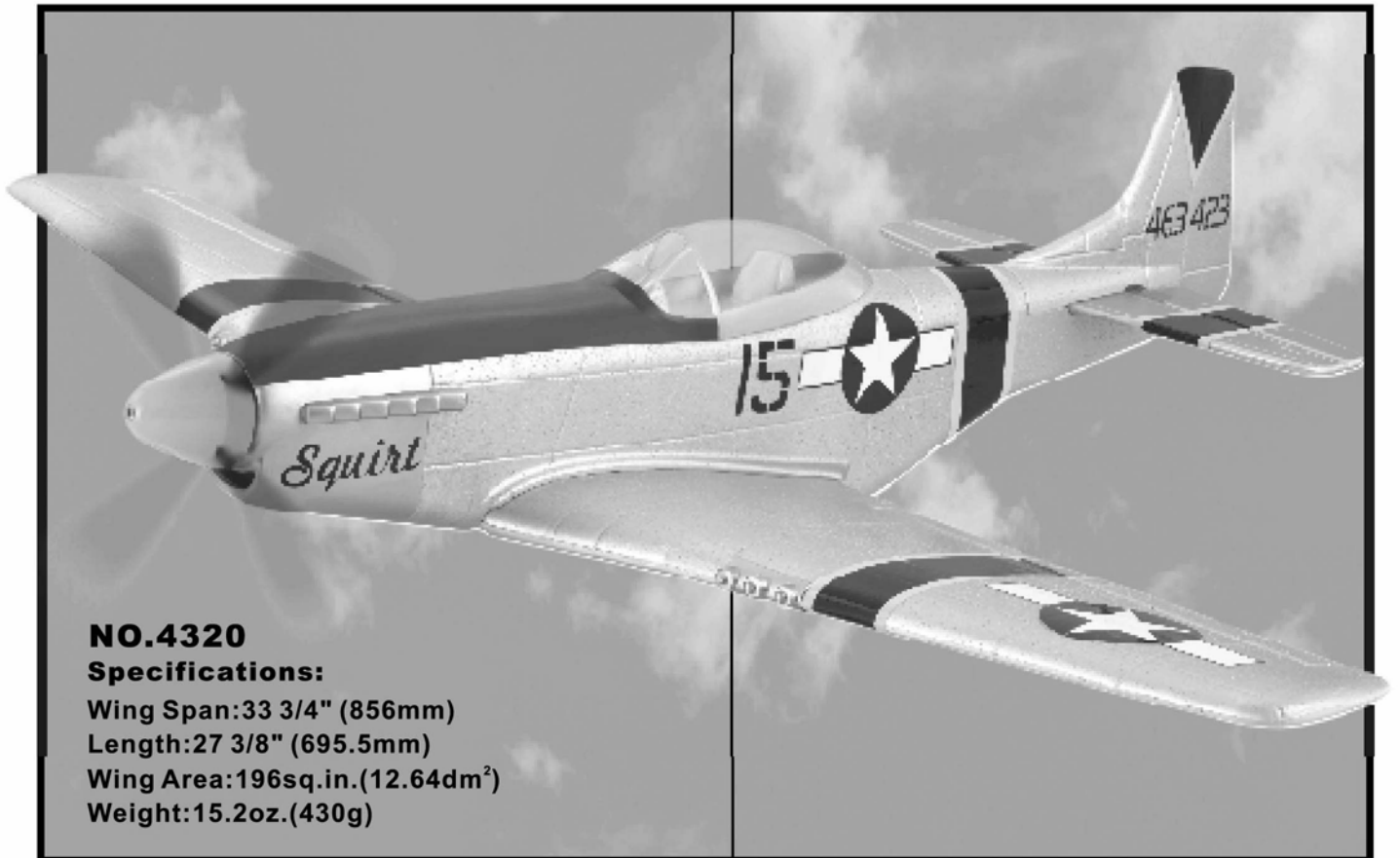




# P-51D MUSTANG



## NO.4320

### Specifications:

Wing Span: 33 3/4" (856mm)

Length: 27 3/8" (695.5mm)

Wing Area: 196sq.in. (12.64dm<sup>2</sup>)

Weight: 15.2oz. (430g)

## Warranty

This kit is guaranteed to be free from defects in material and workmanship at the date of purchase. It does not cover any damage caused by use or modification. The warranty does not extend beyond the product itself and is limited only to the original cost of the kit. By the act of assembling or controlling this user assembled kit, the user accepts all resulting liability for damage caused by the final product. If the buyer is not prepared to accept this liability, it can be returned new and unused to the place of purchase for a refund.

## Notice: Adult Supervision Required

This is not a toy. Assembly and flying of this product requires adult supervision. Read through this book completely and become familiar with the assembly and flight of this airplane. Inspect all parts for completeness and damage. Contact Thunder Tiger authorized agent if you find any problem or need tech support.

JE6721

## INTRODUCTION

Congratulations on the purchase of our finest D.G.A. EP Park Flyer Series. As the most successful fighters in WW2, a truly incredible aircraft changed the war for allied air forces, the P-51D Mustang has enjoyed a reputation as America's favorite fighter. It is an aircraft not only combined speed with agility, but also had a long range and powerful punch. Thunder Tiger is very proud to present the P-51D with its majestic flying capabilities and great looks to all R/C hobbyists alike worldwide. Now every pilot can fly this most famous fighter at any flying field.

## CAUTION

Before beginning the assembly read the instructions thoroughly to give an understanding of the sequence of steps and a general awareness of the recommended assembly procedures.

This P-51D Mustang is designed for **intermediate to advanced pilots** and it requires assembling and flying skill.

By following these instructions carefully and referring to the corresponding pictures, the assembly of your model will be both enjoyable and rewarding. The result will be a well built, easy to assemble model which you will be proud to display.

## 產品簡介

非常感謝您購買雷虎產品P-51D Mustang 電動飛機。這架集速度和靈敏為一體的二战飛機使盟軍的命運得以改變，取得了空中的優勢。雷虎公司非常榮幸能夠為世界各地的飛行愛好者再度呈現這架飛機的風采。請熟讀組裝前須知確保組裝過程順利。本飛機為中高級者模型愛好者而設計，須具備組裝和飛行技巧。

## Table of contents 目錄

Introduction 產品簡介	2	Motor 馬達	10
Pre-Assembly Notes 組裝前須知	2	Wing 機翼	11
Other Items Required 需求配件	3	Radio 遙控設備	13
Optional Parts 選購部分	3	Decal 貼紙	15
Tools and Supplies Needed 工具	3	Balance 平衡	15
Parts Drawing 零件圖	4	Operation Check 操作檢查	16
Fuselage 機身	6	Flying 飛行	17
Tail and Elevator 尾翼	8	Radio Movement 操縱指南	19
Landing Gear 起落架	9	Repair 維修	20

## PRE-ASSEMBLY NOTES

### 組裝前須知

1. For all the three versions: STD, OBL and Super Combo, please assemble your model according to this instruction manual. Do not attempt to modify or change your model in any way as doing so may adversely change its flying characteristics. Doing so will be out of warranty.

標準版、無刷版套件及完成機版共用此組裝說明書，請按照說明書指示組裝，切勿修改以免影響該機原有優異飛行性能。如因自行修改所造成的損壞，不在產品保證範圍內。

2. For Super Combo version, some assembly steps are finished by factory craftsman. We recommend you to read the manual to familiar with the whole plane as well and just skip the assembled steps.

假如您購買完成機則部分組裝步驟已經由工廠完成，您可以跳過這些組裝步驟，然而建議您仍仔細閱讀這些組裝步驟以加深對該機了解。

3. For OBL version, there are a few parts different from STD version. Please read the manual carefully and install the different parts.

假如您購買無刷版，則有一部分套件內容不同於標準版，建議您仔細閱讀組裝說明書，參考說明書上無刷版組裝步驟組裝您的愛機。

4. Before you begin please check entire contents of this kit against the parts drawings to be sure that no parts are missing or damaged. This will help you to become familiar with each component.

請先參考零件圖並檢視套件以確認是否有缺件或損壞，這同時讓您進一步熟悉每個零件。

5. If you find that any parts are either missing or damaged, please contact your dealer immediately for replacement. Note: Your dealer cannot accept kits from return if construction has begun.

如果您發現有任何缺件或損壞，請與原購買經銷商或模型店更換。

Remember we have worked very hard to make this model as easy to assemble as possible while still maintaining our high standard of quality. Your assembly of this model is very important and will determine the final flight capabilities of your model, so use extra care and follow the assembly procedures exactly.

請小心組裝因為您的組裝品質將影響該機飛行性能。

## OTHER ITEMS REQUIRED

### 其他需求配件

**Radio:** You will need at least a 3 channel radio control system with 2 micro servos for your model. Thunder Tiger provides 3CH Single-Stick (8304) and Dual-Stick(8305) radio for your choice.

3動遙控器並配備2個微型伺服機（產品編號:單杆遙控器 ACE 8304/雙杆遙控器 ACE 8305）。



ACE8304



ACE8305



ACE8117

**ESC-10:** ACE ESC-10 (P/N ACE8015) with BEC for controlling the power of your model as well as eliminating the need of a separate radio battery. The BEC (Battery Eliminator Circuitry) in this controller will automatically turn off the power to the motor when the battery reaches a factory present discharge level leaving about 10 minutes of flight time for the radio system.



速控器10A, 並含有BEC低電壓斷電功能（產品編號ACE 8015）。

**Battery:** We recommend the use of a 8 cell 9.6V 600mAh AAA size NIMH battery. (P/N ACE 2945)

建議使用 9.6V 600mAh AAA size 鎳氫電池（產品編號 ACE 2945）。



**Charger:** You will need a quick charger to charge your power battery. We recommend our economical DC Quick Field Charger. (P/N ACE 2626)



建議使用快速直流充電器, 12V輸入, 900mAh輸出(產品編號P/N ACE 2626)。

**Super Combo Version contains 3CH radio system (either Single-Stick or Dual-Stick), ESC-10, Battery and Charger as mentioned above.**

如購買完成機, 則含有以上各配件: 單杆或雙杆遙控器 (擇1)、速控器、電池、充電器。

**OBL Version contains brushless motor, OBL motor mount and prop adapter; OBL Less Motor Version comes without brushless motor.**

無刷版包括含無刷馬達及不含無刷馬達兩種版本, 以上兩種版本都含有無刷馬達座及轉接器。

## OPTIONAL PARTS

### 供選擇的配件:

OBL 2928/09 (P/N 2354)  
OBL Motor Mount (P/N AS6380)

The OBL2928/09 installed on outrunner motor mount as photo shown is a perfect upgraded power unit for P-51D Mustang EP.

無刷馬達 (P/N 2354);

無刷馬達座 (P/N AS6380)。



Prop Adaptor (P/N AQ0751)  
Prop Adaptor is a must buy part for P-51D Mustang EP if user intend to install an Outrunner and the standard 4-blade propeller.

無刷版P-51D電動機必須配備的螺旋槳轉接器 (P/N AQ0751)。



AcePower Lipo Battery 1050mAh 3S1P 11.1V (P/N 2804)

The AcePower Lipo battery is a high discharging rate battery which provides continuous discharging rate at 15C and the burst is up to 20C(5~10 sec). Note: Lipo battery is extremely dangerous, always use care when charging or discharging.



