傾倒，最好的方式是先打一個小量的循環螺距，讓直昇機可以快速的升空。
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.

参數選單

参數選單，方便您調整直升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

Menu LED 燈第 A 點 – 雙盤快速微調（= 選單第 A 點閃爍）

Move the stick(s) for aileron and elevator to trim the swashplate into the desired direction. When using the
tail gyro in Normal - Rate mode you can store the last servo position by pressing and holding the button for
2 seconds. To delete all trimmings that have recently been made briefly push the rudder stick.

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。

<table>
<thead>
<tr>
<th>Status-LED</th>
<th>Off</th>
<th>Purple</th>
<th>Flashing Red</th>
<th>Red</th>
<th>Flashing Blue</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Control Style</td>
<td>User Defined</td>
<td>Normal</td>
<td>Sport*</td>
<td>Pro</td>
<td>Extreme</td>
<td>Tx Mode</td>
</tr>
<tr>
<td>C Speed Flight Stability</td>
<td>User Defined</td>
<td>very low</td>
<td>Medium*</td>
<td>High</td>
<td>Very High</td>
<td></td>
</tr>
<tr>
<td>D Rudder Rate Consistency</td>
<td>User Defined</td>
<td>very low</td>
<td>Medium*</td>
<td>High</td>
<td>Very High</td>
<td></td>
</tr>
<tr>
<td>E Stick Deadzone</td>
<td>User Defined</td>
<td>very small</td>
<td>Medium</td>
<td>Large</td>
<td>very large</td>
<td></td>
</tr>
<tr>
<td>F Torque Precompensation</td>
<td>User Defined</td>
<td>Off</td>
<td>High - Nor.</td>
<td>High - Inv.</td>
<td>High - Inv.</td>
<td></td>
</tr>
<tr>
<td>G Cyclic Response</td>
<td>User Defined</td>
<td>Normal*</td>
<td>Increased</td>
<td>Aggressive</td>
<td>Very Aggressive</td>
<td></td>
</tr>
<tr>
<td>H Pitch Boost</td>
<td>User Defined</td>
<td>Off</td>
<td>High</td>
<td>Aggressive</td>
<td>Very Aggressive</td>
<td></td>
</tr>
<tr>
<td>I Throttle Response</td>
<td>User Defined</td>
<td>Soft</td>
<td>Normal*</td>
<td>Increased</td>
<td>Aggressive</td>
<td></td>
</tr>
<tr>
<td>J Slow Ramp Up Speed</td>
<td>User Defined</td>
<td>50 rps</td>
<td>200 rps</td>
<td>300 rps</td>
<td>300 rps</td>
<td></td>
</tr>
<tr>
<td>K Fast Ramp Up Speed</td>
<td>User Defined</td>
<td>Using SlowRamp Up Speed</td>
<td>Using FastRamp Up Speed</td>
<td>300 rps</td>
<td>500 rps</td>
<td>700 rps</td>
</tr>
</tbody>
</table>
ATTITUDE CONTROL (OPTIONAL)
姿態模式 (另購)

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，方使您調整直升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。

PARAMETER MENU POINT L - ATTITUDE CONTROL MODE
參數選單第 L 點- 姿態模式

AttitudeControl can be used to level the helicopter automatically by the flip of a switch. This provides different applications i.e. to use as bail out rescue in case the pilot loses orientation, to have a training aid for learning new flight maneuvers or to use as stabilization for camera flights. At Parameter menu point L you can choose between different operation modes and applications that determine how the helicopter will be stabilized exactly when activating AttitudeControl in flight. Please see the instruction manual for further reference. For the beginning we recommend using the "Rescue mode with pitch control".

