Thank you for buying ALIGN products. The 3GX MRS FLYBARLESS SYSTEM is the latest technology in Rotary RC models. Please read this manual carefully before assembling and flying the 3GX MRS FLYBARLESS SYSTEM. We recommend that you keep this manual for future reference regarding tuning and maintenance.
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3GX MRS flybarless system are designed with goals of simple, convenient, light, and ease of adjustment. 3GX MRS flybarless system equipped with the embedded brand new S-FHSS 2.4GHz system; 3GX MRS flybarless system is compatible to Futaba S-FHSS / SPEKTRUM (DSM2/DSMX)/ JR DSM2. The 3GX MRS flybarless system are more than just a flybarless system; it simplifies installation on small/micro size helicopters since no receiver is needed. Even easier, more logical setting method, which allows 3GX MRS flybarless system settings to be completed with only a few steps achieving even higher stability and control feel suitable for most pilots.

3GX MRS無平衡翼系統主要是以簡單、方便、輕巧、好調整為出發點，特別推出了全新的Futaba S-FHSS / SPEKTRUM(DSM2/DSMX)/ JR DSM2系統，讓3GX MRS無平衡翼系統不單單只是無平衡翼系統，它也具備接收機的功能，運用在小型或迷你直升機上可以節省接收機的空間。

更為簡單、直覺的設定方式，只要幾個步驟就可以輕鬆完成3GX MRS無平衡翼系統的調校，另外也針對亞拓T-REX 250-T-REX 500機型的飛行性能最佳化，而表現比以往更穩定、更符合絕大部分人的操控手感。簡單來說，3GX MRS無平衡翼系統提供玩家一個更經濟、更可靠的選擇。

**WARNING LABEL LEGEND**
標誌代表涵義

![Forbidden](image)
Do not attempt under any circumstances.
在任何禁止的環境下，請勿嘗試操作。

![Warning](image)
Mishandling due to failure to follow these instructions may result in 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](image)
Mishandling due to failure to follow these instructions may result in damage or injury.
因為疏忽這些操作說明，而使用錯誤可能造成危險。

**IMPORTANT NOTES**
重要聲明

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

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

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

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

模樣商司需顧客使用前務必於購買前仔細閱讀說明書，如使用後發現異常或損壞，將無法於保固條件內更換或維護，如使用前使用條件或保固範圍，本公司不負擔任何責任。
SAFEY NOTES
安全注意事項

- Fly only in safe areas, away from other people. Do not operate R/C aircraft within the vicinity of homes or crowds of people. R/C aircraft are prone to accidents, failures, and crashes due to a variety of reasons including, lack of maintenance, pilot error, and radio interference. Pilots are responsible for their actions and damage or injury occurring during the operation or as a result of R/C aircraft models.
- Prior to every flight, carefully check rotorhead spindle shaft screws and tail blade grip screws.
- 兩軸模型飛機、直升機屬高危機性品，飛行時務必盡量遠離人群，人為因故或機件損壞、操控技術不良、以及操控上的不熟悉的惡果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，並請了解自總顧問認可任何意外之責任。
- 請每架飛行前須仔細檢查，主旋翼夾座軸心螺絲、尾旋翼夾座螺絲，以及機身各部位球頭、螺絲，確實上膠鎖緊才能昇空飛行。

LOCATE AN APPROPRIATE LOCATION
遠離障礙物及人群

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

Do not fly your model in inclement weather, such as rain, wind, snow or darkness.

NOTE ON LITHIUM POLYMER BATTERIES
鋰聚電池注意事項

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

PREVENT MOISTURE
遠離潮濕環境

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

直昇機內部也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，避免在浴室或雨天使用，防止水氣進入機身內致而導致機件及電子零件故障而引發不可預期的意外！
PROPER OPERATION

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

WARNING

OBTAIN THE ASSISTANCE OF AN EXPERIENCED PILOT

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

SAFE OPERATION

Operate this unit within your ability. Do not fly under tired condition and improper operation may cause 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.

ALWAYS BE AWARE OF THE ROTATING BLADES

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

KEEP AWAY FROM HEAT

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

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REMOTE CONTROL HELICOPTER

The small model aircraft will accelerate, fly, spin, and perform stunts that may be unpredictable. Do not fly this model near people or other property. Be aware of other models in the area. If you experience difficulty in flying or want to retire the model from use, immediately turn off the model and transmitter and store it away in a safe place.

CHECK FOR SAFETY

Always check your model before flying. Check for any possible damage to the model, such as broken parts, bent parts, or worn parts. When you are finished flying, immediately turn off the model and transmitter and store it in a safe place.

FIRE AND EXPLOSION DANGERS

Avoid storing the model near flammable materials. This may include fuel, paints, solvents, and electrical equipment. Keep the model away from fires, flames, and other sources of ignition. When the model is not in use, store it in a safe place.

AVOID SOILING

Avoid soil or dirt from the model. Keep the model away from dust or dirt. Clean the model before using it. Do not use the model in a dusty environment.

ELECTRICAL HAZARDS

Avoid electrical hazards. Do not fly the model indoors where electrical hazards may be present. Do not fly the model near electrical equipment, such as power lines, power transformers, and power substations.

INJURY TO EYES

Avoid injury to the eyes. Do not fly the model to a location where there are other objects that may strike the model and injure the eyes. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO FINGERS

Avoid injury to the fingers. Do not fly the model near objects that may strike the model and injure the fingers. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO OTHER

Avoid injury to other people. Do not fly the model near objects that may strike the model and injure other people. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO OTHER ANIMALS

Avoid injury to animals. Do not fly the model near objects that may strike the model and injure animals. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO BUILDINGS

Avoid injury to buildings. Do not fly the model near objects that may strike the model and injure buildings. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO MAJOR UTILITY SYSTEMS

Avoid injury to major utility systems. Do not fly the model near objects that may strike the model and injure major utility systems. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO MAJOR INFRASTRUCTURE SYSTEMS

Avoid injury to major infrastructure systems. Do not fly the model near objects that may strike the model and injure major infrastructure systems. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO CAR OR TRUCK OR RV OR BUS OR Massive Vehicle

Avoid injury to car, truck, RV, bus, or massive vehicle. Do not fly the model near objects that may strike the model and injure car, truck, RV, bus, or massive vehicle. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO TREE OR FENCE OR BUILDING OR Tree or Fence or Building

Avoid injury to tree, fence, or building. Do not fly the model near objects that may strike the model and injure tree, fence, or building. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO WALL OR Door or Window or Wall or Door or Window

Avoid injury to wall, door, or window. Do not fly the model near objects that may strike the model and injure wall, door, or window. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO PEOPLE OR PET OR Other People or Pet or Other

Avoid injury to people, pet, or other. Do not fly the model near objects that may strike the model and injure people, pet, or other. Do not fly the model near people, pets, or other objects that may be injured by the model.

