

PILATUS PC-6 PORTER 40 [A340 Kit]



Wing Span	:	64 in / 1625 mm
Wing Area	:	592 sq in / 38.2 sq dm
Flying Weight	:	5.5 lbs / 2500 g
Fuselage Length	:	45.5 in / 1155 mm
Requires	:	"Glow Power" requires 4-channel radio w/5 standard servos, 2-stroke 0.40-0.46 engine, or "Electric Power" requires 4-channel radio w/ 4 standard servos, Outrunner Motor KM37490750 w/ Radial Mount Adaptor HW2340300, 40A Brushless ESC, 4 cells 14.8V 3200 mAh Lipo battery and charger

Specifications are subject to change without notice.

Warning! This model is not a toy.

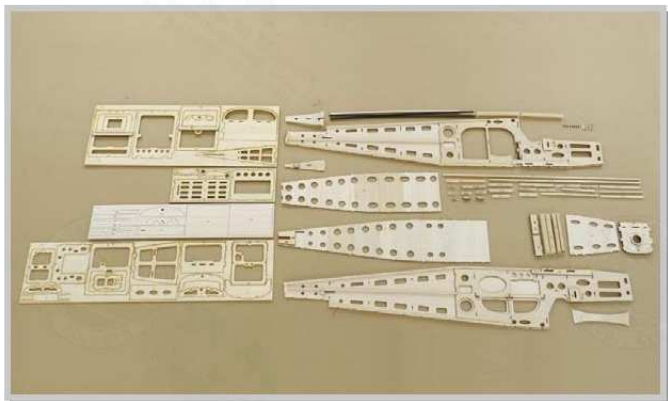
It is designed for maximum performance. Please seek advice if one is not familiar with this kind of engine powered precision model. Operating this model without prior preparation may cause injuries. Remember, safety is the most important thing. Always keep this instruction manual at hand for quick reference.



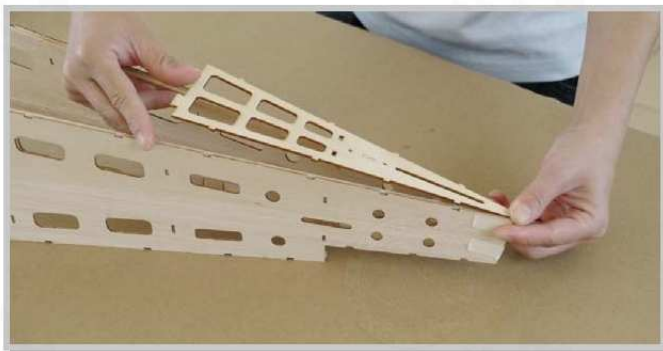
The World Models
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PRECISION LASER CUT
EASY BUILT KIT SERIES
MADE IN CHINA

FUSELAGE ASSEMBLY



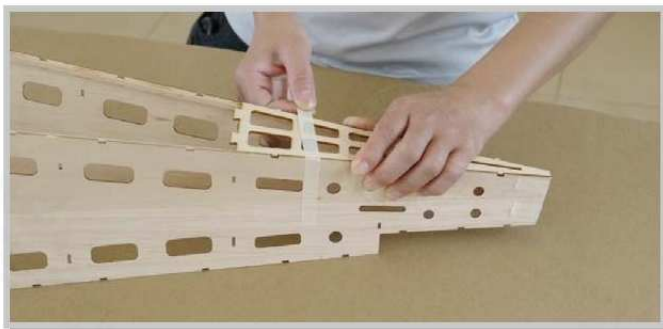
Lay out the fuselage parts on a flat table top.



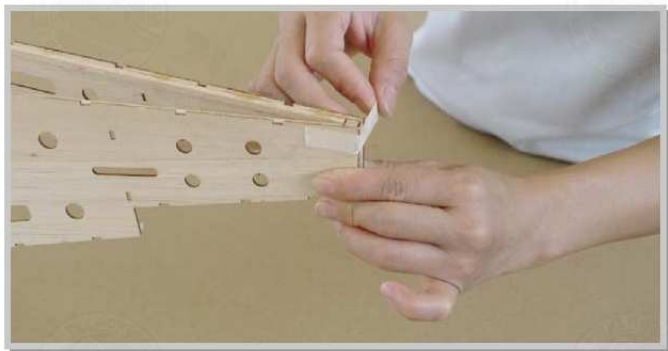
1.4 Flip the fuselage over with bottom up, take F29 and latch it between the two side panels. Note that the side with small plywood sheet should be facing inside of the fuselage.



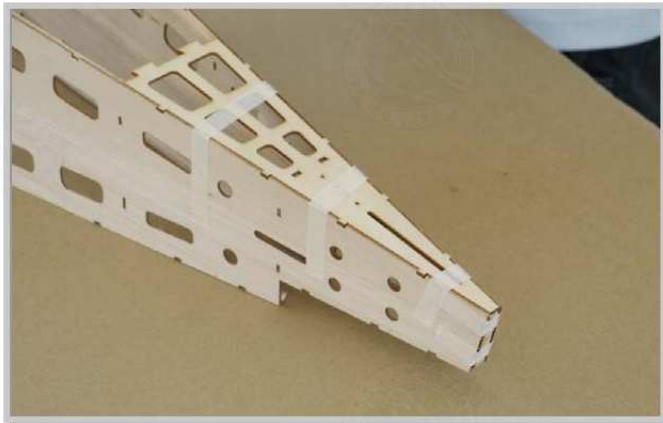
1.1 Remove parts from plywood, cut connecting tabs when required.



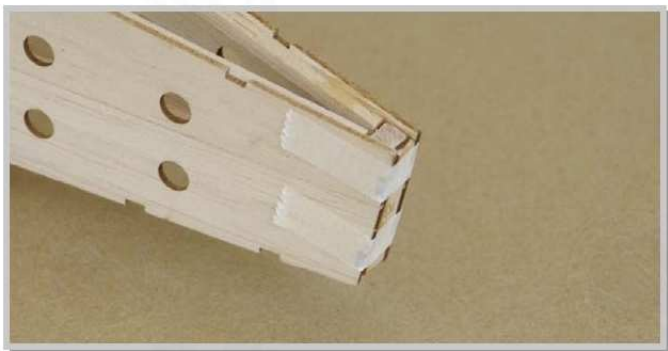
1.5 Use tape to hold F29 in place.



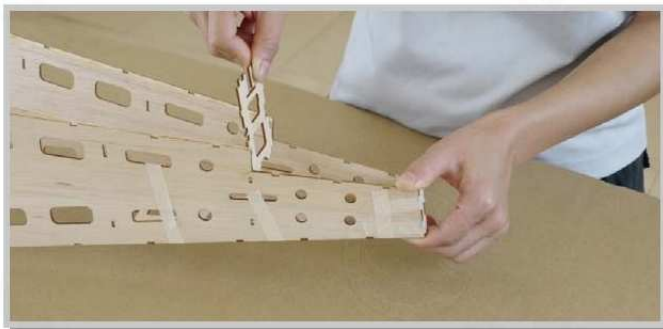
1.2 Use tape to bind the left and right fuselage panel together at the ends.



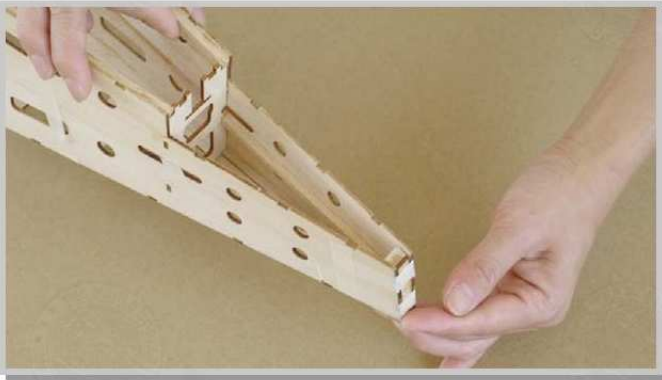
1.6 F29 in position.



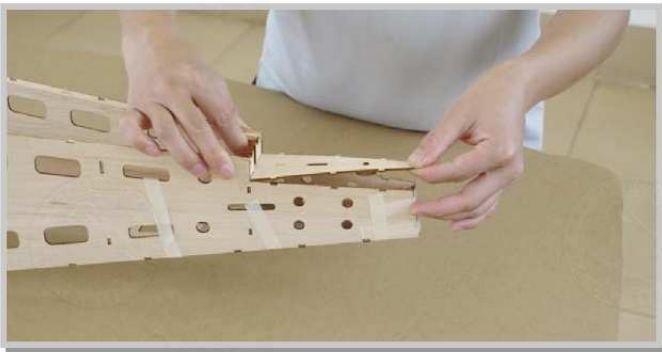
1.3 Holding the panels by tape.



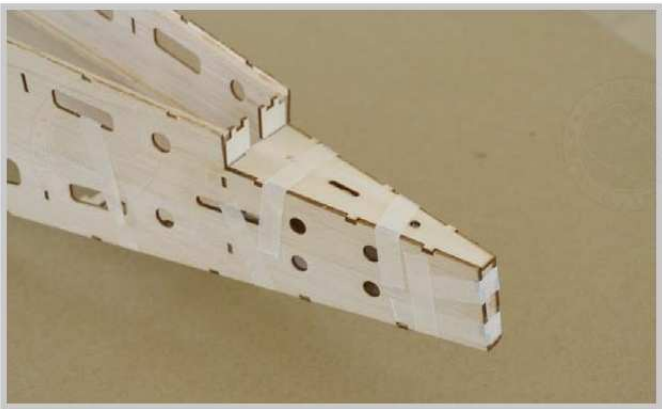
1.7 Flip the fuselage over now with top up, take F11 and latch it between the panels. Make sure the open slot of F11 is at the top.



1.8 F11 in position.



1.9 Take F41 and latch into side panels, make sure the blind nut is facing down inside the fuselage after installation.



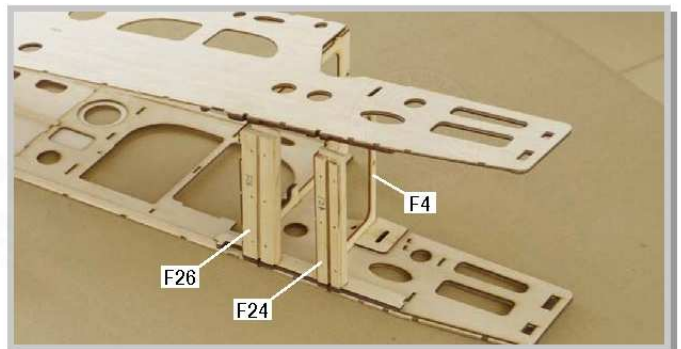
1.10 How it looks when F41 is in position.



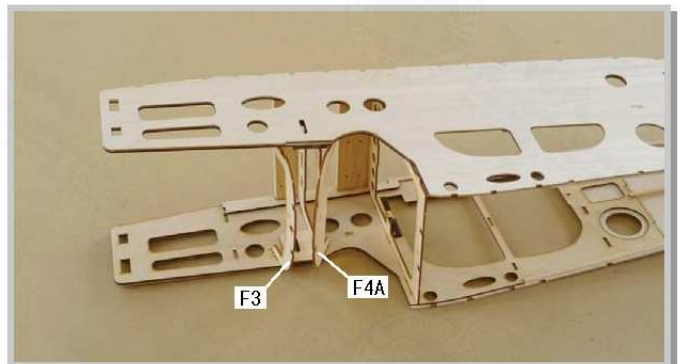
1.11 Cut open CA glue tip for CA application. Make sure opening is not pointing at anyone.



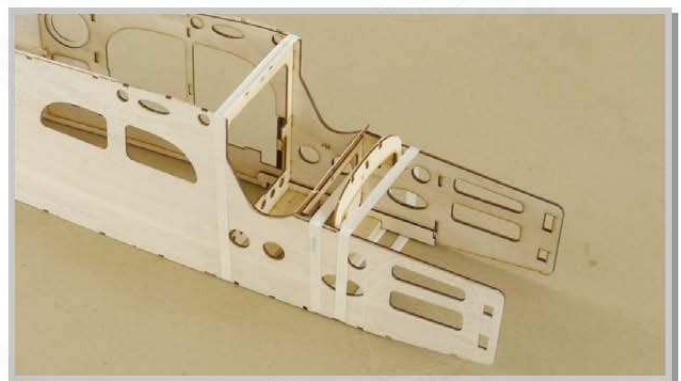
1.12 Take F5 and latch between the panels. Make sure the side with glued plywood block is facing the rear. Apply a few drop of CA to temporary fix its position perpendicular to the left side panel.



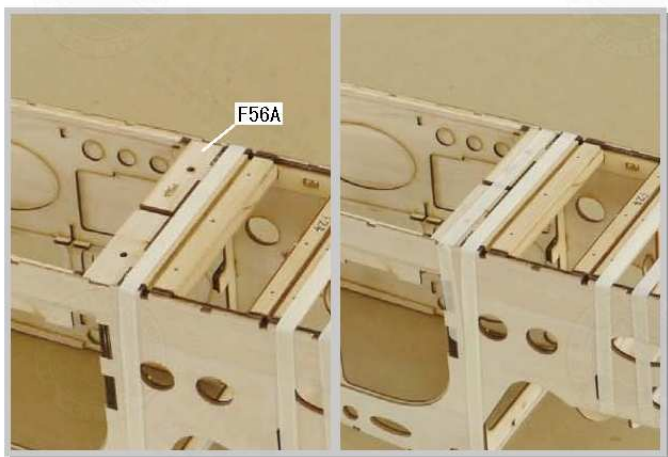
1.13 Latch in F4, F24 and F26 perpendicular the the left side panel and apply a few drops of CA to fix them in place. Make sure F24 and F26 have the grooved side facing outward.



