

WIN WIND 30



GWS

Grand Wing Servo-tech Co.,Ltd.

4F., 183, SEC. 1, TA-TUNG RD., SHI-JR CITY,
TAIPEI HSIEN 221, TAIWAN, R. O. C.
<http://www.grandwing.com>
<http://servoman.hypermart.net>

WIN WIND 颯風



	零件代號	品名 ITEM	數量 Piece
1	AASMWIN-P-----	推拉桿零件包 Push Rod pack	1
2	AASMWIN-P-----1-	附件零件包 Accessory pack	1
3	AASMWIN-P-----2-	排氣延長接頭15mm零件包 Muttler adaptor	1
4	PHWIN-1006----L-	WIN WIND主翼(左) WIN WIND Main Wing (L)	1
5	PHWIN-1006----R-	WIN WIND主翼(右) WIN WIND Main Wing (R)	1
6	PHWIN-1006----H-	WIN WIND水平尾翼 WIN WIND Horizontal Stabilizer	1
7	PHWIN-1006----V-	WIN WIND垂直尾翼 WIN WIND Vertical Fin	1
8	PHFUS-1005-----	WIN WIND機身主體 WIN WIND Fuselage	1

SPECIFICATION

- 全長 Length: 46.2in(1175mm)
- 翼展 Wingspan: 52in(1330mm)
- 翼面積 Wing area: 527sq.in(34spdm)
- 飛行重量 Flying Weight(Approx): 1900g(4.25lbs)
- 引擎 Recommended Engine: .30 2-Stroke
- 螺旋槳 Recommended propeller: 9" x 7" (22.8x17.8cm)
- 遙控器 Radio Required: 4 CH+4 SERVO

套件以外你還需要配合的裝備

REQUIRED FOR OPERATION

四動作的發射機
4CH TRANSMITTER



接收機和石英晶體
RECEIVER & RX CRYSTAL



接收機用電池
RECEIVER BATTERY



伺服機延長線
Extension Cord





S03N 2BB 伺服機四顆
S03N 2BB SERVO x 4Pcs



開關組
Switch Harness



十字板手
4-way Socket Wrench



火星塞點火電池
Glow-Starter



啟動馬達
STARTER



十二伏電池
12V BATTERY



螺旋槳 (9" x 7")
PROPELLER (9" x 7")



燃油
Glow Fuel



30~40引擎
.30~.40 2-Stroke



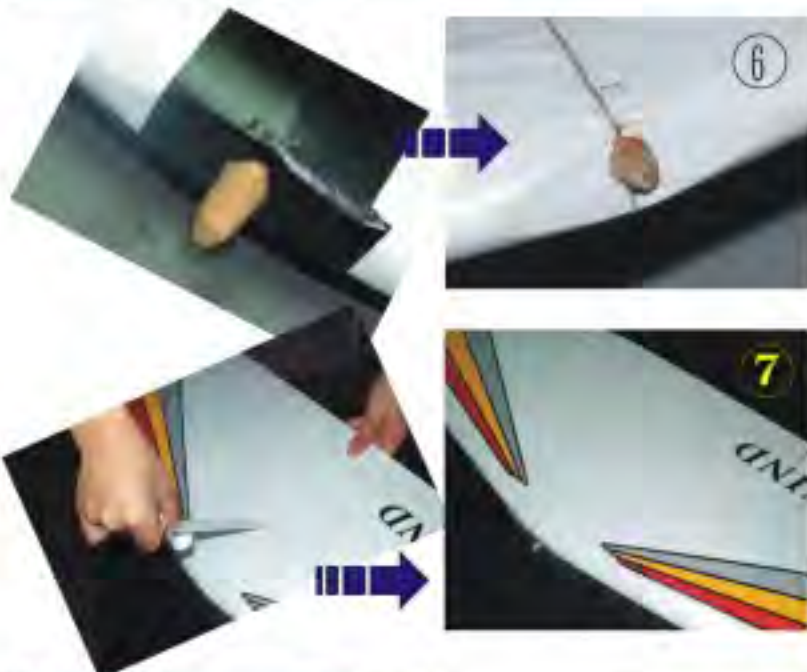
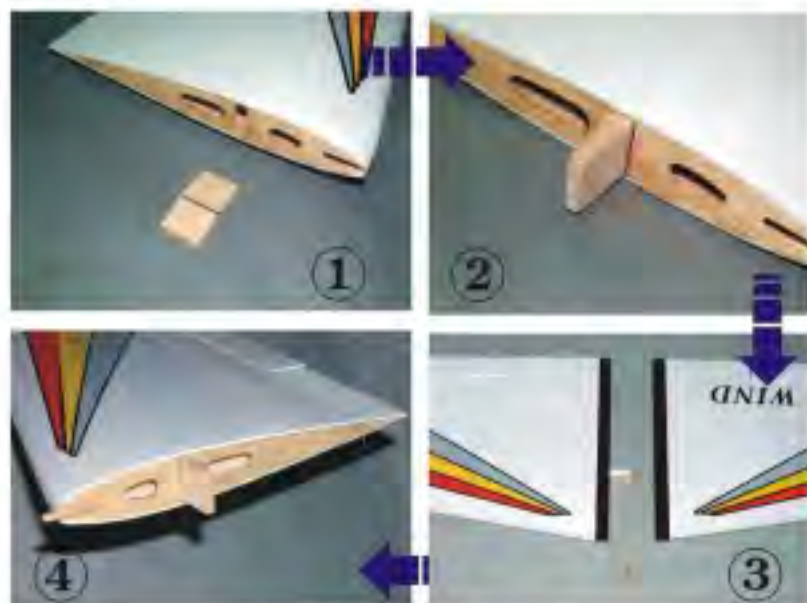
AB膠
Epoxy



