ASSEMBLY INSTRUCTIONS

SUPER STICK

RC ACROBATIC AIRCRAFT MODEL

GET IN THE KNOW

WINGSPAN: 172 cm
FUSELAGE: 146 cm
STRUCTURE WEIGHT: 1.650 gr aprox.
FINISHED WEIGHT: 3.450 gr aprox.
ENGINE : 0.55 - 0.65 (not included)
CONTROL: 6 CHANNELS (not included)

KIT FEATURES

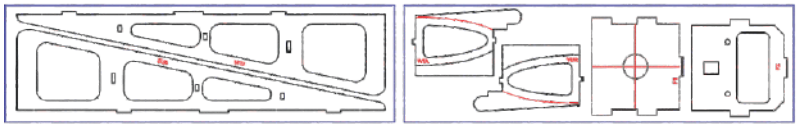
Plywood and balsa wood Laser cut
Balsa wood sheets
Balsa stick and Balsa wooden profiles
Hardwood blocks for reinforcements
Carbon fiber landing gear
Tail skid metal rod
Plans Scale 1:1
Assembly instructions
Decals
Sander

NEEDED TO COMPLETE

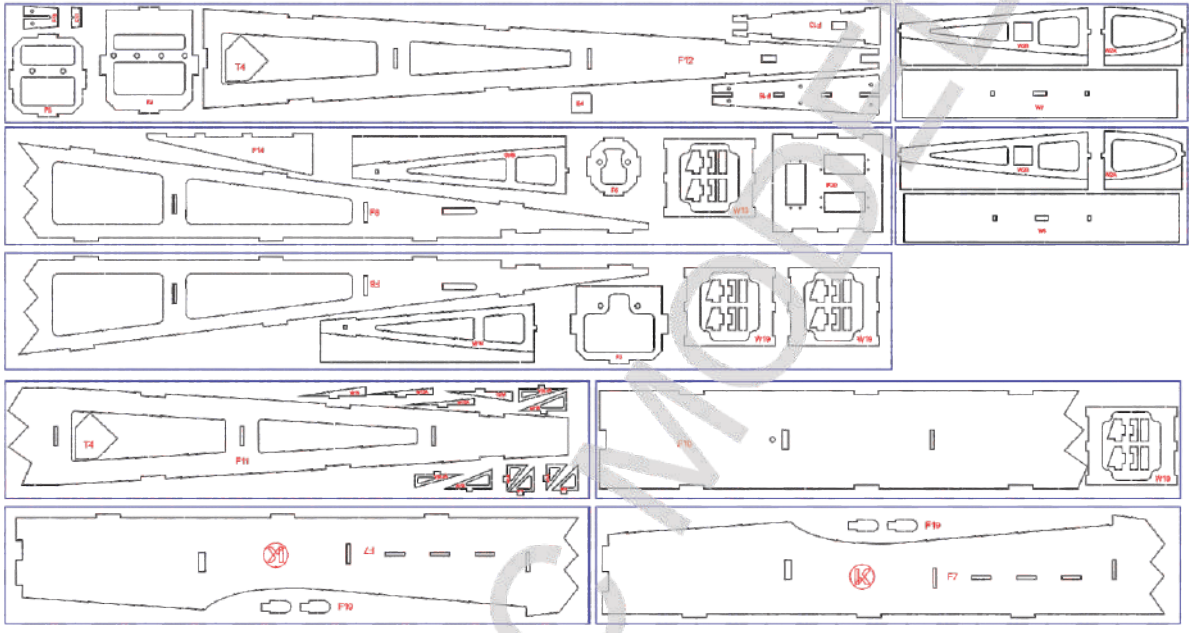
* 1 RC 6 Channels
* 7 Servo Standar
* 1 Shwich
* 1 Engine .55-.65
* 1 Propeller 11-7
* 1 Spinner 2 1/2"
* 1 Mount engine with screws
* 1 Fuel tank 14 oz
* Fuel Hose
* 2 Wheel 3"
* 2 Landing gear screw 5/32"
* 2 Collars 5/32"
* 1 Tail wheel 1 1/2"
* 2 Nylon wing bolt 1/4"
* 2 Blind nut 1/4"
*3 Nylon bolt for landing gear 3/16"
* 3 Blind nut 3/16"
* 2 Pushrods 36" flexible
* 21 Hinge 1/8"
* 6 Control horn
* 14 Clevis
* Covering