INJURY TO OBJECTS OR PEOPLE OR Pets OR Other

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1. **Radio Transmitter and Electronic Equipment Required for Assembly**

   Suitable for below flybarless models:
   - T-REX 250
   - T-REX 450 SPORT/PLUS DFC
   - T-REX 450 PRO
   - T-REX 500

   Compatible with ALIGN T6 and Futaba S-FHSS
   - ALIGN T6 與 S-FHSS 2.4 Ghz 遙控器

   SPEKTRUM DSM2 / DSMX
   - JR DSM2 System
   - 2.4Ghz 遙控器
   - DSM2 / DSMX
   - Remote Receiver
   - 衛星天線

2. **Additional Tools Required for Assembly**

   - Swashplate Leveler
     - 十字盤調整器
   - AP-800 Digital Pitch Gauge
     - AP-800 數位螺距規
   - Multi-function Tester
     - Voltmeter/Servo Diagnosis
     - 多功能檢測計
     - 電池電壓／伺服器檢測
1. **3GX MRS WIRING DIAGRAM**

   Gain and roll rate dials are set to 50% as factory default (dial at 12 o'clock position, same direction as the antenna). Should there be any oscillation on aileron or elevator during flight, reduce the gain by turning the dial counter-clockwise approximately 10 degrees at a time.

   Should there be any drift front/rear/left/right during flight, increase the gain by turning the dial clockwise approximately 10 degrees at a time.

   Roll rate dial is used to adjust the roll rate of helicopter's elevator and aileron; turning clockwise will increase roll rate, with faster elevator and aileron response; turning counter-clockwise will decrease roll rate, with slower elevator and aileron response. We recommend novice pilots to fly with lower roll rate.

2. **SERVO SETTING AND ADJUSTMENT**

3. **T-REX 250 PLUS**

   - **FUTABA/ALIGN T6 TRANSMITTER/SERVO**
     - **Aileron:** CH1
     - **Elevator:** CH2
     - **Pitch:** CH6

   - **Front:** 機頭方向
1. Servo can only be installed in this orientation when 3GX MRS is used: with head point forward, right forward is aileron (CH1), left forward is pitch (CH6), mid-rear is elevator (CH2). CH1 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.
2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MRS model setting is set to T-REX 250.

1. 使用3GX MRS 伺服器的安裝方式只有一種。當機頭朝前時，右前為副翼 (CH1)；左前為螺距 (CH6)；右後為升降 (CH2)。CH1、CH6不可換。如果未依照圖示連結，直昇機動作會不正確。
2. 遙控器十字盤設定，必須選擇H1傳統十字盤模式。依照圖示安裝完畢，如果十字盤動作不正確，請檢查3GX MRS機型設定是否為T-REX250。

**DS415M Digital Servo:**
1. Stall torque/輸出扭力: 2.0kg.cm (4.8V)
   2.4kg.cm (6.0V)
2. Motion speed/動作速度: 0.1sec/60° (4.8V)
   0.08sec/60° (6.0V)
3. Dimension/尺寸: 22.9 x 12 x 25.8mm
4. Weight/重量: 13.9g

**DS425M Digital Servo:**
1. 1.520 μs standard band / 1520 μs 単頻系統
2. Stall torque/輸出扭力: 1kg.cm (4.8V)
   1.2kg.cm (6.0V)
3. Motion speed/動作速度: 0.07sec/60° (4.8V)
   0.05sec/60° (6.0V)
4. Dimension/尺寸: 22.9 x 12 x 25.8mm
5. Weight/重量: 13.9g
1. Servo can only be installed in this orientation when 3GX MRS is used: with head point forward, right forward is aileron (CH1), left forward is pitch (CH6), mid-rear is elevator (CH2). CH1 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.

2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MRS model setting is set to T-REX 450 Sport/PLUS DFC.

1. 使用3GX MRS伺服器的安裝方式只有一種。當機頭朝前時，右前為副翼（CH1）；左前為螺距（CH6）；右後為升降（CH2）。CH1、CH6不可換。如果沒依照圖示連結，直昇機動作會不正確。

2. 遙控器十字盤設定，必須選擇H1傳統十字盤模式。依照圖示安裝完畢，如果十字盤動作不正確，請檢查3GX MRS機型設定是否為T-REX450 SPORT/PLUS DFC。
DS415M Digital Servo:
1. Stall torque/輸出扭力: 2.0kg.cm(4.8V)
   2.4kg.cm(6.0V)
2. Motion speed/動作速度: 0.1sec/60° (4.8V)
   0.08sec/60° (6.0V)
3. Dimension/尺寸: 22.9 x 12 x 25.8mm
4. Weight/重量: 13.9g

DS425M Digital Servo:
1. 1520 μs standard band /1520 μs 宽頻系統
2. Stall torque/輸出扭力: 1kg.cm(4.8V)
   1.2kg.cm(6.0V)
3. Motion speed/動作速度: 0.07sec/60° (4.8V)
   0.06sec/60° (6.0V)
4. Dimension/尺寸: 22.9 x 12 x 25.8mm
4. Weight/重量: 13.9g

WARNING
1. 3GX MRS can only be installed face down, with antenna point towards front of the helicopter.
2. Incorrect installation will cause incorrect compensation of the helicopter swashplate. Flying with incorrect installation will result in crash.

3GX MRS 面板必須朝下，天線朝前安裝

3GX MRS must face down, antenna point forward.

Check if the screws are firmly tightened before flight.

飛行前再次確認螺絲是否鎖固。
1. Servo can only be installed in this orientation when 3GX MRS is used; with head point forward, right forward is aileron (CH1), left forward is pitch (CH6), mid-rear is elevator (CH2). CH1 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.
2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MR model setting is set to T-REX 450 PRO.

1. 使用3GX MRS伺服器的安裝方式只有一種。當機頭朝前時，右前為副翼（CH1）；左前為螺距（CH6）；左後為升降（CH2）。CH1、CH6不可換。如果無依指示連接，動翼機動作會不正確。
2. 遙控器十字盤設定，必須選擇H1傳統十字盤模式。依指示安裝完畢，如果十字盤動作不正確，請檢查3GX MR模型設定是否為T-REX450 PRO。

**DS525 Digital Servo:**
- 1.5kHz standard band / 1520 μs 寫頻系統
- 2. Stall torque/輸出扭力: 2.4kg.cm (4.8V)
  3.0kg.cm (6.0V)
- 3. Motion speed/動作速度: 0.08sec/60° (4.8V)
  0.06sec/60° (6.0V)
- 4. Dimension/尺寸: 35.1 x 15.1 x 29mm
- 5. Weight/重量: 29g

**M2 Nut**
M2 螺帽

**DS5BF Servo horn**
DS5BF 伺服臂

**DS525 Tail Servo**
DS525 尾陀伺服器

**DS415M Digital Servo:**
- 1. Stall torque/輸出扭力: 2.0kg.cm (4.8V)
  2.4kg.cm (6.0V)
- 2. Motion speed/動作速度: 0.1sec/60° (4.8V)
  0.08sec/60° (6.0V)
- 3. Dimension/尺寸: 22.9 x 12 x 25.8mm
- 4. Weight/重量: 13.9g
1. Servo can only be installed in this orientation when 3GX MRS is used: with head point forward, right forward is aileron (CH2), left forward is pitch (CH6), mid-rear is elevator (CH3). CH1 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.