火星塞
Glow-plug

主翼的組裝

Wing assembly



1. 請先自行準備AB膠和木工用的瞬間膠。取出左、右主翼及接合支撐片等零件。
Prepare the wing panels, and the plywood wing joiner piece.
2. 將支撐片畫上中心線，試著把支撐固定片和主翼試接合，並比對插入主翼時深度是否正確。檢查左、右主翼接觸面是否吻合，再確實將左、右主翼與支撐片暫時比對組裝。(但先不要黏合)(圖①②③)
Mark the center line of the plywood wing joiner and test fit for depth and the joint line of the wing (don't glue in this step) (Pic. 1, 2, 3.)
3. 以3mm鑽頭於主翼中心線前緣的中心位置鑽一個深約2公分之插孔，再以手工工具(或是4-5mm起子)擴孔，將圓棒插入(預留外部長度約1-1.5公分)，並以木工用瞬間接著劑接著。(圖④)
At the center leading edge, drill a 3 mm hole 30 mm deep, then expand the hole to 4 mm to 5 mm. Now insert the wood stick leaving 10 mm to 15 mm protruding from the leading edge. Then use CA glue. (Pic. 4)
4. 前(1)(2)項試組合完成後，再將支撐片與左、右主翼的其中一邊先行接合，接合前先用紙膠帶或是PVC膠帶，沿支撐片插槽兩側貼上，以預防在黏合擠壓時AB膠溢出表面。取適量AB膠混合後，塗佈於支撐片之溝槽，再將支撐片插入至中心線齊為止，約待4-5分鐘後，將膠帶撕除即可。(圖③⑤)
接合左右主翼前，先以紙膠帶沿接合線斷面邊緣線貼上，再取適量AB膠塗佈於接合面之一側及支撐片溝槽，再將主翼另一側對插結合，並在膠水未凝固前，調整主翼兩側平行對齊。(註:AB膠約5分鐘即凝固，所以塗佈AB膠及結合調整對齊的時間請於AB膠混合後2-3分鐘內完成)。
If the (1 & 2) test is O.K. glue the wing joiner to one wing panel with epoxy. (We suggest you tape the leading edge around the slot in the wing panel to prevent overspill. Mix some epoxy and glue the wing joiner in one wing panel, position it so the marked center line matches the surface of the wing rib. Wait for the epoxy to cure then remove the tape. (Pic. 3, 5)
5. 接合主翼時，請留意主翼插鞘處，不要讓黏合的A B膠溢出，我們可以等主翼結合好後，再黏主翼插鞘，並用膠帶包覆四周，待膠乾固後才撕除。(圖⑥)
Before you join the wing panels use tape on the leading edge of the wing surface as shown in (Pic. 6) to prevent epoxy from overspill. Apply epoxy on the surface of the first wing rib on each wing panel and inside the slot for the wing joiner then join the wing halves checking for alignment then tape the wing panels to hold the alignment and set aside to dry.
6. 等主翼黏合的AB膠乾固後，請利用套件內所附的白色膠帶，延著中央接縫黏貼，如此做法主要是強補主翼外，還有美化的作用。(圖⑦)
After the epoxy is cured, remove the tape. Use white tape provided with the kit cover the wing joint. (Pic. 7)

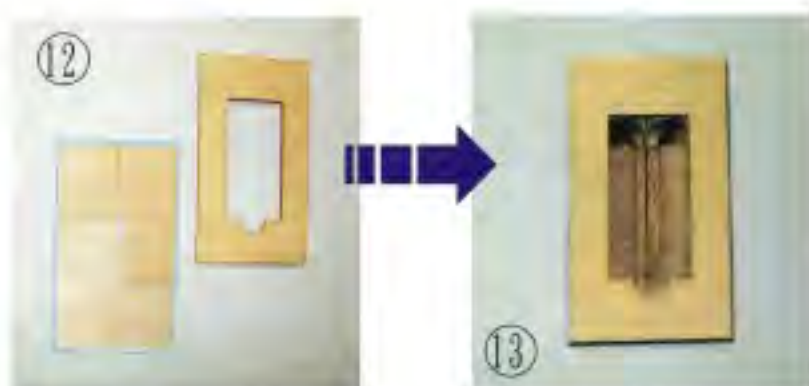


7. 接著主翼補強板前,先將補強板上之螺孔與主翼之螺孔位置比對,對齊後用筆描繪補強板外形於將與主翼接著之位置。

以美工刀沿描繪線輕切後,將該處貼紙撕除,再將補強板以AB膠接著於該處。(圖⑧⑨⑩⑪)

Use the plywood reinforcement as a guide to mark the position of the reinforcement on the wing panel at the center line, draw a line around the reinforcement with a pencil and now cut away the film inside the marked area. Glue the reinforcement to the wing with epoxy. (Pic. 8, 9, 10, 11.)