鋰電池 (P/N 2804), 當充放電時請謹慎使用, 充電電壓請勿超過1A。

## TOOLS AND SUPPLIES NEEDED

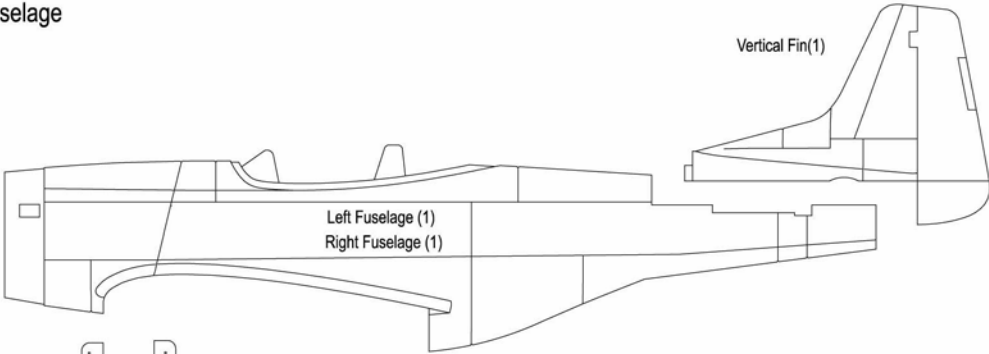

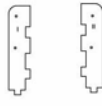








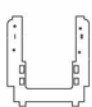
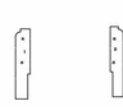







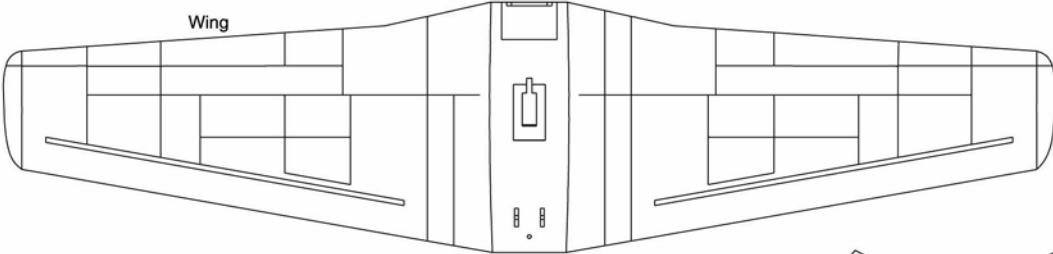








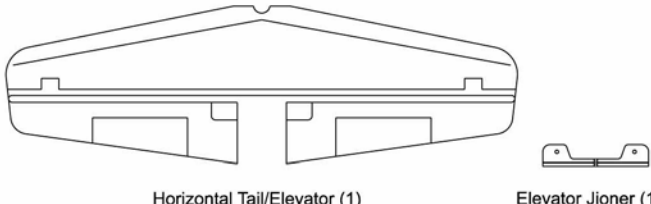
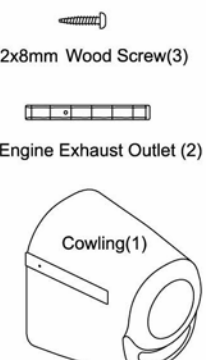





### 組裝需求工具

Mixing Stick for Epoxy	攪拌棒
Medium Grit Sandpaper	砂紙
Rubbing Alcohol	工業用酒精
Paper Towel	紙巾
Hobby Knife	美工刀
Ruler	尺
Pen, Pencil or Marker	鉛筆/奇異筆
Phillips Screw Drivers	小螺絲起子
Curved Scissors	剪刀
Nose Plier	尖嘴鉗
Mylar Tape (3/4" in width)	馬拉膠帶(寬3/4", 19mm)
Drill Bit 5/64" (2mm)	鑽頭 5/64", (2mm)

# PARTS DRAWING

Open the box and check that you have all the parts, If anything is missing please contact your dealer. Parts shown below are same in STD and OBL version.

請檢視套件是否齊全, 如有遺漏, 請與供應商聯系。套件中以下內容為標準版和無刷版相同之處。

<b>AS6403 Fuselage</b>  <div> <div>          </div> <div>         </div> </div> <div>   </div>		
<b>AS6404 Wing</b>  <div>       </div> <div>   </div>		
<b>AS6405 Horizontal Tail</b> 	<b>AS6406 Cowling</b> 	<b>AS6407 Canopy</b> 
<b>AS6408 Wheel Door</b> 	<b>AS6409 Spinner</b> 	
<b>AS6414 Spinner Adaptor</b> 	<b>AS6410 4-Blade Propeller</b> 	



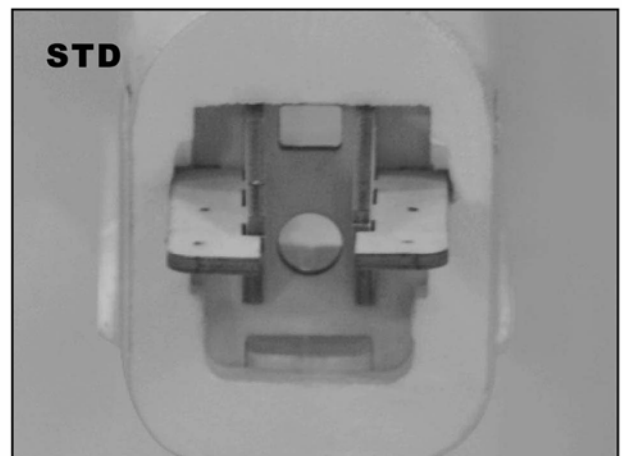
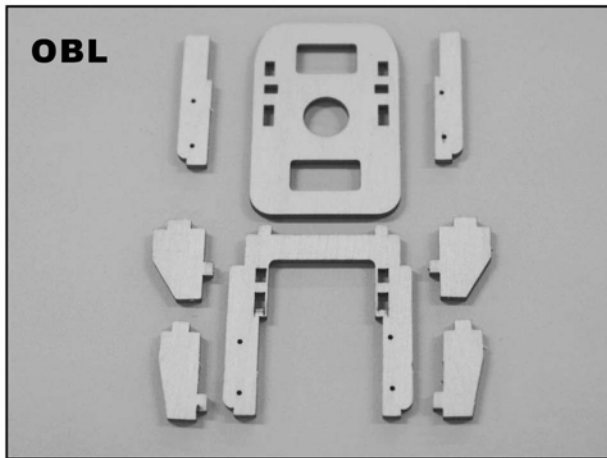
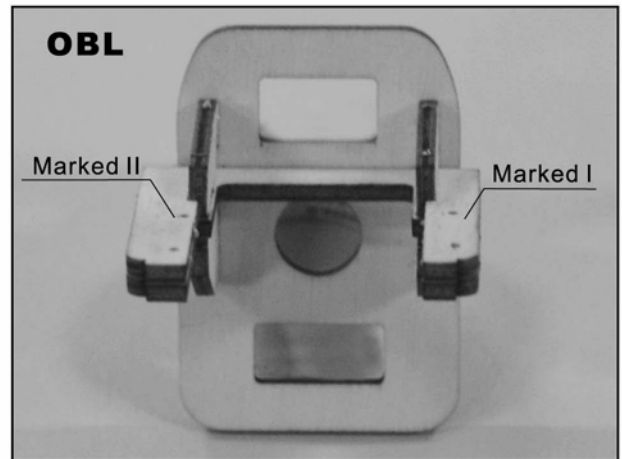
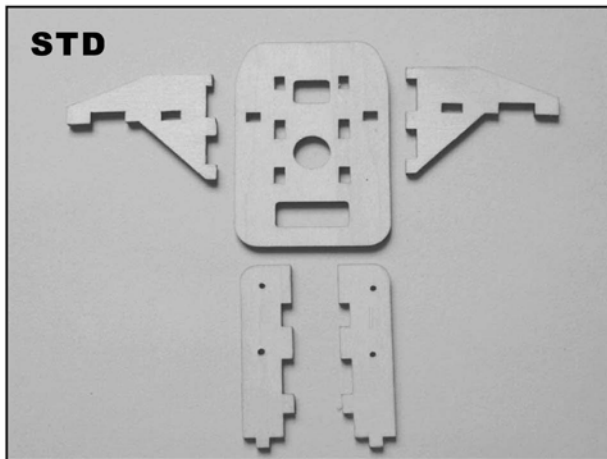
<b>AS6411 Pushrod Set</b> <p>Elevator Pushrod (1)</p> <p>Aileron Pushrod (2)</p>				<b>AS6412 Tail Gear</b> <p>Tail Gear Mount A (1)</p> <p>Tail Gear (1)</p> <p>Tail Gear Mount B (2)</p> <p>Tail Wheel (1)</p> <p>Collar (1)</p> <p>3x3mm Set Screw (1)</p>			
<b>AS6378 Landing Gear</b> <p>Landing Gear (L/R)</p> <p>Landing Gear Mount A (2)</p> <p>Landing Gear Mount B (2)</p> <p>Landing Gear Mount C (2)</p> <p>Hex Wrench (1)</p> <p>Collar (2)</p> <p>3x3mm Set Screw (2)</p>				<b>AS6413 Decal</b> <p>Decal A (1)</p> <p>Decal B (1)</p>			
				<b>AS6375 Ultralite Wheel</b> <p>Wheel (2)</p>			

Parts shown below are vary in STD and OBL version.

