

A10

RADIO CONTROL SYSTEM

ALIGN

INSTRUCTION MANUAL

使用說明書

[HERA1002T]



Much precise control
feeling for more fun.



10 CHANNELS
2.4GHZ TRANSMITTER



For more detailed instruction, please check our website.
<http://www.align.com.tw/A10>

更多詳細說明請上官網。

Congratulations on your purchase of Align professional aerial photography products! To ensure your success with this product, we would like to present the following information and important reminders.

承蒙閣下選用亞拓遙控世界系列產品，謹表謝意。進入遙控世界之前必須告訴您許多相關的知識與注意事項，以確保您能夠在使用的過程中較得心應手。在開始操作之前，請務必詳閱本說明書，相信一定能夠給您帶來相當大的幫助，也請您妥善保管這本說明書，以作為日後參考。

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INTRODUCTION

前言

ALIGN

Thank you for purchasing the ALIGN A10 transmitter digital proportional R/C airplane/helicopter system. This radio has been designed and manufactured to provide you with many, many years of modeling enjoyment and fun. Whether this is your first venture into R/C or you're a seasoned veteran, the A10 offers something for everyone. If this is your first 'computer' radio, rest assured that this system is designed to make initial setup and field-tuning of your airplane and/or helicopter easier and more accurate than using a non-computer 'analog' radio. Experienced modelers will appreciate some of the A10's advanced features and functions normally found on the more advanced radios. In either case, to make the best use of the ALIGN A10 system, and to operate it safely, you should carefully read the instructions in their entirety prior to operation.

承蒙閣下選用亞拓遙控世界系列產品，謹表謝意。進入遙控世界之前必須告訴您許多相關的知識與注意事項，以確保您能夠在學習的過程中較得心應手。在開始操作之前，請務必詳閱本說明書，相信一定能夠給您帶來相當大的幫助，也請您妥善保管這本說明書，以作為日後參考。

Every modeler has their own personal preferences on the proper steps to set-up and program their models. As such, it would be very difficult to create a manual that would satisfy all modelers accordingly. Thus, this manual has been designed to 'step you through' the programming of the A10 transmitter, following the function list of the system. If you wish to follow your own personal preference on setting up a model, please feel free to do so keeping in mind that some programming options will interact with others. For example, Dual Rates and End Points will influence one another.

每個模型使用者都會依自己的個人喜好採適當的步驟及設置其模型。因此，創造一本可以滿足所有模型使用者的手冊是非常困難的一件事情。致此，透過本手冊，能讓您“按步就班”設定A10遙控器的各項功能。如果您想依個人喜好建立一個新模型，請記住一些會相互影響的功能設定選項。例如，大小動和舵機行程量這兩功能是會有連帶關係的。

SUGGESTION

建議

If, while reading the instructions, you are unclear of some of the procedures or functions described or become 'stuck', please continue reading anyway. Oftentimes, the function or procedure will be explained again later in an alternate manner which will clarify the procedure or function. Another alternative is to connect the battery, servos, receiver, etc. to simulate your aircraft and actually program the radio accordingly. This will allow you to visually recognize the effects of your programming inputs. If utilizing this alternate method of familiarizing yourself with your radio, please ensure that your aircraft can not cause harm to yourself or others by disabling it accordingly.

This product is to be used for the flying of radio controlled models only. ALIGN is not responsible for the results of use of this product by the customer or for any alteration of this product including modification or incorporation into other devices by third parties. Modification will void any warranty and is done at the owner's risk and responsibility. Please protect the environment by disposing of rechargeable batteries responsibly. Throwing rechargeable batteries into the trash or municipal waste system is illegal in some areas.

如果，您對此遙控器的程式指令或功能不是很瞭解而發生困惑時，請查閱本說明書。通常，有些功能或程式在另一個環境中才會被使用。當您改變設定時，建議要連接電池、開關和伺服器、接收器等，並且安裝在實際的模型上，這樣有助於展現改變設定後的實際效果。本產品僅限於無線電遙控模型飛行使用。肇因於改裝或使用由第三方製造的產品設備所產生的產品問題，本公司將不負任何責任。擅自拆裝等不當改裝將不受任何保固以及須自負其所衍生的責任。

為保護環境，對充電電池的處理是大家應負的責任。在某些地區的垃圾處理系統上，將充電電池扔進垃圾桶是違法的行為，請知悉有關您所在地區的鎳鎘電池回收方式，並依各所在地區相關法令規範辦理。

IMPORTANT NOTES

重要聲明

Radio Control (R/C) multicopters are not toys. R/C multicopters utilize various high-tech components to achieve superior performance. Improper use of this product can result in serious injury or even death. Please read this manual carefully before operating, and make sure to be conscious of your own personal safety and the safety of others nearby when operating all ALIGN products. Manufacturer and seller assume no liability for the operation or the use of this product. This product is intended for use only by adults with experience flying remote control aircraft at legal flying fields. After the sale of this product we cannot be held liable over its operation or usage.

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

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

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

遙控模型包括遙控器、電子設備、遙控飛行機並非玩具，它是結合了許多高科技產品所設計出來的休閒用品，所以商品的使用不當或不熟悉都可能造成嚴重傷害甚至死亡，使用之前請務必詳讀說明書，勿輕忽並注意自身安全。注意！任何遙控模型的使用，製造商和經銷商是無法對使用者於零件使用的損耗異常或組裝不當所發生之意外負任何責任，本產品是提供給有操作過遙控飛行機經驗的成人或有相當技術的人員在旁指導，並於當地合法遙控飛行場飛行，以確保安全無虞下操作使用。產品售出後本公司將不負任何操作和使用控制上的任何性能與安全責任。

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

做為本產品的使用者，您，是唯一對於您自己操作的環境及行為負全部的責任之人。

This product complies with low-power radio wave radiation of the provisions of motor management :

- Article 12: Without permission granted by the DGT, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to a approved low power radio-frequency devices.
- Article 14: The low power radio-frequency devices shall not influence aircraft security and interfere legal communications; If found, the user shall cease operating immediately until no interference is achieved.
- The said legal communications means radio communications is operated in compliance with the Telecommunications Act. The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

本產品符合低功率電波輻射性電機管理辦法：

- 第十二條：經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
- 第十四條：低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
- 前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.




Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING LABEL LEGEND

標誌代表涵義

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

- 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.
- Please obey all regulations to enjoy safe modeling.
- Please keep the model in sight at all times as large objects can negatively impact the RF signal. Please keep in mind that objects such as wire fences and wire mesh will also cause degradation of the RF signal.
- 遙控模型屬高危險性商品，操作時務必遠離人群。人為組裝不當或未定期檢修造成的機件損壞、電子控制設備不良，以及操控上的不熟悉、都有可能導致模型失控損傷等不可預期的意外，請操作者務必注意操作安全，並需了解自負疏忽所造成任何意外之責任。
- 每趟飛行前須仔細檢查遙控模型機身各部位之零/配件/電子設備之性能是否正常，及無損耗老化現象，並確實將螺絲鎖緊才能升空飛行。並做好定期檢修，避免零件或電子產品異常所造成不可預期意外。
- 請遵守所有規定以享受安全的模型活動。
- 請在任何時候都將視線保持在模型上，大型物件會對射頻信號產生負面的影響。請牢記，如鐵絲圍欄和鐵絲網等物件也將引起射頻信號衰減。



- Do not use the product at night or in bad weather like rain or thunderstorm. It can cause erratic operation or loss of control.
- Do not use the product in poor visibility conditions.
- Do not use the product on rainy or snowing days. Any exposure to moisture (like water or snow), erratic operation or loss of control may occur.
- Frequency interference may cause loss of control, make sure not to use the products in the following places to ensure the safety of yourself:
 1. Near the base station or other radio wave exposure places
 2. Near high voltage cables and broadcast communication antennas.
 3. Near crowd or on the streets/roads where vehicle pass by.
 4. On open water area where passenger ship go through.

FORBIDDEN
禁止

- Do not use this product when you feel tired, uncomfortable, or after drinking alcohol or taking drugs. Doing so may cause serious injury to yourself or others.
- 2.4GHz radio band is different from other low frequency wave, make sure not to use the product out of your sight, such as large obstacle/object will block the RF signal and lead to unexpected danger.
- When operating the product, it's forbidden to hold the radio antenna. Or it'll significantly decrease transmission quality and strength then lead to unforeseen danger and loss of control.
- Do not touch any heating part of the model during operation or just after stopping, such as engine, motor or speed controller, or it may cause serious injury and scald.
- 請不要在夜間或雷雨天氣使用本產品，惡劣的天氣環境有可能導致遙控設備失靈。
- 請不要在能見度有限的情況下使用本產品。
- 請不要雨雪或有水的地方使用本產品。如果有液體進入到系統內部，可能會導致
- 信號干擾可能導致設備失控。為確保您和他人的安全，請不要在以下地點使用本產品
 1. 基地台附近或其他無線電活躍的地方。
 2. 高壓電線或通訊廣播天線附近。
 3. 人群眾多場所或道路有車輛通行的附近。
 4. 有客船運輸通行的水域。
- 當您感到疲倦、身體不適、或服用含有酒精性、或會導致麻醉或興奮的藥物後，嚴禁使用本產品，否則可能對自己或他人造成嚴重的傷害。
- 2.4GHz無線電波完全不同於之前所使用的低頻無線電波段。使用時請確保模型產品在您的視線範圍內，較大的障礙物將會阻斷無線電頻率信號，進而發生遙控失靈及模型失控，導致人員生命傷害及財務的損失。造成不可預期的危險。
- 在使用過程中，嚴禁緊握遙控器天線，否則將會減弱無線電傳播訊號的質量和強度，導致遙控失靈及模型失控。
- 在操作或使用遙控模型後，請勿觸任何可能發熱的部位，例如發動機、馬達、定速設定等，以避免造成嚴重的燒燙傷。

WARNING
警告

- Misuse of this product may lead to serious injury or death. To ensure the safety, make sure to read this manual and follow the instructions for assembly and setup carefully.
- Before operating, make sure the product is properly installed, or it may cause serious damage and injury.
- Make sure to disconnect the receiver battery firstly, then turning off the transmitter. If the receiver still been operated after transmitter is off, then it may lead to unintended operation and cause an accident.
- Before operating, ensure that all motors and servos are operated in the correct direction same with the radio transmitter. If not, make sure to trim the direction first.
- 遙控設備使用不當可能導致操作者或他人嚴重受傷、甚至死亡。為確保您和設備的安全，使用前請仔細閱讀使用說明書，並按照相關要求進行操作。
- 使用前必須確保本產品與模型安裝正確，否則可能將導致模型發生嚴重損壞。
- 關閉時，請務必先關閉接收器電源，然後再關閉遙控器。如果關閉遙控器電源時接收器仍然在運行工作，有可能導致遙控設備失控或是動力設備繼續運行，而引發不可預期的危險。
- 使用前，務必先確認模型所有伺服器的動作方向與操控遙桿方向一致，如果不同必須先調整好正確的方向，確認無誤，才能操作使用。

CAUTION
注意

IMPORTANT!