2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MRS model setting is set to T-REX 500 PRO.

1. 使用3GX MRS伺服器的安裝方式只有一種。當機頭朝前時，右前為副翼 (CH2)；左前為螺距 (CH6)；右後為升降 (CH3)。CH2、CH6不可換。如果沒依照圖示連結，直昇機動作會不正確。

2. 遙控器十字盤設定，必須選擇H1傳統十字盤模式。依照圖示安裝完畢，如果十字盤動作不正確，請檢查3GX MRS機型設定是否為T-REX500 PRO。
DS515M Digital Servo:
1. Stall torque/輸出扭力: 4.0kg.cm(4.8V)
   5.0kg.cm(6.0V)
2. Motion speed/動作速度: 0.12sec/60°(4.8V)
   0.10sec/60°(6.0V)
3. Dimension/尺寸: 35.1 x 15.1 x 29mm
4. Weight/重量: 29g

DS515M Servo
DS515M 伺服器

Servo horn
伺服器

Washer
墊圈

Linkage ball A(M2x3)
球頭A(M2x3) φ4.75x8.18mm

D6FF Metal servo arm
D6FF 金屬伺服臂

DS525M Servo
DS525M 伺服器

M2 Nut
M2 螺帽

Socket button head self tapping screw
半圓頭內六角自攻螺絲
T2.6x10mm

DS525M Digital Servo:
1.1520μs standard band /1520 μs 寬頻系統
2. Stall torque/輸出扭力: 2.4kg.cm(4.8V)
   3.0kg.cm(6.0V)
3. Motion speed/動作速度: 0.08sec/60° (4.8V)
   0.06sec/60° (6.0V)
4. Dimension/尺寸: 35.1 x 15.1 x 29mm
4. Weight/重量: 29g

Front
機頭方向

Double sided tape
雙面粘著帶

3GX MRS
陀螺儀

3GX MRS installed on T-REX 500 must face down. Antenna point towards tail of the helicopter.
3GX MRS 面板, 必須朝下天線朝機尾方向安裝。

Check if the screws are firmly tightened before flight.
飛行前再次確認螺絲是否鎖固。

WARNING
警告

1. T-REX 500 of 3GX MRS installation has difference between T-REX 250 and 450, 3GX MRS installed on T-REX 500 must face down with antenna point towards tail of the helicopter.
2. Incorrect installation will cause incorrect compensation of the helicopter swashplate. Flying with incorrect installation will result in crash.

WARNING
警告

1. T-REX 500的3GX MRS安裝方式與T-REX 250、450不同，必須是面板朝下且天線朝機尾方向。
2. 安裝錯誤會造成直昇機十字盤修正錯誤，強行飛行會有墜機的危險。
## 1 COMPATIBLE TRANSMITTER

適用遙控器

- Use S-FHSS 2.4 GHz transmitter
- 使用S-FHSS 2.4GHz遙控器

The 3GX MRS flybarless system in the T-REX 250 PLUS DFC BTF contains a built in S-FHSS 2.4GHz receiver, and is compatible only with similar S-FHSS transmitter. In addition, 3GX MRS also supports the use of satellite receivers, capable of binding with Spektrum DSM2/DSMX and JR DSM2 radios.

3GX MRS無平衡翼系統，內建S-FHSS 2.4GHz接收模組，必須選擇一樣為S-FHSS 2.4GHz系統的遙控器才能對頻使用。另外，3GX MRS 也支援衛星天線接收，可以用 SPEKTRUM DSM2/DSMX 與 JR DSM2 衛星天線遙控器對頻使用。

## 2 SELECT H-1 SWASHPLATE TYPE

選擇H-1十字盤類型

3GX MRS supports H-1 type swashplate layout. Set the swashplate mode to H-1 in the transmitter's setting. If swashplate type is not setup properly, the control movement will not be correct, making the helicopter unflyable.

3GX MRS 支援的十字盤類型為H-1十字盤。這裡要將遙控器的十字盤選項，設定為H-1十字盤類型。如果十字盤選擇錯誤，會造成直昇機動作不正確無法飛行。

## 3 TRANSMITTER SETUP PARAMETERS DIAGRAM

遙控器設定表

Relative 3GX MRS parameters setting information is provided for customers to fairly simple use and operate on the unit. The parameters in diagram below is suitable for beginners and general 3D flying, but can be adjusted to suit personal flying preference.

為了方便玩家更容易使用3GX MRS，以下提供使用3GX MRS遙控器的相關參數與設定。下列參數適用初學基礎飛行以及一般3D飛行使用，您也可以依照個人飛行習慣來調整遙控器參數。

### 1 ALIGN T6 AND FUTABA S-FHSS SYSTEM

**ALIGN T6與FUTABA S-FHSS系統**

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</tr>
<tr>
<td>460 PRO</td>
<td>500 PRO</td>
</tr>
<tr>
<td>75% (AVCS)</td>
<td>75% (AVCS)</td>
</tr>
<tr>
<td>Normal Throttle Curves</td>
<td>Normal flight / 一般飛行</td>
</tr>
<tr>
<td>250 PLUS</td>
<td>450 PLUS</td>
</tr>
<tr>
<td>75% (AVCS)</td>
<td>75% (AVCS)</td>
</tr>
<tr>
<td>460 PRO</td>
<td>500 PRO</td>
</tr>
<tr>
<td>75% (AVCS)</td>
<td>75% (AVCS)</td>
</tr>
<tr>
<td>Normal Throttle Curves</td>
<td>Normal flight / 一般飛行</td>
</tr>
<tr>
<td>250 PLUS</td>
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<td>75% (AVCS)</td>
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<tr>
<td>460 PRO</td>
<td>500 PRO</td>
</tr>
<tr>
<td>75% (AVCS)</td>
<td>75% (AVCS)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IDLE-UP Throttle Curves</th>
<th>3D飛行油門曲線</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 %</td>
<td>25 %</td>
</tr>
<tr>
<td>0 %</td>
<td>25 %</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>IDLE-UP Pitch Curves</th>
<th>3D飛行螺距曲線</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 %</td>
<td>25 %</td>
</tr>
<tr>
<td>0 %</td>
<td>25 %</td>
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<td>0 %</td>
<td>25 %</td>
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<tr>
<td>0 %</td>
<td>25 %</td>
</tr>
</tbody>
</table>
These are the standard channel mapping when satellite receivers are used.
(1) THR (2) AIL (3) ELE (4) RUD (5) GAIN (6) PIT