姿態模式可以利用一個開關來回正直升機，這個功能有許多不同的運用，例如當飛行員失去方向時，可做為失控保護救援功能，還可用來學習新飛行的動作，或者在掛載相機時能自動飛行以防止抖動，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序之間進行選擇，然後精確地穩定直升機的飛行。請參閱說明書參數選單第 L 點。初始飛行時，我們建議您使用失控保護模式-傾斜控制。

<table>
<thead>
<tr>
<th>Status-LED</th>
<th>Status-LED燈</th>
<th>Off</th>
<th>Flashing Purple</th>
<th>Purple</th>
<th>Flashing Red</th>
<th>Red</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>L AttitudeControl Operation Model</td>
<td>L 姿態模式</td>
<td>Attitude Control Disabled*</td>
<td>失控保護</td>
<td>Bail Out Rescue</td>
<td>Bail Out Rescue W. Pitch Control</td>
<td>3D Mode</td>
<td>3D Mode w. pitch control</td>
</tr>
</tbody>
</table>

PARAMETER MENU POINT M - ATTITUDE CONTROL PITCH
參數選單第 M 點- 姿態模式螺旋

When you choose an AttitudeControl mode "with pitch control" at menu point L additionally menu point M will appear after pressing the button at L. Here you can adjust the collective pitch that will be used when AttitudeControl is activated and the heli is hovering stable. Use the stick for aileron to adjust the pitch if necessary.

當您選擇姿態模式，在選單第 L 點及第 M 點，在按下按鈕後會出現 "with pitch control"，如果這時姿態模式已經啟動，您就可以在這裡調整螺旋槳讓直升機在定態時更穩定。如有需要，也可使用副翼搖桿來調整螺旋槳。

TRANSMITTER PROGRAMMING
遙控器編程

In case AttitudeControl has been enabled at Parameter menu point L you can activate it in flight by moving the channel for AttitudeControl into one direction. There are 2 options for the control channel: Either you use a separate switch channel that can be assigned in Receiver setup menu (or which is set by default) or you use the tail gyro gain channel also for adjusting AttitudeControl. Whenever the AttitudeControl status changes the Status LED will light solid red and the Menu LEDs indicate whether AttitudeControl is on or off and how strong it will react. After 8 seconds the display changes back to showing the tail gyro operation mode.

如果在參數選單第 L 點啓用姿態模式，您可以在飛行時將姿態模式的通道往一個方向移動來開啓它。系統提供兩個方法來設定姿態模式的控制通道：(一)利用接收器設定選單，指定一個單獨的通道(或預設通道)；(二)利用尾陀螺儀感度通道。而在操作模式中，您可以檢查姿態模式是否已經開啓，以及運作是否正常。每當姿態模式的狀態更改時，Status-LED 燈會變紅色，Menu LED (感度)表示姿態模式的狀態是在「開啓」或「關閉」，以及反應的強度。8秒之後，系統會返回尾陀螺儀運作模式。
Menu LED (= Gain)  
Menu-LED亮(-感度)

AttitudeControl off  
(Status-LED: Red)  
姿态模式關閉  
(Status-LED為紅色)

AttitudeControl on  
(Status-LED: Red)  
姿态模式啓動  
(Status-LED為紅色)

Switch Channel For AttitudeControl  
姿态模式的開關通道

-100% 0% +100%

For the first flight it is recommended to adjust the throw of the AttitudeControl channel just until Menu LED G lights up when AttitudeControl is activated with the switch on the transmitter. Later onwards you may increase or decrease the throw which determines how fast and violent the helicopter will be rotated back to and held in horizontal position. If the switch channel is in "AttitudeControl off" position the amount of throw is not of importance for AttitudeControl.

首次飛行，建議您打開遙控器姿態模式通道的開關，調整姿態模式的通道輸出量，直到選單第 G 點 LED 燈亮起。之後您可以增加或減少輸出量，來決定直升機的飛行速度，態度程度，以及回正時的水平位置。如果開關通道處於「姿態模式開閉」的位臵，通道輸出量對姿態模式就不那麼重要了。

If switching AttitudeControl works the other way round (one of the Menu LEDs B - N lights up when the AttitudeControl switch is in "off" Position and you can't increase further than Menu LED A when the switch is in "on" Position) then reverse the channel for AttitudeControl by using the servo reverse function of your transmitter.