Always turn on the transmitter first, then the receiver. When turning off the system, always turn off the receiver first. The receiver should never be on without the transmitter on. Following this procedure will prevent damage to the servos and/or control surfaces. Or, in the case of electric-powered models, the motor may unexpectedly turn on causing severe injury.

重點提示！

每次開啓系統時，務必先開啓遙控器，再開啓接收器；當關閉系統時，則先關閉接收器，然後再關閉遙控器。接收器不應在遙控器未開啓前被開啓。按照以上程序操作可防止損壞伺服系統或控制舵面。否則在使用馬達動力的模型情況下，馬達可能會意外運轉造成嚴重傷害。



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.

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



PROPER OPERATION

勿不當使用本產品

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

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



PREVENT MOISTURE

遠離潮濕環境

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

遙控模式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！



DO NOT FLY ALONE

避免獨自操控

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

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





WARNING 警告 SAFE OPERATION 安全操作

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

請於自己能力範圍內並具備必要的操作技術的情況下操作遙控模型，過於疲勞、精神不佳或不當操作，意外發生風險將可能會提高。不可使遙控飛行機在視線範圍外飛行，降落後也請馬上關掉遙控飛行機和遙控器電源。



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

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

遙控飛行機主旋翼／螺旋槳是以高轉速運行，具有高危險性會造成自己與他人在身體上或環境上的嚴重損傷，請勿觸摸運轉中的主旋翼／螺旋槳，並保持安全距離以避免造成危險及損壞。



CAUTION 注意 KEEP AWAY FROM HEAT 遠離熱源

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

遙控模型多半是以碳纖維、PA 纖維或聚乙烯、電子商品為主要材質，因此要盡量遠離熱源、日曬，以避免因高溫而變形甚至熔毀損壞的可能。



CAUTION 注意 SAFETY ON THE USE OF DRY CELL BATTERIES 乾電池使用安全

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

The four AA carbon-zinc batteries included with this product are one time use, they should not be charged for repetitive use. Please read and follow the guidelines below prior to use. The manufacturer cannot be held liable for accidents and damages as result of improper usage.

- Ensure proper polarity and installation method during use.
- Do not mix battery of different age or different model. Doing so may affect battery life, and even cause fire danger.
- If the product is not used for long period of time, please remove the batteries to prevent damaged caused by battery leaks. Do not use batteries which exhibits symptoms of leaks.
- Please follow local law and ordinances when disposing used batteries. Do not dispose them improperly.

如果使用不同型號的電池將可能有電池爆炸的風險。請依產品說明指示報廢電池。

本產品使用4顆3號(AA)碳鋅電池，安裝使用前請務必詳讀並遵照下列事項，本公司將不對任何不當使用所造成的損害及意外負責。

- 安裝使用時，請確認電池正負極位置及安裝方式。
- 嚴禁新舊或不同型號電池混用，以免影響電池使用壽命，甚至造成電池起火燃燒的危險。
- 產品長時間不使用時，請取出電池，以免造成電池電力流失或電池漏液而損壞主機。若電池已經有漏液情況，請勿再繼續使用。
- 廢棄電池，請依照該使用國家或地區的廢棄物清理法令回收，切勿任意丟棄以免汙染環境。



Battery leakage
電池漏液



STANDARD EQUIPMENT

標準配備

ALIGN



A10 Radio Control System
A10遙控器



A6B Receiver
A6B接收器



User Guidance
使用者須知



AA Carbon-zinc Batteries x 4
3號(AA)碳鋅電池 x 4

OPTIONAL EQUIPMENT

選配商品

ALIGN



Upgrade Cable
升級線



Simulator Cable
FMS模擬線

PACKAGE CONTENTS

包裝說明

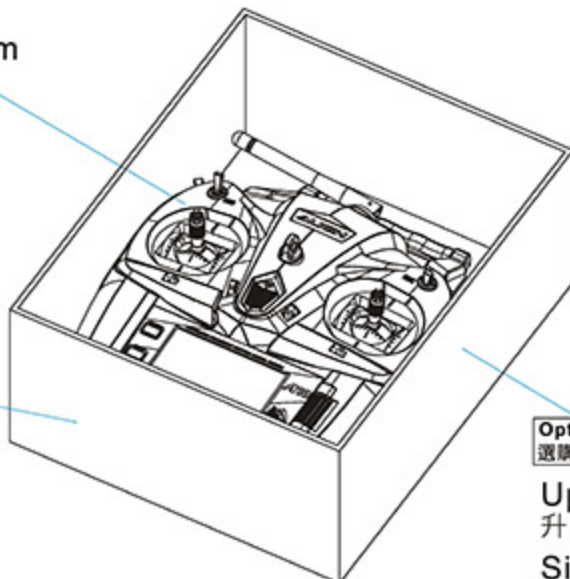
ALIGN

A10 Radio Control System
A10遙控器

A6B Receiver
A6B接收器

AA Carbon-zinc Batteries
3號(AA)碳鋅電池

User Guidance
使用者須知



Quick Finder
零件快速購



Option Equipment
選購品

Upgrade Cable
升級線

Simulator Cable
FMS模擬線

INTRODUCTION

產品介紹

ALIGN

ALIGN A10 transmitter and A6B receiver is a transmit/receive set can support up to 10 channels, and with 2.4GHz AFHDS 2A digital proportional computerized R/C system which suitable for quadcopters. With AFHDS 2A digital proportional computerized R/C system, anti-interference, low power consumption and high sensitivity receiver.

ALIGN A10遙控器和A6B接收器，為相對應的發射接收組合，遙控器具備10頻道作動，接受器最大支援可達18頻道。AFHDS是自動調頻數位系統的簡寫。它是一個高度精密的遙控信號傳播系統，這個系統能夠提供良好的距離，抗干擾能力強並且耗電量低。2.4G增強版數位自動跳頻系統，適用於多軸飛行設備。具有數位自動跳頻系統，抗干擾、低功耗和高敏感度接收。

SYSTEM FEATURES

系統特點

The AFHDS (Automatic Frequency Hopping Digital System) offering superior protection against interference while maintaining lower power consumption and high reliable receiver sensitivity. It is considered to be one of the leaders in the RC market today.

AFHDS 數位自動跳頻系統，是一個高度精密的遙控訊號傳播系統，具有抗干擾、低功耗和高敏感度接收，是目前市面上最好的系統之一。



MULTI-CHANNEL HOPPING FREQUENCY 多頻道跳頻工作

This system bandwidth ranges from 2.408GHz to 2.475GHz, divided into 160 independent channels, each system using one of 16 different working frequencies and 160 kinds hopping regularly. It initiatives to avoid co-channel interference when power-up and using multi-channel hopping frequency.

此系統工作頻率範圍為2.408GHz至2.475GHz，共分為160個獨立頻點，每套系統使用其中不同的16個工作頻點和160種跳頻規律，通過開機時間不同及跳頻規律不同和使用頻點不同，主動避開同頻干擾。



OMNI-DIRECTIONAL GAIN ANTENNA 全角度增益天線

This system uses high-efficiency full-band gain antenna, which widely covers all the frequency band, it can greatly improve the efficiency of the system transmit and receive sensitivity, to enhance the system stability and passive anti-jamming capability.

此系統使用高效率的全波段增益天線，天線帶寬覆蓋整個波段寬度，可大大提高系統發射效率及接收的靈敏度，從而提升系統的穩定性，並增強自身被動抗干擾能力。



UNIQUE ID RECOGNITION SYSTEM 獨立身份識別系統

There is unique identification ID for each remote controller and receiver. After pairing with the receiver, this ID code will be stored in the receiver; when operating the receiver, you will be asked to verify this ID code. If verified failure, it's not activated. It improves and enhances system stability to prevent RF interference.

此系統每個遙控器和接收器都具有唯一的身份識別ID，當與接收器進行對頻後，此ID碼被存在接收器內；接收器工作時，首先會驗此ID碼，若驗證失敗則不會動作。此項可加大系統的主動抗干擾能力，進而提升系統的穩定性。