套件中以下內容為標準版和無刷版不同之處。

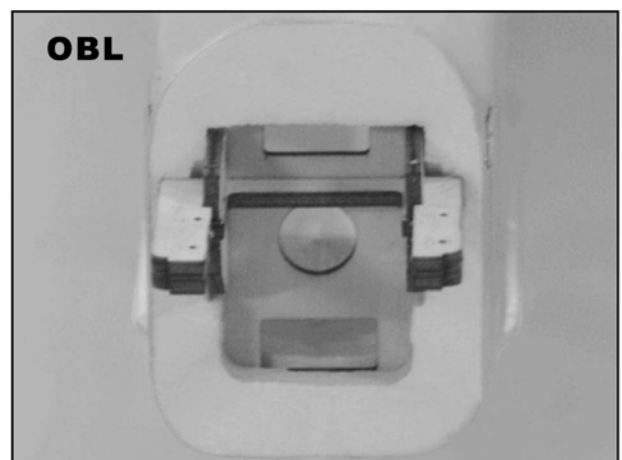
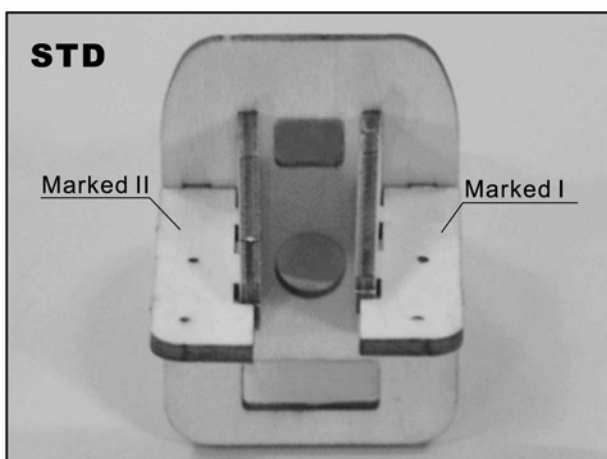
<b>AS6353 STD Motor</b> <p>370 Motor (1)</p>	<b>AS6379 STD Motor Mount</b> <p>2.6x8mm Wood Screw (4)</p> <p>M3 Washer (2)</p> <p>Ball Bearing (2)</p> <p>3x5mm Machine Screw (2)</p>	<p>Motor Mount (1)</p> <p>Drive Nut (1)</p>	<b>AS6372 STD Drive Shaft</b> <p>Spur Gear/Drive Shaft (1)</p> <p>Pinion (1)</p> <p>E Clip (1)</p>
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<b>No.2354 OBL 2928/09</b> <b>(Only comes with 4320-K21)</b> <p>Outrunner Brushless Motor 2928/09 (1)</p>	<b>AS6380 OBL Motor Mount</b> <p>OBL Motor Mount (1)</p> <p>M3 x 6mm Sink Screw (4)</p> <p>M2.6 x 8mm Wood Screw (4)</p>	<b>AQ0751 OBL Prop Adaptor</b> <p>PROP ADAPTOR (1)</p> <p>3 x 3mm Set Screw (1)</p>
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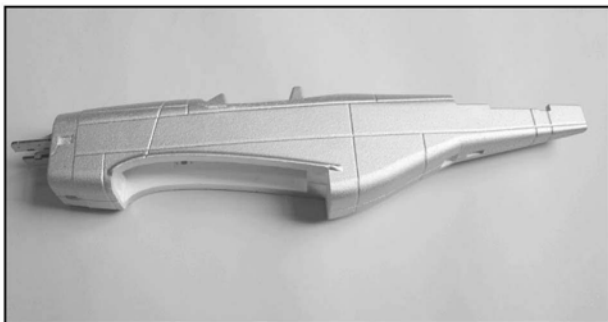
1. Locate the firewall, motor mount and mount supports.  
取防火牆、動力組架、動力組支撐如圖所示。

Note: STD and OBL version are different from each other, choose their own parts for installation.  
注意：標準版和無刷版各不相同，選擇各版本的套件內容組裝。



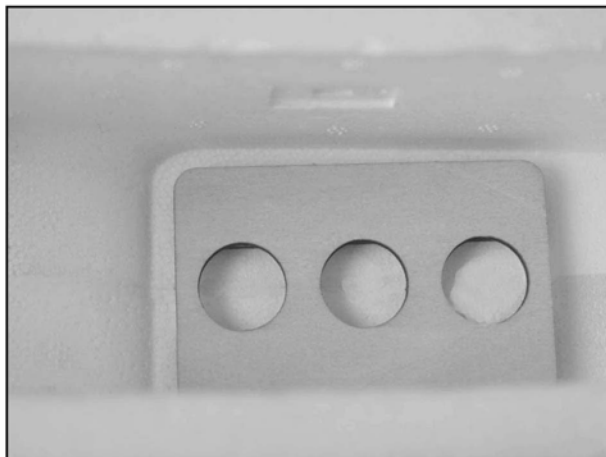
2. Epoxy the motor mount and supports on firewall.  
將動力組架、動力組支撐黏入防火牆。

3. Trial fit the firewall assembly in fuselage. Note the orientation of the firewall assembly.  
將黏合後的防火牆黏入機身。

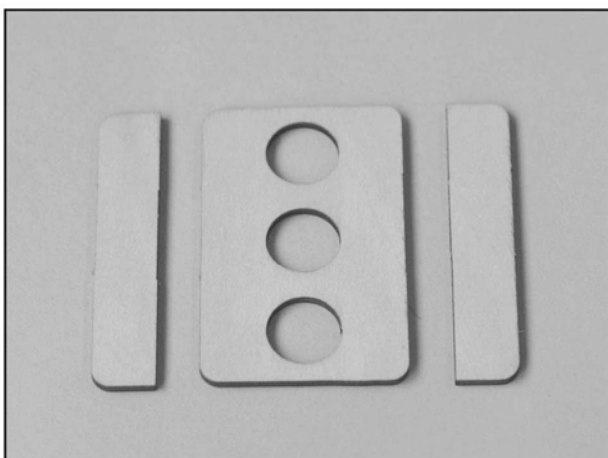


4. Epoxy the left and right fuselage halves together. Note the furnished epoxy is 5-min. epoxy and working time is only 3 minutes, you will have to quickly apply epoxy on left and right fuselage within 3 minutes. There are more different Epoxy available in 12-min, or 30-min. epoxy which allow longer working time that you can buy in any hobby store.

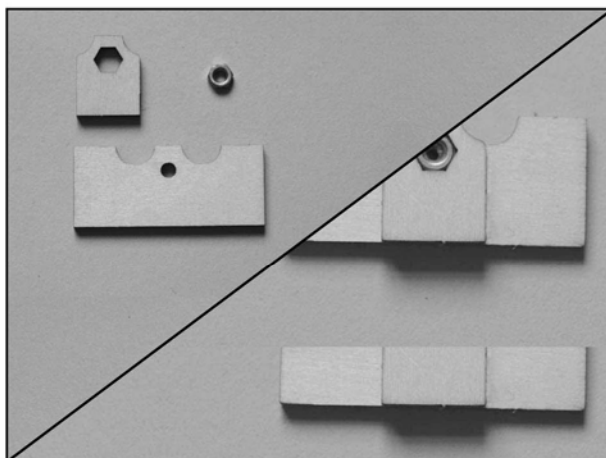
使用套件中所附之5分鐘環氧樹脂，與等量混合攪拌後3分鐘內黏合左右機身。



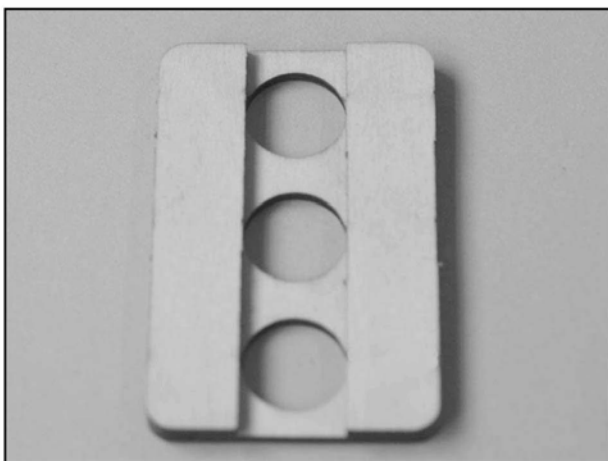
7. Epoxy the battery tray assembly in fuselage .  
將黏合後的電池固定板黏入機身。



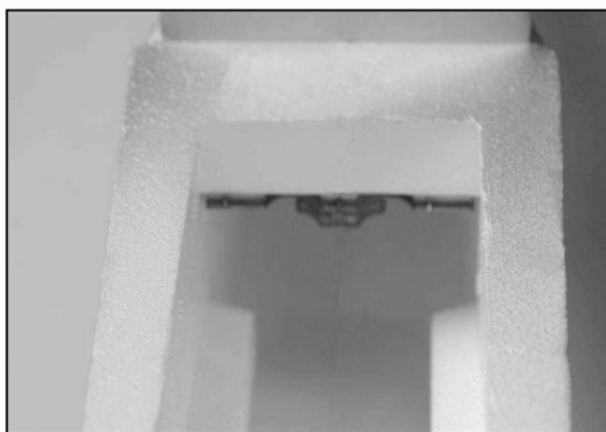
5. Locate the battery supports and tray.  
如圖取出電池固定板。



8. Locate the wing mount, nut retainer and M3 nut. Glue the retainer on wing mount then press M3 nut in place. Make sure the M3 nut is centered.  
將機翼固定板、M3螺帽、螺帽固定板如圖黏合。



6. Glue the battery supports and tray as shown.  
將電池固定板如圖黏合。



9. Epoxy the wing mount assembly in fuselage. Make sure the hole is not epoxyed.  
將黏合後的機翼螺帽固定板黏入機身。

# TAIL AND ELEVATOR



10. Locate the cowling mounts then epoxy the mounts in place.

依圖黏合引擎罩固定塊。



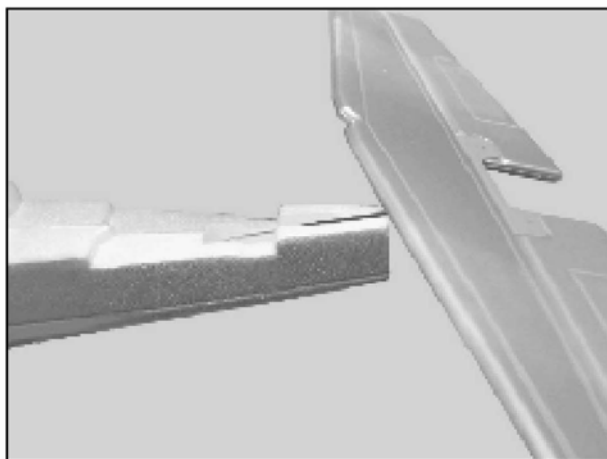
13. Trial fit the joiner in place next apply epoxy and glue it firmly in place. It will be easier to bend two elevators then slide the joiner on the elevators.

以環氧樹脂膠合平尾搖臂於水平尾翼上。



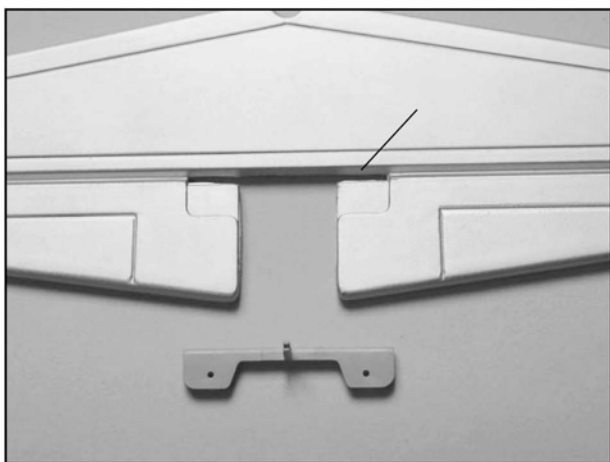
11. Refer to Page 15 apply decal 24 first next decal 5, 12, 13, 14, 21, 25 on the canopy, then secure the canopy in place with furnished decal 15 and 16.