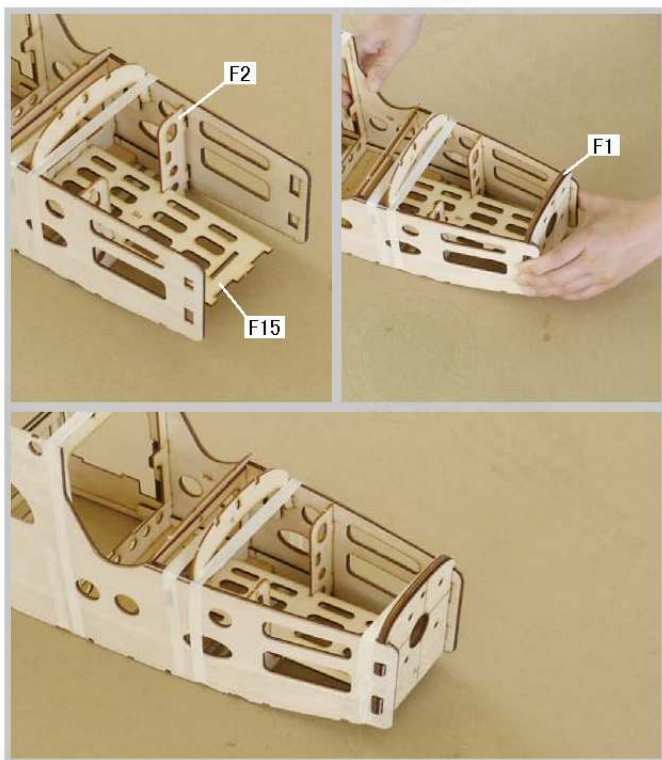
1.14 Latch in F3 and F4A in the same manner as 1.12 above.



1.15 Press and fit right side fuselage to F3, F4, F4A, F5, F24 and F26, use tape to hold them in position.



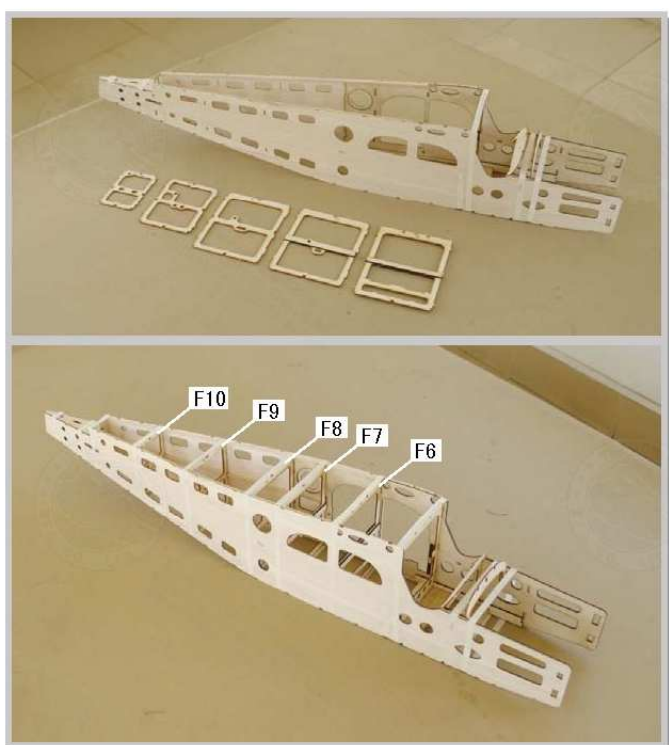
1.16 Flip fuselage over and latch in F56A, note that the blind nuts should be facing inward of the fuselage.



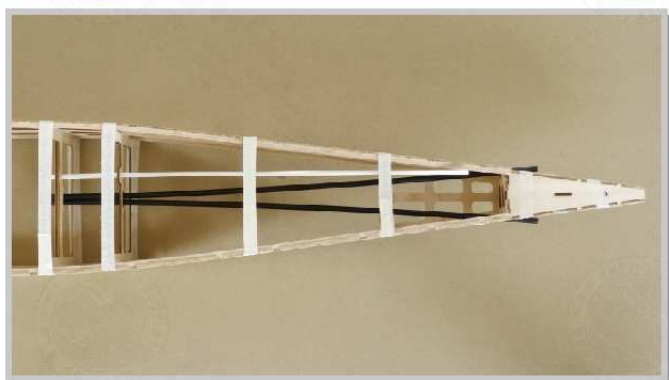
1.19 Latch in F2, F15 and F1 into side panels and hold them in position with tape. Make sure the blind nuts at F1 is facing the rear. For better strength of the firewall, it is recommended to use epoxy to glue F1 to the side panels.



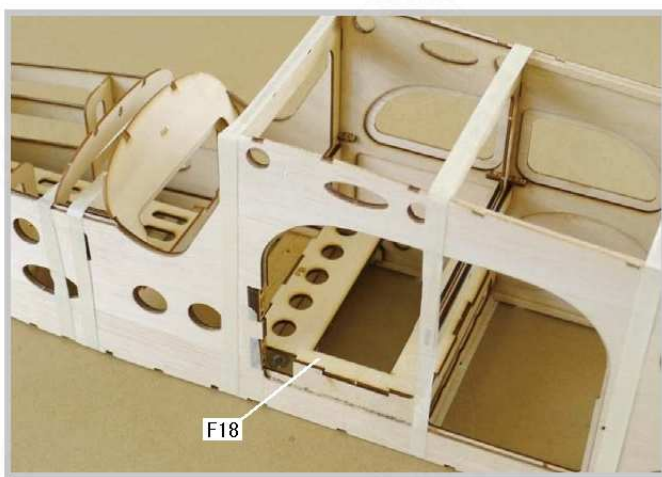
1.20 Glue in F15A.



1.17 Latch in F6, F7, F8, F9 and F10 between the fuselage panels. Pay attention to the tenons and cut outs, they may not be symmetrical and if they don't seem to fit, flip it left to right will do.

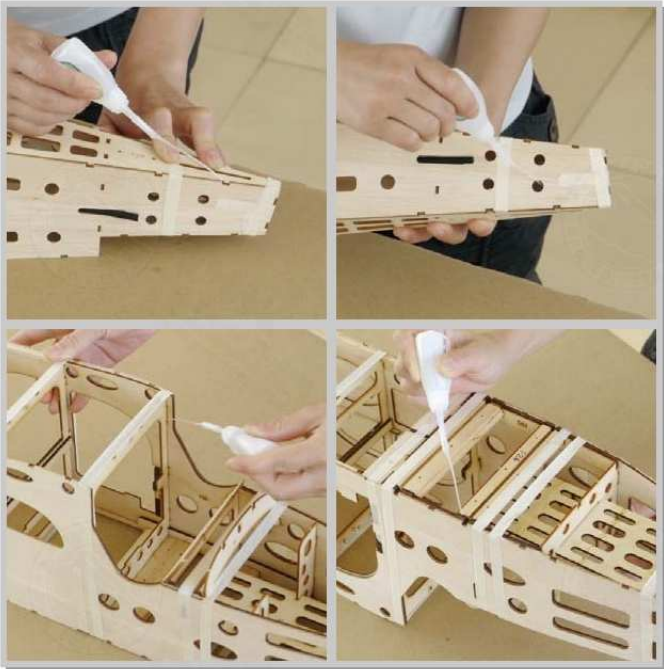


1.18 Insert two black and one white pushrod guide sleeve into the partition panels.

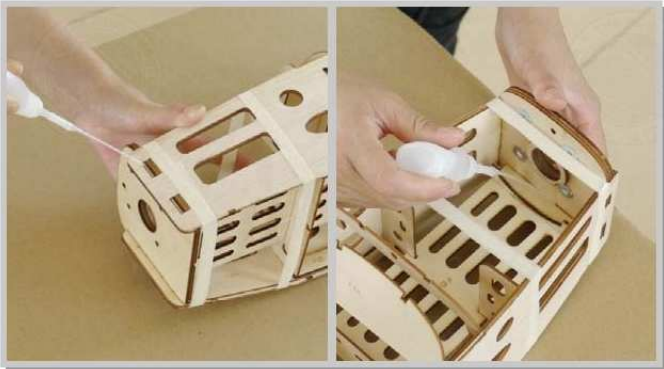


1.21 Glue in F18.

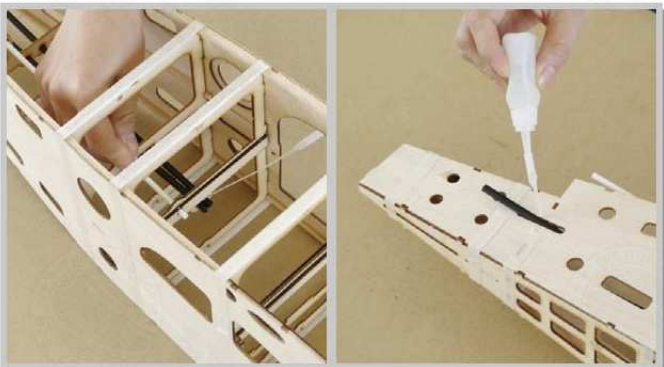
- 1.22** Basic fabrication of fuselage is complete. Check any loose joints and distortion of the frame work. Prepare to apply glue in the next step.



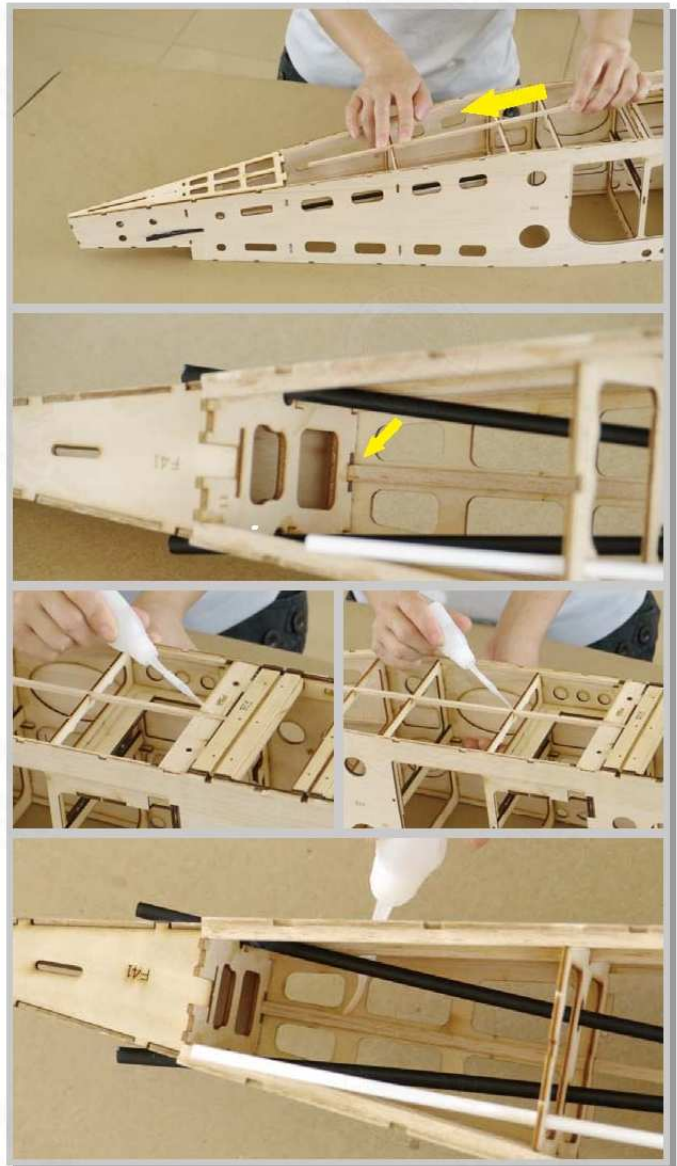
- 2.1** Apply CA glue to all surfaces in contact. Apply from both sides in and out and let glue seep into joints. Use extension tube through side panel holes to get access to inside of fuselage. Avoid area with tapes at this stage, when glue is cured at other areas, remove tape and apply glue to area under the tapes.



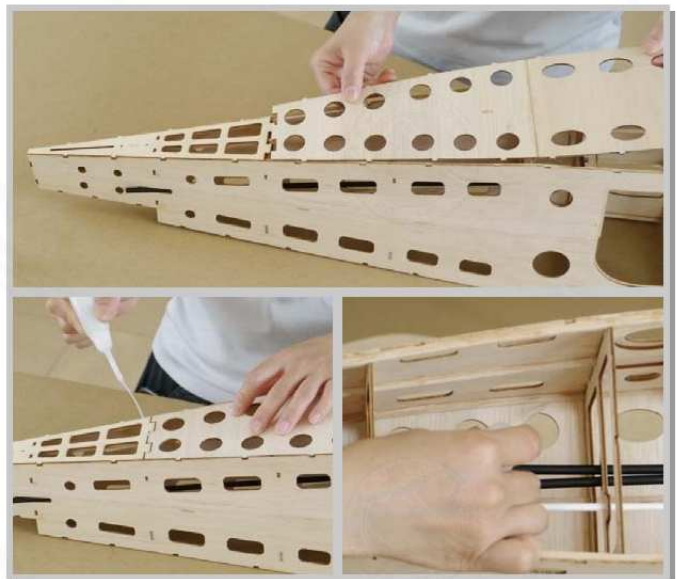
- 2.2** If epoxy was not used in Step 1.19, apply adequate CA to the F1 joints.