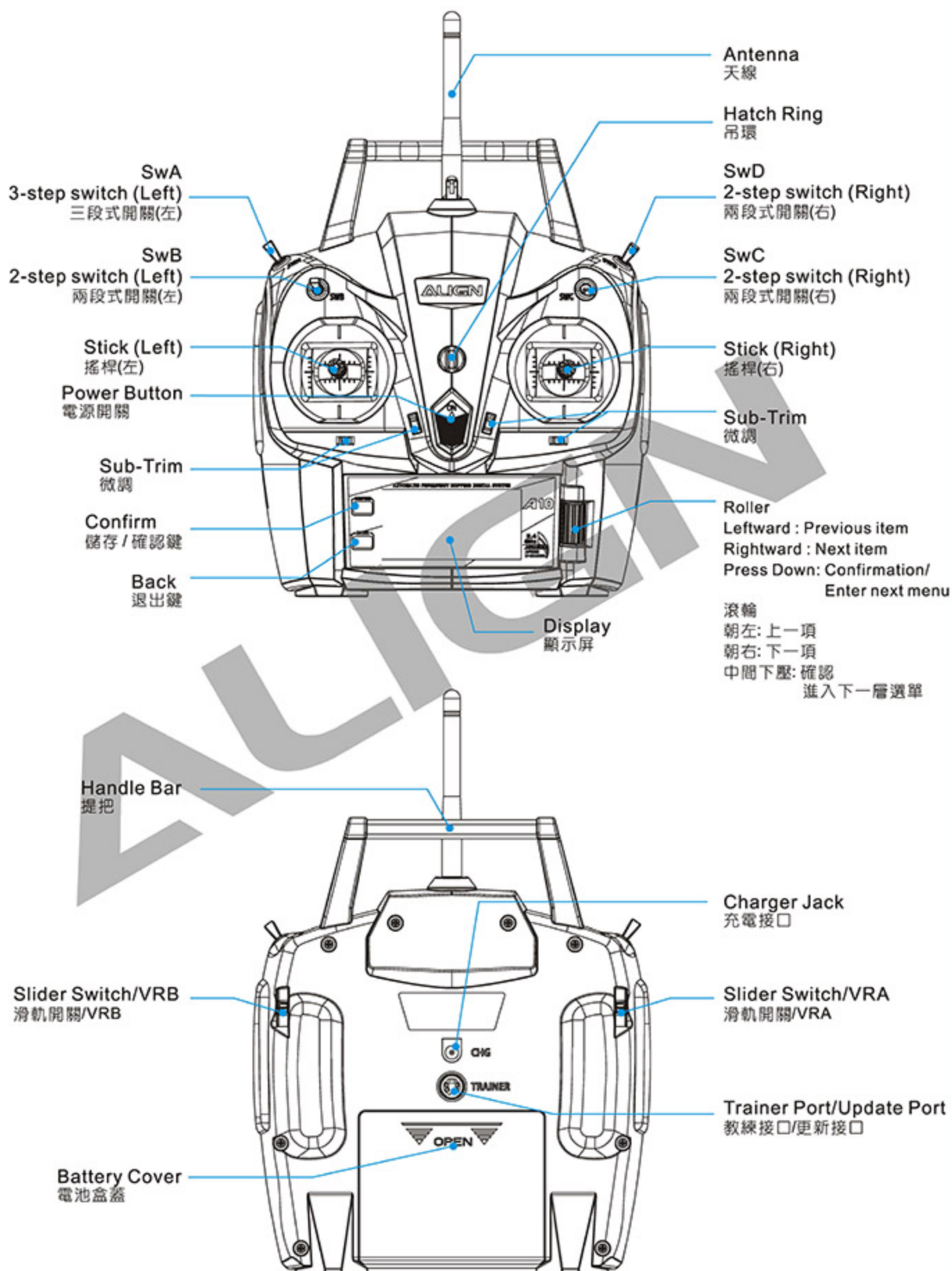
LOW POWER CONSUMPTION 低功耗

The system features with low power consumption, and highly sensitive component, while operating interval data transmission, it can effectively reduce the emission rate, extend battery lifetime, lower power consumption which is 1/10 of FM.

本系統採用低功耗、高靈敏度物件，同時使用間隔數據發送的工作方式，能有效降低發射率，延長電池使用時間，使系統功耗降低，是FM版本十分之一。

TRANSMITTER INTRODUCTION

遙控器功能介紹



TRANSMITTER ANTENNA 遙控器天線

To ensure quality signal reception the antenna should be vertical the RC model. When operating, careful to avoid pointing an antenna directly at the receiver. DO NOT grip transmitter antenna during operation as this will weaken the quality and intensity of radio transmission resulting in loss of control.

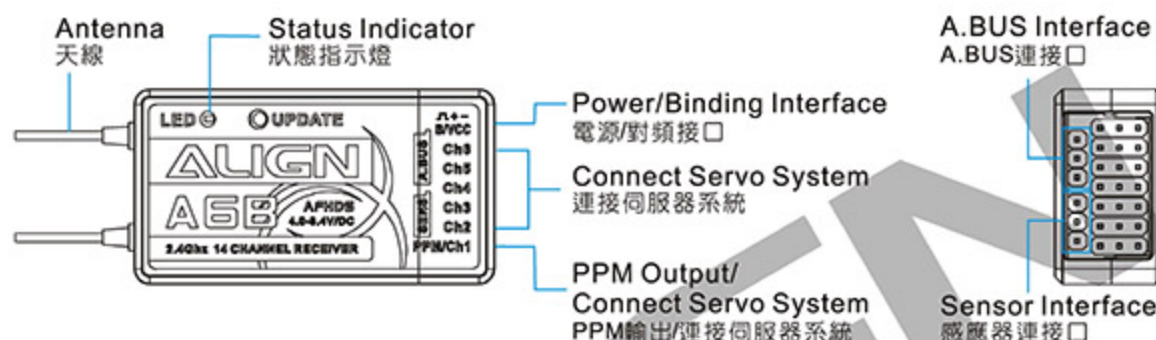
為確保訊號品質，天線應與遙控模型垂直放置。操控時不要用天線直接對著接收器。在使用過程中，嚴禁緊握遙控器天線，否將會減弱無線電傳播訊號的品質和強度，導致操控失靈及遙控模型失控的危險。

RECEIVER OVERVIEW

接收器功能介紹

RECEIVER SETUP INDICATORS

接收器各部位名稱



PPM/CH1: Connect CH1 servo or PPM output signal.

CH2~CH6: The interface connect servo, power and other accessories.

B/VCC: Using binding wire when binding; using power cord when normal operating, power range is 4.0~8.4V.

A.BUS: For output A.BUS signal.

SENS: For connecting sensor.

PPM/CH1: 連接CH1通道的伺服器或輸出PPM信號

CH2~CH6: 接口可以連接伺服器、電源或其他零件

B/VCC: 對頻時用於連接對頻線，正常操作時用於連接電源線，供電範圍值在4.0~8.4V。

A.BUS: 用於輸出A.BUS接收器接收訊號。

SENS: 用於連接各感應器。

RECEIVER ANTENNA 接收器天線

To ensure signal reception quality, please make sure to keep electronics governor and other metal parts away when installing receiver.

為確保訊號質量，安裝接收器時請盡量避開電子調速器及其他金屬零件。

STATUS INDICATOR 狀態指示燈

The status indicator shows current battery voltage and work status of the receiver.

LED off: Power disconnected.

Red solid light: Power on and working.

Fast flashing: Binding

Flashing slowly: The pairing transmitter is off or loss of signal.

狀態指示燈用於指示接收器電源以及工作狀態

燈號熄滅: 接收器電源未連接

紅色恆亮: 接收器已連接電源，並正常運作。

快速閃爍: 接收器處於對頻狀態。

慢速閃爍: 已配對的遙控器未開機，或訊號遺失。

GETTING STARTED

使用前準備

ALIGN

Before operating, make sure to follow the instruction to install the battery and connect the system.

開始操作前，請按照順序指引安裝電池、連接設備。

TRANSMITTER BATTERY INSTALLATION 遙控器電池安裝

Instruction for battery installation in the transmitter :

1. Open the battery lid.
2. Insert four fully-charged AA batteries. Use caution to ensure proper battery polarity.
3. Put the battery lid back.

請按照以下步驟安裝遙控器電池：

1. 打開電池盒蓋。
2. 將4個充滿電的3號(AA)電池裝入電池盒內，確保電池上的金屬端子與盒內的金屬端子相接。
3. 蓋好電池盒蓋。



WARNING
警告

- Battery designated for use only. (AA battery)
- Do not open, disassemble, or attempt to repair the battery.
- Do not crush/puncture the battery, or short the external contacts.
- Do not expose battery in high temperature environment or in liquid.
- Do not drop, crash or shake the battery.
- Always store the battery in a cool, dry place.
- Do not use the battery if it's damaged.
- 請使用原廠指定電池。[4個3號(AA)電池]
- 請勿打開、拆卸或自行維修電池。
- 請勿擠壓、刺穿或接觸電池的金屬端子。
- 請勿將電池於高溫環境或液體中。
- 請注意防止電池掉落、碰撞或振動。
- 請將電池存於乾燥陰涼的環境中。
- 如果發現電池損壞，請立即停止使用。

OPERATION INSTRUCTIONS

操作指引

ALIGN

After finishing installation, please follow the instructions to start set up.

準備完成後，您可以按照本章指引開始使用本系統。

POWER ON 開機

Instruction for power on :

1. Check the system and make sure :
 - a) The batteries are fully charged and installed properly.
 - b) The receiver is installed correctly and disconnect the power.
 - c) All Switch (SwA~D) is up and the throttle stick is down.
2. Slide the power button to the ON position. The screen will light, and musical tones are played indicating the radio is powered on.
3. Connect power supply to the receiver.

請按照以下步驟進行開機

1. 檢查系統狀態，確保：
 - a) 電池充滿電並且安裝正確。
 - b) 接收器安裝正確並且電源未連接。
 - c) 開關(SwA~D)全部向上並且油門搖桿向下。
2. 開啓A10遙控器電源，直到螢幕亮起，此時正確開機會有開機聲響。
3. 連接接收器電源。



WARNING
警告

The system is now powered on. Use caution and always maintain a safe distance from the model. Serious injury may result if contact is made with the model during operation.

此時系統已啟動，請謹慎操作，並與模型保持安全距離，否則可能導致模型運轉而損壞，或造成人員傷亡、財務損失等，不可預期的危險發生。

RX BINDING 接收器對頻

The transmitter and receiver are bound before leaving the factory. Please follow the instructions if you use other transmitter and receiver :

1. Turn on transmitter while simultaneously pressing "Confirm" button to enter the bind process.
2. A6B receiver connect with binding key with power, A6B receiver got into process of binding.
3. Connect power supply to other receiver port and binding successfully, then the receiver indicator LED red solid light.
4. Check to see transmitter, receiver, and servos are all working correctly. Please re-start the bind procedure, from the beginning, for any error condition.

本遙控器和接收器在出廠前已對頻成功。如果您要使用其他的遙控器及接收器，請按照以下步驟進行對頻：

1. 打開遙控器電源，同時長按住"Confirm" 儲存 / 確認鍵，遙控器則自動進入對頻程序。
2. A6B接收器接上對頻金鑰後給電，A6B接收器則自動進入對頻程序。
3. 接收器連接電源，並對頻成功正常運作，接收器燈號會顯示紅色恆亮。
4. 檢查遙控器、接收器、遙控模型是否正常工作。如有異常，請重複以上步驟重新對頻。

PRE-CHECK 操作前檢查

Before operating, please follow the instructions to check the system:

1. Check to confirm all systems are performing as expected.
2. Check reception distance for safety: the model is on the ground while one pilot observes the model. The other, pilot while holding the transmitter, walks away, increasing the distance of the transmitter from the model. Check the RC model status and mark the distance from where the model starts to lose control.