如果開啓姿態模式後，雖然可以動作但是方向相反(選單 LED 燈 B - N 其中一個亮起，但是，姿態模式的開關是處於「關閉」位置，且移動開關到「開閉」位置時，您所增加的伺服輸出量無論如何都無法超越選單 LED 燈 A)，此時，請使用您遙控器的伺服反向功能來由前向後即可。

If using the tail gyro control channel also for AttitudeControl the amount of throw determines as usual the height of gyro gain when switched into direction "AttitudeControl off". Moving the channel by using a switch into the other direction the amount of tail gyro gain will be stored temporarily and AttitudeControl is activated. The amount of throw into this direction determines the height of AttitudeControl gain.

如果利用尾陀螺儀控制通道來控制姿態模式，其控制方式和控制尾陀螺儀是一樣的，伺服輸出量決定了陀螺儀以及姿態模式的態度。將陀螺儀儀搖往一個方向移動，系統會記憶這個方向的伺服輸出量，姿態模式會被開啓。這個方向的伺服輸出量決定了姿態模式的態度。
When using AttitudeControl with combined switch channel make sure AttitudeControl is at least deactivated once before take off. Otherwise the tail gyro gain would be minimal as the system would not yet have been able to determine your tail gain setting after initialization.

當使用姿態模式-組合開關通道時，請確定姿態模式在起飛前至少關閉一次。否則，系統會將尾陀螺儀感度限制在最小值，因為在初始化後，系統無法判斷您所調整的尾陀螺儀感度。

CAUTION 注意

With this type of operation it is absolutely necessary to use a switch that changes the control directions directly and without intermediate steps. In particular, do not use a slider or delay function for switching the gain channel on the transmitter! Otherwise, when you activate AttitudeControl the tail gyro sensitivity would be decreased to 0% at first before the system turns on the AttitudeControl. You would have 0% of tail gyro gain when AttitudeControl is active as the system stores the last valid tail gyro value!

在此模式下，絕對要使用一個直接控制方向且沒有中間步驟的開關，特別是，不要使用遙控器滑套！否則，當你開啓姿態模式時，尾陀螺儀的感度會下降到 0%。所以，當姿態模式開啓時，您的尾陀螺儀感度會是 0%，因為系統會自動存儲最後一個尾陀螺儀感度！

FUNCTIONAL TEST OF ATTITUDECONTROL
姿態模式功能測試

When activating AttitudeControl you should be able to see an immediate impact on the swashplate control: If the heli is tilted to one side, MICROBEAST PLUS permanently steers the swashplate opposed to the inclination. In the region around horizontal position the swashplate will always stay nearly horizontal to the ground. The system constantly tries to bring the helicopter back to the horizontal position as long as the helicopter is oblique.

當開啓姿態模式時，您應該可以看到十字盤控制的直接影響，如果直昇機向一側傾斜，MICROBEAST PLUS 將永遠控制十字盤並補償相反傾角使直昇機回到水平位置。

Tilt the helicopter forwards, backwards or to the side 直昇機向前、向後或向側邊傾斜

The system will try to level the helicopter by keeping the swashplate horizontal or moving it against rotation as long as the helicopter is tilted. 系統將不斷補償，修正直昇機傾斜來維持十字盤水平位置。

If on the other hand AttitudeControl is deactivated the system will only counteract sudden movements but will not control the swashplate as long the heli is not moved even in tilted position. 另一方面，若「關閉」姿態模式，系統只會抵銷突然的動作，但不會控制十字盤，雖然直昇機仍然處於傾斜狀態。
### Menu Overview

#### Setup Menu (Menu LED Solid)

<table>
<thead>
<tr>
<th>Device Orientation</th>
<th>Off (熄滅)</th>
<th>Flashing Purple</th>
<th>Purple</th>
<th>Flashing Red</th>
<th>Red</th>
<th>Flashing Blue</th>
<th>Blue</th>
<th>Red &amp; Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swashplate Servo Update Rate</td>
<td>User Defined</td>
<td>50 Hz*</td>
<td>65 Hz</td>
<td>120 Hz</td>
<td>165 Hz</td>
<td>200 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
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#### Tai Gyro Direction