使用衛星天線時，內部通道已指定為：(1) THR (2) AIL (3) ELE (4) RUD (5) GAIN (6) PIT

### 3 SPEKTRUM SYSTEM

<table>
<thead>
<tr>
<th>Servo Reverse</th>
<th>THR 油門</th>
<th>AIL 副翼</th>
<th>ELE 升降</th>
<th>RUD 尾舵</th>
<th>GYRO 感度</th>
<th>PIT 螺距</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/R 雙重比數</td>
<td>▲ 100 %</td>
<td>▲ 100 %</td>
<td>▲ 100 %</td>
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<td>▲ 100 %</td>
<td>▲ 100 %</td>
</tr>
<tr>
<td>EXP 動作曲線</td>
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<td>▼ 100 %</td>
<td>▼ 100 %</td>
<td>▼ 100 %</td>
<td>▼ 100 %</td>
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<tr>
<td>End Point Adjust</td>
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<td>▲ 100 %</td>
<td>▲ 100 %</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Swash type 十字盤類型</th>
<th>H-1</th>
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</thead>
<tbody>
<tr>
<td>gyro gain 尾舵感度</td>
<td></td>
</tr>
<tr>
<td>250 PLUS</td>
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</tr>
<tr>
<td>450 PLUS</td>
<td></td>
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<tr>
<td>55%(AVCS)</td>
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<td>55%(AVCS)</td>
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<td>450 PLUS</td>
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<td>50%(AVCS)</td>
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<tr>
<td>50%(AVCS)</td>
<td></td>
</tr>
<tr>
<td>normal throttle curves</td>
<td>P1</td>
</tr>
<tr>
<td>0 %</td>
<td>P2</td>
</tr>
<tr>
<td>42 %</td>
<td>P3</td>
</tr>
<tr>
<td>65 %</td>
<td>P4</td>
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<td>78 %</td>
<td>P5</td>
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<td>44 %</td>
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<td>74 %</td>
<td>P4</td>
</tr>
<tr>
<td>84 %</td>
<td>P5</td>
</tr>
<tr>
<td>idle-up throttle curves</td>
<td>P1</td>
</tr>
<tr>
<td>90 %</td>
<td>P2</td>
</tr>
<tr>
<td>90 %</td>
<td>P3</td>
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<td>90 %</td>
<td>P4</td>
</tr>
<tr>
<td>90 %</td>
<td>P5</td>
</tr>
<tr>
<td>idle-up pitch curves</td>
<td>P1</td>
</tr>
<tr>
<td>0 %</td>
<td>P2</td>
</tr>
<tr>
<td>25 %</td>
<td>P3</td>
</tr>
<tr>
<td>50 %</td>
<td>P4</td>
</tr>
<tr>
<td>75 %</td>
<td>P5</td>
</tr>
<tr>
<td>100 %</td>
<td></td>
</tr>
</tbody>
</table>
Rudder Gain Value with the difference between different size of helicopter, generally speaking, observe the heli not to exist any hunting action on the tail (rapidly tilt the heli to the left/right), increase the Gain Value until right before hunting occurs, so that must be adjusted it through the actual conditions of helicopter.

尾舵感度大小會隨著直昇機的不同而有所差異。日常而言，在不產生追蹤現象 (尾部出現左、右搖摆的情況) 的前提下感度愈高愈好，所以必須透過實際飛行的狀況來進行調整。

FEATURES

**3Axis**
3-axis gyroscopic flybarless system to simulate the stability of mechanical flybar system, yet at the same time achieving agile 3D performance.
3軸陀螺儀無平衡翼系統, 可模擬有平衡翼系統的穩定性, 更有靈活的3D性能。

**MEMS**
Utilizes MEMS gyro sensors, which feature small footprint, high reliability, and excellent stability.
採用MEMS (Micro Electro Mechanical Systems) 微機電氣技術感應器，具有體積小，可靠性高，穩定性佳的優點。

**12bit**
Sensor with 12 bit ultra high resolution, resulting in highly precise controls.
感測器12位元，超高解析度，控制細膩精準。

**S-FHSS**
Supports Futaba S-FHSS 2.4Ghz transmission protocol.
支援Futada S-FHSS 2.4GHz 傳輸系統。

**Supports Spektrum and JR satellite receivers.**
支援SPEKTRUM與JR衛星天線。

**Easy**
Simplistic setup process without the need of external devices. Setup is done through 6 steps and 2 sensitivity adjustments.
設定簡單不需額外的介面，只需六個步驟、兩個感度調整即可完成所有設定。

**Energy**
Flybarless system dramatically improves 3D power output and efficiency, resulting in reduced fuel or electricity consumption.
飛平衡翼系統，可大幅降低3D大動作飛行能量消耗，提供直升機更大的動力輸出且更加節省燃油或電力。

**Stable**
Highly sensitive gyroscopic sensors combined with advanced control detection routine providing higher hovering and aerobatic stability than other flybarless system.
高感度陀螺儀感測器及先進環路設計，可提供比一般平衡翼系統更佳的靜態及動態穩定性。

**T-REX 250-500**
Designed specifically for T-REX 250 、T-REX 450 and T-REX 500, contains optimal flight conditions, no adjustments is needed out of the box to achieve superior flight performance.
針對T-REX 250 、T-REX 450 、T-REX 500 設計，內建最佳飛行參數，不需調整即有優異性能表現。

**3.5V~8.4V**
Capable to operate between 3.5V to 8.4V, compatible with high voltage servos.
適用電壓3.5V~8.4V，支援高電壓伺服器。

**10g**
Small footprint, light weight, minimalists and reliable design
體積小、重量輕，構造簡單可靠，提供操控者高性能的飛行樂趣。

**RoHS**
RoHS certified.
符合RoHS使用規範。
### FLYBARLESS SYSTEM SETUP MODE

- Flash 1 time: Aileron neutral point
- Flash 2 times: Elevator neutral point
- Flash 3 times: Pitch neutral point
- Flash 4 times: Rudder neutral point
- Flash 5 times: Rudder left travel limit setting
- Flash 6 times: Rudder right travel limit setting

### BIND LED

- Steady lit green LED: Radio binding successfully
- Flashing green LED: Radio binding failed
- Steady lit red LED: No signal detected

### ROLL RATE ADJUSTMENT DIAL

Roll rate dial is used to adjust the roll rate of helicopter's elevator and aileron; turning clockwise will increase roll rate, with faster elevator and aileron response; turning counter-clockwise will decrease roll rate, with slower elevator and aileron response. We recommend novice pilots to fly with lower roll rate.

Roll rate旋鈕為調整整體機升降、副翼縫轉速率，往順時針調大縫轉速率，升降與副翼反應會變快，往逆時針調低縫轉速率，升降與副翼反應會變慢，初階入門者建議把縫轉速率調低飛行。

### GAIN ADJUSTMENT DIAL

Should there be any oscillation on aileron or elevator during flight, reduce the gain by turning the dial counter-clockwise approximately 10 degrees at a time.