開始操作前，請執行以下步驟檢查系統狀態：

1. 檢查整個系統，確保各部位功能按照預期方式正常運行。
2. 按照如下方法確認安全距離：一名操作者手持遙控器、另一操作將遙控模型帶向遠處，檢查遙控模型狀態，記錄遙控開始失效的距離。



CAUTION
注意

- When checking reception distance for safety, in order to avoid turning on the transmitter accidentally and causing RC model's blades rotated, suggested not equip blades on helicopter in advance; or directly remove the motor wiring temporarily reducing any unnecessary accident.
- Stop operating for any error condition.
- Make sure to operate the model within the safety receiving distance.
- Other signal interference may affect signal quality.
- 紀錄遙控模型有效安全距離時，避免因誤觸遙控器造成遙控模型主旋翼轉動，建議勿先將主旋翼安裝至機身上；或直接將機身上的馬達接線暫時移除可減少不必要的意外發生。
- 測試時，若有異常狀況出現，請不要操作遙控模型。
- 操作時，務必確保遙控模型未超出安全距離。
- 周圍干擾源可能會影響訊號的質量。

USB SIMULATOR MODE USB模擬器練習

Simulator function can simulate aircraft flight conditions on computer until familiar with the operation and then fly the real model.

1. Download FMS Simulator.
2. Open the FMS Simulator and connect transmitter and computer by USB.

模擬器功能是指可於電腦上模擬搖控模型的飛行狀況，直到熟悉操作方式後再操控真正的模型。

1. 請先下載FMS模擬器。
2. 在電腦上開啓FMS模擬器，並將遙控器通過FMS模擬線連接到電腦上。



Scan QR CODE and read the detail information for A10 Transmitter FMS Simulator Installation and Instruction.

FMS飛行模擬程式安裝搭配A10遙控器設定教學

請掃描QR CODE會有完整的教學步驟，請依教學步驟完成設定後，再模擬飛行。



CAUTION
注意

FMS Simulator Cable is optional accessory and not included in A10 Transmitter package. Allow to purchase [HEP00002] FMS Simulator Cable and 4P Mini DIN adopter (Female connector) for system connection.

A10遙控器內無附“FMS模擬線”，若有需要使用FMS飛行模擬程式練習，請自行另購專用的FMS模擬線。或將[HEP00002] FMS模擬線，搭配自行另購的4P Mini DIN(母頭)轉接頭後，即可使用FMS飛行模擬程式模擬練習。

POWER OFF 關機

Follow the instruction to turn off the system :

1. Disconnect the receiver power.
2. Turn off the transmitter .

請按照以下步驟進行關機：

1. 關閉接收器電源。
2. 關閉遙控器電源。



WARNING
警告

Make sure to turn off the receiver power firstly, then turn off the transmitter to prevent any damage or serious injury.

關閉時，請務必先關閉接收器電源，再關閉遙控器，否則可能導致遙控模型損壞或造成人員受傷。

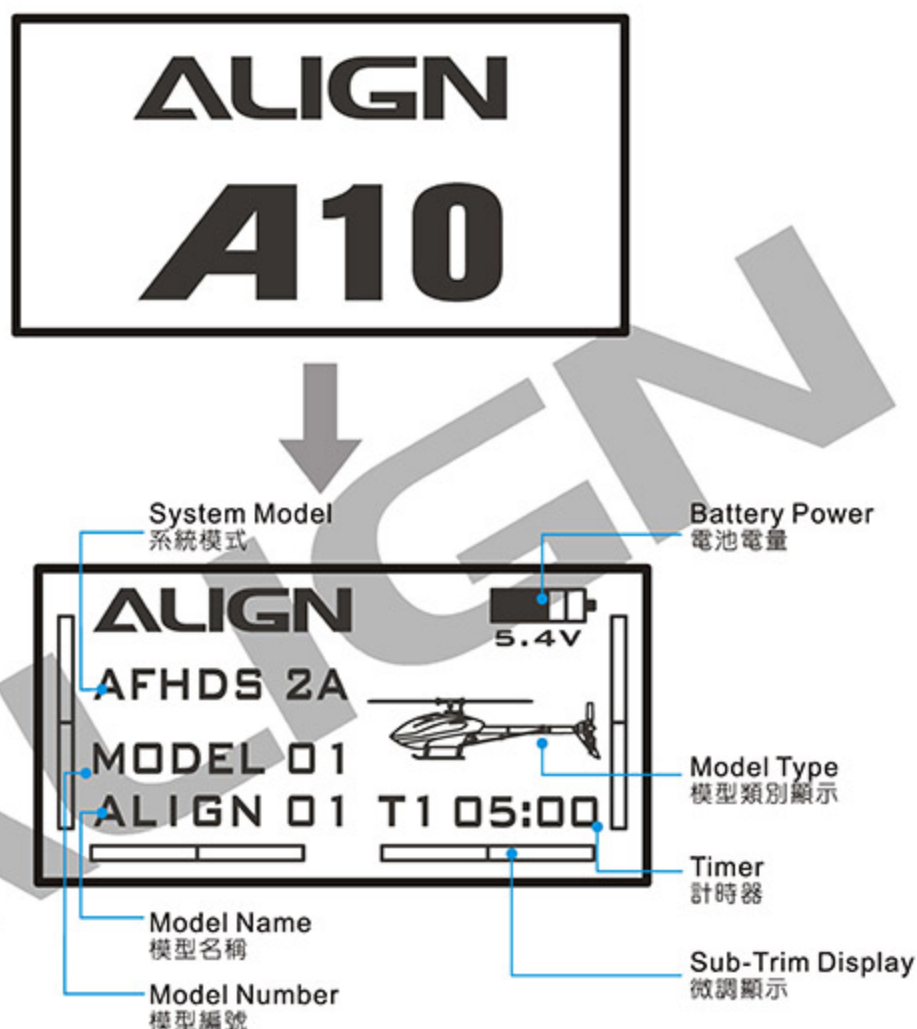
HOME PAGE

遙控器主介面

ALIGN

After power on, A10 transmitter displays the Home Page with valuable information including; model name and number, timer, connection, battery power, etc.

開機後會顯示A10遙控器版本頁面，2秒後進入首頁。首頁顯示模型相關信息，包括計時器、模型名稱、模型編號、連線顯示和電池電量狀態。



警告

For safety, all switches must be up (turned away), and the throttle is in the off position (lower throttle stick) before transmitter will turn on. If any switch or the throttle is in the incorrect position a warning sound is played and notice is displayed.

若開機未依指定方式開啓時，LED顯示器會出現警告提示並發出聲響，請將遙控器撥桿全部向上設在關閉位置並將油門搖桿拉至最低，警告提示聲響才會停止並進入首頁。

!! WARNING !!

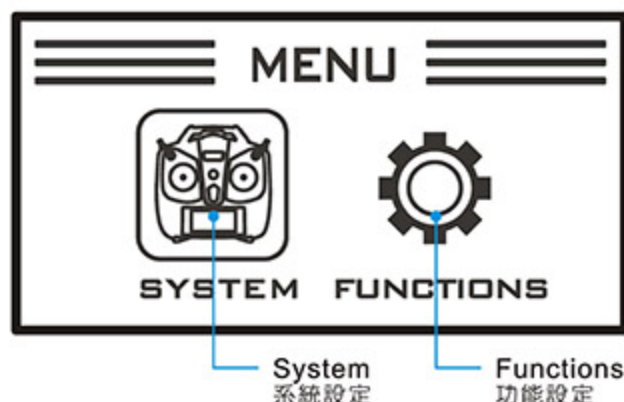
FOR YOUR SAFETY,
TURN UP ALL
SWITCHES AND
LOWER THE THROT.
TO CONTINUE

MENU PAGE

遙控器選單介面

The "Home Page" shows useful information about the model including, hold down roller to enter the "Menu"; model name and number, timer, connection TX/RX status, etc.

選單分為兩部分，系統設定和功能設定，滾輪下壓長按進入選單。方框為已選取，使用者可進入選單設定其功能。



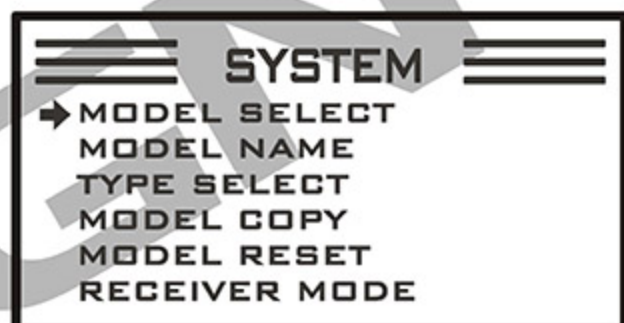
SYSTEM

系統設定

ALIGN

Hold down roller to enter the "Menu", use the roller to scroll right or left to select menu function, press roller to enter menu function.

選單頁面滾輪下壓進入系統選單，滾輪左右滾動選擇想要的功能，進入系統設定頁面。



CAUTION 注意

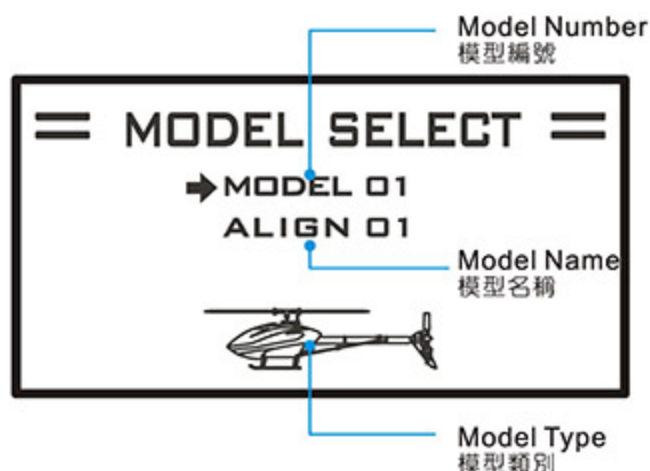
After adjusting each parameter of radio, you have to press "Confirm" button to save the setting. Failure to press "Confirm" will result in the new setting not being saved.