副翼伺服的安裝 AILERON SERVO INSTALLATION



1. 副翼伺服器座如圖示位置,先以伺服器座比對,並以筆沿外形描繪,再以美工刀沿描繪線將包覆紙裁切下來,以瞬間膠將伺服器座接著於固定位置,以美工刀如圖示切開伺服器座內框位置,再裝內部隔板,並切除多餘或影響伺服機安裝的部分。(圖⑫⑬)

Align the servo mount with the servo cutout in the wing and draw a line around the mount with a pencil. Cut away the film from the surface of the wing inside the marked area. Use epoxy to glue the servo mount to the wing, set aside to dry. (Pic 12, 13.)



2. 同時鎖上副翼舵角操作片。(圖⑭⑮)

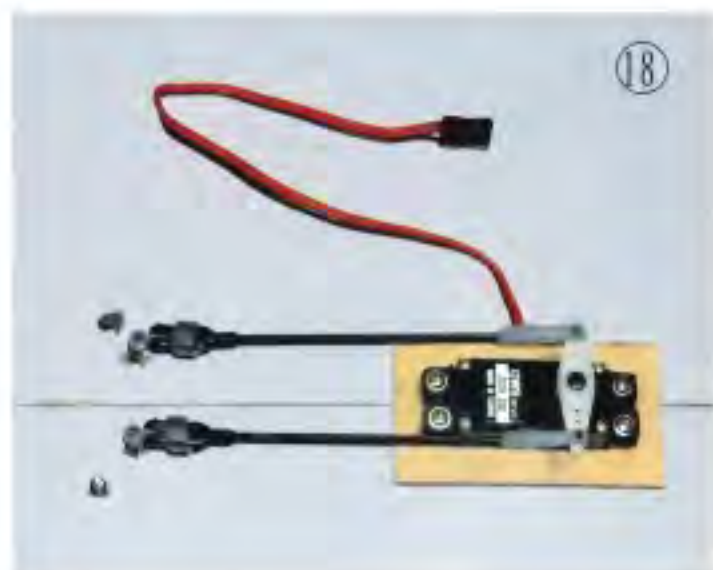
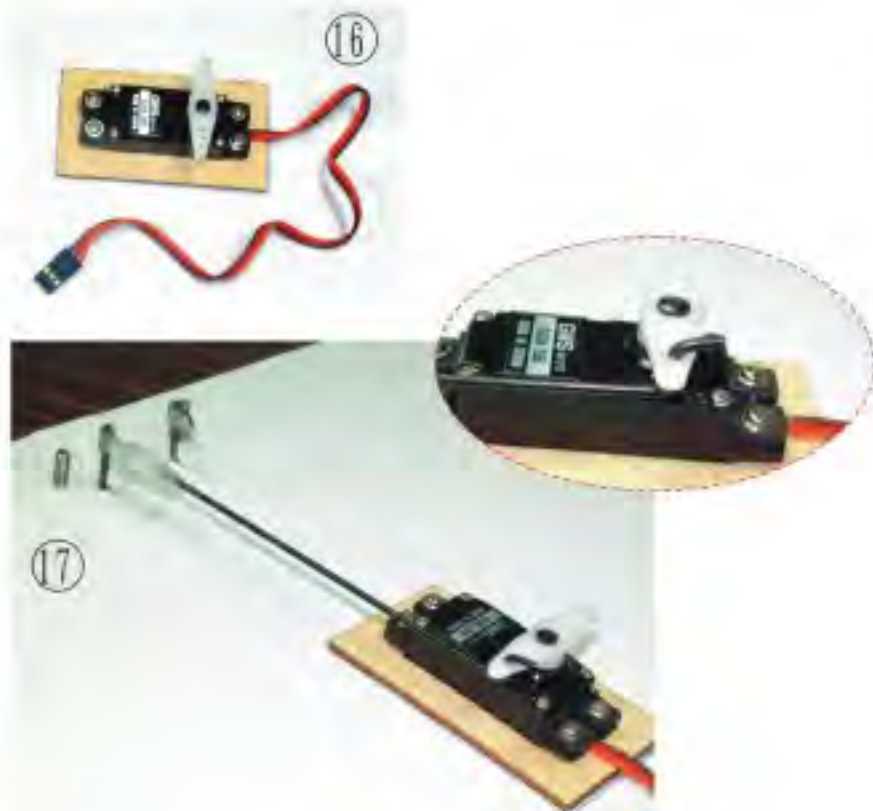
Install the aileron control horn. (Pic. 14, 15)

3. 在裝副翼伺服器時,得先將托架邊開一道凹槽,使伺服電線能順利通過,並且要留意不會夾住電線,否則電線被壓迫太久可能會有斷裂的危險,這些問題解決後,找出附屬在遙控組內橡膠墊,固定於伺服外殼固定座上,再用木工用的自攻螺絲鎖在托架上,完成後就可用AB膠固定在事先挖好的副翼伺服槽內。(圖⑯⑰⑱)

Install the rubber grommets on the servos and install the eyelets in the grommets.

Screw the servo to the mount with the enclosed wood screws. Make sure the servo wires are pulled out from the mount.