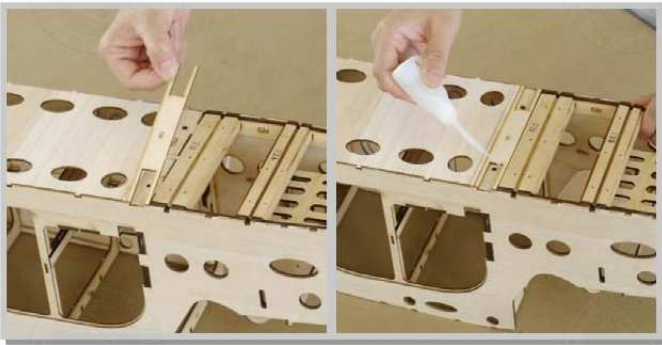
- 2.3** Expose 5~10mm length section for the pushrod sleeves outside the plywood partition and apply CA to fix it in position. Make sure glue does not get inside sleeve.



- 3.1** Flip fuselage over with bottom facing up, insert F50 and apply CA glue.



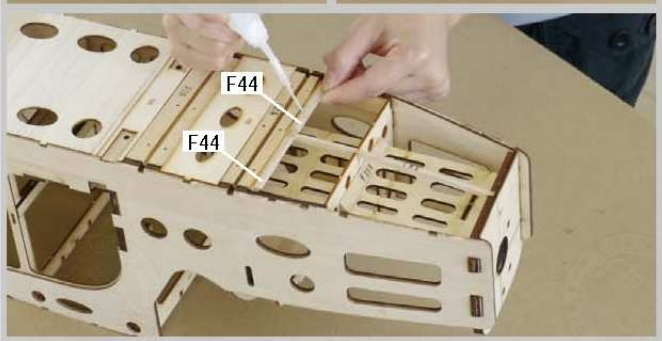
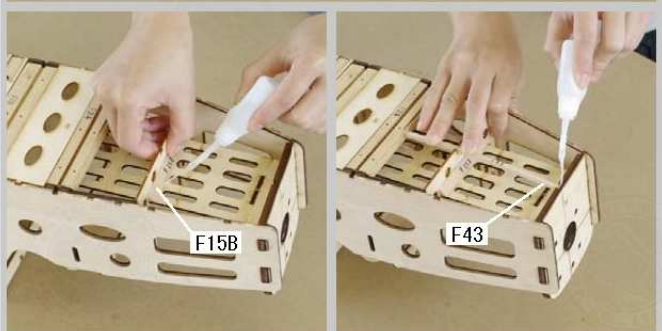
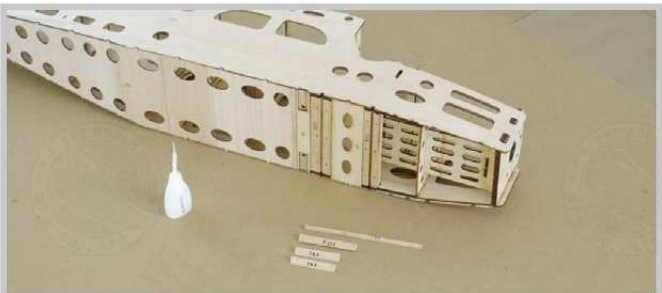
- 3.2** Latch in F27, apply glue to inside and outside of the fuselage.



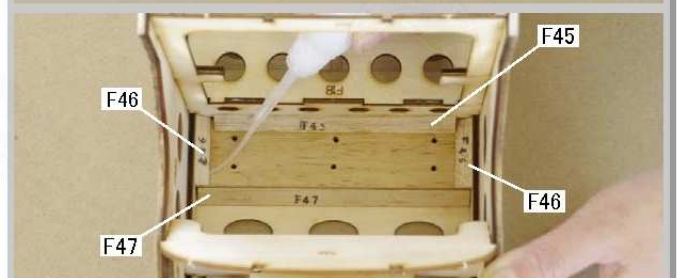
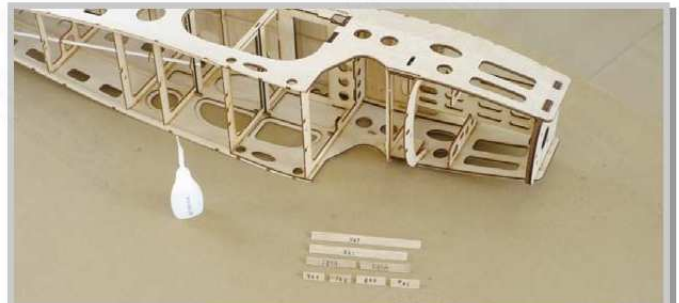
3.3 With fuselage bottom up, glue in wing strut support F28. Pay special attention not to allow glue to get into blind nuts of F56A, or it will be difficult to apply the wing strut bolts later.



3.4 Glue in F25.



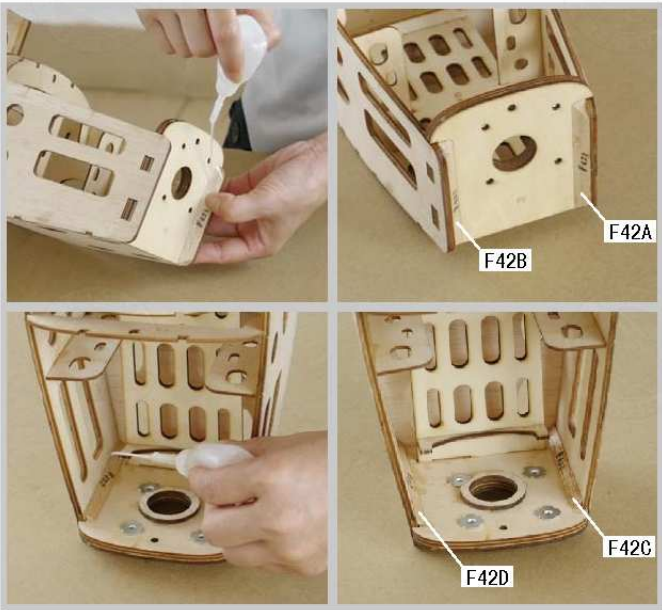
3.5 Glue in F15B, F43 and F44, note that F43 should be flush with the cut outs, and F44 should be flush with the lower step of F24. (F22 will be laid on top of the lower step of F24 and F44.)



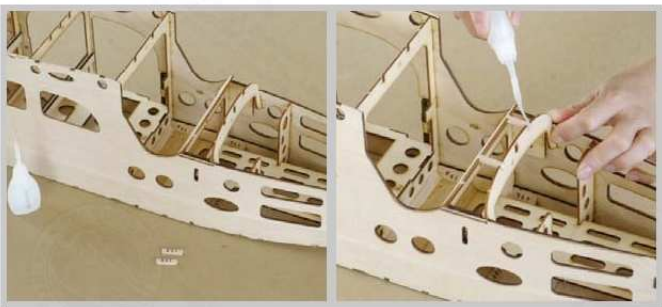
3.6 Flip over fuselage and glue in reinforcement bars F45, F45A, F46, F47 and F48.



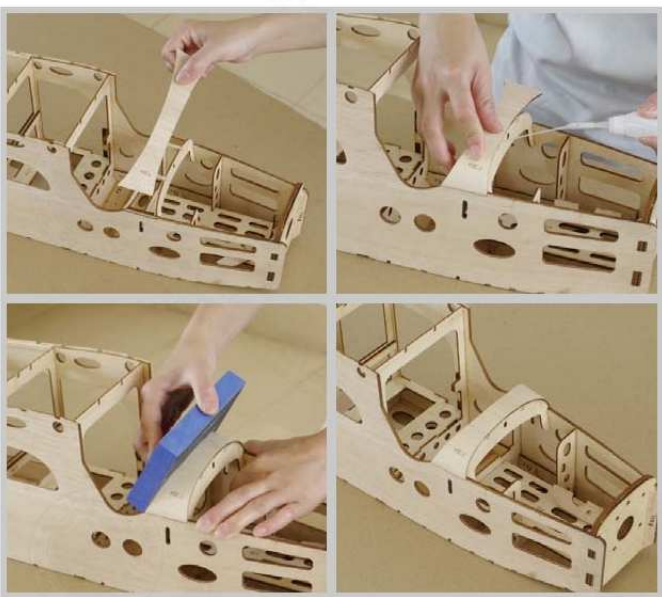
3.7 With fuselage bottom up, latch in F22. After fitting in tenons and cut outs, apply glue to fix it in position. Flip over fuselage to apply glue from the inside.



3.8 Glue in reinforcement bars F42A, F42B, F42C and F42D. Note that F42A and F42C are at the left side of fuselage, and F42B and F42D at the right side. They are not interchangeable due to the thrust angle at the firewall. For better strength, use epoxy to glue in the bars.



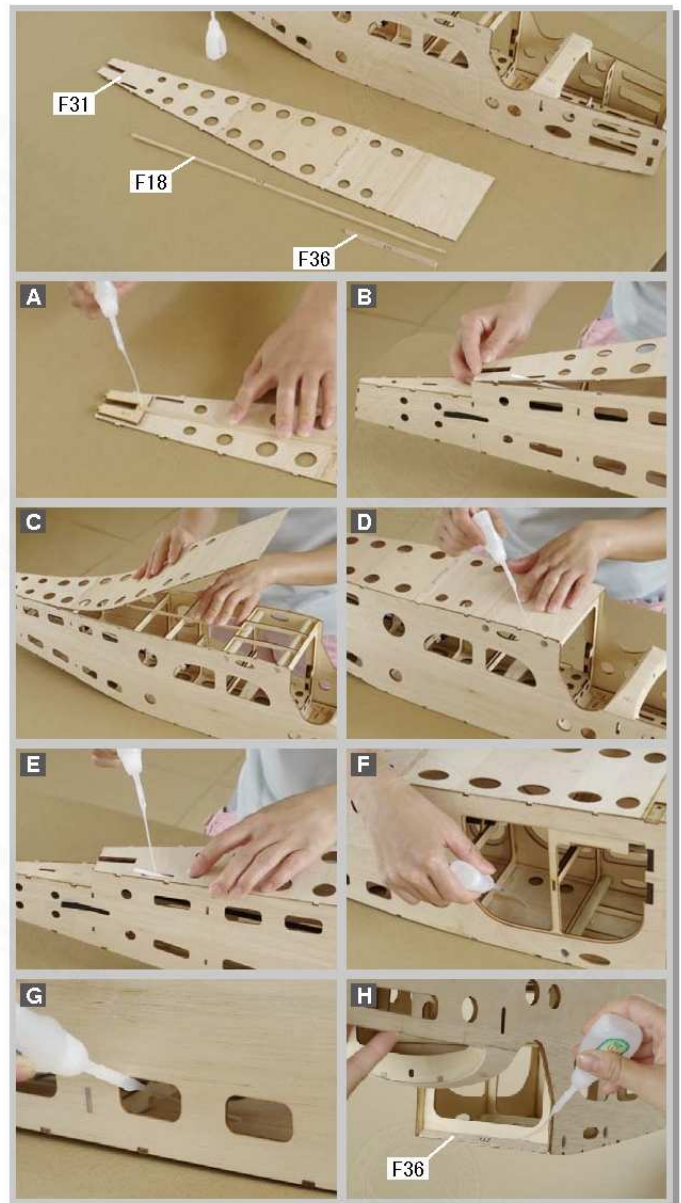
3.9 Glue in F33. If they are longer than the space between F3 and F4A, let them stick out and grind them down later, otherwise F30A could be too narrow to fit in next step.



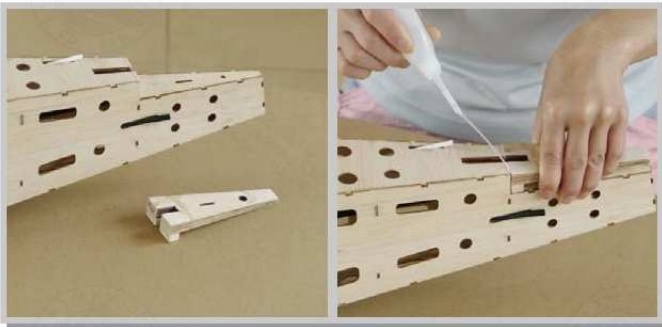
4.0 Glue on F30A. Apply glue on one end first, when cured, bend the balsa sheet along the former F4A and apply glue along the joint until the other end. Sand down rough edges and protruding spots when cured.



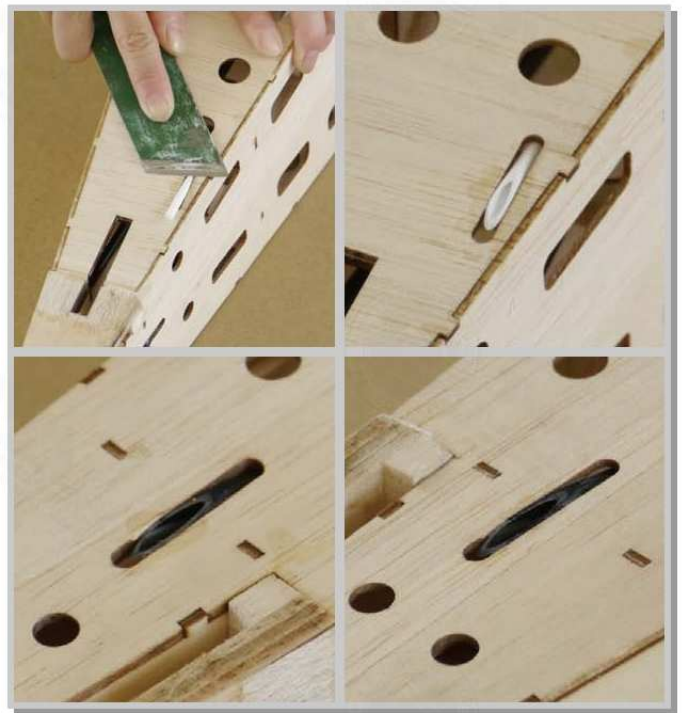
4.1 Insert wing tube sleeves into fuselage. Apply glue to fix them in position. When cured use sand paper to grind down sleeves to flush with fuselage side panels.