遙控器調整完任一介面參數時，必須按"Confirm"儲存/確認鍵，設定值才會儲存，否則設定值不會改變。

MODEL SELECT 模型選擇

Selected model: 20 different models with specific custom parameters can be saved in the transmitter allowing you to copy or instantly choose one of the other 20 models.

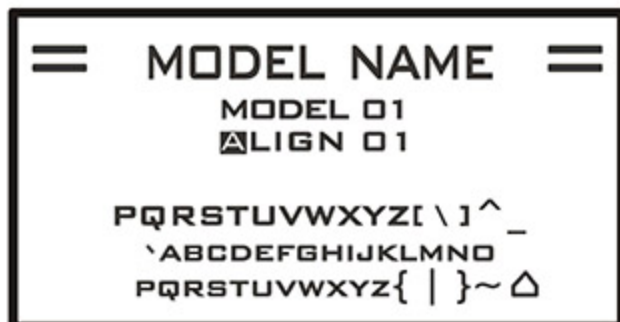
遙控器可用於記錄20組不同類型及參數的飛機模型，使用者可複製、切換不同資料。



MODEL NAME 模型命名

Model name may include up to 8 characters either alphabetic or numbers. Advance to the next character space by pressing the roller, scroll through the characters at the bottom of the screen and press the roller to select the highlighted character. Name the models to allow for easy recognition.

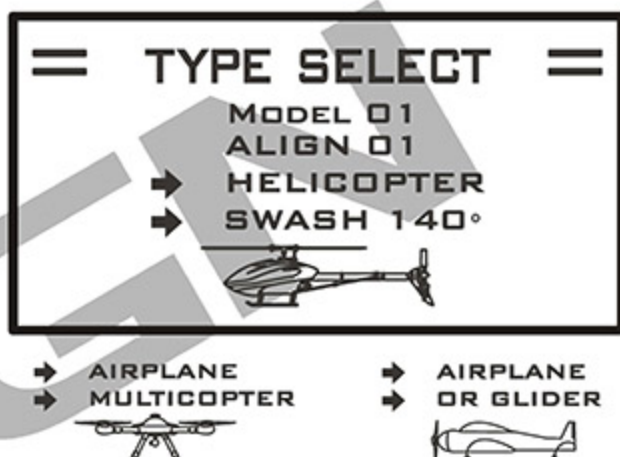
由英文及數字共8碼組成，滾輪下壓選擇需要修改的字母，滾動選鈕選擇新字母，使用者可依據個人喜好命名模型的名稱，以利辨別。



TYPE SELECT 模型類型

To select Model Type either aircraft, helicopter or multicopter. The transmitter supports airplanes (including V tail configuration), fixed and variable pitch helicopters and CCPM (Collective and Cyclic Pitch Mixing) 90°, 120°, and 140°.

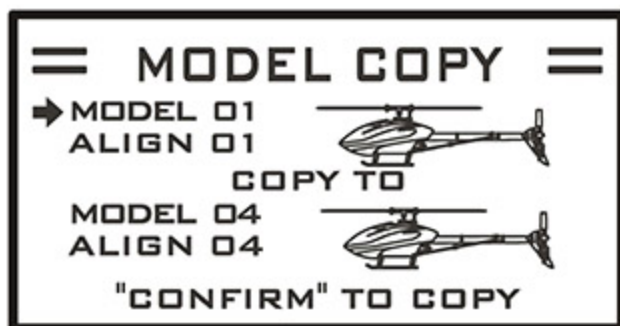
自行設定選擇直昇機、飛機或多軸共三種不同選項的模型類別；支援飛機模式(包括V型尾翼結構)，固定螺距和傳統十字盤的直昇機以及CCPM(直昇機螺距混控系統) 90°、120° 和 140°。



MODEL COPY 模型複製

To copy one mode settings to another. The original target model settings will be deleted and replaced with the source model settings. Since this command is destructive, a request to copy is must be confirmed.

將選定的模型的資料複製到目標模型，目標模型的原始資料將被永久刪除，並且被目標源的模型設置所代替，指令確認後無法修復，請務必再次確認是否執行該操作。



注意

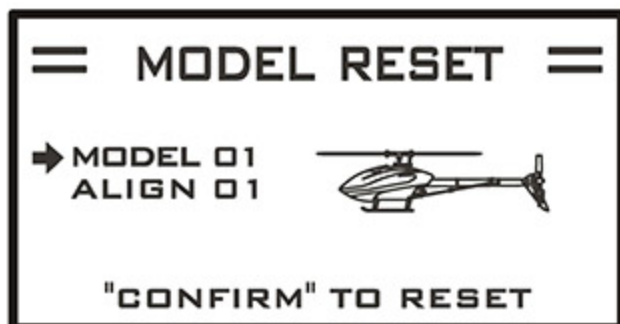
After adjusting each parameter of radio, you have to press "Confirm" button to save the setting. Failure to press "Confirm" will result in the new setting not being saved.

遙控器調整完任一介面參數時，必須按"Confirm"儲存/確認鍵，設定值才會儲存，否則設定值不會改變。

MODEL RESET 模型重置

This function will reset the current model to default settings. Other models are not affected. This function is useful when there may be a model configuration issue, and a reset to default setting is necessary to begin a fresh start.

將目前模型選擇紀錄的參數恢復到原廠設定，其他儲存的模型資料並不會被修改。設置調亂時可使用該功能進行初始化設置。



CAUTION 注意

After adjusting each parameter of radio, you have to press "Confirm" button to save the setting. Failure to press "Confirm" will result in the new setting not being saved.

遙控器調整完任一介面參數時，必須按"Confirm"儲存/確認鍵，設定值才會儲存，否則設定值不會改變。

RECEIVER MODE 接收模式

The ALIGN A6B receiver offers two receiver modes: Mode 1: Where CH1~CH6 receiver channels correspond to CH1~CH6 output channels or Mode 2: Where CH1~CH6 receiver channels correspond to CH9~CH14 output channels. Select the A6B receiver mode which best suits the user's application.

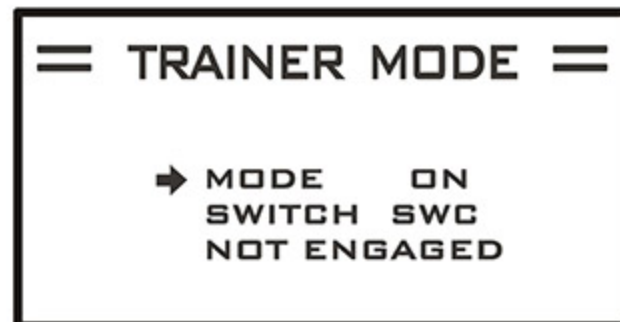
搭配ALIGN A6B接收器使用，可選擇A6B的兩種接收模式。模式1：接收器CH1~CH6插座對應頻道1~頻道6的輸出；模式2：接收器CH1~CH6插座對應頻道9~頻道14的輸出。可依使用者所需來選擇A6B接收的接收模式。



TRAINER MODE 教練模式

Connect 2 transmitters together using a dedicated cable connected to the back interface. As soon as the trainer switch is turned off, the student transmitter regains control. To be effective, the 2 transmitters have to use the same radio mode (see below).

初學者可透過教飛線連接兩台遙控器一同控制。一台遙控器為教練控制，另一台遙控器為初學者學生控制。教練可通過自己的遙控器控制模型。當教練關閉開關時，初學者則恢復控制權。



STUDENT MODE 學生模式

All mode settings are bypassed and the sticks position is sent directly to the instructor's transmitter. At that time, the student transmitter must not control any model directly and any receiver bound to the trainer transmitter must be turned off.

學員機上所有資料都被鎖定，操縱杆的資料直接由教練機定義。而且學員機無法直接控制任何模型，任何與教練機連線的遙控器必須關閉。學員機上所有的設置資料將被鎖定，教練機和學員機共用教練機上的設置資料防止教練機關閉時教練機和學員機的脈衝干擾。

= STUDENT MODE =
THIS WILL ENTER
STUDENT MODE
ALL SETTINGS
WILL BE BYPASSED
PRESS "CONFIRM"
TO PROCEED



注意

After adjusting each parameter of radio, you have to press "Confirm" button to save the setting. Failure to press "Confirm" will result in the new setting not being saved.

遙控器調整完任一介面參數時，必須按"Confirm"儲存/確認鍵，設定值才會儲存，否則設定值不會改變。

STICKS MODE 搖桿模式

Support four different stick modes. The 4 first channels are mapped to the selected sticks according to your flying habits (left or right handed for example).

此系統支援MODE 1~MODE4共四種搖桿模式，設置完成後對應搖桿會自動切換，使用者可根據飛行習慣自行選擇。

= STICKS MODE =
MODE 2

CH3 CH2
CH4 CH1

MODE 1 模式1 	MODE 2 模式2
MODE 3 模式3 	MODE 4 模式4

A10 TRANSMITTER MODE 1 AND MODE 2 CONVERSION INSTRUCTION

A10遙控器-模式1~2互換教學

A10 transmitter Mode 1 and
Mode 2 Conversion Instruction

A10遙控器-模式1~2互換教學



While this manual provides instructional information and references for this product, Align also provides A10 transmitter Mode 1 and Mode 2 conversion instruction, please refer to following instruction video to convert it setp by step to make sure your safe and proper use of this product. <http://www.align.com.tw/A10>

說明書詳細介紹了本產品的使用說明，供您設定時參考。另外，亞拓提供A10遙控器-模式1~2互換教學，請依循教學影片中的步驟拆解更換安裝，並利用下方連結處觀看，以確保您是安全且正確的使用本產品。網頁瀏覽<http://www.align.com.tw/A10>

STICKS ADJUST 搖桿校正

Stick calibration is used to correct the neutral point and the maximum or minimum joystick travel or slide switch. Enter this menu option and move the stick or slide switch to the maximum and minimum position and return to center, press "Confirm" to save stick calibration.