Measure the length of the linkage wire and cut to the length and make a Z-bend on the end of the wire without the thread and connect to the servo horn and connect the other end to the aileron horn with an adjustable connector. (Pic. 17, 18) NOTE You May also use EZ Connectors)





1. 將機身之水平、垂直尾翼、插槽位置上的包覆紙以美工刀切開。(圖 19 20 21 22)

Trim the film which covers the pre-cut slot on the tail unit. (Horizontal Stabilizer X 2 Vertical Stabilizer X 1) (Pic. 19, 20, 21, 22.)

2. 把主翼裝置上機身，並以螺絲固定後，將垂直、水平尾翼暫時插置於機身比對各角度是否對稱(此方式參考照片圖文)。將水平尾翼上面繪出中心線。(圖 25 26)

Try-fit the wing on the fuselage and secure with the two screws. Measure out the center line on both sides of the horizontal stabilizer (Pic. 24) Adjust the horizontal stabilizer making it equal on both sides from the center line and mark along the fuselage with a pencil on both sides of the horizontal stabilizer.

3. 用筆沿水平尾翼與機身接合位置描繪出裁切線，再以美工刀輕切撕去包覆紙。(圖 25 26 27 29)

Cut off the film on both sides of the horizontal stabilizer. (Pic. 25, 26, 27, 29)

4. 以紙膠帶沿尾翼與機身接合於位置貼上，再以適量AB膠接合(註:AB膠約5分鐘即凝固，所以請於2~3分鐘內完成調整角度及對稱位置)。(圖 28 30)

Use epoxy to attach the stabilizer to the fuselage and hold in place with tape until the epoxy is cured. (Pic. 28, 30)

5. 垂直尾翼與機身接合方式步驟同水平尾翼，待約4~5分鐘後即撕去膠帶即可。(圖 29 31 32)

Now install the vertical stabilizer to the fuselage and make sure it is 90 to the horizontal stabilizer, use tape to hold the vertical stabilizer in place until the epoxy is cured. (Pic. 29, 31, 32)



主輪架之安裝

SKY HERO LANDING GEAR

WIN WIND



1. 用美工刀將腳架凹槽上的包覆膜延著邊切開，切開後您可看到左、右靠邊處各有一個孔。(圖 33)
Cut the film which covers the filler, after that you will see the holes on the left and right. (Pic. 33)

2. 從零件包找出相同形式的兩支腳架，用其中一端L型分別交叉的插入腳架凹槽內(圖 34)。角架安裝定位後，取出固定片用筆標示出概略固定片的孔位，並用鑽頭鑽出小孔。再從螺絲包取出四支自攻木螺絲，按照圖片的方式鎖緊。(圖 35 37 38 39)
Take out the 2 L-shaped landing gear and install. Landing gears to the hollow on each side (Pic. 34). Use the landing gear retainer and use a pen to mark the position and drill the holes for the screws. Then secure the landing gear with the screws. (Pic. 35, 37, 38, 39)

3. 再從螺絲包中找出二顆輪檔(DURA COLLAR)和低壓航空輪胎二粒，按照圖片的方式鎖緊。請預留間隙使輪胎能很輕鬆的轉動。
Take the wheel and wheel collar from the accessory pack and install them as shown. (Pic. 40)



鼻輪架之安裝

NOSE GEAR INSTALLATION



1. 如圖示之距離位置開一長1.5cm,寬0.3cm之開口(注意開口側位置)。(圖 41 42)
Cut a slot 15 mm long by 3 mm wide (on the side of the fuselage) (Pic. 41, 42)

2. 將機身底部主輪固定槽的位置之包覆以美工刀切開，並將白色的油門推桿的導管安置好。(圖 43)
Install the white plastic tube for the push rod. (Pic. 43)

3. 將主輪架安裝於主輪固定槽，並以固定片如圖示安裝固定。(圖 44 45)
Slide the nose gear control horn on the nose gear then insert the nose gear in the nose gear mount and install a wheel collar. (Pic. 44, 45)

4. 轉向鋼絲安裝前請於一方彎成“Z”字型)將鋼絲導管由開口穿入至機身伺服器位置。(圖 46 47)
Make a Z-bend in the push rod for the nose gear and insert the wire in the white tube and insert it through the firewall to the servo position. (Pic. 46, 47)



5. 將鼻輪配件如圖依序安裝，分別將輪胎安裝主鼻輪架，並鎖上輪檔(圖 48)
Secure the nose gear with the wheel collar according to (Pic. 48)