參考P15貼上貼紙，依此為24、5、12、13、14、21、25  
修剪機艙罩後用15、16號貼紙貼在機身上。



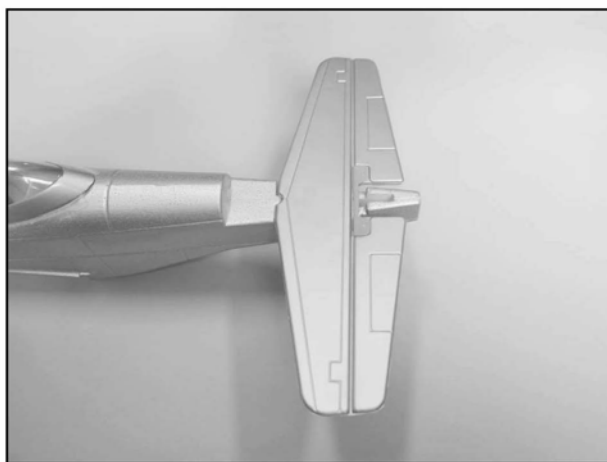
14. Locate the elevator pushrod, thread the clevis then snap onto the elevator joiner. Next insert the pushrod into the fuselage from the tail.

寧上連桿頭于升降舵鋼絲後壓入平尾搖臂，將升降舵鋼絲穿入機身。



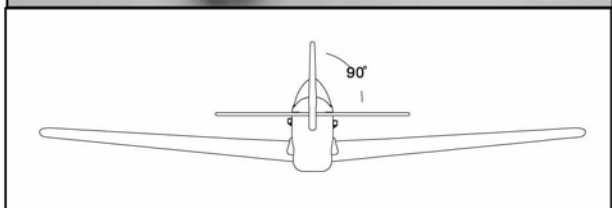
12. Cut a slot at the hinge line for installation of elevator joiner.

如圖在水平尾翼上切開一個槽以便裝平尾搖臂。



15. Trial fit and center the horizontal tail in place. Make sure the elevator joiner is flush with the tail of fuselage. Epoxy the tail when satisfied.

以環氧樹脂將膠合水平尾翼於機身。



16. Trial fit main wing on fuselage then temporally secure with M4 washer and wing bolt. Epoxy the vertical fin in place and make sure it is perpendicular to the horizontal tail.

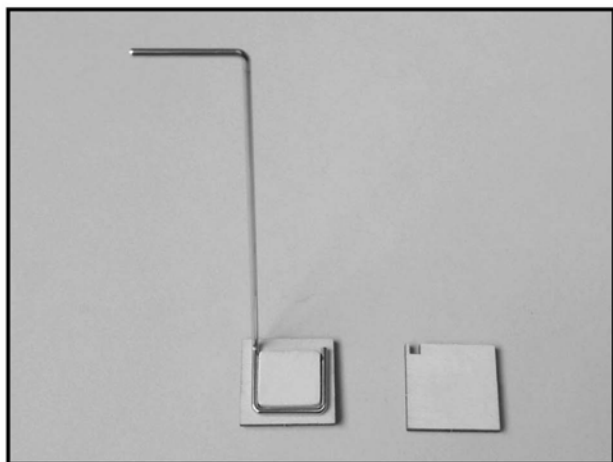
暫時裝上機翼，以環氧樹脂膠合垂直尾翼，注意平尾與垂尾互相垂直。

### Landing Gear

Before assembling the landing gear you will have to decide to install the fix gear or foe retracted gear for less drag.

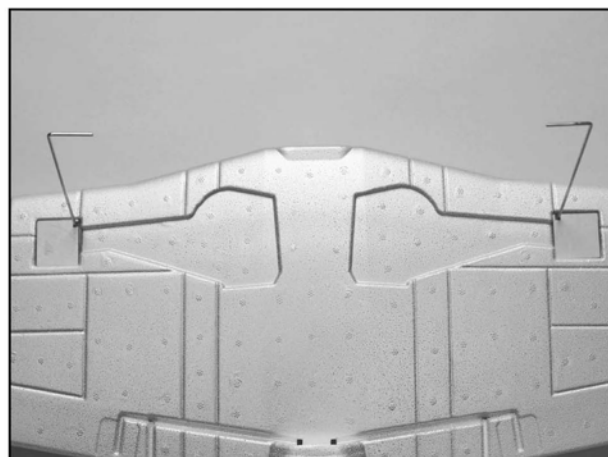
組裝起落架前請先確定是裝固定式輪架還是偽裝收腳式輪架。

#### <Fix Gear 固定式輪架>



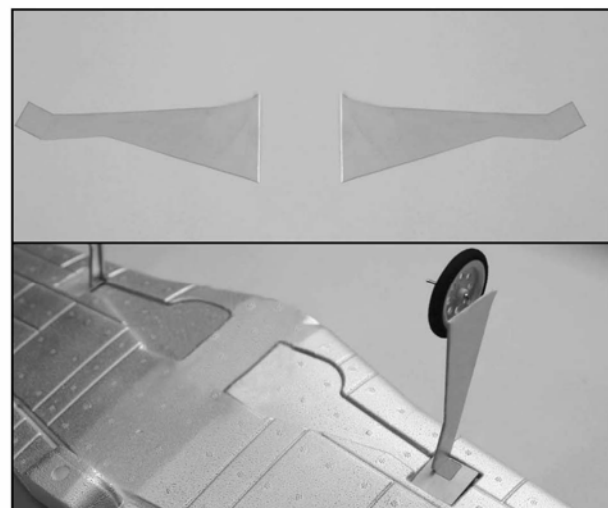
17. Locate landing gear mounts and sandwich the mounts with the wire as shown. Note the orientation of the mount. Trial fit the mount to the wing before you sandwich these mounts.

如圖膠合起落架固定板與起落架夾板。



18. Epoxy the landing gear assembly on the bottom wing at landing gear well.

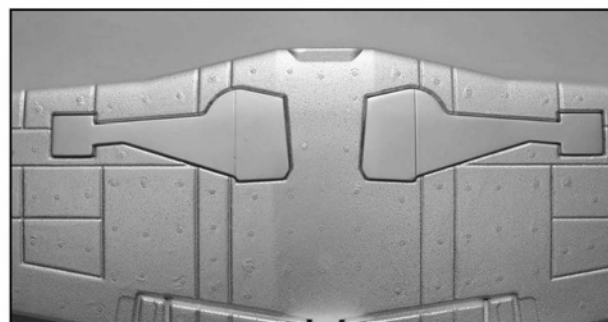
以環氧樹脂膠合起落架於起落架孔。



19. Trim the wheel door along the molded line then fix on the wire with furnished decal 26. Install light wheel and secure the collar with set screw.

以貼紙26固定起落架側板與鋼絲上，在將前輪裝入起落架。

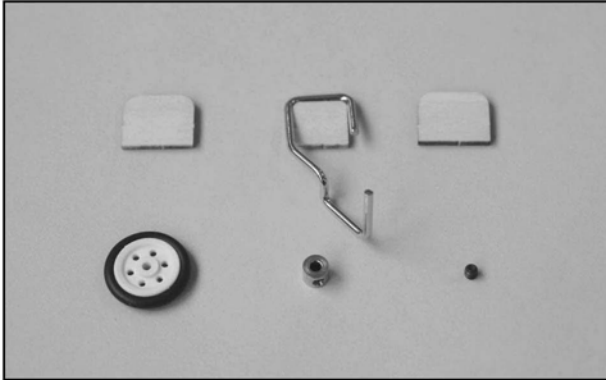
#### <Foe Retracted Gear 偽裝收腳式輪架>



20. The foe retracted gear is a good choice for less drag. Trim the vacuum formed foe retracted gear then epoxy them at bottom wing.

如圖修剪偽裝收腳式輪架，以膠帶將偽裝收腳式輪架固定於機翼底部。

## Tail Gear 尾輪



21. Locate tail gear mounts, tail gear, collar, set screw and tail wheel. Epoxy the tail gear ply plates together to make a complete tail assembly. You may disregard this step if you do not want to install the tail gear for less drag.

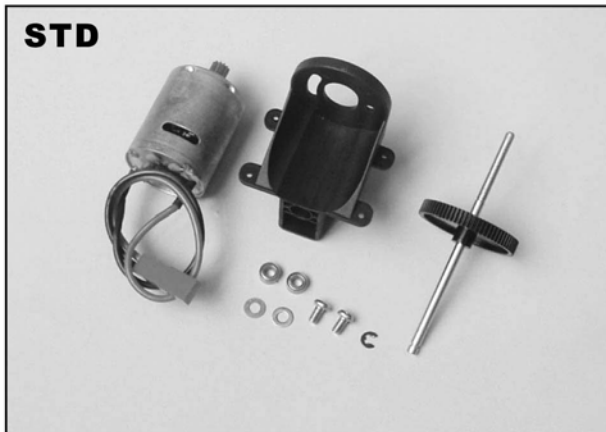
如圖膠合尾輪組。



22. Install the tail gear with epoxy in the aft section of the fuselage.

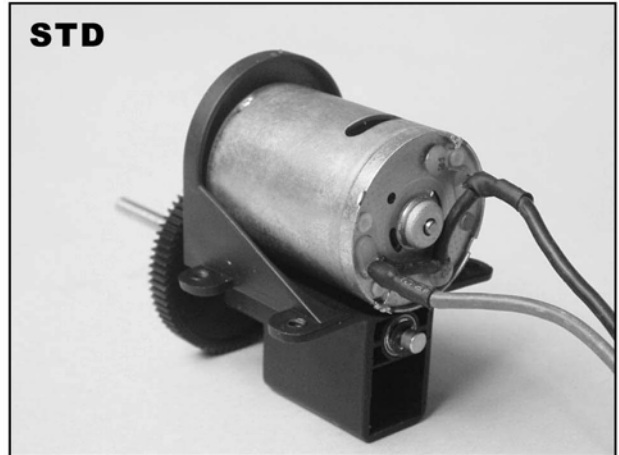
以環氧樹脂膠合尾輪於機身。

## STD Power Unit



23. Locate the motor, gear motor mount, drive shaft, bearing and E clip, 3x5mm screws and M3 washers. 如圖取出馬達固定座、從動齒輪組、3x5mm螺絲、M3墊片、軸承和E形扣環。

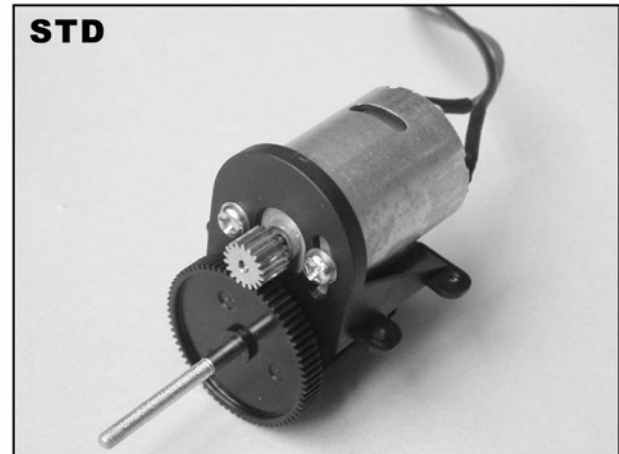
## STD



24. Press the bearings all the way in then insert the drive shaft. Snap on the E clip and make sure the E clip is well positioned and drive shaft will not come off.