搖桿校正可以校正遙控器搖桿與滑軌開關的中立點與最大最小行程。進入此頁面後，將搖桿與滑軌開關打到最大最小行程後，回復至中立點位置，最後按"Confirm"儲存/確認鍵完成校正程序。



CAUTION
注意

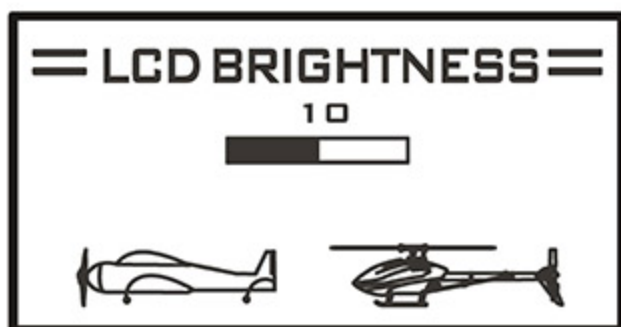
After adjusting each parameter of radio, you have to press "Confirm" button to save the setting. Failure to press "Confirm" will result in the new setting not being saved.

遙控器調整完任一介面參數時，必須按"Confirm"儲存/確認鍵，設定值才會儲存，否則設定值不會改變。

LCD BRIGHTNESS 顯示屏亮度

Adjust LCD brightness, in sunlight, use a high-brightness backlight.

調整顯示屏的亮度，在陽光下可以使用高亮度的背光。



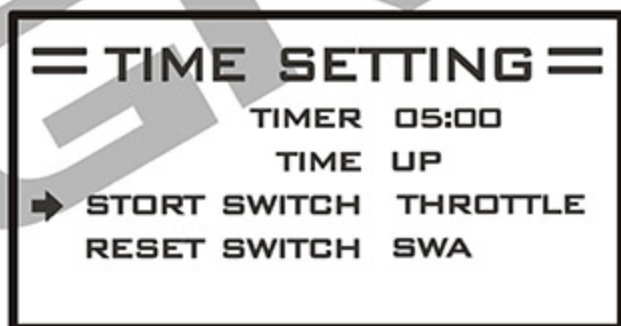
The screen brightness will affect battery life. Increasing the screen brightness will shorten battery life.

顯示屏亮度越亮，遙控器電池持續的時間越短。

TIME SETTING 時間設定

Time setting has count down and count up mode allowing you to set up the switch of start or reset.

計時模式可分倒數計時或正數計時，可依使用者操作習慣設定開始開關及重置開關。



LANGUAGE SELECT 語言選擇

Select appropriate user language interface. Default Language interface is English. Enter setup to select a different language.

介面可用多種語言顯示，選擇您要的語言。預設為英文介面，可進入此項目更改設定。



FIRMWARE VERSION 固件版本

Current firmware version and the update date.

顯示目前遙控器固件版本及更新日期。

= FIRMWARE VER. =

ALIGN A10

18-DEC-2017
VERSION 1.0.01

FIRMWARE UPDATE 固件更新

1. After the update finishes the A10 radio will reboot indicating firmware has been updated. The following warning is displayed "This will enter firmware update mode and halt other functions press "ok" to proceed." Press the roller to proceed with the firmware update.
2. To perform a firmware update refer to page 29.

1. 主程式版本更新時，所有功能將暫停，更新完成後 A10 遙控器會重新開機，代表主程式已更新完畢。
2. 主程式更新方式請參閱第30頁。

= FIRMWARE UPDATE =

THIS WILL ENTER
FIRMWARE UPDATE
MODE AND HALT
OTHER FUNCTIONS
PRESS "CONFIRM"
TO PROCEED



注意

After adjusting each parameter of radio, you have to press "Confirm" button to save the setting. Failure to press "Confirm" will result in the new setting not being saved.

遙控器調整完任一介面參數時，必須按"Confirm"儲存/確認鍵，設定值才會儲存，否則設定值不會改變。

FACTORY RESET 恢復原廠設定

System can be reset to default setting. This will reset all parameters to their factory default press "Confirm" to proceed.

將所有參數恢復至原廠預設值。

請按"Confirm"儲存/確認鍵繼續執行。

= FACTORY RESET =

THIS WILL RESET
ALL PARAMETERS
TO THEIR
FACTORY DEFAULT
PRESS "CONFIRM"
TO PROCEED



注意

1. All the setting value will be removed after resetting to default setting.
2. After adjusting each parameter of radio, you have to press "Confirm" button to save the setting. Failure to press "Confirm" will result in the new setting not being saved.

1. 參數恢復原廠設定值後，您所有設置的參數將會遺失。
2. 遙控器調整完任一介面參數時，必須按"Confirm"儲存/確認鍵，設定值才會儲存，否則設定值不會改變。

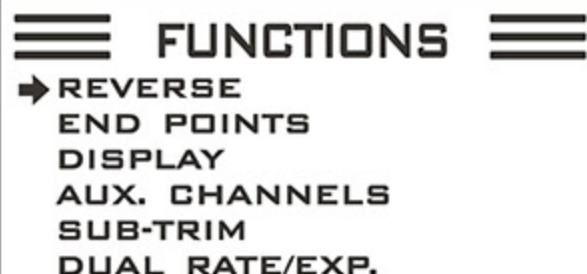
FUNCTIONS

功能設定

ALIGN

Press the roller down to display menu. Scroll the roller to the right to highlight functions setup and press roller to display function options. Scroll either right or left using the roller to move to different sub-functions. Press the roller to enter the selected sub-function.

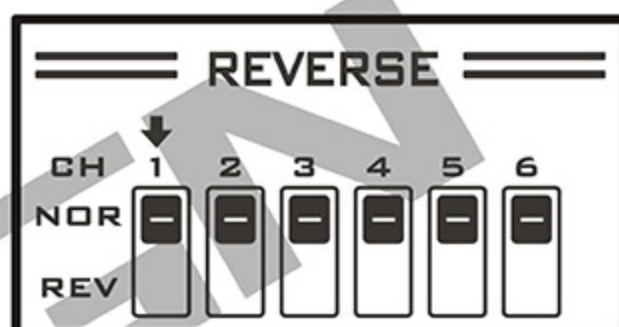
滾輪下壓進入選單，滾輪左右滾動選擇想要的功能，按滾輪下壓確認。進入功能設定頁面。



REVERSE 正反向

Reverse provides the ability to change each channel (servo) direction. It may be necessary to change the servo direction based upon the specific model requirements.

此功能針對不同類型的伺服器與其頻道輸出方向或是各種機種的安裝方式不同，調整伺服器及頻道的輸出方向，可使模型上所有伺服器的方向透過此設定改變。



Always double check all servos to confirm radio stick movement is working correctly based on the model.

操控時，請務必再次確認所有伺服器的動作方向與操控方向一致。

END POINTS 舵機行程量

End Points for all channels (servos) can be adjusted to improve flight control based on the model.

1. The end point can be adjusted from 0%~120%. By setting the maximum end point, this can protect the servo from excessive binding which can damage the servo.
2. Press the roller to select the channel and scroll to change value.

調整各種伺服器及頻道範圍的大小量，以便伺服器輸出及頻道數據輸出符合結構設計及性能的要求，達到最佳的控制效果。

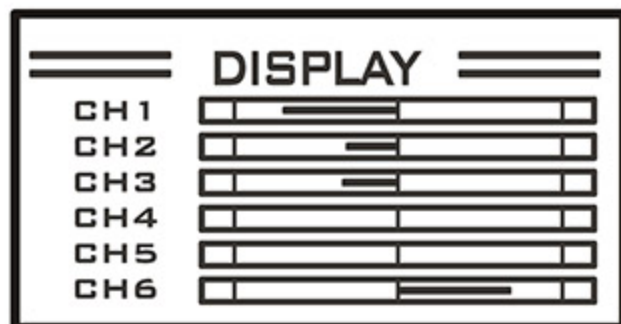
1. 最大行程量限制點可以從0%~120%之間調整。設定此限制點後，即使混控等操作使得伺服器行程量增加，伺服器的動作也不會超越限制點，進而保護伺服器的鎖定及連接作用。
2. 滾輪下壓選擇頻道，根據需要和使用者的模型結構移動對應的撥動開關或者旋鈕調整每一個頻道的數值範圍的大小。

END POINTS			
CH 1	➔ 100%	100%	
CH 2	100%	100%	
CH 3	100%	100%	
CH 4	100%	100%	
CH 5	100%	100%	
CH 6	100%	100%	

DISPLAY 頻道顯示

Display shows movement for CH1~CH10; this can be used to help correctly configure the radio for a model.

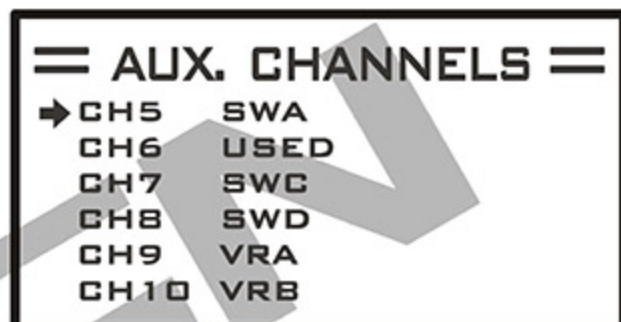
顯示十個頻道的操控模型實際狀況。學生模式在沒有啟動的狀況下，此處顯示的是本機所有設置的實際狀況。



AUXILIARY CHANNELS 輔助頻道

After model assembly and basic settings setup, auxiliary channels CH5~CH10 can be set up and assigned on switch, dial or stick for functional changes. For example; SWA~SWD, VRA, VRB.

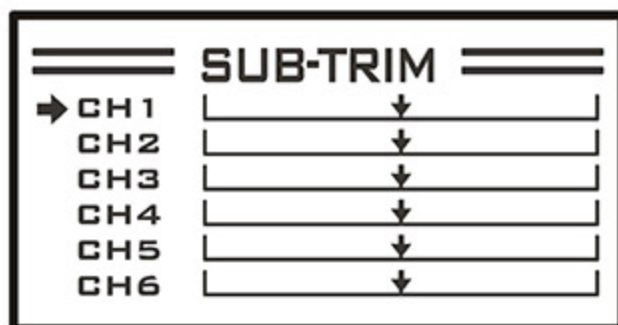
當模型裝配調整基本完成後，若還有發現些許結構功能沒有設置，可透過輔助頻道來進行調整完成。輔助頻道當飛行結構完成後，為剩下的頻道選擇一個開關、選鈕或搖桿作為輔助頻道。預設為自定義頻道為CH5~CH10。可設定開關為SWA~SWD、VRA、VRB。



SUB-TRIM 微調

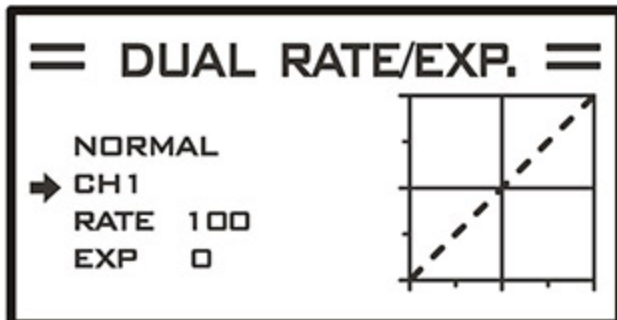
Sub-trim can be used on CH1~CH10 to change the channel/servo neutral position. For example; if the RC model drifts slightly, the sub-trim can correct this flight issue. Please, confirm it is acceptable to use sub-trim with the flybarless controller before making any adjustment for a helicopter model.