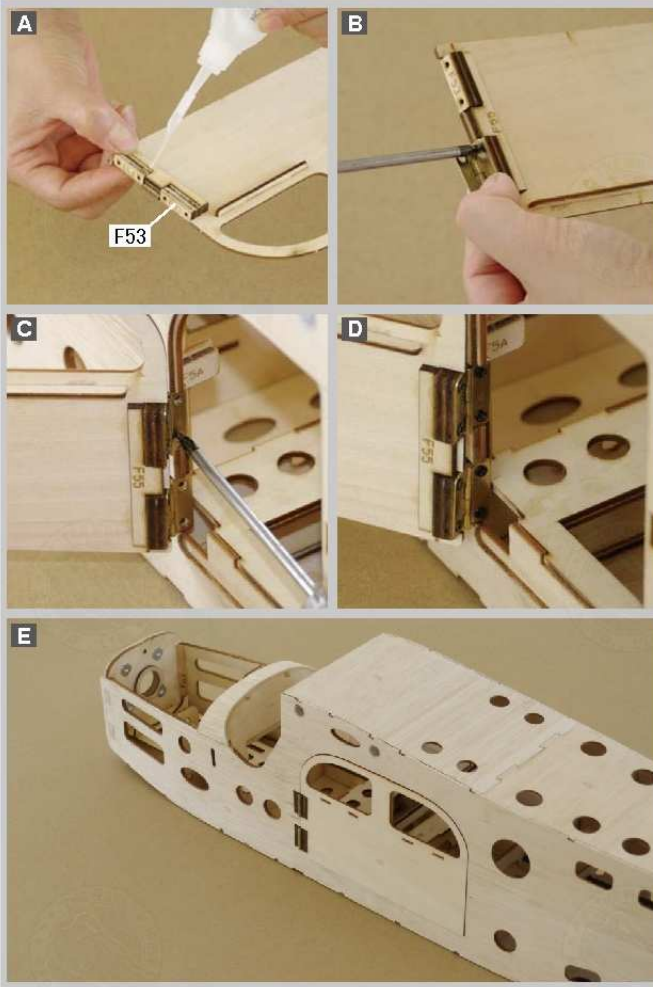
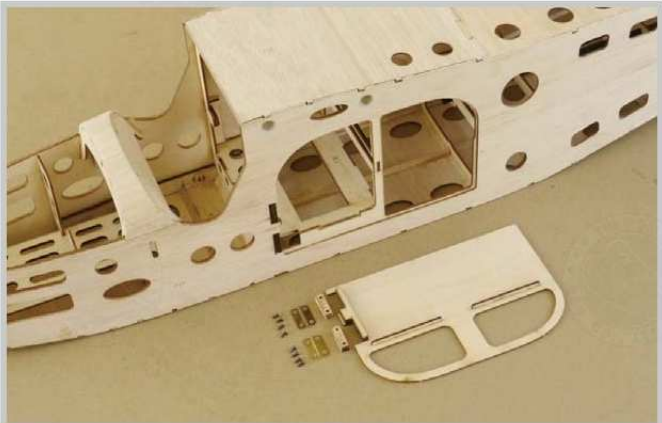
4.2 Glue F18 on the inside of F31, F18 should fit in the plywood cut out at the end of F31. Flip over F31, with tail slot at the right, insert white sleeve through slot, and latch in F31 onto fuselage side panels. Apply glue inside and out. Glue in reinforcement bar F36.



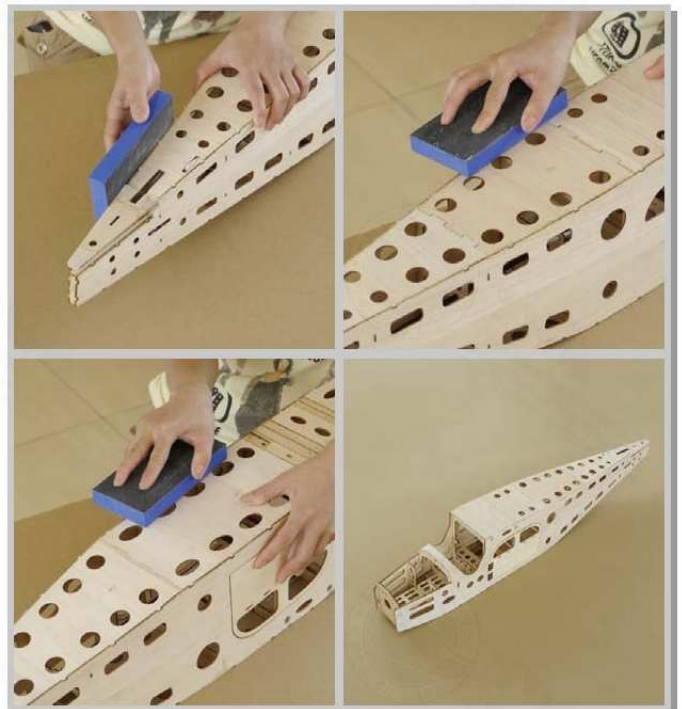
4.3 Glue in F40, make sure the slot thus formed for housing horizontal stabilizer is of uniform thickness.



4.5 Cut and trim plastic sleeves to flush with fuselage.

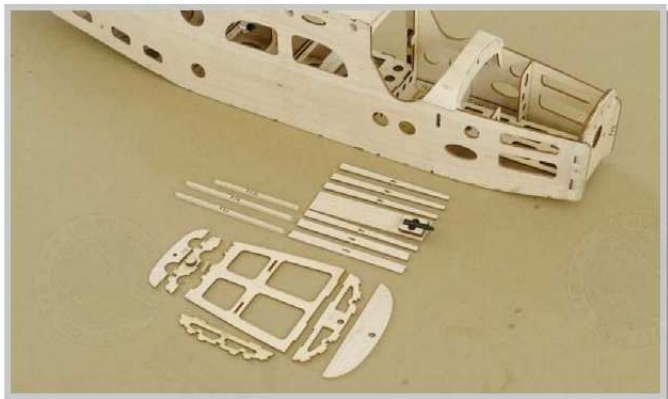


4.4 Install the cabin door. Glue F53 to F21 and install hinges. Do not tighten the screws. Fit the door to the fuselage, and tighten the screws gradually when the door is fitting nicely to the door frame.



4.6 Use sand paper to remove rough edges.

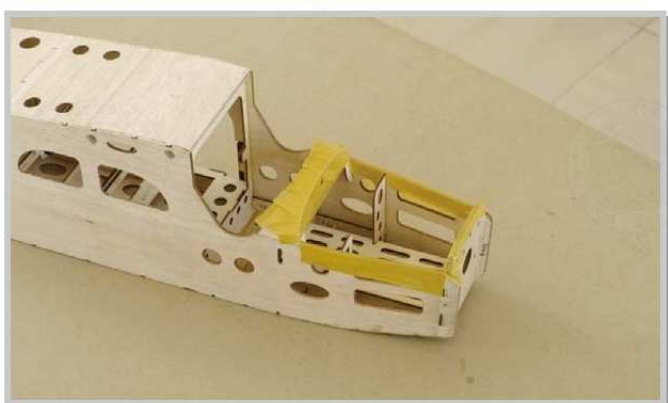
BATTERY COVER ASSEMBLY



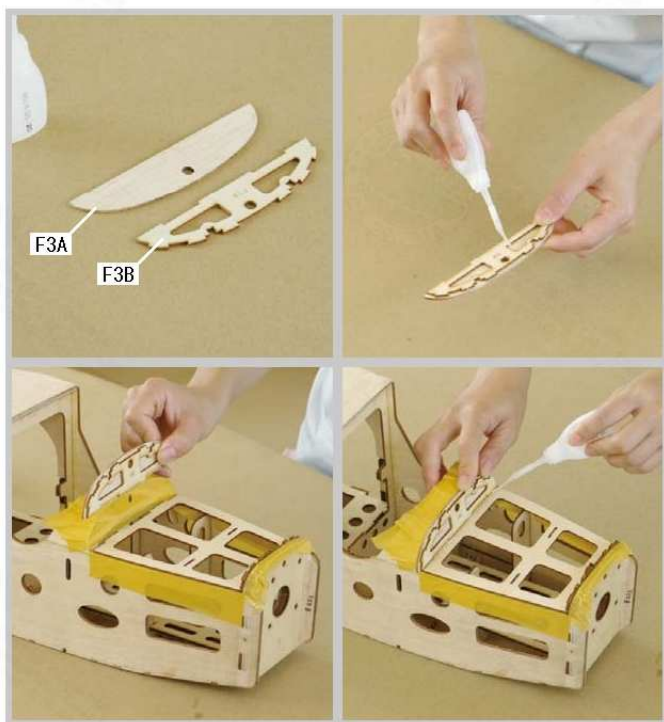
Lay out parts for the battery cover.



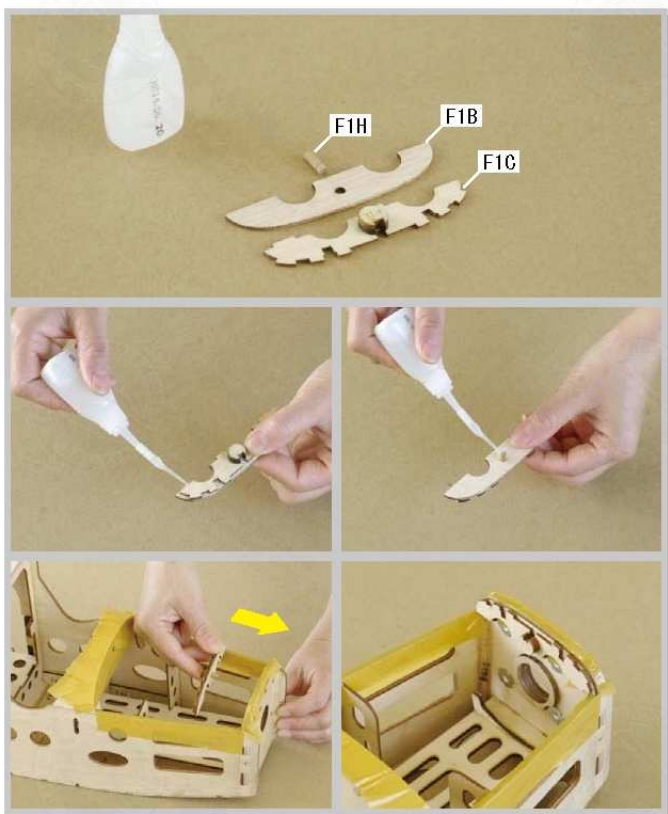
5.3 Latch in F35, apply CA to glue it in place.



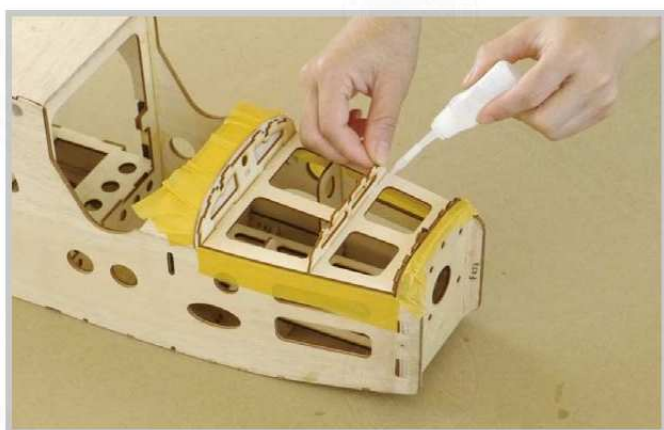
5.1 Apply thin plastic sheet to protect battery cover opening.



5.4 Glue F3A to F3B, make sure the hole and edges align. When cured latch in F35 and apply CA to glue it in place.



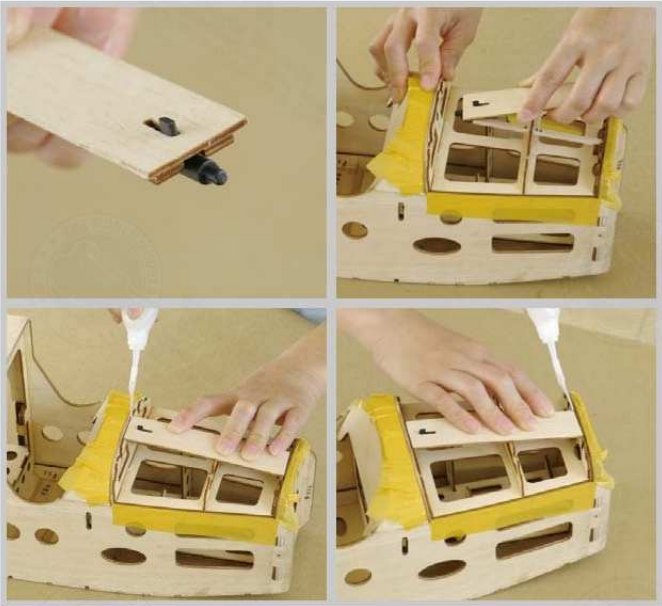
5.2 Insert F1H into F1B, then F1C, align the edges and the semi-circle cut outs. Apply CA to glue them in position. When cured, insert the assembly to the fuselage, with F1H through the upper hole of F1.