如圖組裝馬達組。

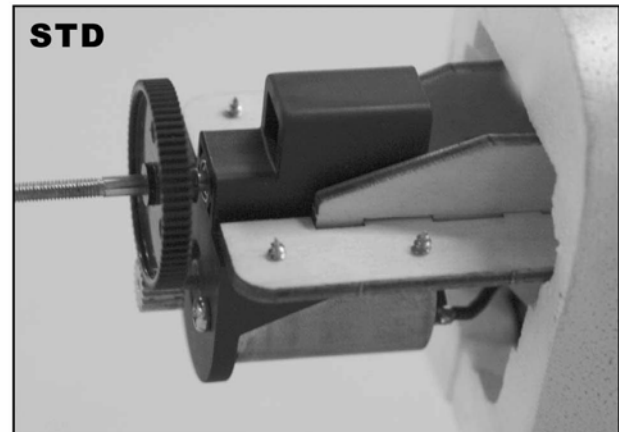
## STD



25. To get good gear mesh, use a piece of thin paper and set between the pinion and spur gear. Secure the motor tightly with 3x5mm machine screws and washers. Remove the paper by rotating the gear.

以所附的3x5mm自攻螺絲固定馬達組。

## STD

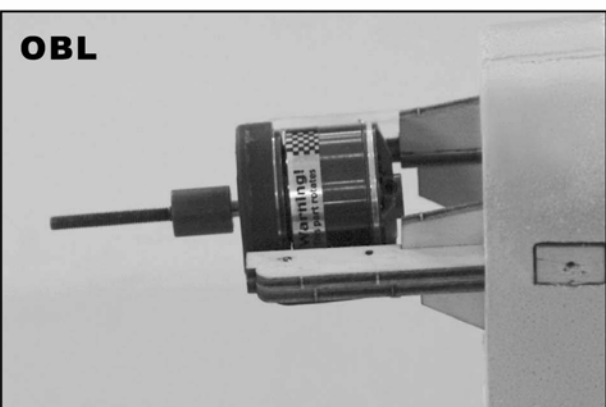


26. Secure the power unit with the furnished four 2.6x8mm wood screws.

以所附的2.6x8mm的木螺絲固定馬達動力組於動力組架上。

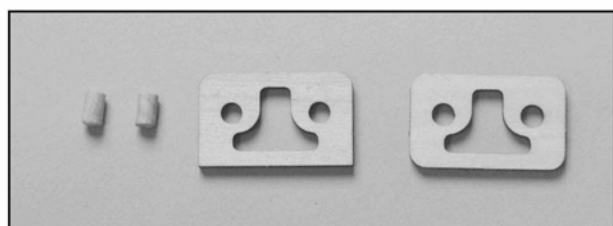


## OBL Power Unit

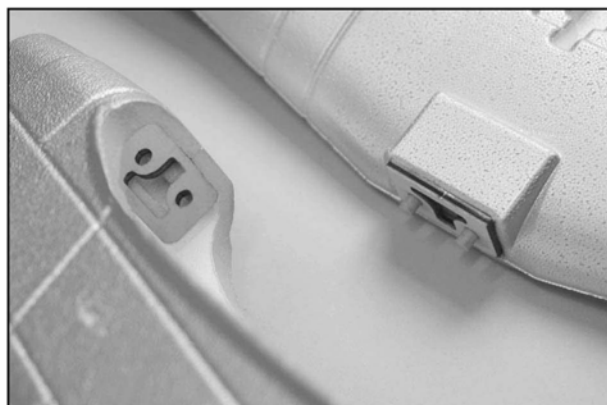


For OBL version, please install the brushless motor as shown.

如果您購買無刷版，請依圖組裝無刷版馬達。



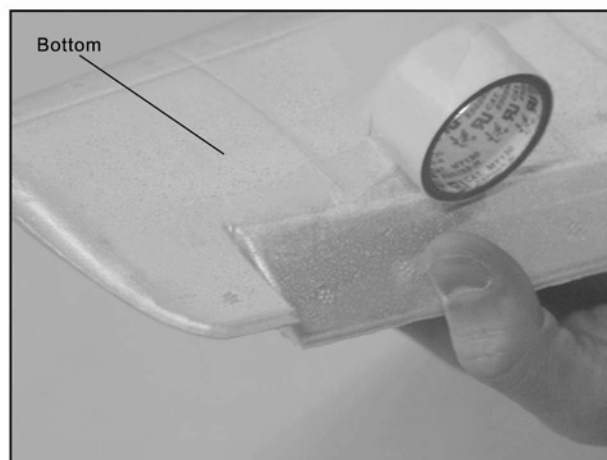
27. Locate the dowels, wing dowel plate I and II.  
如圖取出短圓木棒與機腹連接板。



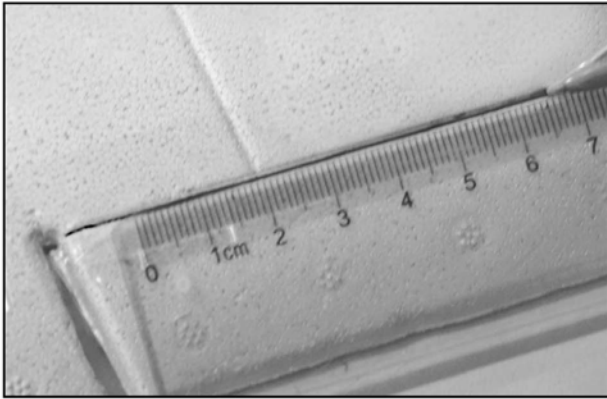
28. Epoxy wing dowel plate I on the front fuselage and wing dowel plate II on the front center wing, then glue the two dowels on wing dowel II. (Note the orientation of wing dowel I and II, make sure they are fit properly.)  
以環氧樹脂膠合機腹連接板I於機身，機腹連接板II於機翼，然後膠合短圓木棒於機腹連接板II上。



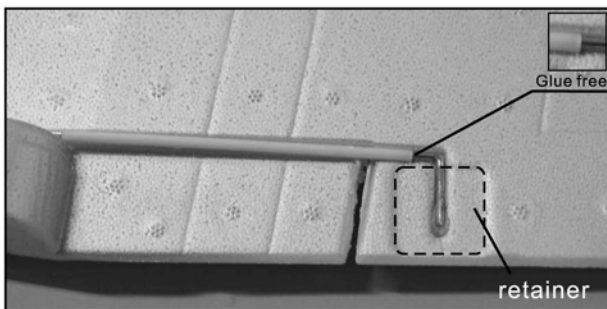
29. Cut two ends of aileron.  
小心切開副翼兩端。



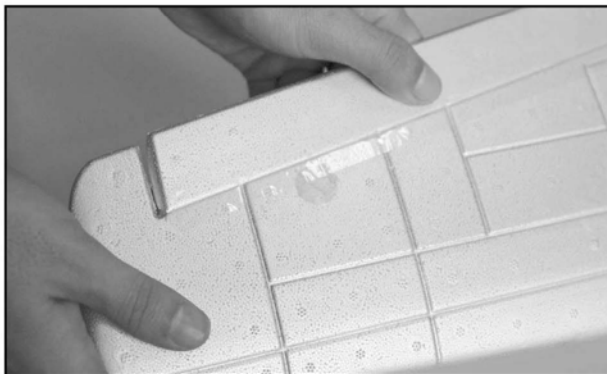
30. Bend and tape hinge line.  
將副翼稍微下折，貼上膠帶。



31. Draw a line between two ends of aileron.  
然後沿副翼兩端頂部畫一條直線。



32. Epoxy the torque rod and torque rod retainer in place. Same procedure on the other one.  
以環氧樹脂膠合副翼鋼絲於機翼。



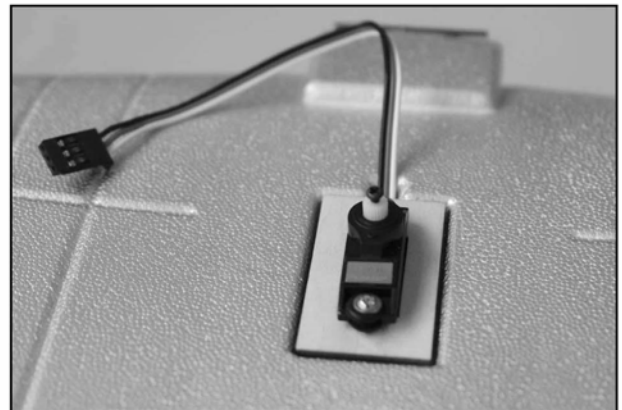
33. Carefully flapping aileron and make sure it move freely but will not come off. Note: Do not cut the hinge line.  
掰開副翼使副翼能夠自由上下轉動。



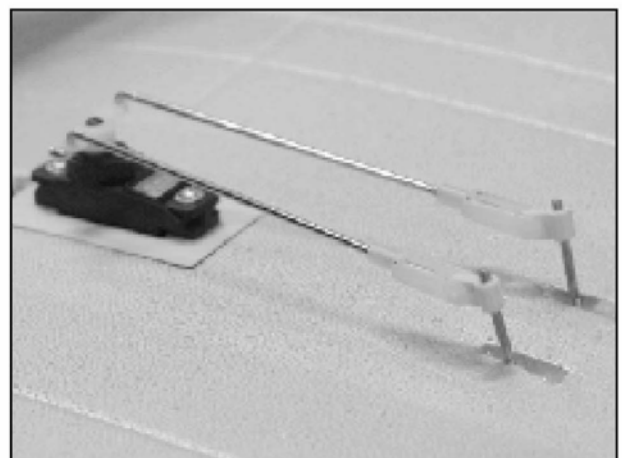
34. Carefully trim and epoxy the radiator scoop in place.  
如圖修剪並以環氧樹脂膠合偽裝潤滑油散熱器。



35. Trim and epoxy the machine gun in place, same procedure on the other one.  
如圖修剪並以環氧樹脂膠合偽裝機槍孔。



36. Secure the servo on the aileron servo tray, then epoxy the servo tray assembly at the aileron servo well.  
將副翼伺服機裝入伺服機托盤，以環氧樹脂膠合伺服機托盤於機翼上。



37. Locate aileron pushrods and clevises, thread clevises on the pushrods. Install connectors then connect the Z-bend end of pushrods to the servo horn and snap the clevises on the connectors. The first hole of servo horn is preferred.  
將副翼鋼絲裝入伺服機。



38. Secure the servo on the elevator servo tray, then epoxy the servo tray assembly in the fuselage. Note: Adjust the position of servo tray properly and set the pushrod on servo tray.