Should there be any drift front/rear/left/right during flight, increase the gain by turning the dial clockwise approximately 10 degrees at a time.

飛行時若機體有左右或前後抖動，表示感度偏高，請順時針調整感度旋鈕，以每次調整約10度方式，調整至適當位置。飛行時若機體有左右或前後偏移時，表示感度偏低，請順時針調高感度旋鈕，以每次10度方式調整至適當位置。
1. During pre-flight check, please ensure 3GX MRS is securely mounted, and there are sufficient battery in the transmitter.

2. There is a key to mount 3GX MRS on the T-REX 250 and T-REX 450 helicopters. Do not alter the mounting direction, otherwise incorrect compensation may result in danger of crashing.

3GX MRS installed on T-REX 250 and T-REX 450: 3GX MRS must face down, antenna point towards front of the helicopter. 3GX MRS installed on T-REX 500: 3GX MRS must face down, antenna point towards tail of the helicopter.

3. After 3GX MRS has been mounted with transmitter, please ensure 3GX MRS power indicator is lit correctly, and that swashplate and rudder is compensating the correct direction.

4. To ensure proper initialization of 3GX MRS, please keep the helicopter stationary during power up, do not move any transmitter sticks.

5. Please ensure the swashplate setting in transmitter is set to H-1 prior to making any setting changes.

6. While setting neutral position of servos, all steps must be completed before power is turned off, otherwise servos neutral setting will fail. To ensure optimal flight performance, please ensure swashplate is level during swashplate neutral setting.

7. Adjustment of elevator and aileron roll rate must be done with the dials on 3GX MRS, do not adjust elevator and aileron travel end points on transmitter. On the other hand, rudder speed is adjusted through rudder end points.

8. To achieve optimal flight performance, pitch (CH6) and rudder (CH4) travel can be adjusted on the transmitter, but do not adjust elevator and aileron end points on transmitter.

9. Elevator and Aileron gyro gain must be adjusted through the dials on 3GX MRS unit. Rudder gyro gain is adjusted through transmitter's GYRO SENS function.

10. To ensure optimal signal reception, 3GX MRS antennas should be at least 1/2 inch away from conductive material, and should not be bent excessively. Try to keep the transmitter close to 3GX MRS during binding. Should it unintentionally bind to another transmitter, just perform binding process again.

1. 在每次飛行之前，請確認3GX MRS是否固定良好，並且檢查發射器電力是否足夠。

2. 3GX MRS安裝在直昇機上的方式只有一種，請勿任意更改安裝方向，以免發生錯誤造成危險。

T-REX250、T-REX 450：必須面版朝下，天線朝前；T-REX 500：必須面版朝下，天線朝機尾方向。

3. 發射和3GX MRS完成對頻後，請確認3GX MRS開機燈號以及十字盤和尾舵的修正是否正確。

4. 開機時請保持直昇機靜止，且不要動發射器任何桿桿，以免3GX MRS初始化錯誤。

5. 在進入所有設定之前，請確認發射的十字盤類型須為H-1模式。

6. 在設定伺服機中立點位置時，必須把全部步驟完成才可將電源關閉，否則設定值將不被記憶。設定伺服機中立點位置時請將十字盤調成水平以 獲得最佳飛行性能。

7. 調整升降及副翼的後縮速率時只能用3GX MRS上的旋鈕來調整，不可利用發射器上的升降和副翼行程選項來調整。調整尾舵速率時則必須利用發射器上的尾舵行程來調整。

8. 為獲得最佳飛行性能，可以調整發射器上的螺釘 (CH6)以及尾舵 (CH4)的行程，但不可調整發射器上的升降和副翼行程。

9. 與調副翼的舵感度必須用3GX MRS上的旋鈕調整，尾舵的舵感度請利用發射器的Gyro SENS選項來調整。

10. 3GX MRS的天線位置應遠離導電材料至少半英尺的距離，且不要過度彎曲，以獲得最佳的射頻信號。發射器和3GX MRS對頻時，請盡量靠近。若對到別の發射器時，重新對頻即可。
1. Servo can only be installed in this orientation when 3GX MRS is used: with head point forward, right forward is aileron (CH1), left forward is pitch (CH6), right-rear is elevator (CH2). CH1 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.

2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type.

3. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MRS model setting is set to T-REX 250.

4. To avoid damages to system, digital servos must be used for swashplate. Recommend servo specification: speed of 0.09s/60 degrees or faster; torque 2.2kg or higher.

Please ensure the swashplate setting in transmitter is set to H-1 prior to making any setting changes.

請確認發射器的十字盤類型必須為H-1模式。
Please ensure the swashplate setting in transmitter is set to H-1 prior to making any setting changes.

1. Servos can only be installed in this orientation when 3GX MRS is used: with head point forward, right forward is aileron (CH1), left forward is pitch (CH6), right rear is elevator (CH2). CH1 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.

2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type.

3. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MRS model setting is set to T-REX 450 Sport/PLUS DFC.

4. To avoid damages to system, digital servos must be used for swashplate. Recommend servo specification: speed of 0.11s/60 degrees or faster, torque 4.6kg or higher.

1. 使用3GX MRS伺服器的安裝方式只有一種。當機頭朝前時，右前為副翼(CH1)；左前為螺距(CH6)；右後為升降(CH2)。CH1、CH6不可換。如果沒依示圖示連結，直昇機動作會不正確。

2. 遙控器十字盤類型，必須選擇H1十字盤模式。

3. 依照圖式安裝完畢，如果十字盤動作不正確，請檢查3GX MRS機型設定是否為T-REX450 SPORT/PLUS DFC。

4. 十字盤必須安裝數位伺服器，否則會造成損壞。
   建議規格：速度0.11秒/60度以內；扭力4.6kg以上。
Please ensure the swashplate setting in transmitter is set to H-1 prior to making any setting changes.

1. Servo can only be installed in this orientation when 3GX MRS is used: with head point forward, right forward is aileron (CH1), left forward is pitch (CH6), left-rear is elevator (CH2). CH1 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.

2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type.

3. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MRS model setting is set to T-REX 450 PRO.

4. To avoid damages to system, digital servos must be used for swashplate. Recommend servo specification: speed of 0.09s/60 degrees or faster, torque 2.2kg or higher.

1. 使用3GX MRS伺服器的安裝方式只有一種。當機頭朝前時，右前為副翼 (CH1)；左前為螺距 (CH6)；左後為升降 (CH2)。CH1、CH6 不可換。如果未依照圖示連結，直昇機動作會不正確。

2. 遙控器十字盤類型，必須選擇H1十字盤模式。

3. 依照圖式安裝完畢，如果十字盤動作不正確，請檢測3GX MRS機型設定是否為T-REX450 PRO。

4. 十字盤必須安裝數位伺服器，否則會造成損壞。
   建議規格：速度0.09秒/60度以內；扭力2.2kg以上。
T-REX 500 PRO CONNECTIVITY METHOD

Please ensure the swashplate setting in transmitter is set to H-1 prior to making any setting changes.