微調功能用來調整CH1~CH10頻道/伺服器的中立點，當伺服器因結構固定的角度差無法調整時，可透過微調調整每個頻道對應伺服器的中立點。例如：如果遙控模型的中立點位置輕微偏移，可透過微調能來修正該問題。



DUAL RATE / EXPONENTIAL 大小動/動作曲線

DUAL RATE : Commonly abbreviated as "D/R", dual provides the ability to change the travel distance of a channel (servo) thus affecting the overall travel of the servo(s). Decreasing the percentage value for a given servo will reduce the travel amount of the channel respectively. For example, if the rudder of the helicopter travels 1/2" at the high rate and maximum stick input, and a value of 50% is input for the low rate when the switch is moved to the low rate position, the servo moves precisely half as far per stick position. example, if the rudder control input is all the way deflected, the maximum travel is now 1/4".



EXPONENTIAL: Commonly abbreviated as "EXP" is used to adjust the sensitivity of center stick the neutral point. Adjusting "EXP" does not affect the travel range. For example: When EXP set at positive, the neutral point will be sensitive and very reactive. When EXP set at negative, the neutral point will be less sensitive and slow usually making the model easier to fly.

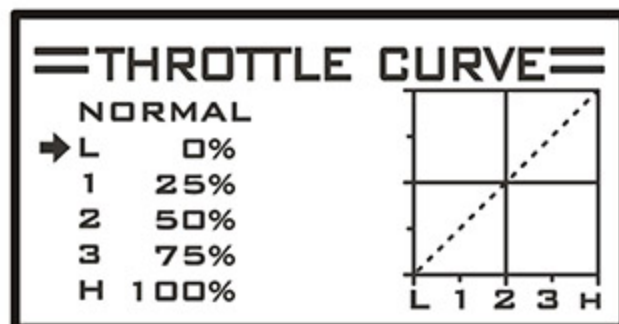
大小動：D/R是大小動的縮寫簡稱，這功能可改變伺服器的行程量，然後影響伺服器的輸出。因此，減少伺服器雙重比率的百分比將會減少頻道輸出的行程量。例如：如果開關在高比率位置且撥桿為最大輸入時，對應的尾舵的輸出行程為1/2"(英吋)，當開關切到低比率且數值設定為50%，則尾舵的行程就會變成原來的一半。在這個例子中，開關切換到低比率時，尾舵的最大行程會變成1/4"(英吋)。

動作曲線：簡稱EXP，主要影響動作中立點位置的輸出反應，EXP不會影響到伺服器的行程量大小，當EXP數值設定為"+"時，該動作中立點附近反應會變快變靈敏；反之，設定為 "-"時該動作中立點附近反應會變緩慢。

THROTTLE CURVE 油門曲線

Allows the ability to adjust the Throttle Curve based on the model and flight requirements.

The throttle curve has five adjustable points; L=0%, 1=25%, 2=50%, 3=75%, H=100% throttle stick movement. Each point can be adjusted from 0%~100% for throttle range based on motor, pitch curve, and flight requirements.



此功能用來調節油門的操作曲線，使搖桿動作與油門的相互協調，達到理想之油門輸出反應。

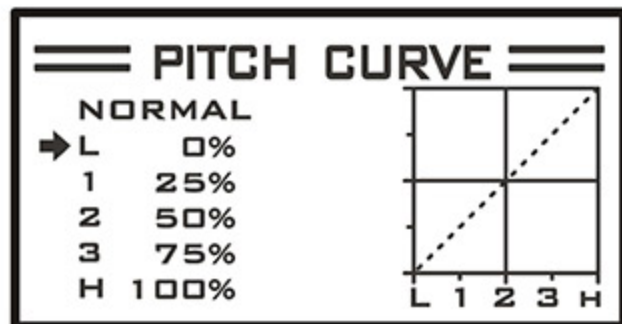
油門曲線提供5個主要位置點可調整，分別對應油門搖桿的最低、1/4、1/2、3/4、最高位置，每點可調整油門範圍為0%~100%，依照馬達引擎特性與螺距曲線(直昇機)搭配，匹配最佳油門曲線位置。

PITCH CURVE 螺距曲線

Suitable Models
適用機型



Pitch Curve is used for a Helicopter model. Offer five adjustable points; L=0%, 1=25%, 2=50%, 3=75%, H=100% stick travel. Each point can be adjusted from 0%~100% based on throttle range and desired pitch requirements of the helicopter model.



此功能適用於直昇機模式。螺距曲線提供5個主要位置點可調整，分別對應油門搖桿的最低、1/4、1/2、3/4、最高位置，每點可調整油門範圍為0%~100%，依照您所想要的螺距輸出並匹配油門曲線來設定。

SWASH AFR 十字盤調整

Suitable Models
適用機型



Suitable for a Helicopter model. Allow adjusting the Aileron, Elevator, and Pitch travel range of the swashplate. For example; set a negative value to reverse the swashplate direction.



適用直昇機模式。此功能是設置十字盤副翼、升降和螺距的行程動作量。若需要使十字盤動作反向，必須調整數值使數值為負值。

MIX 混控

The mix function can be used to create a channel mix. For example, it allows the setup of Aileron to Rudder to counteract undesirable roll of aircraft with Rudder and Aileron. The mix function is not used on a helicopter model.

混控功能可用於設置通道之間的混控關係，例如：您可以設置副翼與方向的混控關係，實現遙控模型轉變過程中，方向舵伺服器自動變化。

MIX	
➔ MIX #1	
MIX IS	OFF
MASTER	CH1
SLAVE	CH2
POS. MIX	50%
NEG. MIX	50%
OFFSET	0%

Master : Main Channel Setup.

Slave : Slave Channel Setup.

Pos. Mix : Allows the setup of the available controlling range between the master channel and Slave channel. If max. mix value is set to 50%; the slave channel will automatically be set to 50% when master channel value is changed to 100%.

Neg. Mix : Allows the setup of the available controlling range between the master channel and Slave channel. If min. mix value is set to 50%; the slave channel will automatically be set to -50% when master channel value is changed to -100%.

Offset : Allows the ability set a value to slightly correct drift.

Master : 設置主控通道。

Slave : 設置從控通道。

Pos : 設置主控通道高端對從控通道的的影響範圍：若高端混控設置到50%，當主控通道移動到 100%時，從控通道同時移動到50%。

Neg : 設置主控通道低端對從控通道的的影響範圍：若低端混控設置到50%，當主控通道移動到-100%時，從控通道同時移動到-50%。

Offset : 為從通道添加偏移值，負值可使從通道向低端偏移。

ELEVON 升降輔助翼

Suitable Models
適用機型



Suitable for Airplane. Aileron function is for Tilt and Roll flight adjustment.

適用飛機模式。升降副翼功能可同時實現飛機俯仰和滾轉的動作。左右升降副翼同向偏轉時可以有升降舵的作用；左右升降副翼反向作動時可以有副翼舵的作用。

ELEVON	
➔ ELEVON	OFF
CH1	50%
CH2	50%
CH1 <= CH1	
CH2 <= CH2	

V TAIL V型尾翼

Suitable Models
適用機型



Suitable for V Tail Airplane. Allows adjust to CH1 Aileron and CH2 Elevator Mix function.

適用飛機模式。使用具有V型尾翼結構的模型，打開此功能可在此設置副翼(CH1)和升降舵(CH2)的混控比例。此功能是設置副翼、升降和螺距的比例。

V TAIL	
→ V TAIL	OFF
CH2	50%
CH4	50%
CH2 <= CH2	
CH4 <= CH4	

GYRO 尾舵感度

Suitable Models
適用機型



Suitable for Helicopter. Allows adjust of CH5 Rudder Gyro gain for specific flight modes such as Normal, Hovering, and Idle Up.

適用直昇機模式。使用者可在此功能中打開CH5的尾舵陀螺儀感度功能，可設定一般模式和懸停模式的數值。

GYRO	
→ GYRO	NONE
MODE	NONE
VALUE	2%

GOVERNOR 定速設定

Suitable Models
適用機型



For Helicopter models with a governor function to set the head speed or engine speed. A governor sensor is required to use this feature.

適用直昇機模式。針對有搭配定速器功能的直昇機，鎖定主旋翼/引擎轉速。定速設定必須搭配定速器一起使用。

GOVERNOR	
→ GOVER.	OFF
MODE	NORMAL
VALUE	50%

SWITCHES ASSIGN 開關設定

Assign Flight Mode switch for normal/3D.
Assign the Throttle Hold switch.

此功能為分配飛行模式(一般、特技)油門鎖定的開關。

SWITCHES ASSIGN	
→ D/REXP	SWA
NORMAL	
IDLE MODE	SWB
NORMAL	
THRO.HOLD	SWD
OFF	

THROTTLE HOLD 油門鎖定

Set the Throttle Hold value.

此功能可以啟動油門鎖定功能並設置油門鎖定值。

= THROTTLE HOLD =

→ HOLD OFF
VALUE 50%
NOT ENGAGED

THROTTLE CUT 油門熄火

Suitable Models
適用機型



Throttle Cut function is used for either a fuel powered helicopter or airplane. When setting correctly a switch will cut off the engine.

適用直昇機/飛機模式。此功能為設定引擎熄火的開關。

= THROTTLE CUT =

→ ACT OFF
POS 17%
SWITCH SWA

FAILSAFE 失控保護

To protect the RC model and operator when receiver loose signal the system will restore factory defaults.