將升降舵伺服機裝入伺服機座，以環氧樹脂膠合伺服機座於機身並將升降舵鋼絲置于伺服機座上。



39. Thread the pushrod to the servo horn and secure the servo horn on the servo when servo is in neutral position. 裝入升降舵鋼絲並請確認伺服機之中立點後將伺服機擺臂鎖上。

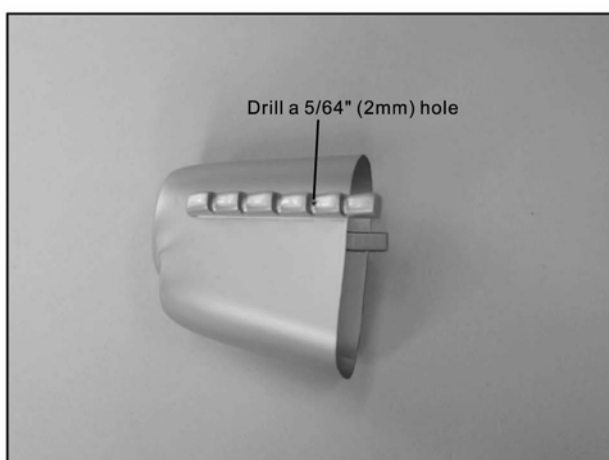


41. Secure the cowling assembly with three 2x8mm wood screws at the molded point.

以所附之2x8mm自攻螺絲將引擎罩固定於機身。



42. Install the 4 blades on the blade holder as shown. 將螺旋槳葉裝入槳座上。

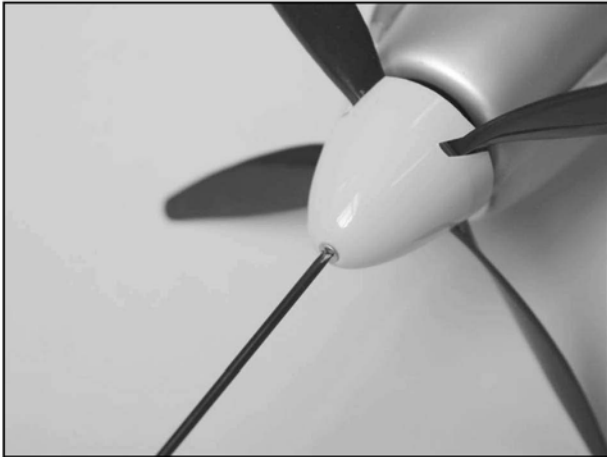


40. Trim cowling and engine exhaust outlets along with the molded line, then epoxy the engine exhaust outlets on the cowling.

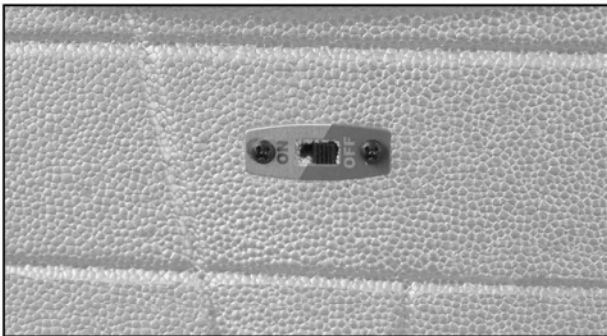
如圖修剪引擎罩與偽裝排氣孔後將偽裝排氣孔以環氧樹脂膠合於引擎罩。



43. Locate spinner adaptor, drive nut, prop washer and a clear round plate, then install 4-blade propeller as shown. 如圖裝上4葉螺旋槳。



44. Trim spinner along with the molded line, drill a 1/8" (3mm) hole at the nose point then secure the spinner with furnished 3x15mm sink screw.  
如圖裝上槳罩。

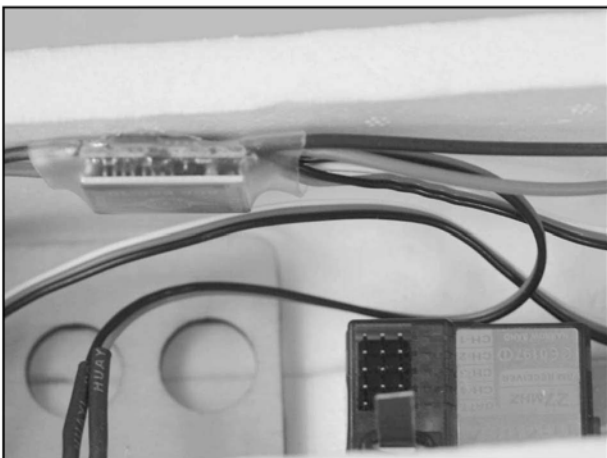


45. Install the switch of the electric speed controller. Do not over tighten the screws as it may crush the Styrofoam.

裝上速控器開關，注意切勿施力過當，損壞機身。

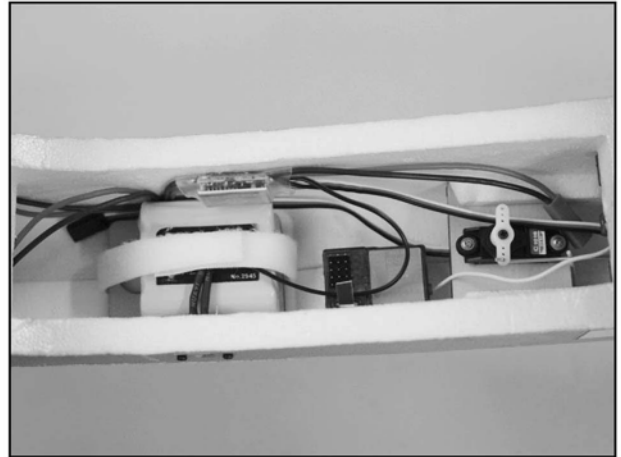
**For OBL version, install the brushless ESC, receiver and LIPO battery.**

无刷版请装上无刷ESC, 接收机和锂电池。



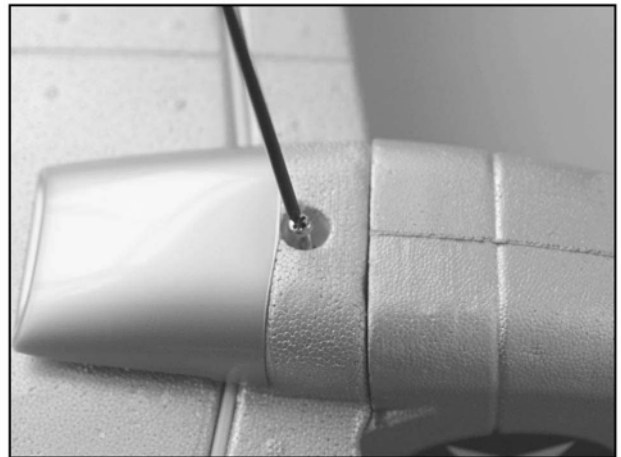
46. Install the Speed Controller, Receiver in the fuselage with Velcro.

裝上速控器、接收機。



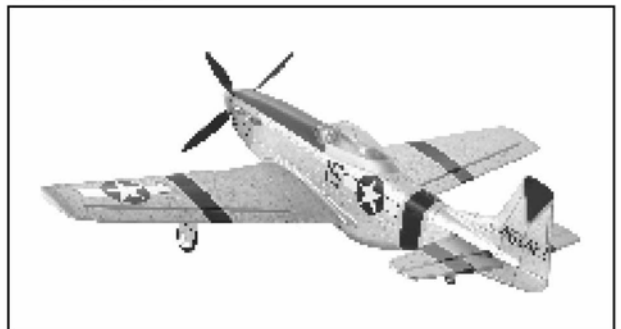
47. Secure Battery on the battery tray with Velcro. Connect all servo wires to receiver.

裝上電池，將所有的綫連接好。



48. Route antenna wire to the hole at bottom fuselage then tape it on fuselage. Secure main wing on fuselage with M4 washer and wing bolt.

如圖裝上主翼，將天線穿過機身從尾部穿出，並以膠帶固定於機身。



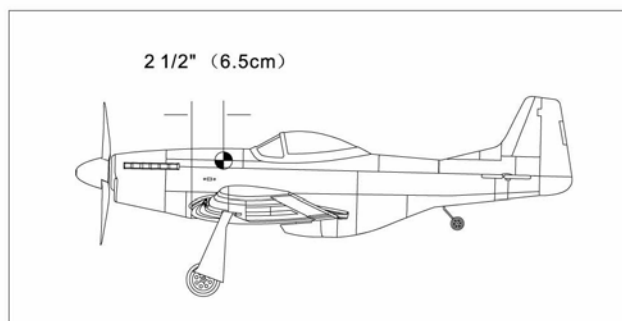
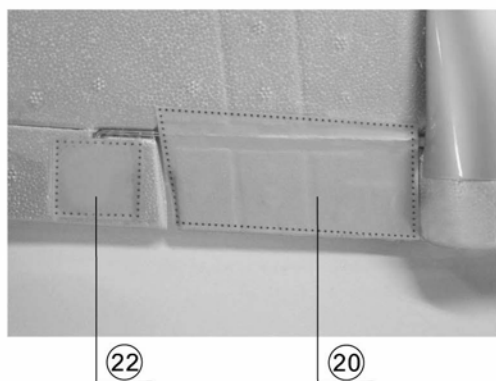
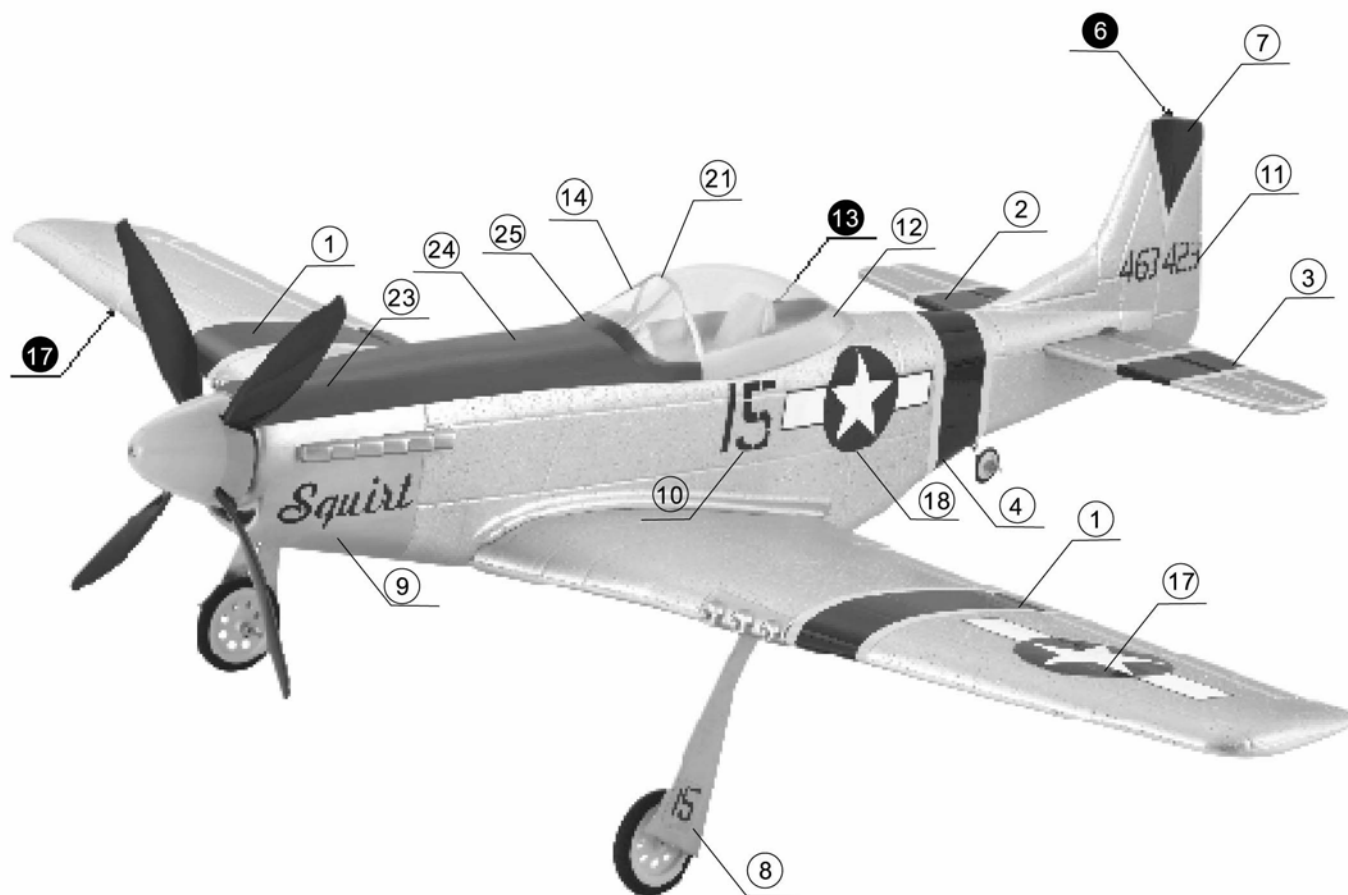
49. Refer to next page and apply all the decals.