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#### Swashplate Servo Trim

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#### Collective Pitch

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#### Swashplate Servo Limit

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#### Swashplate Gyro Directions

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#### Internal Rpm Governor

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### Governor Setup Menu (Menu LED Flashing Slowly)

#### Test Mode

"Nitro/gas Hiell": Status-led Blue When Magnet Passes Sensor
"Electric Hiell": Status-led Blue When Motor is Running
"Nitro/gas Hiell": Status-led Blue When Motor is Running
"Electric Hiell": Status-led Blue When Motor is Running
"Nitro/gas Hiell": Status-led Blue When Motor is Running
"Electric Hiell": Status-led Blue When Motor is Running
"Nitro/gas Hiell": Status-led Blue When Motor is Running
"Electric Hiell": Status-led Blue When Motor is Running

#### Motor Off/Idle Position

"Nitro/gas Hiell": Status-led Blue When Magnet Passes Sensor
"Electric Hiell": Status-led Blue When Motor is Running
"Nitro/gas Hiell": Status-led Blue When Magnet Passes Sensor
"Electric Hiell": Status-led Blue When Motor is Running
"Nitro/gas Hiell": Status-led Blue When Magnet Passes Sensor
"Electric Hiell": Status-led Blue When Motor is Running
"Nitro/gas Hiell": Status-led Blue When Magnet Passes Sensor
"Electric Hiell": Status-led Blue When Motor is Running

#### Full Throttle Position

Set throttle channel/throttle servo to full throttle position. 油門通道/油門伺服器設定在全油門位置

#### Transmitter Setup

RPM Governor of / RPM Governor maximum / RPM Governor of / RPM Governor on / RPM Governor off / RPM Governor

#### Signal Divider

<table>
<thead>
<tr>
<th>Off (熄滅)</th>
<th>Flashing Purple</th>
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</table>

#### Main Gear Ratio

Use "user Defined" at Menu Point F
F + G + H 時

### Factory Setting

* Factory Setting: * 出廠預設值
### Paramete Menu (Menu-LED is Flashing Quickly)

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**Control Style**

- Control Style: User Defined
- Sport*: Medium
- Pro*: High
- Extreme*: High
- TX Mode: User Defined

**Speed Flight Stability**

- Very Slow
- Slow
- Medium
- High
- Very High

**Rudder Rate Consistency**

- Very Small
- Small
- Medium
- Large
- Very Large

**Torque Precompensation**

- Off
- Low
- High

**Cyclic Response**

- Normal
- Slightly increased
- Increased
- Aggressive

**Pitch Boost**

- Off
- On

**Throttle Response**

- Normal
- Slightly increased
- Increased
- Aggressive

**Slow Ramp Up Speed**

- 50 rps
- 100 rps
- 200 rps

**Fast Ramp Up Speed**

- 300 rps
- 500 rps
- 700 rps

**Attitude Control Mode**

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<tr>
<th>Mode</th>
<th>Description</th>
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<td>RemoteS</td>
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<tr>
<td>SpectrumSatell.</td>
<td>SpectrumSatell. mode</td>
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<tr>
<td>Futaba-SBUS</td>
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<tr>
<td>SRXL</td>
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<td>SPM</td>
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**RECEIVER SETUP MENU (Menu-LED is flashing quickly)**

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**Receiver Type**

- Standard
- JR-RX20
- RemoteSatellite
- Futaba-SBUS
- SRXL
- SPM

**Collective Pitch**

- Status-LED Light on in blue color if valid incoming signal from receiver.
- Move the stick/channel on the transmitter you want to assign. The Status-LED will flash briefly in case the movement has been detected.
- Menu points H, I and J can be skipped in case you don’t want to use the specific function or you want to use nitro RPM Governor and/or Attitude Control without separate channel.
- To load the default channel assignment keep the button pressed at any menu point. You will directly jump to menu point N.

**Failure Safe Position**

- Move throttle to failsafe position and push button to show all menu items and exit menu. Move out of the fail safe position and push button to lock in standby position.