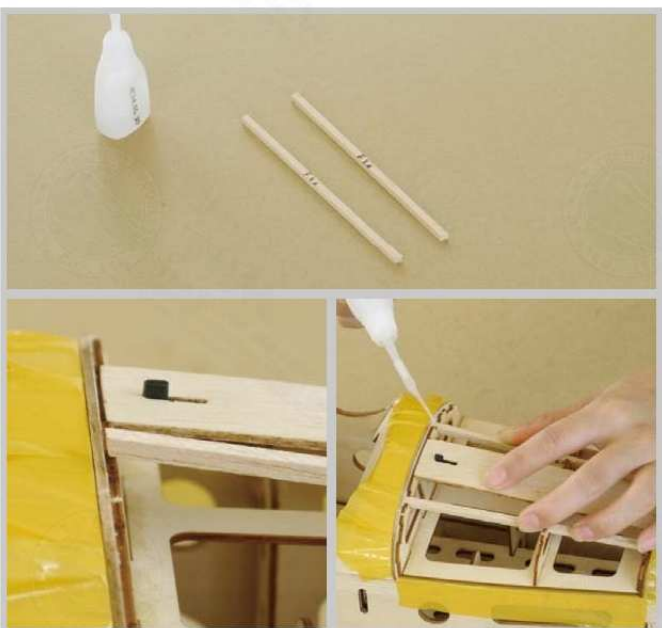
5.5 Glue in F2A.



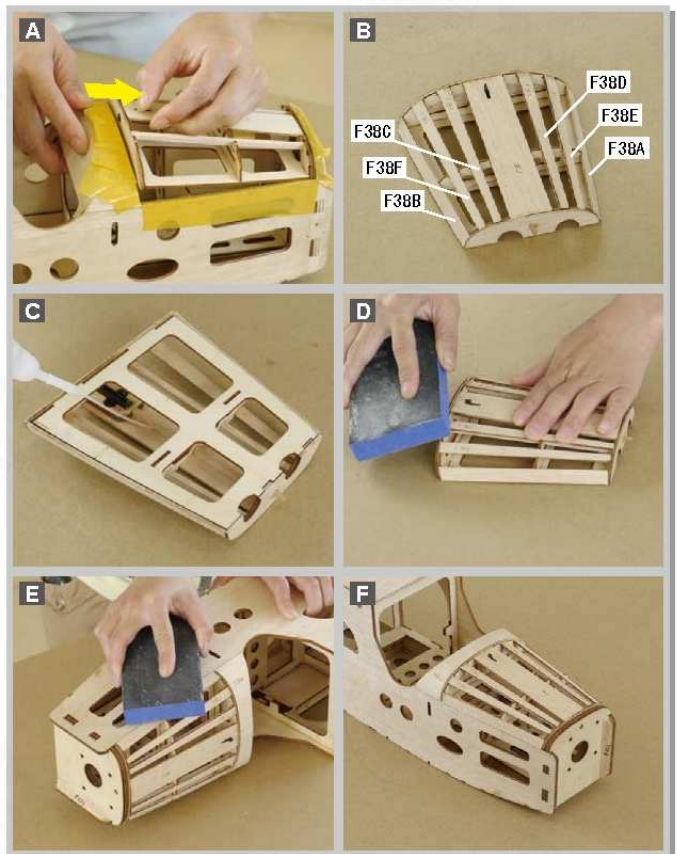
5.6 Glue in F34A.



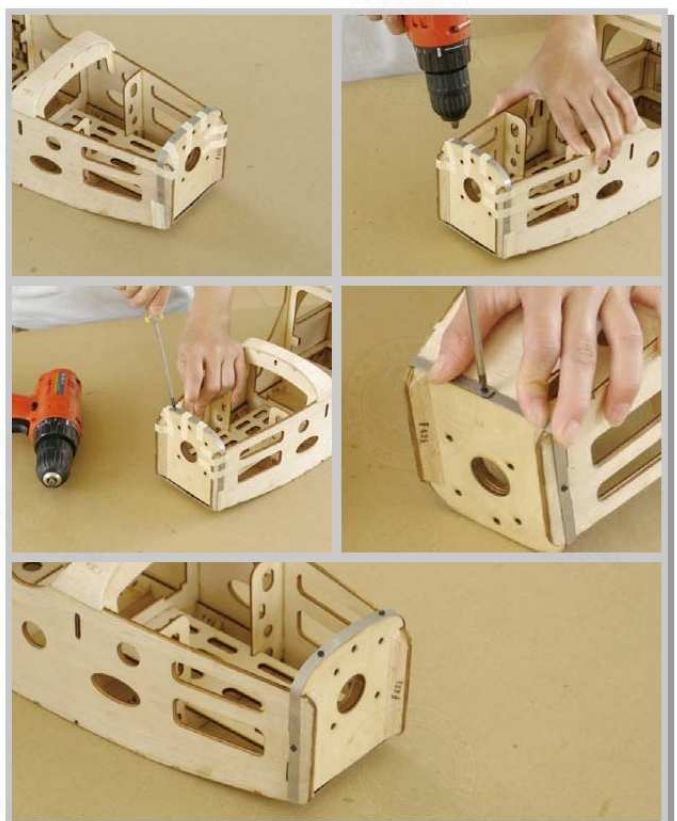
5.7 Latch in F30, insert the black plastic cover latch into the holes of F3B and F3, apply CA to glue it in place. Pay special attention not to allow CA to flow into the plastic latch. You can apply just a little CA at the top away from the latch to fix its position, take it out and apply more glue at the back to avoid CA getting into the latch.



5.8 Glue in F34. Note that slant side of stick should be joined to F3B.

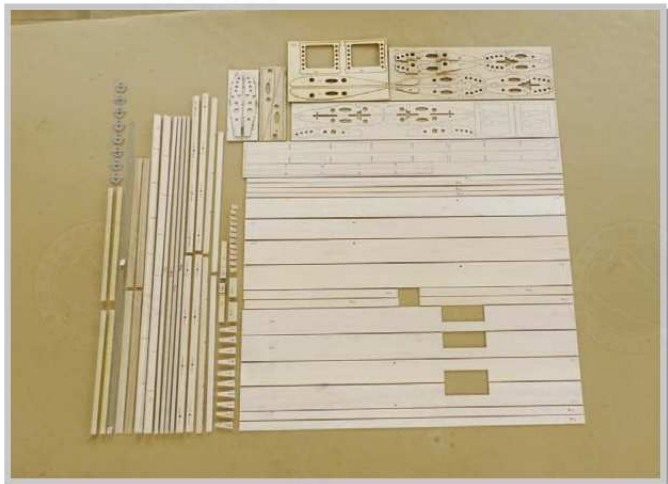


5.9 Glue in F38A, F38B, F38C, F38D, F38E and F38F. Remove battery cover, apply glue to back side of joints. Use sand paper to remove rough edges.

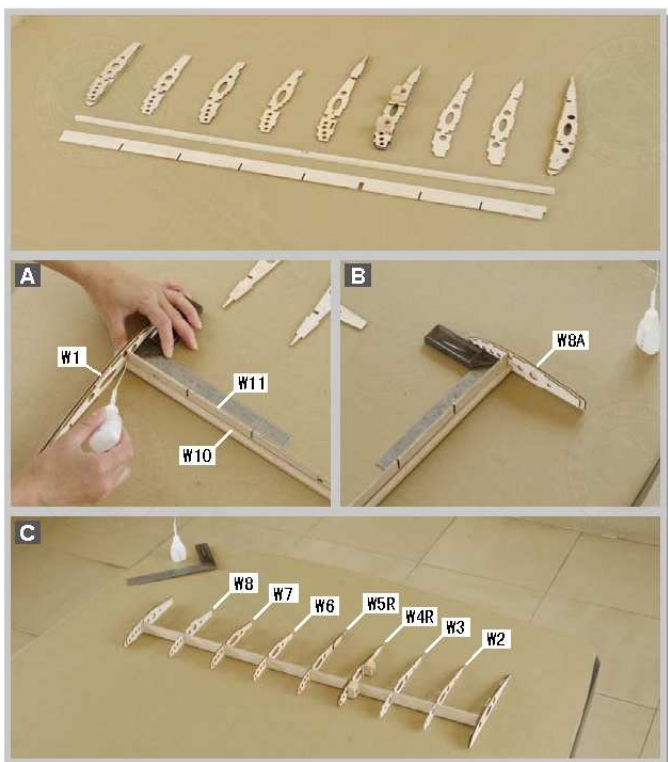


5.10 Install firewall reinforcement ring. Use tape to fix ring in place, drill 1 mm pilot holes at the firewall, and apply KA2.3 x8 screws to hold it in place.

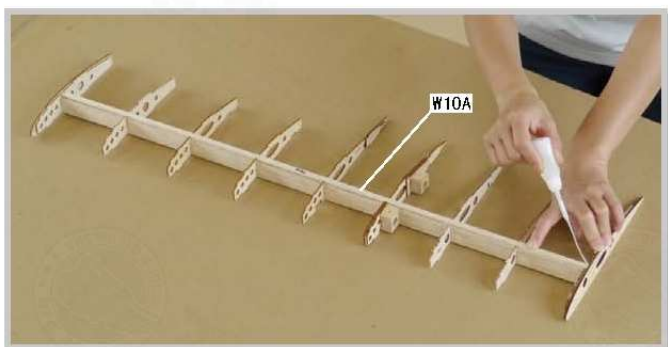
MAIN WING ASSEMBLY



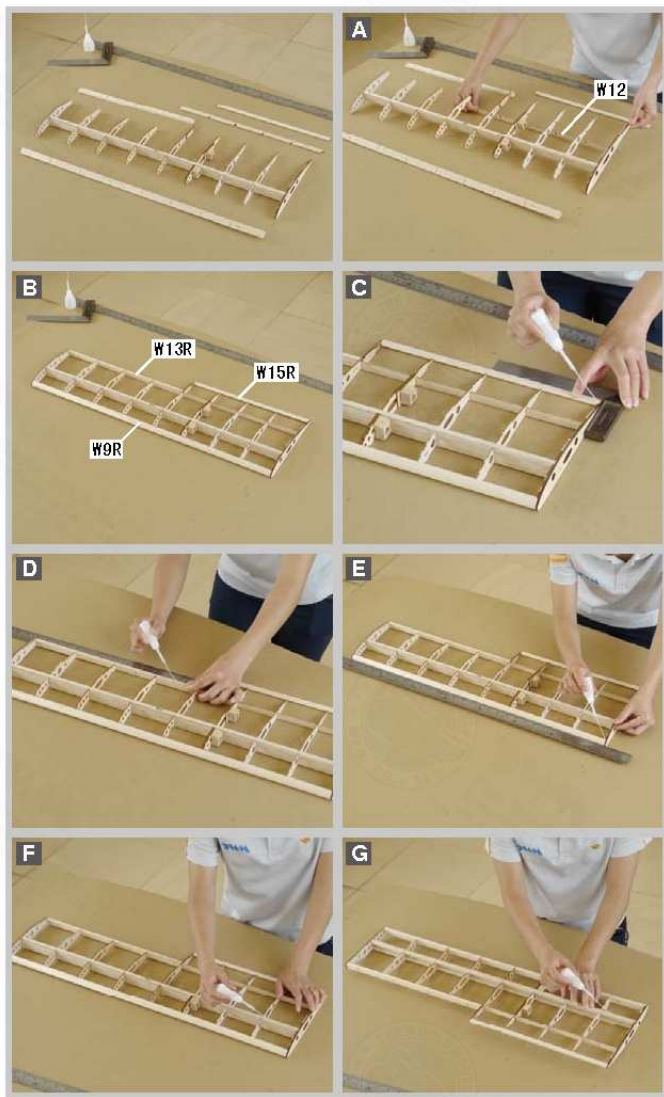
Lay out parts for the wings.



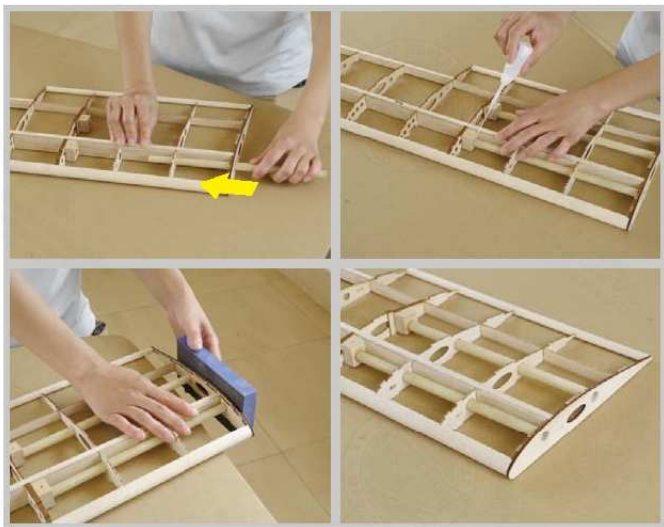
6.1 Glue in W1, W11, W10 and W8A in place, use straight angle to align W1 and W10, W10 and W8A to make sure they are at right angles. Latch in W2, W3, W4R, W5R, W6, W7 and W8, do not apply glue yet until step 6.3.