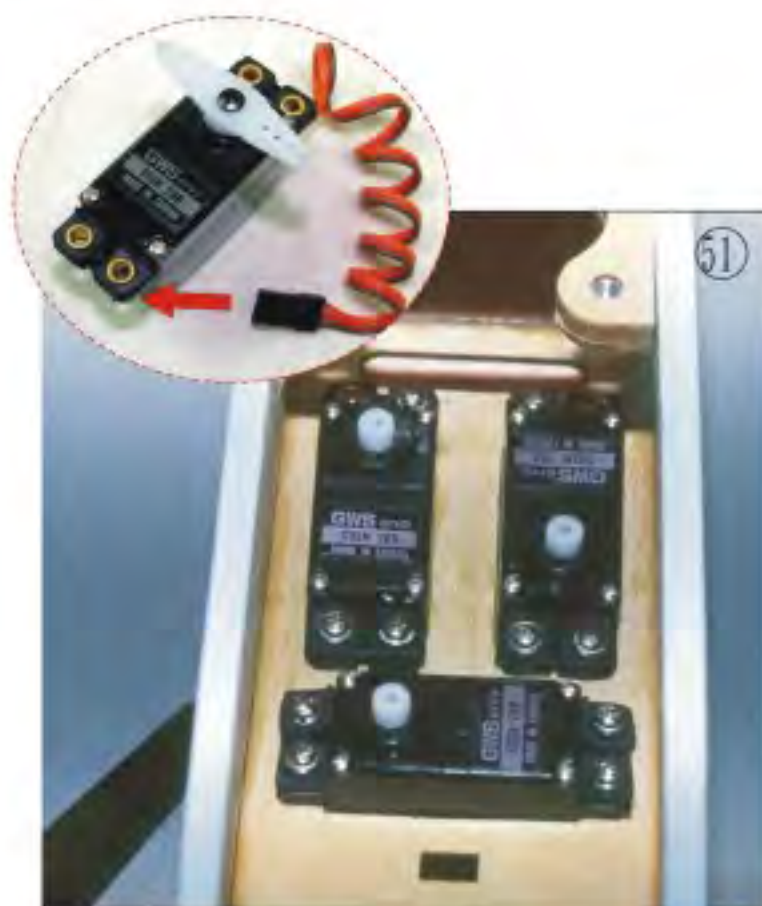
接收系統的安裝 RECEIVER INSTALLATION



1. 將伺服器座如圖示安裝於機體內，並以瞬間膠固定。(圖 49)
Install the servo mount inside the fuselage wit instant glue. (Pic.49),

2. 首先您需準備一組接收系統，這套系統內最少要具備四顆**伺服機**，**接收機**，**開關組**以及**電池組**。如可能也可多準備一條副翼伺服機用的**伺服延長線**。(圖 50)
Install a 4 channel or up receiver system with 4 servos (S03N), a battery pack, one aileron extension wire. (Pic. 50).

3. 請依照圖例所示，裝妥機體內的伺服機，請注意伺服機的方向，再固定伺服機前請先裝妥防震墊及金具。(圖 51)
Install the rubber grommets on all servos and then insert the eyelets in the rubber grommets then mount the servos, (the left side of the picture shows the tail servo.)



油箱的安裝

FUEL TANK INSTALLATION

WIN WIND



請依圖示依序安裝。

1. 先將鋁管和油箱蓋壓片依照圖例組裝，並請注意油箱蓋的壓片前後位置，較大的放在頂端。並請把放於油箱內的鋁管之一端折彎，再接一節油管當通氣管。另外一隻鋁管接重錘，請控制調整油管的長度，當油箱倒立時，重錘必須能夠移動到底。(圖52 53 54 55)

Please refer to picture 52 and 53 to assemble the plug for the fuel tank, but don't tighten the screw before putting the plug in the tank. Insert one aluminum tube through the rubber plug for a vent and bend the tube and put a small piece of extension tube on the aluminum tube, this is the air vent. The other aluminum tube is for fuel. Insert it through the rubber plug and then put a longer piece of extension tube on. Attach the clunk on the other end of the extension tube, the clunk must reach the bottom to the tank. Now mark the aluminum tube connected to the clunk with a RED marking pen, and mark the air vent tube with a blue marking pen. (Pic. 54, 55).



2. 等到油箱內部油管都調整妥當後，請將油箱蓋中央螺絲鎖緊，並把塑膠蓋翻下來固定油箱的瓶口和放置入機體內。(圖56 57 58)