Produced by KYM MANUFACTURAS SAS
Bucaramanga - Colombia
www.kymmanufacturas.com
Email: info@kymmanufacturas.com

KIT CONTENTS



PLYWOOD 6.5 MM



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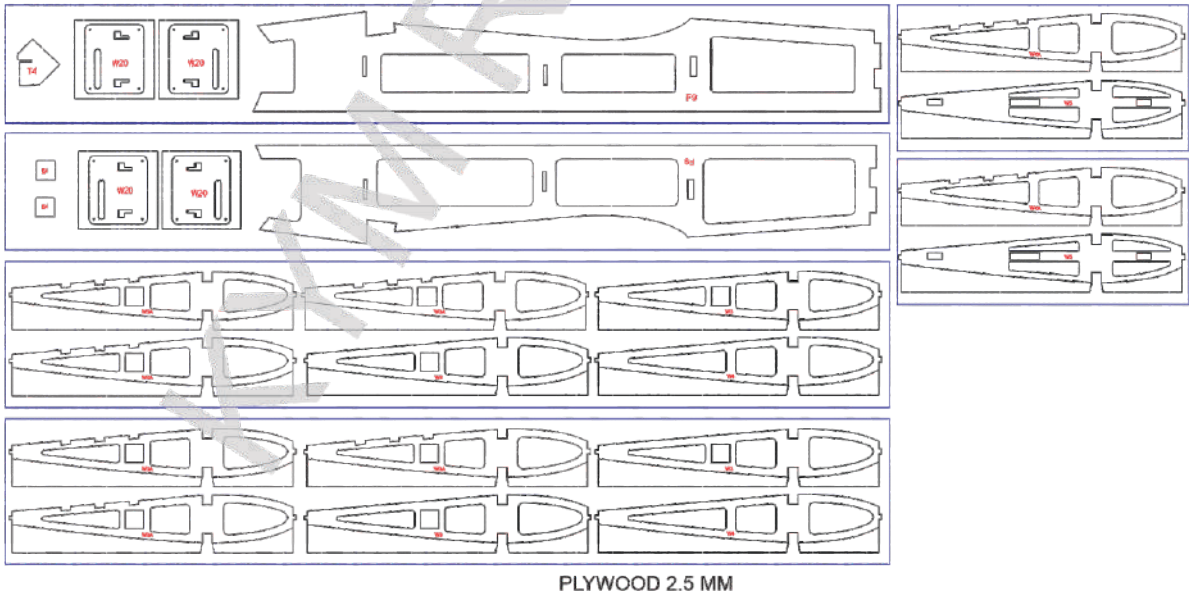