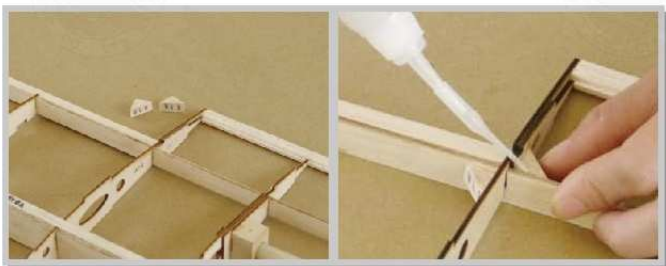
6.2 Latch in W10A, only apply glue at both ends to glue it in place.



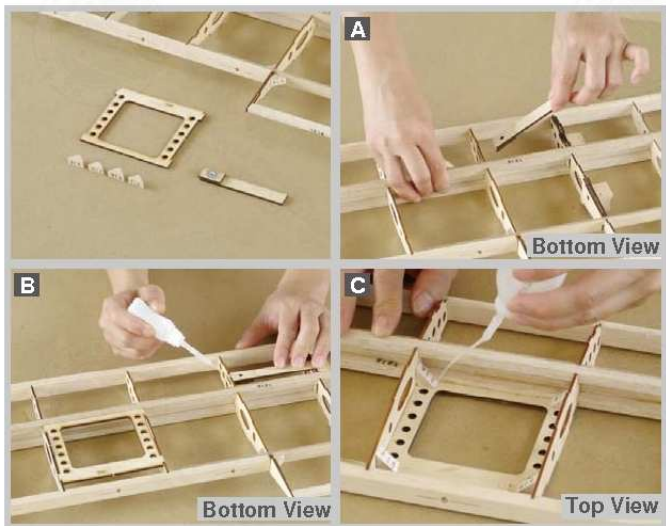
6.3 Lift up wing frame carefully and latch in W12, then latch in W9R, W13R, W15R. Apply CA to glue W15R in place, use straight angle to make sure angle is right. Apply CA to glue W13R and W9R in place, use straight ruler to ensure both are straight when gluing. When cured apply CA to all contacting surface, inside and out.



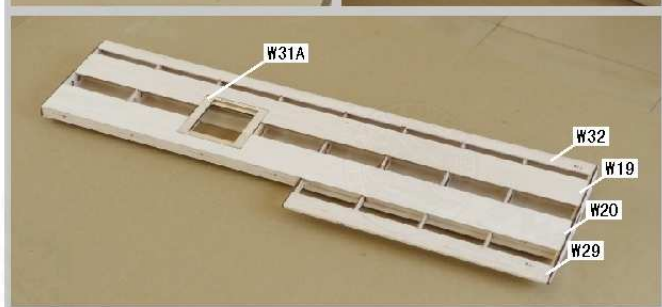
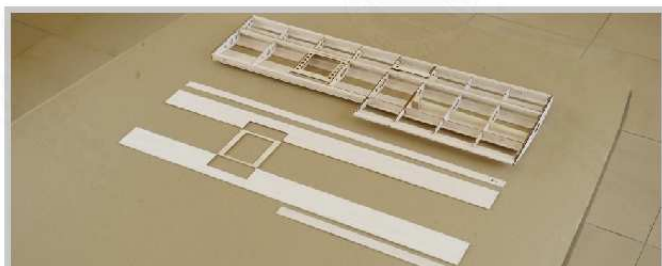
6.4 Insert fiber glass sleeves for wing tubes into W1, W2, W3 and W4R. Glue them in place and when cure, use sand paper to remove edges to make it flush with W1.



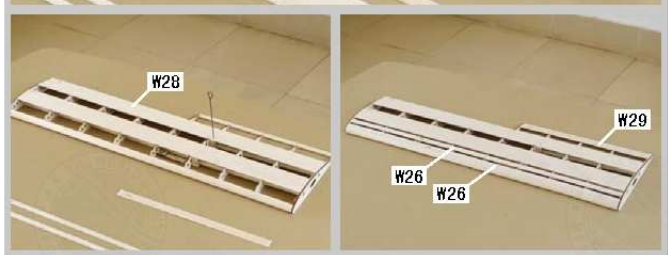
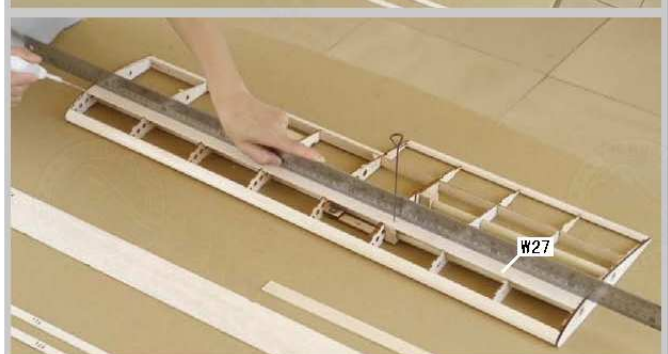
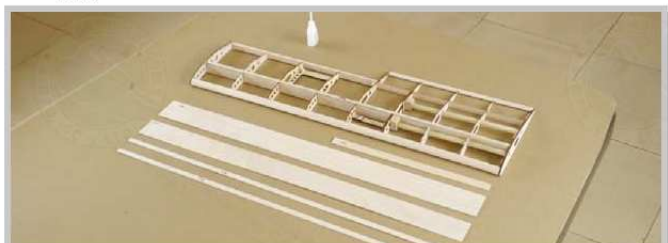
6.5 Glue in W18, make sure they flush with W5R and W12.



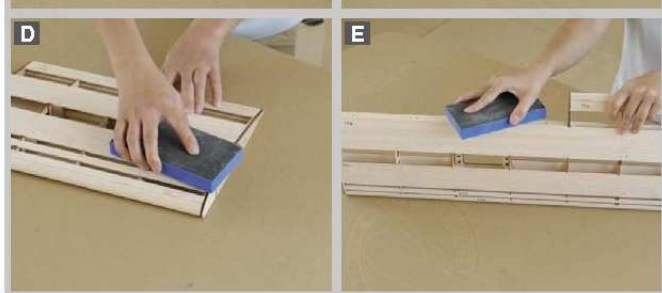
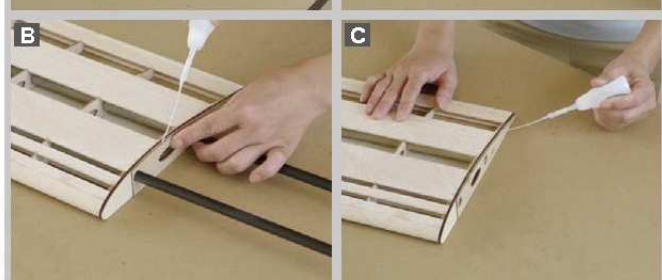
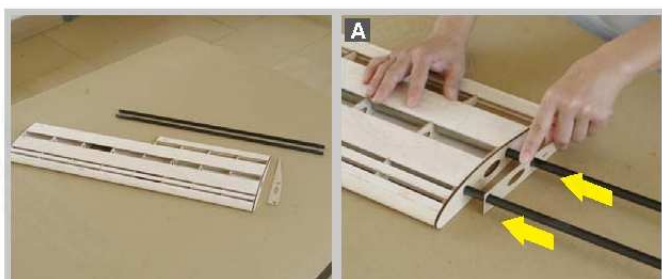
6.6 Flip over right wing with wing bottom up. Latch in W19 to W5R, with blind nut facing inside wing. Apply CA to glue in place. Glue in W16. When cured flip over wing to bottom down, glue in 4x F18 and add CA to all contact surfaces.



6.8 Flip over wing with bottom up, glue in W31A, W32, W19, W20, W29. Align the hole on W19 with the blind nut hole for wing strut installation. Apply CA to glue all surfaces in contact.

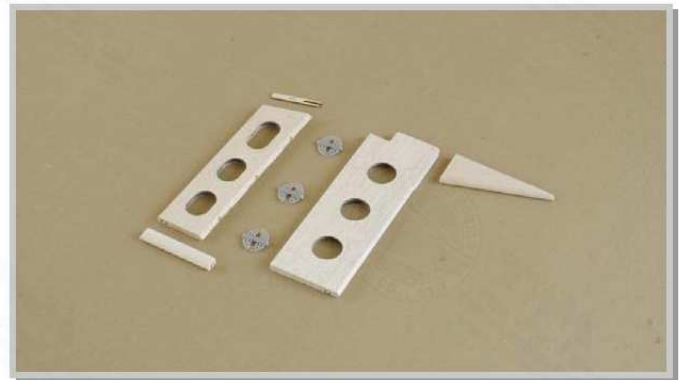


6.7 Glue in W27 and W28, use straight rule to make sure surface is straight. Align the pre-drill holes on W27 and W28 with holes on W4R, they are for the wing bolts. Glue in W26 and W29.

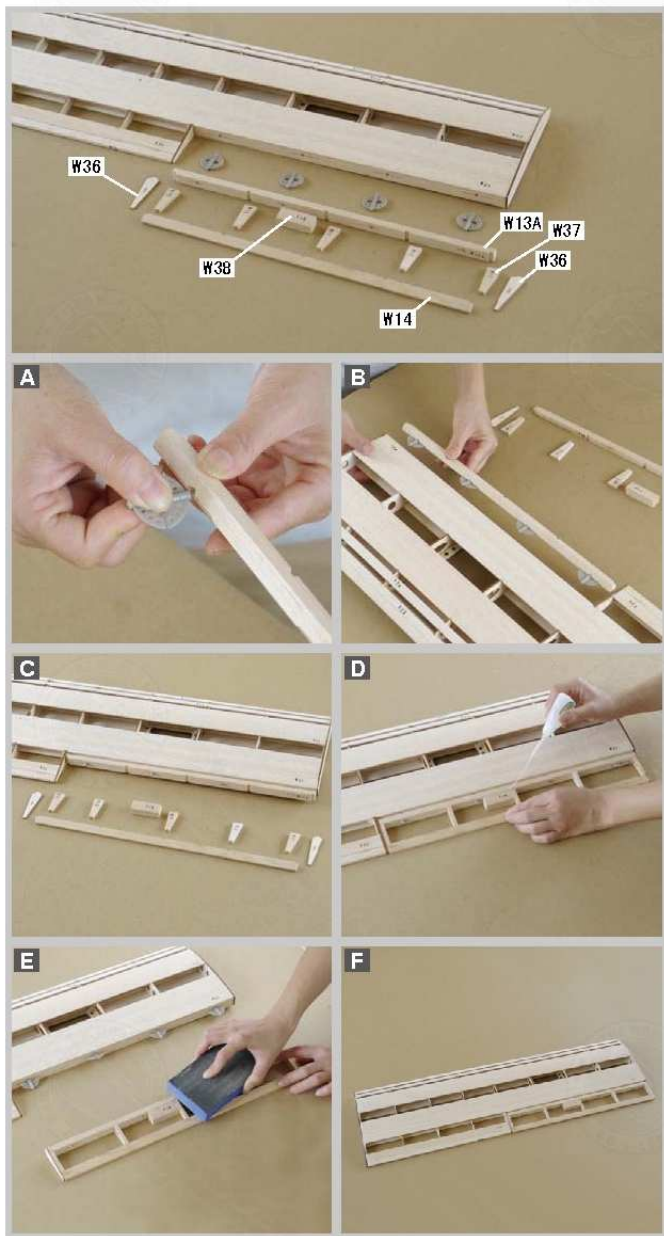


6.9 Glue in W1B. Insert the two wing tube to align the wing tube holes. Use CA to fix W1B in position, remove the wing tubes and apply more CA to glue it in place. Use sand paper to remove rough edges.

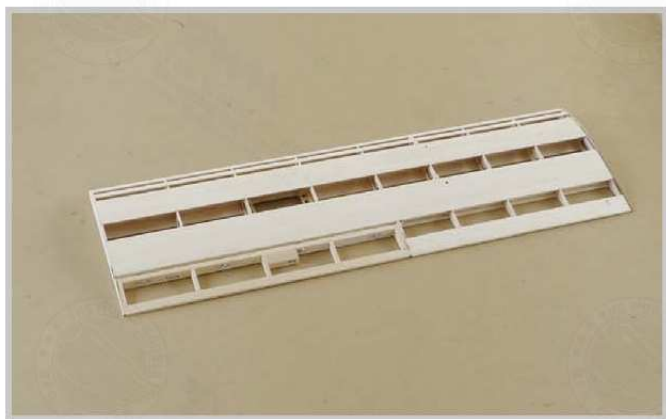
VERTICAL STABILIZER AND RUDDER ASSEMBLY



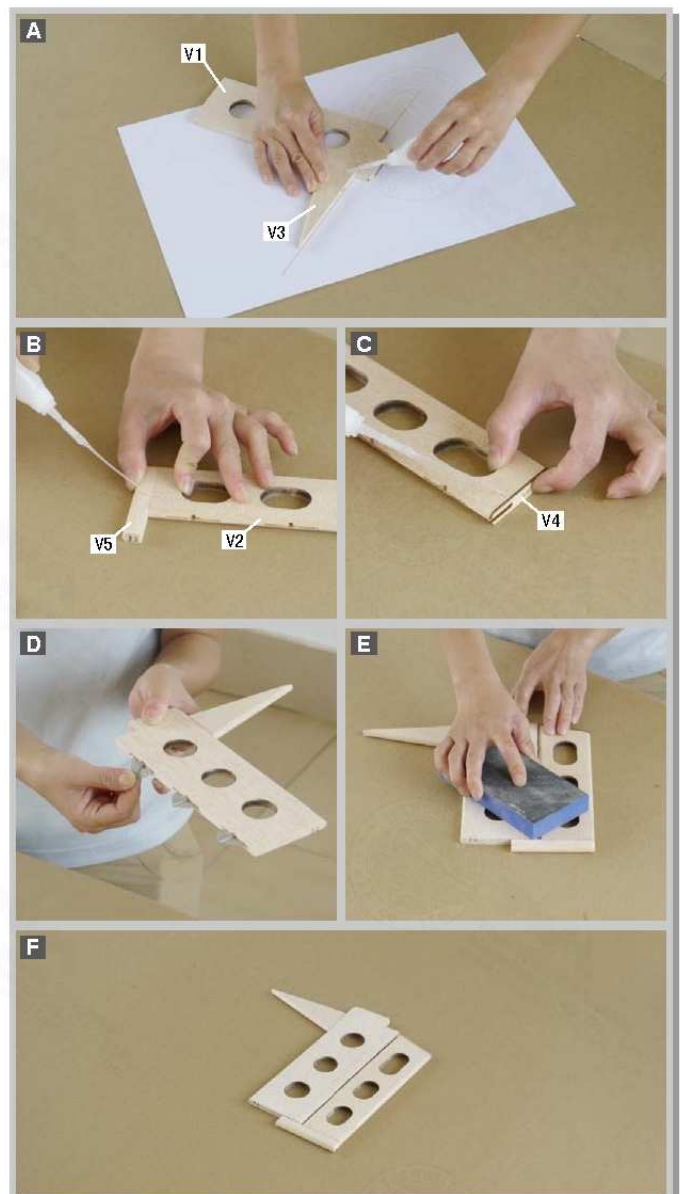
Lay out parts for the vertical fin and rudder



6.10 Insert hinges to W13A, then attach to W13R. Latch in W36, W37, W38 and W14 and glue them in place. Take out aileron and use sand paper to remove rough edges.