1. Servo can only be installed in this orientation when 3GX MRS is used. With head point forward, right forward is aileron (CH2), left forward is pitch (CH6), right-rear is elevator (CH3). CH2 and CH6 cannot be interchanged, otherwise helicopter will not function correctly.
2. Swashplate type setting on the transmitter should be set to H1 traditional swashplate type.
3. If swashplate movement is incorrect after assembly per instruction, please double check to see if 3GX MRS model setting is set to T-REX 500 PRO.
4. To avoid damages to system, digital servos must be used for swashplate. Recommend servo specification: speed of 0.11s/60 degrees or faster; torque 4.6kg or higher.

MODEL SELECTION

3GX MRS is a flybarless stabilization system designed specifically for Align's smaller helicopters, with integrated basic setup parameters for T-REX 250, T-REX 450 SPORT/PLUS DFC, T-REX 450 PRO, T-REX 500 PRO. The 3GX MRS unit bundled with T-REX 450 PLUS DFC comes already configured for the specific helicopter. Follow the steps below to reconfigure the helicopter type.

3GX MRS is particularly designed for T-REX 250, T-REX 450 SPORT/PLUS DFC, T-REX 450 PRO, T-REX 500 PRO. The four model types have different parameters, and the 3GX MRS is configured for different helicopters. Ensure the correct configuration is set for your specific model.
1 MODEL DISPLAY

Binding Plug

4.8V~6.0V power input

Hold The Set Button.
Insert binding plug into AIL port, press and hold SET, then insert 4.8~6.0V power into RUD of THR port.

1. Red LED lit

2. Release SET button

2. Release SET button

STATUS LED indicator for the existing model.

STATUS LED flashes RED once, 250
STATUS LED flashes RED twice, 450SPORT / PLUS
STATUS LED flashes RED three times, 450PRO
STATUS LED flashes RED four times, 500

STATUS LED flashes RED once, 250
STATUS LED flashes RED twice, 450SPORT / PLUS
STATUS LED flashes RED three times, 450PRO
STATUS LED flashes RED four times, 500

2 MODEL SELECTION

Choose heli model and hold the set button

1. Flash alternately in red and green, model changing

2. Release The Set Button

T-REX 450

Pull out the binding plug, connect to the channel corresponding to the model.

AIL: T-REX 250
ELE: T-REX 450 SPORT / PLUS
PIT: T-REX 450 PRO
RUD: T-REX 500

When STATUS and BIND LED's flash alternately in red and green, release the SET button.

STATUS LED indicator for the existing model.

STATUS LED will flash to indicate the selected model type. Pull out power and binding plugs to complete setting.

此時 STATUS 燈就會呈現所選模型的燈號，最後拔掉電源與對頻金鑰就完成設定。
1 USING FUTABA S-FHSS
使用FUTABA S-FHSS

3GX MRS flybarless system contains a built in S-FHSS 2.4GHz system, and is compatible only
with similar S-FHSS 2.4GHz system transmitter. please follow the instruction below to bind your
radio to the 3GX MRS.

3GX MRS 無平衡翼系統內建 S-FHSS 2.4GHz 系統，具備接收功能一定要搭配 S-FHSS 2.4GHz 系統遙控器才能使用。
您可以依照下列式來與 3GX MRS 對頻。

STEP 1

Turn on transmitter, connect 3GX MRS to power source. If signal is detected, BIND LED will flash
green, otherwise it will flash red. If transmitter is turned on, but BIND is still steady red, then
power cycle 3GX MRS so it will restart transmitter signal search.

打開遙控器，將 3GX MRS 接上電源後，若偵測到遙控器訊號，但未完成對頻 BIND 燈號會緩緩閃爍。若已開啟發射
器，但 BIND 燈為紅燈恆亮，請將 3GX MRS 重新給電源，重新尋找遙控器訊號。

![POWER ON](image)

**STEADY LIT GREEN LED:** Radio binding successfully
**FLASHING GREEN LED:** Radio binding failed
**STEADY LIT RED LED:** No signal detected

**CAUTION 注意**

If the LED status appears steady lit green, it mean the binding is successfully.
Please skip Step 2.

If the LED status appears flashing green or steady lit red, it means the binding is
failed. Please proceed Step 2 for rebind.

若燈號為綠燈恆亮，代表對頻成功，不須進行步驟 2 重新對頻；
若燈號為綠燈閃爍或紅燈恆亮，代表對頻失敗，則進行步驟 2 重新對頻。

STEP 2

Press and hold SET button, at this time BIND LED will be flashing red, hold the SET button until
BIND LED shows steady green, then release SET button to complete binding.

按著SET鍵不放，此時BIND燈號會紅燈閃爍，直到BIND燈號顯示綠燈恆亮後，放開SET鍵即完成對頻。

1. Press and hold SET button 長按SET鍵不

![POWER ON](image)

2. LED status changes from flashing red into constant green.

燈號由紅燈閃轉為綠燈恆亮
2 USING DSM2 SATELLITE RECEIVERS

STEP 1
1. Plug the satellite receiver into ANT port, and the binding plug on THR channel.
2. After feeding 5-6V power through RUD or any other channels, BIND LED will turn steady red, while satellite LED flashes red.

1. 先將衛星天線接到ANT插槽，並且把對頻線接在THR通道。
2. 由RUD或其於通道供給5~6V電源後，此時BIND燈為紅燈恆亮，衛星天線為紅燈閃爍。

STEP 2
1. Press and hold the BIND button on Spektrum/JR transmitter, power on the transmitter, wait for transmitter to display "Binding," then release BIND button.
2. When satellite receiver LED shows steady lit RED, remove the binding plug from THR channel.
3. When STATUS and BIND LEDs turn into steady green, this indicates binding complete and 3GX MRS initialized successfully. The system is ready for use.

1. 按住SPEKTRUM/JR發射器的BIND按鈕時，打開發射器電源，直到發射器面板上顯示Binding字樣，在放開BIND。
2. 等到衛星天線為紅燈恆亮後，將在THR通道的對頻線移除。
3. 等到STATUS和BIND燈為綠燈恆亮時，表示對頻以完成且3GX MRS開機成功，可正常執行功能。

3 USING DSMX SATELLITE RECEIVERS

STEP 1
1. Plug the satellite receiver into ANT port, and the binding plug on THR channel.
2. Press and hold the SET button on 3GX MRS, and feed 5-6V power through RUD or any other channels, BIND LED will turn steady red, while satellite LED flashes red.