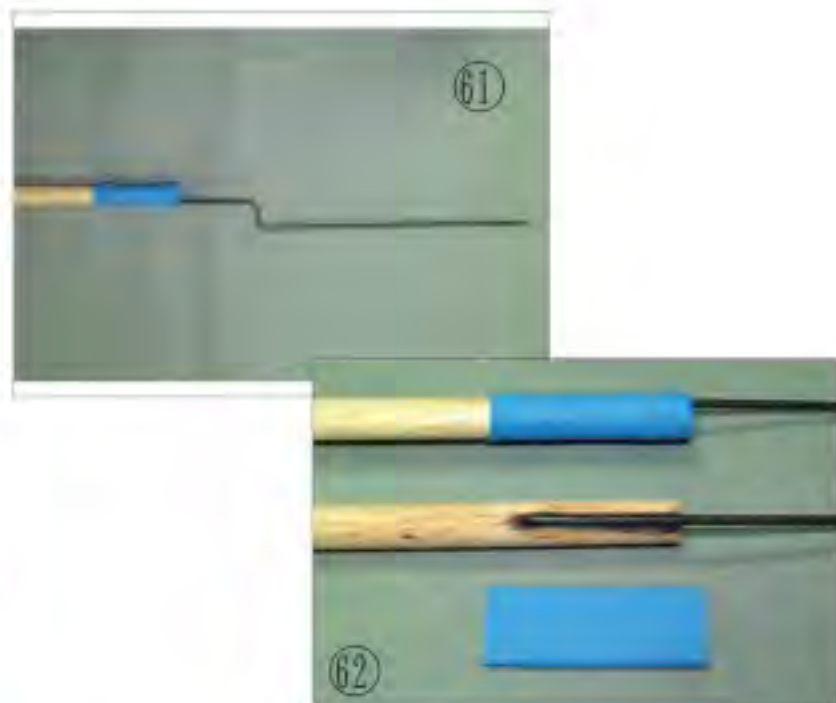
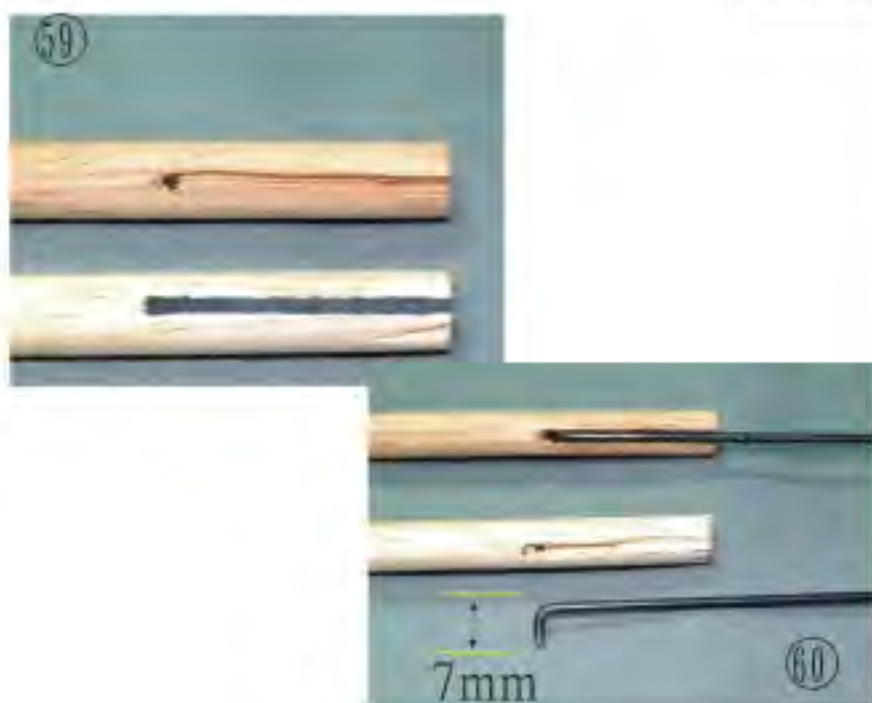
請注意鋁管銜接油管的相關位置，塗黑色的鋁管用油管接消音器，塗紅色的鋁管用油管接往引擎的化油器。待油箱內部鋁管油路處理好後，請依圖示固定油箱，並留意油箱口位置的固定。

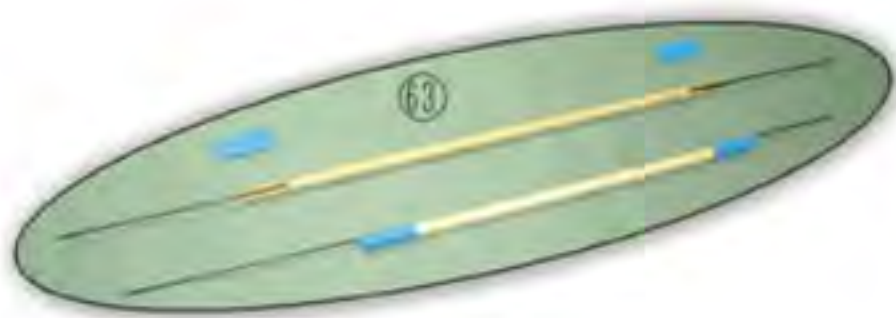
After steps 1 & 2 have been done put the plug into the tank and tighten the screw in the center of the plug. Install the tank in the fuselage with the plug coming through the hole on firewall. (Pic. 56, 57, 58) The Red tube connects to the carburetor and the blue tube connects to the muffler.



伺服推拉桿的安裝

PUSH ROD





- 伺服及升降・方向舵間的推桿・可用圓木棒做主桿・兩個用鋼絲折成L型利用熱縮套管固定於圓棒上・頂端折成Z字形扣在伺服擺臂上・另一端可用調整或U型夾・夾在升降舵的舵角控制片上・(圖59 60 61 62 63) 熱縮套管附在套件內・但顏色不一定是藍色・請視需要長度剪裁後在用熱吹風機熱烘即可。