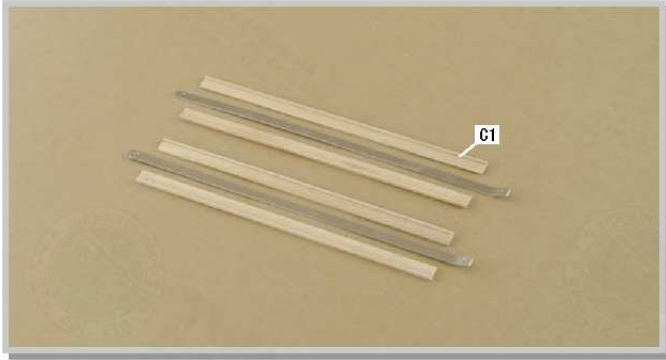


6.11 Repeat the above procedure for the left wing.



7 B. Glue V5 to V2. C. Glue V4 to V2. D. Insert hinges to V2 and attach to V1, check smooth operation of hinges. E. Use sand paper to remove rough edges.

WING STRUT ASSEMBLY

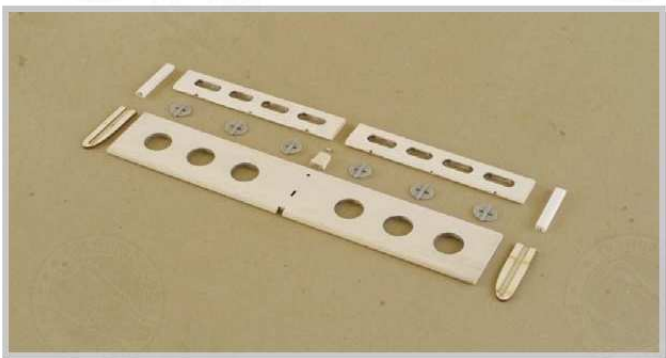


Lay out parts for Wing Struts

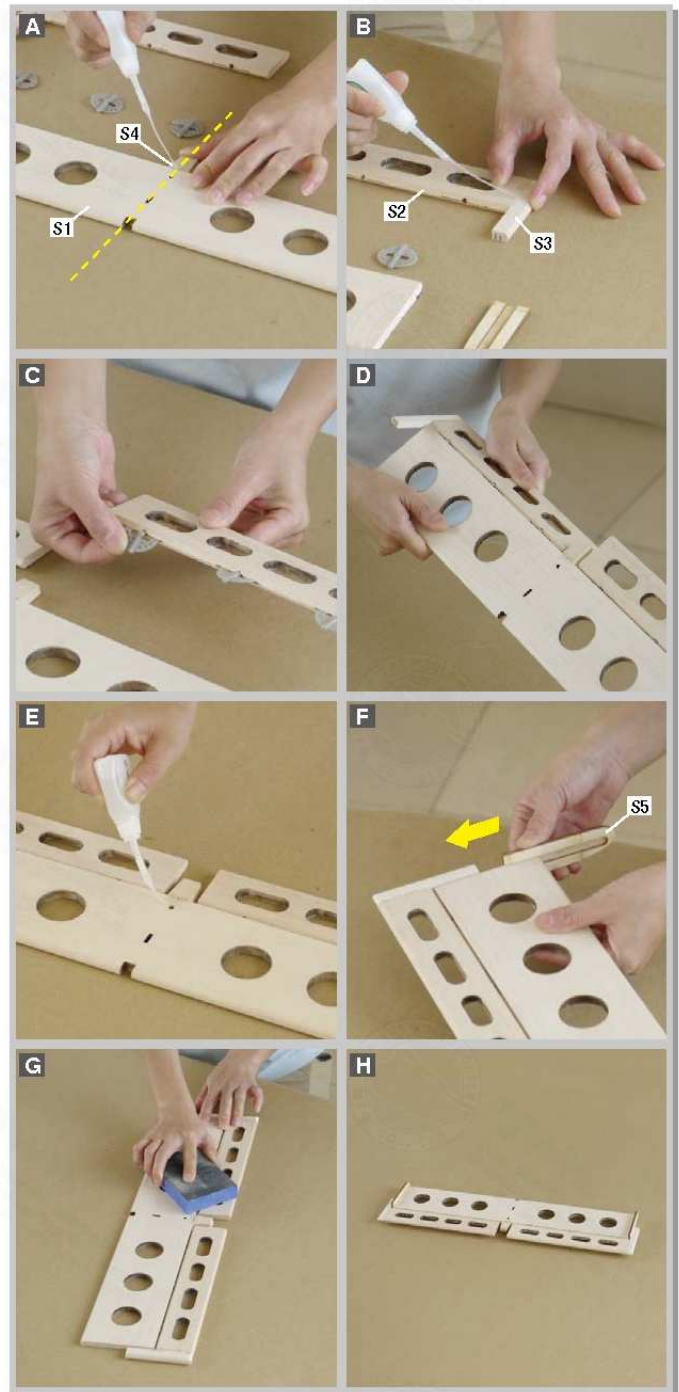


- 8 Apply CA to sandwich the aluminum wing struts with wood sleeve. Expose 20 mm of the aluminum wing struts outside wood sleeve. Remove rough edges with sand paper.

HORIZONTAL STABILIZER AND ELEVATOR ASSEMBLY



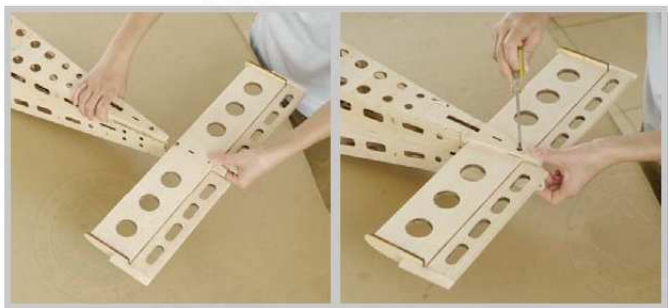
Lay out parts for horizontal stabilizer and elevator



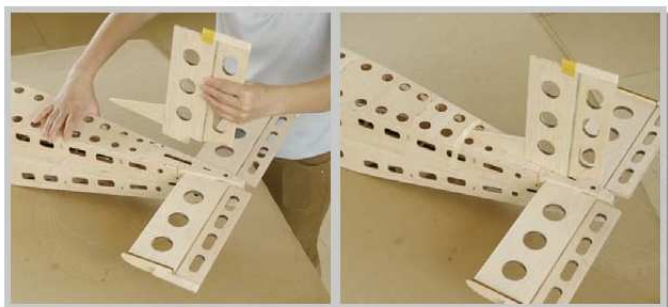
- 9 A. Align S4 to middle of S1 and apply CA to glue in place.
B. Glue S3 to S2, flush at the rear edge.
C/D. Insert hinges to S2 and attach to S1.
E. Glue in copper tube spacer.
F. Latch S5 to S1, apply CA to glue in place.
G. Remove rough edges with sand paper.

Carefully inspect all the glue joints for the assembled parts. If you find gaps between contacting surfaces, add gap filling CA glue or epoxy to reinforce the joints.

STABILIZER, RUDDER, MAIN WING AND FUSELAGE SETTING



10.1 Install horizontal stabilizer and elevator, use PM3x20mm screw and washer to lock in place.



10.2 Attach vertical fin and rudder, use tape to keep hold it in place.



10.3 Install wing tubes and wings.



10.4 Use the pre-drill hole at W4R as guide, drill 3/32 in. hole through wing tube. Use PA3x20mm screw and washer to fasten the wings.

COVERING

The following ironing procedure is for the World Models Tough-Lon covering. Please follow the instructions included with the covering material. Please completely remove dust from the surface before covering, or the covering will not stick to the surface. The covering adhesive is activated at 58°C/136°F, and shrinking starts at 90°C/194°F. Set your iron at about 60°C/140°F to begin.



Lay out the coverings.



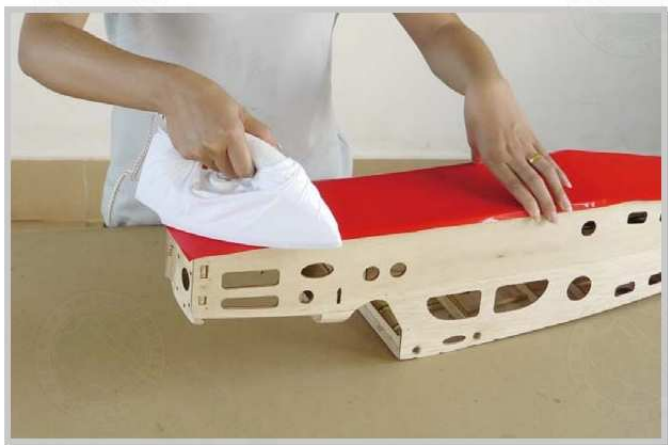
11.1 Cover iron with cotton cloth to eliminate scratch and better temperature distribution. A hobby grade sealing iron with cover sock is recommended for better handling.



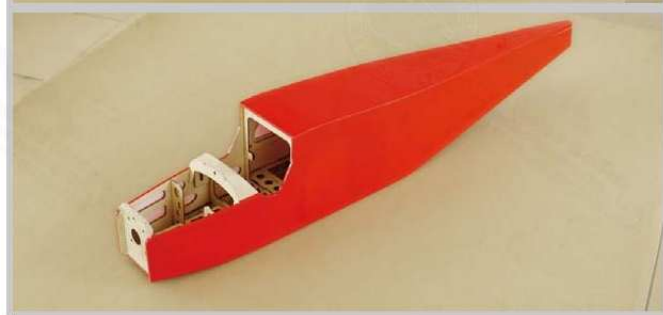
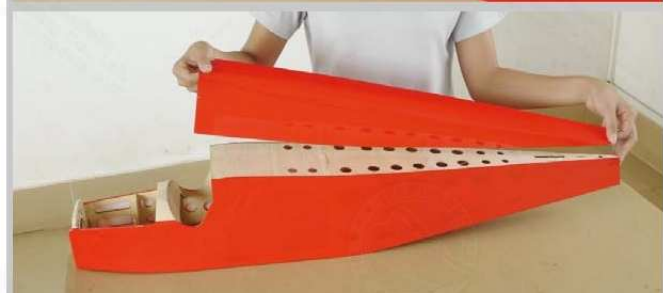
11.2 Take out the covering piece for the bottom of fuselage, and peel off backing sheet.



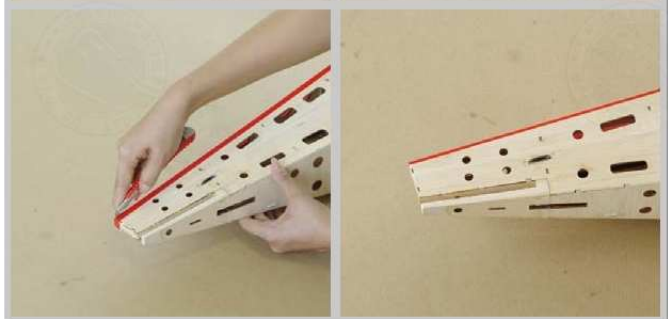
11.3 Place covering on fuselage bottom, completely covering the surface with 5mm overhang at all sides.