Congratulations! now your P-51D is almost ready to fly. Please do the operation check of all devices as well as the control throw and balance before you go to fly. All Thunder Tiger staffs hope you enjoy flying your new P-51D.

參照15頁貼上貼紙。恭喜您！您可以試飛您的愛機了。

Refer to the photos and apply all decals.

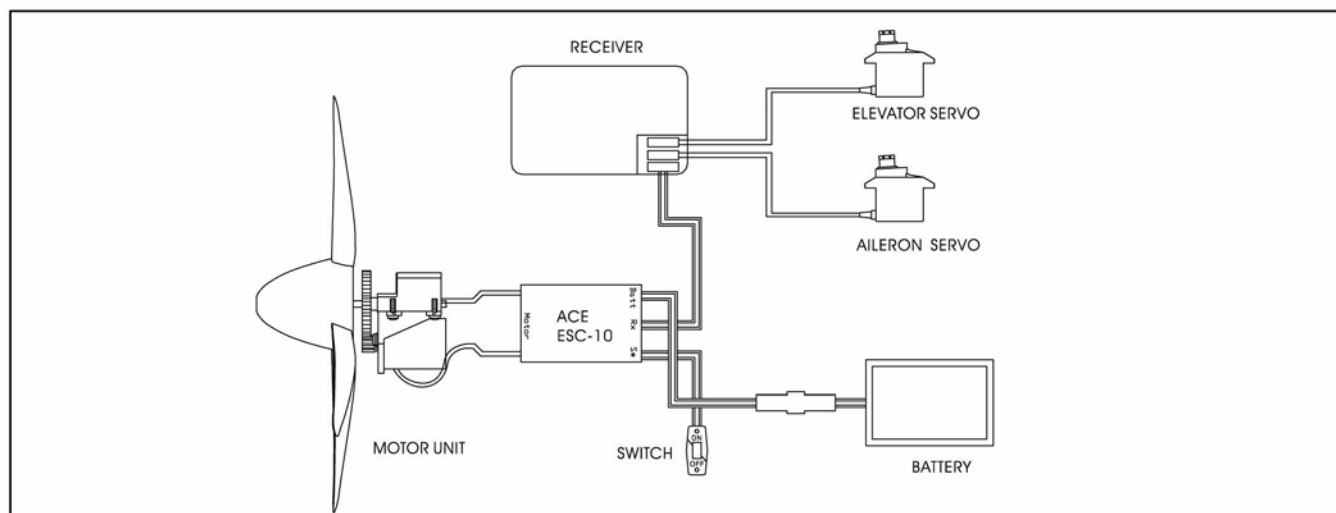
依下列圖示貼上貼紙。



## BALANCE

It is important to balance the plane to the correct C. G. before you fly. The Balance point is 2 1/2 " (6.5 cm) from the leading edge at the wing root.

重心位置距前緣6.5公分處，可前後加重以取得平衡。



## Operation Check

### 操作檢查

1. Install eight AA batteries in the transmitter, refer to the instruction manual of radio system.

參考遙控器說明書安裝電池與發射機。

2. Review the illustration to become familiar with your radio components. Following are description of these components.

請進一步了解電結構圖。

■ ESC: This device controls power to the motor unit. It will cut-off the battery's voltage when it starts to drop.

速控器：控制馬力輸出或馬達轉速，當壓降至某電壓時能自動斷電。

■ Receiver: Receives the radio commands from the transmitter and send them to the servos which converts the command to motion which, in turn, moves the aileron or elevator.

接受機：接收發射機訊號並解碼至伺服機以便控制各舵面。

■ NiMH Battery: Rechargeable battery pack that provides power to the motor unit and radio system.

鎳氫電池：為充電式電池並提供所有機電用電。

■ Motor Unit: Contains a DC electric motor, a gear drive, and a propeller that provides the thrust for the airplane.

馬達動力組：含直流馬達、減速齒輪組及螺旋槳。

3. Turn the transmitter on and then the receiver and refer to illustrations in page 18 (Always turn transmitter on first then the receiver and turn receiver off first then the transmitter.)

先打開發射機然後再開接收機並依照下列方式檢視控制舵面。

■ Move the stick to right and make sure aileron moves right.

搖杆朝右并确认副翼朝右偏摆。

■ Move the stick to left and make sure aileron moves left.

搖杆朝左并确认副翼朝左偏摆。

■ Move the stick upward and make sure the elevator move down.

搖杆朝上并确认升降舵朝下偏摆

■ Move the stick downward and make sure the elevator moves up.

搖杆朝下并确认升降舵朝上偏摆

Check for the proper amount of throw and make sure the aileron and elevator are in neutral position when stick and trim levers are in the center.

檢視舵量是否與圖示相同並確認搖桿及微調桿於中立點時舵面齊平。

4. Hang the airplane and throttle up the stick. The motor unit should come on. Make sure the propeller is trying to pull the airplane forward. Throttle down or turn off the switch to stop the motor.

抓著飛機並將油門搖柄上推以確認馬達推力。油門搖柄往下推或關掉開關以停止馬達。

After you check the movement and balance then you are now ready to go flying!

各項操作檢查完成后，您可以試飛您的愛機了！



## Flying 飛行檢查

If you are a beginner, you should have a flight instructor to teach you how to fly the P-51D Mustang. Like a real airplane, you must have an understanding of how to fly the model before launch, or you will probably not be successful. Check at your hobby shop or contact [www.modelair-craft.org](http://www.modelair-craft.org) for flying clubs in your area.

飛行前請了解遙控器操作及飛行原理並建議您尋求其他玩家指導以期能成功完飛並得到飛行樂趣。

## Pre-Flight Checklist 飛行前檢查

Choose a calm day for your first flight. Never fly in winds over 10 mph. Also choose an open field with no obstacles or people.

選擇無風天氣來做首航，一般飛行時速切勿超過1.5公尺每秒。並選擇開闊無人或障礙物的區域飛行。

- Full charge the receiver battery.
- Make sure there are no other pilots operation on the same channel ( frequency ) as you have. If you turn your radio on while the guy is flying with the same frequency then you will cause him to crash.
- Do range check ( 50 ft. with the antenna collapsed ).

- 飛行前請先充飽電池。
- 開啟遙控器開關請先確認無人使用與您相同的頻率。
- 飛行前與地面檢測遙距天線不拉出20米距離操作正常。

## Take-off 起飛

■ A proper hand-launch of airplane is necessary for flight. It must be launched into the wind with a firm toss. The airplane must be tossed level. It should never be thrown upward or it will stall and crash.

逆風水平推出飛機，切勿朝上以免失速墜機。

## Flight 上空飛行

■ Let the airplane climb out gradually and gently until it reaches a comfortable cruise altitude at full flight speed. Always keep the airplane upwind of yourself and within a reasonable distance so you can see what it is doing. Remember, when the plane is coming toward to you, when you move the stick to the right, the airplane will roll to left from your point of view. This is the hardest thing to learn. Initially, you can keep your body pointed in the same direction as the airplane and look over your shoulder. That helps.

■ Usually, only small stick movements are required. Try to keep your flying smooth. Use elevator to keep the airplane at the desired altitude. You can turn the plane by bumping small amount of aileron and then return to neutral. After a while, coordinate your turns with the elevator. Feeding some up elevator to maintain the turn at the same altitude.

■ If the plane tends to roll one way or the other use the trim lever on the control stick to neutralize the flight. Same thing applies if the plane wants to climb or dive.

■ You can expect 3-4 minutes of “ power-on ” flight. You should always maintain enough altitude so you can set up a landing approach when the auto-cut off device turns the motor off and you begin the glide.

- 飛行時請輕微操作搖桿切勿緊張而大幅搖動搖桿。
- 盡量在上風處飛行。切勿飛行太遠以免無法辨識。
- 若飛機朝您的方向飛來則注意方向舵操控為反向。
- 起飛達10米安全高度後則始可轉向。
- 約4-5分鐘飛行後準備斷電降落，請勿飛行太遠。

## Landing 降落

■ You will have to set up the landing approach before motor cuts-off. Always try to land into the wind. Do not feed in too much up elevator as the plane will stall and may crash.

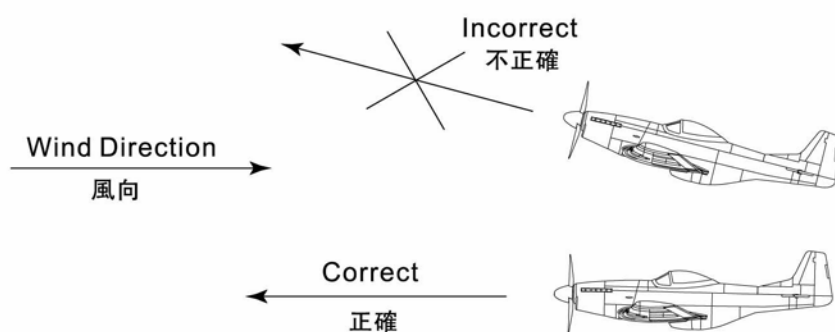
■ Just before touchdown, “ flare ” the plane by adding up elevator. The plane should slow down even more and come in for gentle landing. Don't add too much elevator too soon!

■ Walk over to the plane and turn off the ESC switch on the plane, then the transmitter switch.