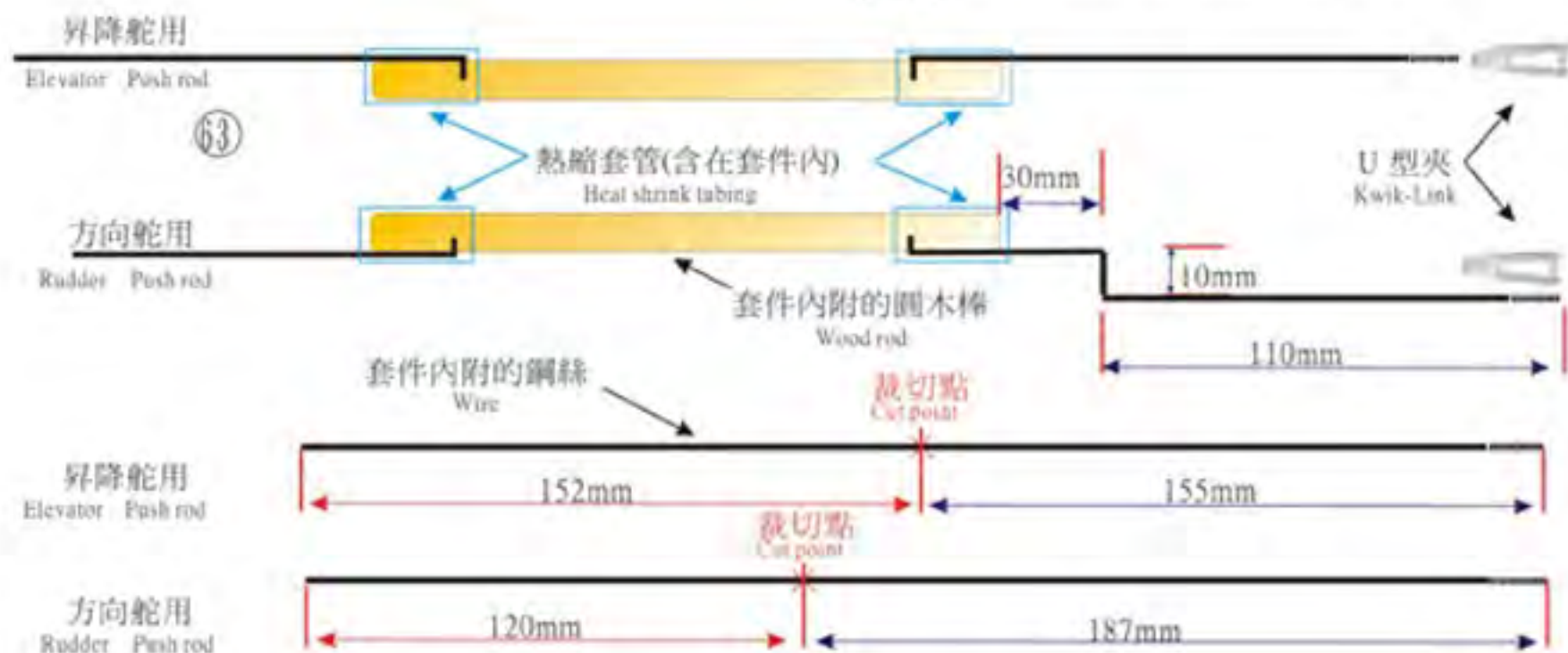
* For the elevator and rudder the length are the same as shown in Picture 63.

* For the elevator and rudder control, the wood rod is the main structure. Please follow the procedures shown in Pictures 59, 60, 61, 62, 63.

Drill a hole through the wood rod and cut a groove as shown in Picture 59.

Make a 90° bend in the end of the control rod wire without the Threads, Refer to picture 63 for the dimensions.

Bend the wire and the wood rod with epoxy and when the epoxy has cured use the supplied heat shrink tubing to cover the joint. (Pic. 61)



舵角片的安裝 HORN INSTALATION



1. 請依照圖示從套件內找出兩組舵角片(圖64)・一組裝在垂直尾翼上(方向用)(圖65)・另一組安裝在水平尾翼上(升降用)。(圖66 67)

The kit has 2 sets of horns, (a set consists of one horn and one back plate), (Pic. 64) one set for the rudder and one set for the elevator. (Pic. 66, 67).

2. 在安裝舵角片時・請注意方向・方向舵角片是安裝在左側・升降舵角片是安裝在水平尾翼的下方。(圖66 67)