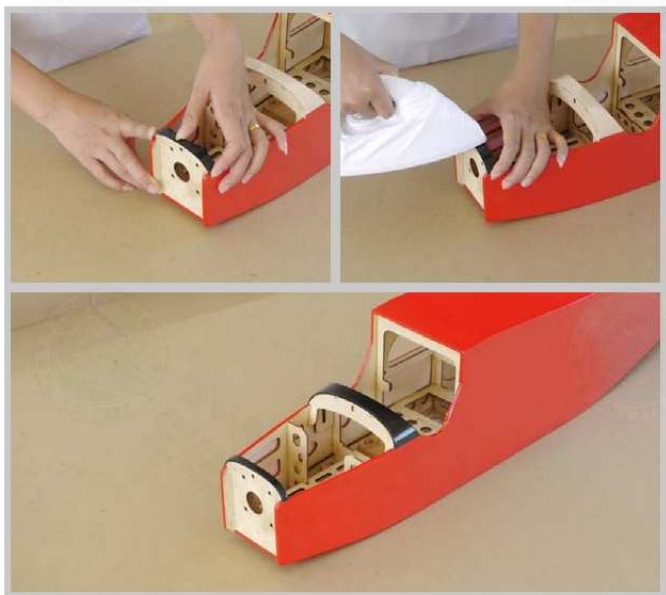
11.4 Tack the covering at corners, this will temporarily fix the position of the covering, and start ironing on the covering. If position is not right, apply heat and peel off the covering and rework. Never try to peel off covering when the covering is cold and adhesive has set, you may pull away wood or separate the color layer. Always heat up the covering to melt the adhesive before peeling.



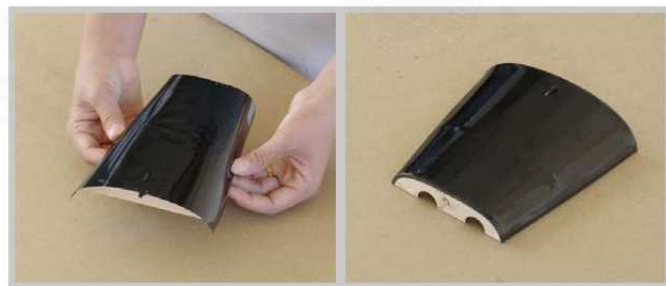
11.6 Iron on covering for the side panels. Always use lower heat to stick on the covering. Use high heat carefully only for shrinking covering round corners. After covering the side panels, cover the top panel. If you find wrinkly or loose covering, you can use higher temperature to shrink that area tight. Avoid apply high heat near the seams, as it will pull away the seams.



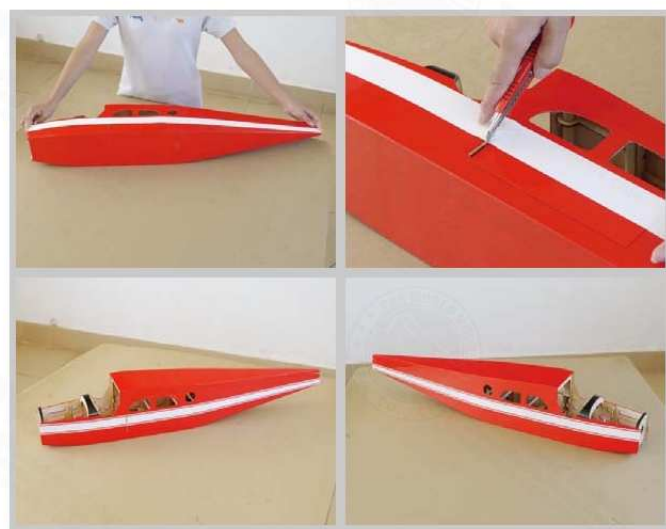
11.5 Iron on the overhangs to cover the edges. If you need to shrink the covering to conform to the shape of edges, you can do so by raising the iron temperature. Just apply heat at the required spot only, since the shrinking temperature is much higher than the adhesive melting temperature, if you apply high heat at area near the edge or seams of covering, the covering will pull away from the edge or seams. Trim off unwanted material.



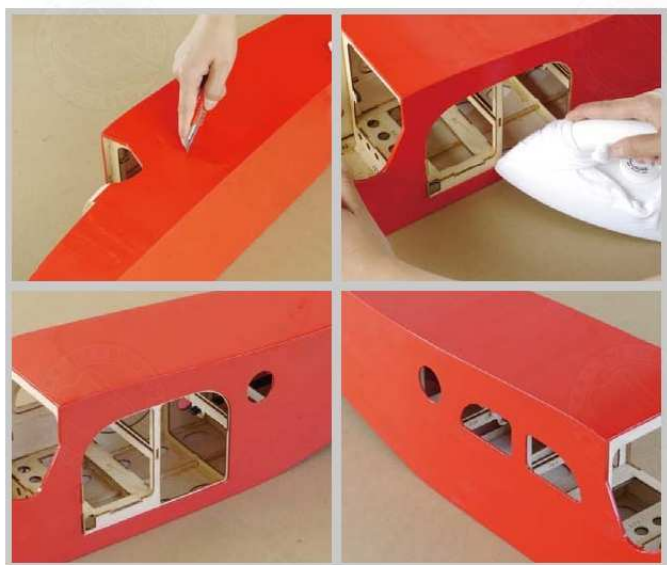
11.7 Iron on black covering on nose section.



11.10 Cover the battery hatch. Cut a slit on the covering for the latch knob before ironing.



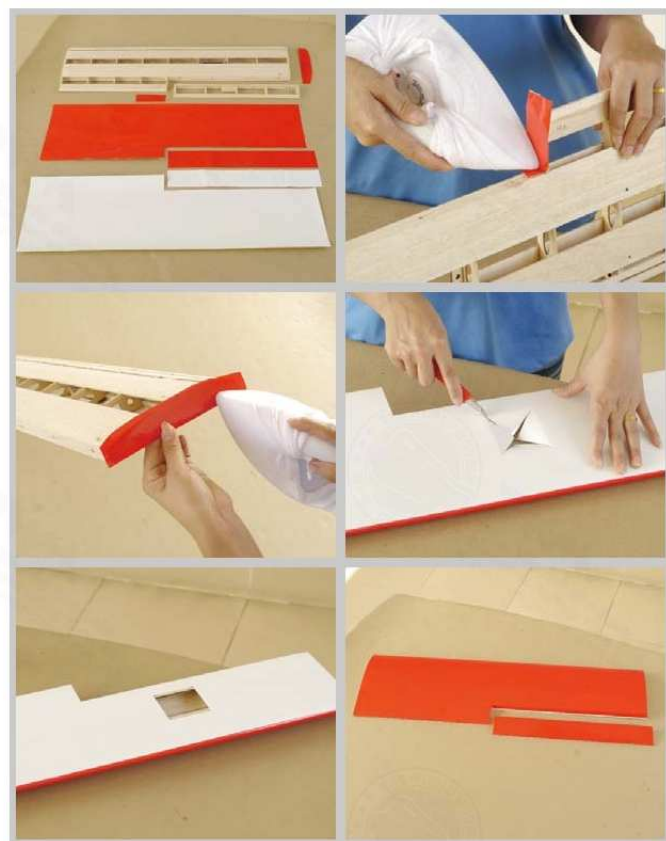
11.11 Iron on the side color trimming. Tack both ends of the trimming stripe to fix the position before ironing.



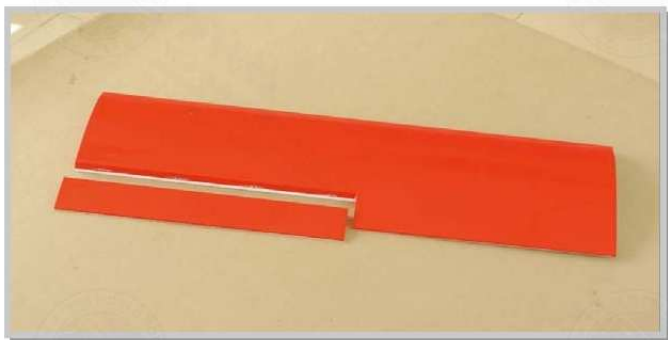
11.8 Cut door and window openings. Leave 3~5mm covering overhang at openings and iron on to cover the rims.



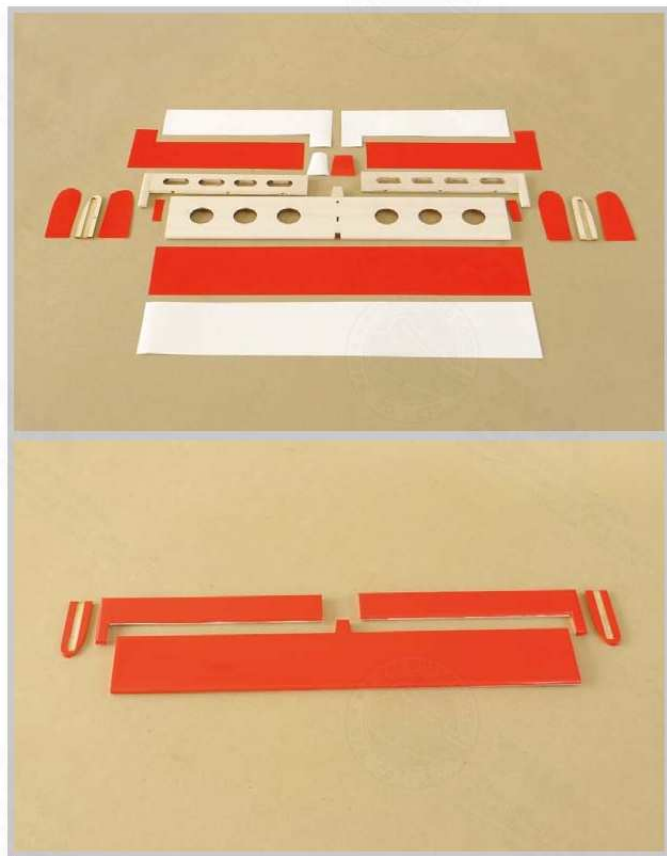
11.9 Cover the door panel.



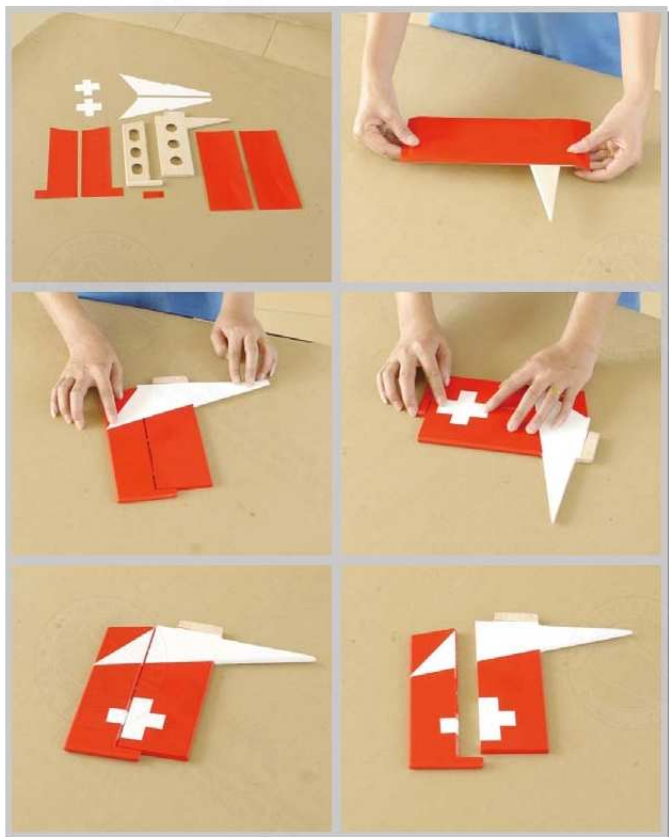
11.12 Cover the right wing panel. Cover the wing tip first, then the bottom panel, and then the top panel. Cover the ailerons the same way, tip first, then bottom and then the top. Cut opening for the aileron servo tray. Leave overhangs and iron on to cover the rims.



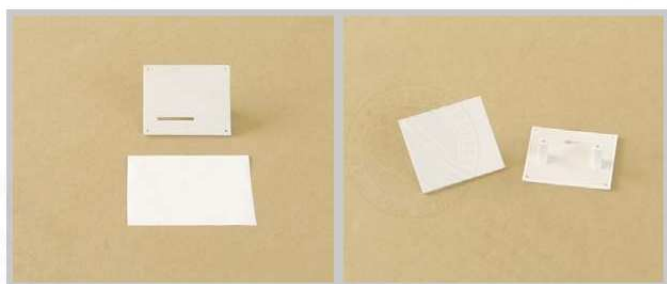
11.13 Cover the left wing panel.



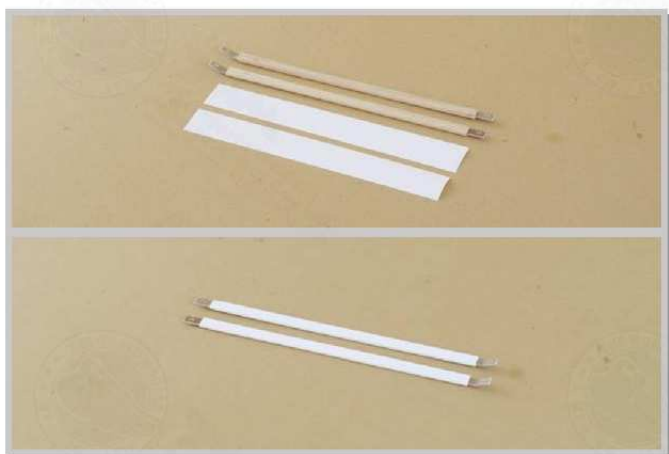
11.16 Cover the horizontal stabilizer and elevator.



11.14 Cover the vertical fin, and then cover the rudder separately. Insert the hinges to align the vertical fin and rudder, then iron on the white trimming stripe and cross. Cut the trimming stripe and cross to allow rudder movement.



11.17 Cover the aileron servo tray.



11.15 Cover the wing struts.

The plane is now ready for equipment installation.





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www.theworldmodels.com



<http://www.theworldmodels.com/para/instruction/instructionManuals.php>

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