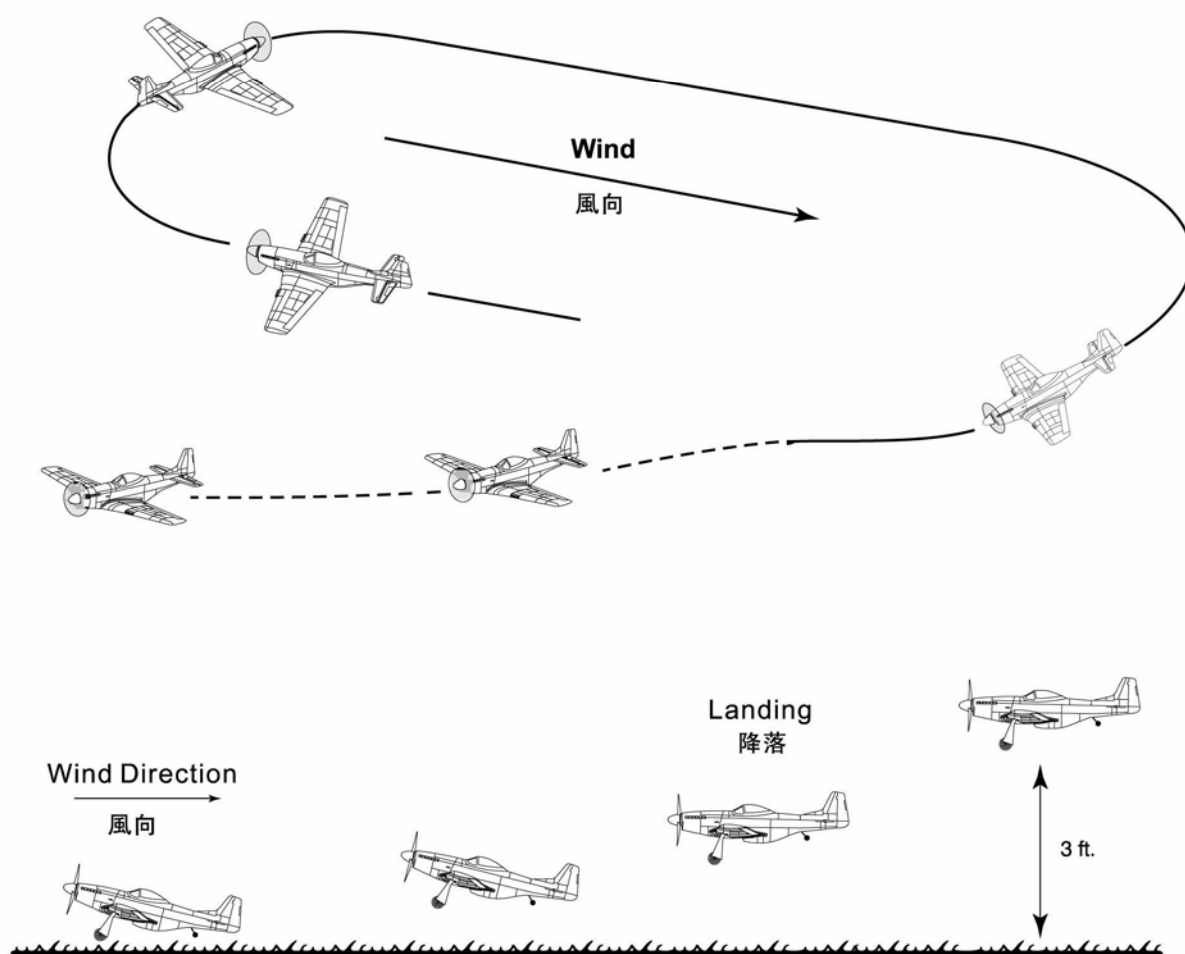
■ Remove the batteries and let them cool off before charging up again.

■ Check over the plane to make sure nothing loosened.

- 模擬降落航道練習降落並注意必須逆風降落。
- 如馬達斷電切勿緊張，維持飛行平穩為先，如有必要稍給下舵飛機仍有速度往前飛。接近地面約 1-2 米時再給點升舵拉平機頭。
- 降落後先關掉開關再檢查有無損傷及推拉桿有無脫落。
- 取下電池並待其冷卻後重新充電。



**Launch firmly into wind straight and level. Do not throw upwards!**  
逆風水平推出。



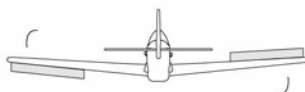
## THE DIRECTION OF MOVEMENT (AILERON AND ELEVATOR)

方向升降舵說明

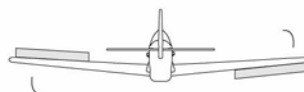
NEUTRAL



RIGHT ROLL

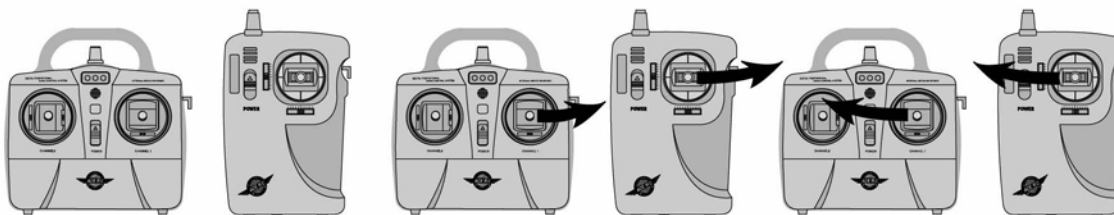


LEFT ROLL



Check the position of aileron and elevator (if these are in neutral).

檢視副翼,升降舵是否位于中立點

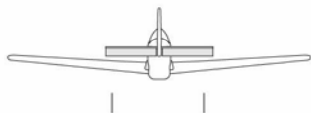


Set the trim in neutral position.  
Set the sticks in neutral position  
將微調和搖杆調整到中立位置

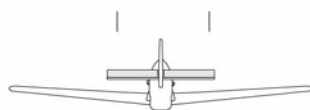
Move the stick to the right.  
搖杆朝右偏擺

Move the stick to the left.  
搖杆朝左偏擺

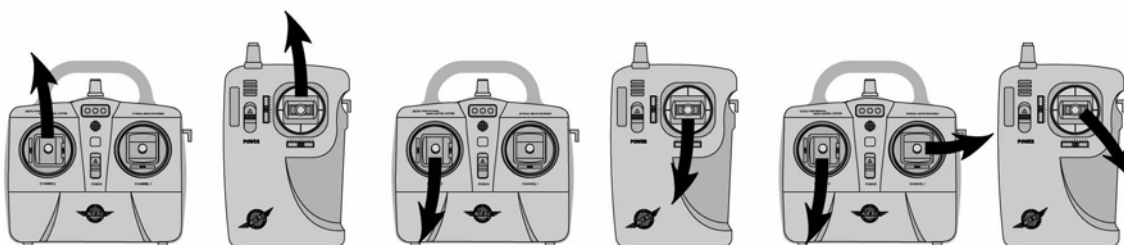
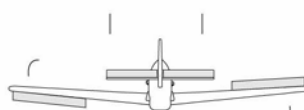
DOWN



UP



RIGHT ROLL AND UP



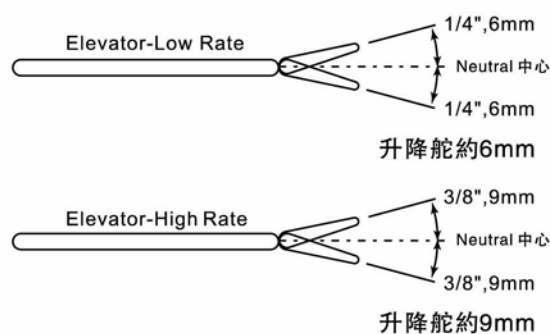
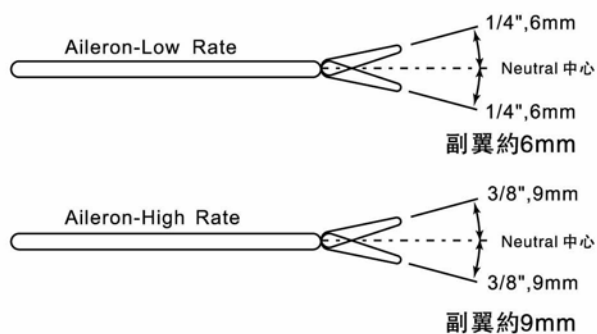
Move the stick up.  
搖杆朝上偏擺

Move the stick down.  
搖杆朝下偏擺

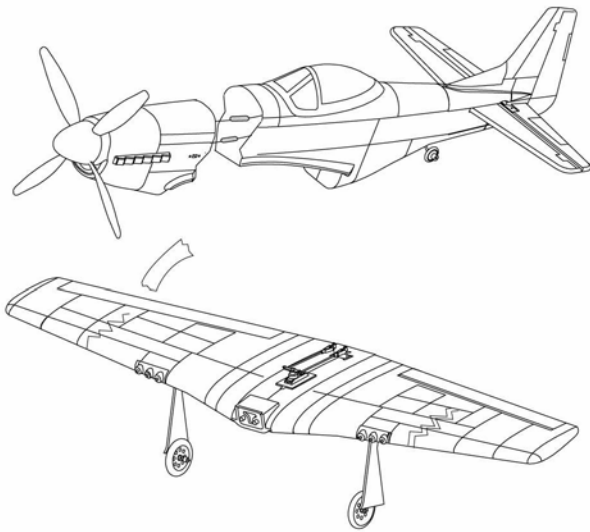
Move the stick down and right.  
搖杆朝右下方偏擺

### Control Throws

Please set up the control throws as indicated drawing for the starting point. After you familiar with its flying characteristics then these control throw can be tailored to fit your flying style. 請根據下圖所示熟悉控制舵量。



## REPAIR 維修



Crash damage is not covered under the warranty!

If damage occurs, use small amount of furnished 5-min Epoxy to repair broken foam. Clear packing tape will hold the parts together; leave it on patch for added strength. Re-balance the plane after you repaired.

如有墜機造成損壞不在產品保證範圍。

使用內附之環氧樹脂來維修您的愛機，並可用透明膠帶補強，但注意必須重新配重。

## IN CASE OF TROUBLE 問題解決

1.If motor does not run when Throttle Stick is up

- Make sure all the wires are well connected.
- Check and follow the manufactures' manual of controller.

油門搖柄上推後，如果馬達並未轉動，先確認接線是否正常或發射機油門正逆轉開關是否反向。請參考遙控器說明書進一步檢視。

2.If the radio is erratic( glitches)

- Check that the transmitter and receiver antennas are extended to their full length.
- Make sure the transmitter batteries are fresh.
- Make sure no one else is operation on your channel ( frequency) in the immediate vicinity.

如果伺服機不正常抖動，請檢視發射機電池是否有電並觀察是否有同頻率的遙控器在使用。

3.If the plane does not fly properly

- Make sure you are being gentle with the control inputs.
- Make sure the plane is balanced properly.
- Make sure all the wing and tail surfaces are flat, true, and properly attached and aligned.

如果飛機飛行不穩定，請確認您是否操控動作量太大或重心位置未調整，並注意您的愛機主翼尾翼角度是否對稱，舵面是否齊平。

If your trouble persists, call authorized dealer for technical help.

經檢視後仍無法改善請就近向其他玩家或向購買之模型店家請教。

## CONCLUSION 结语

To defeat the laws of gravity and take to the wing is both challenging and thrilling. We hope you enjoy the R/C flight and make it your hobby for a lifetime. Please let Thunder Tiger be your chosen brand, no matter what direction you progress.

戰勝地心引力是一種挑戰也是另人亢奮的事情，衷心祝您享受遙控飛行的樂趣並使遙控飛行運動成為您終身之嗜好。讓雷虎成為您的最佳選擇。