1. 先將衛星天線接到ANT插槽，並且把對頻線接在THR通道。
2. 按著3GX MRS的SET鍵後，再由RUD或其餘通道供給5~6V電源，此時BIND燈為紅燈恆亮，衛星天線為紅燈閃爍。
STEP 2

1. Press and hold the BIND button on Spektrum transmitter, power on the transmitter, wait for transmitter to display “Binding,” then release BIND button.
2. When satellite receiver LED shows steady lit RED, remove the binding plug from THR channel.
3. When STATUS and BIND LEDs turn into steady green, this indicates binding complete and 3GX MRS initialized successfully. The system is ready for use.

---

**CAUTION**

1. If both Spektrum and Futaba transmitters are powered up (both have previously bound to MRS), and a satellite receiver is connected to 3GX MRS, the 3GX MRS will select Spektrum system after power up. If no satellite receivers are connected, 3GX MRS will select Futaba system.
2. If a satellite receiver is connected to 3GX MRS, and only Futaba transmitter is powered up, 3GX MRS will select Futaba system after power up. If Spektrum transmitter is powered up afterwards, 3GX MRS will not switch over to Spektrum system.
3. On the other hand, if Spektrum transmitter is powered up and 3GX MRS has already selected Spektrum system, subsequent power up of Futaba transmitter will not cause 3GX MRS to switch over to Futaba system.

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3. On the other hand, if Spektrum transmitter is powered up and 3GX MRS has already selected Spektrum system, subsequent power up of Futaba transmitter will not cause 3GX MRS to switch over to Futaba system.
FAILSAFE (LAST POSITION HOLD)
失控保護（保留最後指令）

When helicopter lost connectivity with your radio under this setting, all channels will hold at the last command position, except throttle channel which goes to a preset position.
1. Push throttle stick to the desired fail safe position.
2. Please refer to P.24 & P.25 binding method, and perform radio binding steps.
3. After successful binding, do not power off the 3GX MRS, unplug the binding plug and allow 3GX MRS to enter initializing process. The last position hold function will be active after the 3GX MRS initializes.
4. Test Method: Power off transmitter. The throttle channel should move to preset position, while all other channels should hold in their last position.

在此模式下，若您無意機與遙控器失連，除油門頻道為預設位置，其餘頻道皆為最後指令位置。
1. 將油門桿放置於您所需要的預設安全位置
2. 依照24頁、25頁的對頻方式，執行與遙控器的對頻動作。
3. 與遙控器完成對頻動作後，不要關閉3GX MRS電源，先將對頻接頭拔除，3GX MRS會進入開機狀態，待3GX MRS開機完成後，即完成保留最後指令設定。
4. 測試方法：將遙控器開機，除了油門頻道為預設安全位置外，其餘頻道都為失連前的最後指令位置。

FAILSAFE (PRE-SET POSITION HOLD)
失控保護（回復預設值）

When helicopter lost connectivity with your radio under this setting, all channels will move to the pre-set position.
1. Please refer to P.24 & P.25 binding method, and power up the 3GX MRS. After the rapid flash of satellite’s LEDs, Pull the binding plug off.
2. Power up radio transmitter, and perform radio binding steps. After radio is bound, LED on the satellite antennas will end the rapid flash, following by slower flash.
3. Move the transmitter sticks to the desired failsafe position while the LED is flashing in slower mode.
4. Satellite antenna’s LED will lit up after 5 seconds, and 3GX MRS goes through initializing process. The fail-safe position will be set after the 3GX MRS initializes.
5. Test Method: Power off transmitter, and all channels should move to the pre-set fail-safe position.

在此模式下，若您無意機與遙控器失連，所有頻道為預設安全位置。
1. 依照24頁、25頁的對頻方式，開啓3GX MRS電源，待衛星天線上LED快速閃爍後，將對頻接頭拔除。
2. 開啓遙控器電源，執行與遙控器的對頻動作，對頻完成瞬間衛星天線上LED會由快速閃爍狀態熄滅，之後再亮起為慢速閃爍。
3. 在慢速閃爍狀態時，將遙控器上的所有搖桿放置於您所需要的預設安全位置。
4. 5秒後衛星天線LED熄為慢亮，3GX MRS進入開機狀態，待3GX MRS開機完成後，即完成失控保護設定。
5. 測試方法：將遙控器開機，所有頻道為預設安全位置。

6 3GX MRS SETTINGS
3GX MRS設定

⚠️ CAUTION 注意

In order for the settings to stick, all 6 setting parameters for 3GX MRS must be completed followed with a press of SET button, regardless if any changes are made for each settings.
3GX MRS的六項設定，不論有無更動，皆須逐一完成，並按下SET鍵退出設定，否則3GX MRS將不會記憶設定。
1 3GX MRS INITIALIZATION

Connect power; if transmitter binding is successful, BIND LED will light solid green; otherwise it will flash green. At this time, STATUS LED lights green indicates successful power up, steady green means rudder is in heading lock mode; steady red means rudder is in non-heading lock mode. Swashplate will jump up and down 3 times after power up.

接上電源，若和遙控器對鎖成功後，BIND燈為綠燈恆亮，否則綠燈閃爍，
此時STATUS燈號亮起代表開機成功，綠燈恆亮，代表尾舵為鎖定。紅燈恆亮，代表尾舵為非鎖定。開機完成時，十字龍跳三下。

2 ENTERING 3GX MRS SETUP

Power up transmitter, connect power to 3GX MRS. When STATUS and BIND LEDs are light steady green, SET button is used to enter setup mode.

先打開遙控器，將3GX MRS接上電源後，當STATUS和BIND燈號為綠燈恆亮時，表示開機完成，此時按SET鍵一次即可進入設定。

After system initializes, press SET once to enter 3GX MRS setup mode. While in setup mode, STATUS LED will flash a number of times indicating the current setting selection. Press SET button to skip to next setting selection. 3GX MRS must complete all 6 setting selections before the settings are memorized.

開機完成後，按SET鍵一次就會進入3GX MRS設定，進入設定後STATUS燈會以閃爍次數代表所進入的設定選項。按

Press SET button to enter Setup
按SET鍵進入設定
1. Disconnect motor to ESC to prevent accidental startup during setup.
2. The throttle stick must remain in center position during setup (or Switch HOLD), pitch curve must be at 50% position and remain fixed.

1. 設定前先拔除馬達線，避免設定中使馬達運轉造成危險。
2. 設定時油門搖桿需置於中間，螺距曲線50% 輸出的位置 (或切入HOLD模式)，不可再移動。

### AILERON SERVO NEUTRAL POINT SETTING

**調整方向舵中立點設定**

- Adjust the servo arm to level position (將伺服器調整至水平)
- Move rudder stick to adjust (撥動尾舵調整)

Momentarily press SET button first time, if STATUS LED flashes once continuously and BIND LED is off, this indicates you are in neutral setting mode of servo 1. At this time you can use RUD on transmitter to trim the neutral position of servo 1. After completing this setting it will proceed into next step.