Failsafe menu shows a list of ten channels. If the channel is marked [OFF], it represents the model will fly after the signal is lost. On the other hand, if it shows 1%, the servo will activate to the corresponding percentage, allowing the model to fly in a pattern based on servo percentage settings.

此功能用是一個安全保護功能，當接收器失去訊號或中斷時，伺服器或飛機控制系統將恢復至預設位置。

失控保護選單下顯示十個頻道的列表，如果在頻道後顯示[OFF]，表示模型在遺失訊號後，該頻道的伺服器會繼續保持失控前的位置繼續運行，如果顯示一個百分比，則表示遙控模型在遺失訊號後，該頻道的伺服器會移動到百分比對應的位置，並保持在該位置繼續運行。

== FAILSAFE ==

→ CH1 OFF
CH2 OFF
CH3 OFF
CH4 OFF
CH5 OFF
CH6 OFF
CH7 OFF

A10 TRANSMITTER FIRMWARE UPDATE

A10遙控器主程式下載更新

ALIGN

A10 transmitter default program is the latest version, please feel at ease to use. You can also link to ALIGN website to get the latest version and the latest news.

A10遙控器，在出廠前已是最新版本，請安心使用。您也可以連結至亞拓網站查詢，隨時更新亞拓發佈的最新版本及各項最新訊息。

1. PC firmware update: Download A10 transmitter update firmware referring to below link: <http://www.align.com.tw/A10>

電腦主程式更新：下載A10遙控器主程式更新安裝檔，請至下列網址
<http://www.align.com.tw/A10>



Scan QR CODE and read the detail information for A10 Transmitter Firmware Update and Instruction.

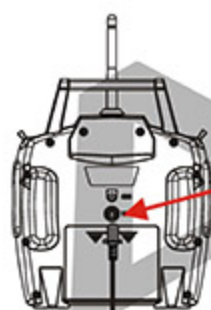
A10遙控器主程式下載更新
請掃描QR CODE會有完整的教學步驟，請依教學步驟完成設定安裝。

2. Before upgrade A10 transmitter, please install firmware of upgrade cable (optional equipment). After decompress file, select driver installer (32-bit or 64 bit) according to your installation system.

A10遙控器升級前請先安裝升級線(選購品)的軟體，將壓縮檔解壓縮後，依您的安裝系統位元(32位元或64位元)選擇安裝版本。

3. Slide the A10 transmitter power button up to power on the radio. Connect Upgrade Cable to the computer after the radio's power is on.

開啓A10遙控器電源，直到螢幕亮起，此時開機會有開機聲響。確認開機後將升級線連接至電腦。



Slide the power button to the ON position. The screen will light, and musical tones are played indicating the radio is powered on.

開啓A10遙控器電源，直到螢幕亮起，此時正常開機會有開機聲響。

Option Equipment
選購品

Upgrade Cable
升級線



注意

Please double check upgrade cable is inserted correctly, or can't be upgraded completely.

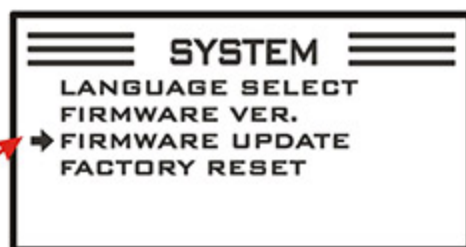
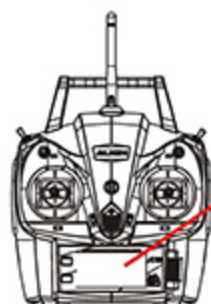
請再次檢查升級線是否安插正確，沒有確實安插則無法下載更新。

Firmware version is shown according to your real updated version. The illustration is for reference only.

安裝版本會依您實際更新之版本呈現，圖片僅供示範參考用

4. Enter in A10 transmitter 『SYSTEM』 page, select 『FIRMWARE UPDATE』

進入A10遙控器『系統設定』頁面中選擇『固件更新』。



5. The window Firmware update notice will be popped out and please press "Confirm".

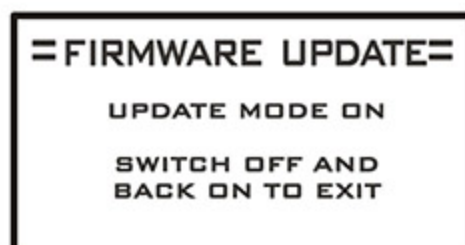
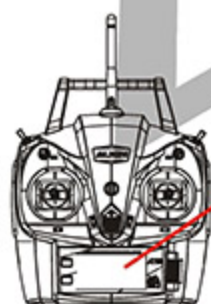
A10遙控器會跳出『將進行更新模式，並暫停其他功能，按"確認"繼續執行』畫面，點按"Confirm"儲存/確認鍵。



Press "Confirm".
點按 "Confirm" 儲存 / 確認鍵

6. After press "Confirm", the transmitter screen will stay in 『This will enter firmware update mode and halt other functions』

點按"Confirm"儲存/確認鍵後，A10遙控器畫面會停留在『將進行更新模式，並暫停其他功能』。



CAUTION
注意

Please don't pull out upgrade cable or power off A10 transmitter to prevent man-made breakdown or unexpected mistakes due to update failure.

此時請勿拔除升級線或關閉A10遙控器電源，避免因更新失敗造成遙控器人為故障或發生不可預期的錯誤。

7. Open A10 transmitter upgrade software, select COM port. After select serial port COM port, click 『Update』 to the next installation. The progress status will be shown at the bottom of the page. After firmware update is completed, A10 Transmitter will be powered on again.

開啓開啓A10遙控器升級軟體，請選擇串口操作COM的數值。選取串口操作COM完成後，點選『Update』進行安裝。安裝後，『Update』下方會顯示安裝進度，安裝完成後，A10遙控器會重新開機。



Before installation, please halt or close antivirus firstly to prevent misjudged as scumware and removed by antivirus when decompressing file.

安裝前請先停用或選擇關閉掃毒軟體，避免因解壓縮執行檔時，掃毒軟體誤判為惡意或潛在垃圾軟體而強行移除。

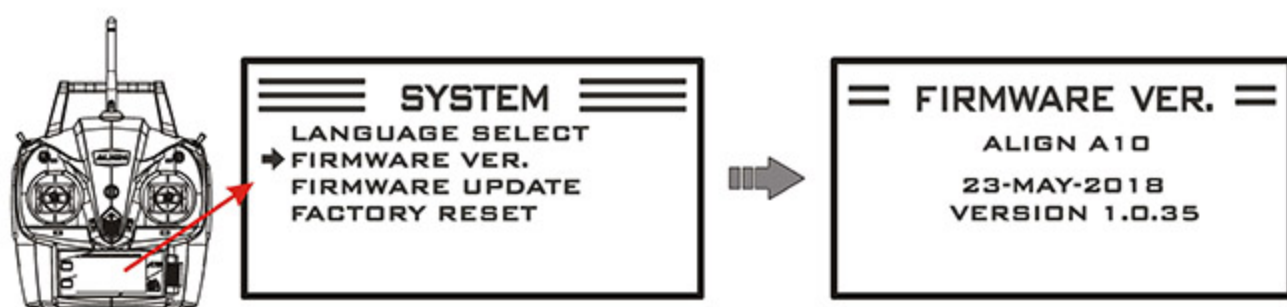
8. Power on the radio, screen will light up and power on music is played. A10 Transmitter monitor will switch to home page, then the firmware update completed.

A10遙控器重新開機後，直到螢幕亮起，此時開機會有開機聲響。A10遙控器畫面會由原本停留在固件更新畫面變成開機後的畫面，代表升級更新完成。



9. Enter in A10 Transmitter 『SYSTEM』 page and select 『FIRMWARE VER.』 to confirm the new version is completely installed

進入A10遙控器『系統設定』頁面中選擇『固件版本』，即可確認是否已安裝更新版本。



PRODUCT SPECIFICATION

產品規格

ALIGN

TRANSMITTER SPECIFICATION(A10) 遙控器規格(A10)

Contents 內容	Specifications 規格
Output Channel 通道數量	10 channels
Model Type 適用機型	Helicopter/ Multicopter/ Aircraft 直昇機/多軸機/固定翼
RF Range 頻率範圍	2.408~2.475GHz
RF 發射功率	<20dBm(For EU)
System Mode 系統模式	2.4G system: AHFSS
Power Input 輸入電源	6V(1.5V AA x4)
Display 顯示方式	128x64mm
Transmit Distance 發射距離	In open space without interference < 1000 meters 空曠無干擾地面距離：< 1000米
Antenna length 天線長度	26mm (dual antenna) 26mm(雙天線)
Weight 機身重量	485g
Dimension: (L x W x H) 尺寸	275x187x102mm
Certificate 認證	CE,FCC

RECEIVER SPECIFICATION (A6B) 接收器規格(A6B)

Contents 內容	Specifications 規格
Output Channel 通道數量	14 channels
RX Sensitivity 接收器靈敏度	-105dbm
RF Range 頻率範圍	2.408 ~ 2.475 Ghz
System Mode 系統模式	2.4G system: AHFSS
Power 電源標準	4.0~8.4V DC
Receives Distance 接收距離	In open space without interference < 1000 meters 空曠無干擾地面距離：< 1000 米
Weight 整機重量	14g
Dimension: (L x W x H) 尺寸	46.7x25.5x13.6mm
Certificate 認證	CE,FCC

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祝福您有一個愉快的飛行體驗。



ALIGN Flight Safety 亞拓飛行安全宣導

<http://www.align.com.tw/flysafe-en/>



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ALIGN Multicopter 亞拓多軸飛行機

<http://www.align.com.tw/multicopter-en/>



ALIGN FPV Racing Quad 亞拓穿越機

<http://www.align.com.tw/multicopter-en/mr25/>



ALIGN Website 亞拓官網

<http://www.align.com.tw>



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<http://shop.align.com.tw/index.php?language=en>



ALIGN Quick Finder 亞拓零件快速購

<http://shop.align.com.tw/partfinder.php?language=en>



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<https://www.facebook.com/Align-Corporation-194493419543/?ref=mf>



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<https://instagram.com/aligncorporation/>



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https://www.youtube.com/channel/UCaPj_K5DNo7HSmP1eytUvMQ



ALIGN Youku

<http://i.youku.com/u/UMTQ0NjEwNjc2Ng==>

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