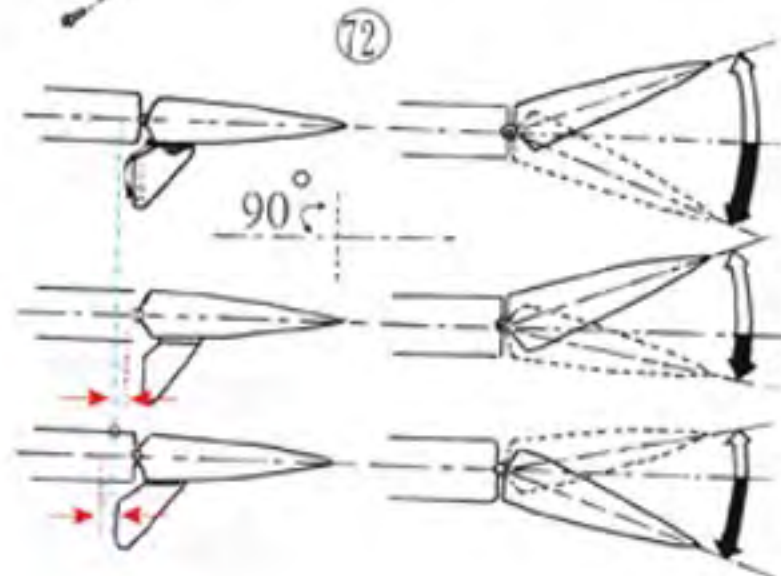
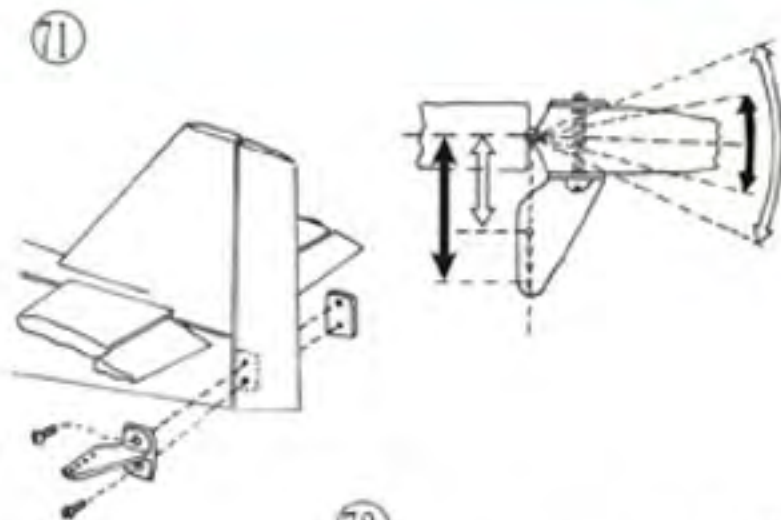
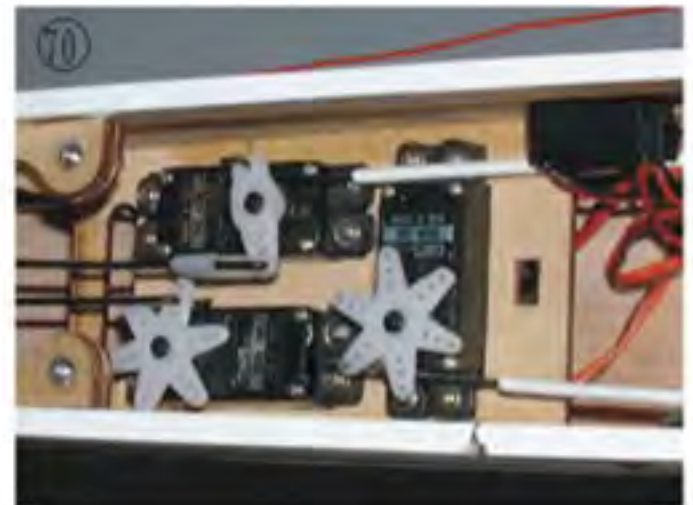
Make sure to install the horns in the right direction, the rudder horn is on the starboard side (Left side). The elevator horn is installed on the bottom of the elevator in the center of the fuselage tail. (Pic. 65, 66, 67, 68).



3. 在安裝完舵角片後，請取出先前組裝好的伺服推拉桿，依圖示將伺服推拉桿分別安裝至相關的伺服機上。(圖 69 70 71) 在安裝升降舵和方向舵的舵角片時，因舵角安裝的位置或角度的差異之不同，會直接影響操作舵面擺幅的大小，請依圖例所示裝設個人所需要的角度。(圖 71 72)

After the horns are installed pull out the push-pull rod from the recesses of the fuselage and follow the procedures shown in pictures 69, 70, 71, 72, and 73. To connect to the servos.

Refer to picture 72 for control surface deflection.



引擎和油門伺服安裝

ENGINE INSTALLATION



首先請注意，本機不適用於後方排氣引擎。

先檢查您引擎油門的控制臂在那個方向，（一般而論大多置於消音器那側）而油門伺服安裝的位置必定要和其同側。

NOTE THIS AIRPLANE IS NOT SUITABLE FOR AFT EXHAUST ENGINES
BEFORE YOU INSTALL THE ENGINE, PLEASE CHECK WHICH SIDE THE THROTTLE IS, YOU WILL NEED TO MAKE A HOLE IN THE FIREWALL FOR THE THROTTLE LINKAGE.

1. 引擎安裝請依照圖例安裝，在安裝前須先穿入油門鋼絲，而鋼絲頂端須先彎成“Z”字形。（圖 74）

Before you install the engine make a Z-bend in the throttle rod wire then insert the throttle rod through the firewall and connect to the engine throttle. (Pic. 74)

2. 引擎固定好後，先安裝機頭罩後蓋，再將螺旋槳固定妥當後再鎖機頭外罩。（圖 75 76）

Install the spinner back plate on the engine, install the propeller, secure with the propeller nut and install the spinner. (Pic. 75, 76)

3. 引擎安裝請事先試卡合，要特別注意機頭罩底部至防火牆之間的長度，以免機鼻的整流罩無法安裝。

Be sure to keep enough clearance for the spinner back plate to clear the engine mount.

4. 將油門鋼絲拉桿在靠近伺服機的那端，事先折成緩衝用的V型式樣，並於鋼絲兩端分別勾上伺服臂和化油器上的油門控制臂。（圖 77）

Make a V-bend in the throttle linkage wire near the servo and connect the wire to the servo. (Pic. 82)

5. 當您發射機油門往上推，您的化油器進氣口也跟著打開，直至全開（圖 80 81），往下拉時，進氣口也會逐漸關閉至慢速位。（圖 78 79）

Test the throttle travel to make sure the throttle opens and closes all the way.