進入3GX MRS 設定的第一個設定為翼面伺服器中立點設定，STATUS 燈為持續亮燈一次且 BIND 燈為熄滅，此時可用遙控器尾舵搖桿微調翼面伺服器中立點

### ELEVATOR SERVO NEUTRAL POINT SETTING

**調整升降舵中立點設定**

- Adjust the servo arm to level position (將伺服器調整至水平)
- Move rudder stick to adjust (撥動尾舵調整)

Momentarily press SET button second time, if STATUS LED flashes twice continuously and BIND LED is off, this indicates you are in neutral setting mode of servo 2. At this time you can use RUD on transmitter to trim the neutral position of servo 2. After completing this setting it will proceed into next step.

接著按 SET 鍵一次進入升降伺服器中立點設定，STATUS 燈為持續亮燈二次且 BIND 燈為熄滅。此時可用遙控器尾舵搖桿微調升降伺服器中立點位置，設定完成後進入下個步驟。
PITCH SERVO NEUTRAL POINT SETTING

Momentarily press SET button third time, if STATUS LED flashes three times continuously and BIND LED is off, this indicates you are in neutral setting mode of servo 3. At this time you can use RUD on transmitter to trim the neutral position of servo 3. After completing this setting it will proceed into next step.

Adjust the servo arm to level position

Adjust aileron, elevator, and pitch servos' neutral point so that servo arms and swashplate remain horizontal (with throttle stick at 50% position). How level your swashplate is will directly affect how well the flight characteristic of 3GX MRS is.

Move rudder stick to adjust

Flash green thrice

Rudder Gyro Direction Setting

Momentarily press SET button fourth time, if STATUS LED flashes four times continuously and BIND LED is steady lit green, this indicates you are in rudder compensation direction setting mode. If compensation direction is correct, then skip this step. If compensation direction is reversed, use RUD on transmitter to reverse the direction, and BIND LED will change to steady lit red. After completing this setting it will proceed into next step.

Tail moving direction

Move rudder stick to adjust

Flash green 4 times

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

Green LED: normal direction
Red LED: reverse direction
450 PLUS DFC is green light
線燈：正向 紅燈：反向
450 PLUS DFC為綠燈
**RUDDER LEFT TRAVEL LIMIT SETTING**
尾舵左舵行程設定

Momentarily press SET button fifth time, if STATUS LED flashes five times continuously and BIND LED is off, this indicates you are in left rudder end point adjustment mode. At this time rudder will drift to one side. Use RUD on transmitter to set the maximum end point on left side. After completing this setting it will proceed into next step.

接者按 SET 鍵一次進入尾舵左舵行程設定，STATUS 條號為持續閃爍綠燈五次且 BIND 條號為熄暗。此時尾舵會偏向左邊，利用遙控器尾舵搖桿設定尾舵伺服器向左最大的行程，設定完成後進入下個步驟。

![Move rudder stick to adjust](image)

**CAUTION 注意**

Adjust the rudder travel limit to the maximum without mechanical binding will result in better rudder gyro compensation effect.

在機構不干涉的情形下，設定較大的尾舵行程可使尾舵陀螺儀有較好的修正反應。

**RUDDER RIGHT TRAVEL LIMIT SETTING**
尾舵右舵行程設定

Momentarily press SET button sixth time, if STATUS LED flashes six times continuously and BIND LED is off, this indicates you are in right rudder end point adjustment mode. At this time rudder will drift to one side. Use RUD on transmitter to set the maximum end point on right side. After completing this setting it will proceed into next step.

再按 SET 鍵一次進入尾舵右舵行程設定，STATUS 條號為持續閃爍綠燈六次且 BIND 條號為熄暗。此時尾舵會偏向右邊，利用遙控器尾舵搖桿設定尾舵伺服器向右最大的行程，設定完成後按 SET 鍵完成 3GX MRS 設定。

![Move rudder stick to adjust](image)

**CAUTION 注意**

Adjust the rudder travel limit to the maximum without mechanical binding will result in better rudder gyro compensation effect.

在機構不干涉的情形下，設定較大的尾舵行程可使尾舵陀螺儀有較好的修正反應。

**CAUTION 注意**

In order for the settings to stick, all 6 setting parameters for 3GX MRS must be completed followed with a press of SET button, regardless if any changes are made for each settings. 3GX MRS 的六項設定，不論有無更動，皆須逐一完成，並按下 SET 鍵退出設定，否則 3GX MRS 將不會記憶設定。
1. Press SET button to enter 3GX MRS setup mode. This setting will eliminate any swashplate interaction which may affect pitch precision.

2. Move throttle stick to enter, pitch curve at 50% position. Pitch should be at 0 degrees during this setting.

3. If servo arms and swashplate is already level at 0 degrees, but main rotor blades pitch is not at 0 degree, please adjust the length of DFC linkage rods to achieve 0 degrees pitch.

**CAUTION**

Disconnect motor from ESC prior to setup.

Before setting up the 3GX MRS FBL system, please use a swashplate leveler to level out the swashplate to make sure the swashplate is leveled to ensure 3GX MRS provides the best performance.

使用3GX MRS無平衡系統，請務必使用十字盤調整器校正十字盤，確保十字盤達到水平狀態，這樣才能確保3GX MRS飛行性能達到最佳效果。
COLLECTIVE PITCH ADJUSTMENT

The collective pitch for 3GX MRS must be adjusted in radio's EPA (End Point) function.

1 MAX. COLLECTIVE PITCH ANGLE

Push the throttle stick to the maximum, adjust maximum collective pitch value through radio's EPA function on CH6.

2 MIN. COLLECTIVE PITCH ANGLE

Push the throttle stick to the minimum, adjust minimum collective pitch value through radio's EPA function on CH6.

CAUTION

Disconnect motor from ESC prior to setup.
### 3GX MRS INDICATOR LED

#### STATUS
- **BIND**
  - **STATUS constant green**
    - 3GX MRS 對頻成功，但開機成功，尾舵為鎖定狀態
  - **STATUS constant red**
    - 3GX MRS 對頻失敗，但開機成功，尾舵為鎖定狀態
  - **STATUS off**
    - 3GX MRS 未連接電源
  - **BIND flashing green**
    - Revert back to original transmitter signal that was lost during usage, rudder is in head locking mode, and detected other transition signals.
  - **BIND flashing red**
    - Signal detected from radio, and set button was pressed for binding.

**Specifications**

- **Operating voltage range**: DC 3.5 ~ 8.4V
- **Operating current consumption**: <100mA @ 4.8V
- **Rotational detection rate**: ±300°/sec
- **Rudder yaw detection rate**: ±600°/sec
- **Sensor resolution**: 12 bits (12 BIT)
- **Operating temperature**: -20°C ~ 85°C
- **Operating humidity**: 0% ~ 95%
- **Swashplate support**: Mode H-1
- **Receiver support**: 2.4GHz S-FHSS, DSM2 / DSMX
## Troubleshooting

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

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

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