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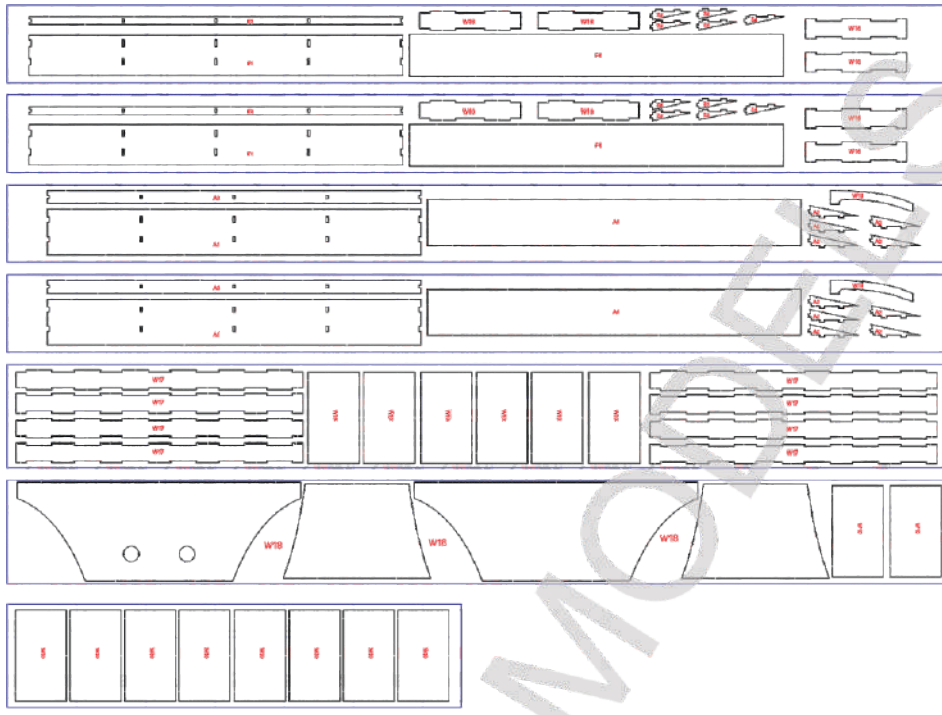
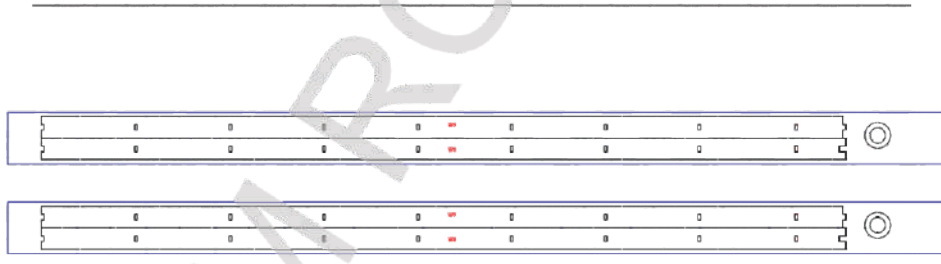
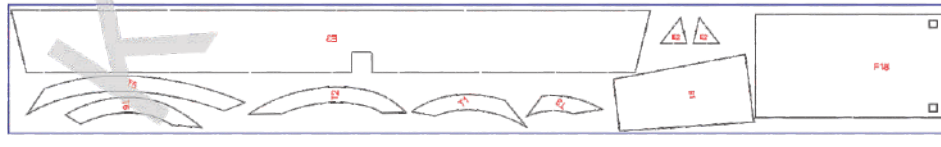


Balsa 2 mm



Balsa 3 mm

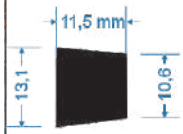
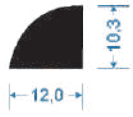
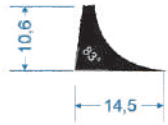
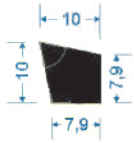


Balsa 8 mm

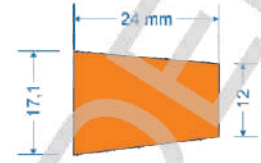
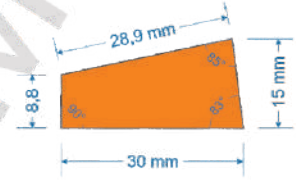
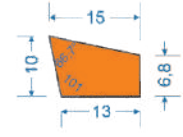
STANDAR MADERA BALSA			
DIMENSIONS	PROFILE	QUANTITY	USAGE
2x100x915 mm		4	Planking
2x25x915 mm		4	Planking
2x10x800 mm		9	Tips for wings
10x10x800 mm		4	Spar
5x12x800 mm		2	Trailing edge of wings and ailerons
15x20x150 mm		1	Wing center block trailing edge
15x15x150 mm		1	Wingtip carving block
8x15x800 mm		3	Profiles for stabilizer, fin and rudder
8x10x800 mm		3	Profiles for stabilizer, fin and rudder
Triangulo 10x800 mm		6	Fuselage reinforcement

STANDAR HARDWOOD			
DIMENSIONS	PROFILE	QUANTITY	USAGE
Triangulo 8x8x100 mm		1	Fuel cap wedge

MACHINED BALSA WOOD

QUANTITY	PROFILE	USAGE AND LENGTH
2		Leading Edge of the Wings x 800 mm
2		Trailing Edge of the Wing x800 mm
1		Leading Edge of the Flap x800 mm
1		Trailing edge for flap adjustment x800 mm
1		Aileron reinforcement *600 mm

MACHINED HARDWOOD

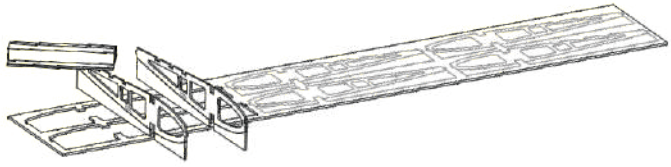
CANTIDAD	PERFIL	USO Y LARGO
1		Core x280 mm
2		Trailing edge center of wing x48 mm
1		Landing gear support x87 mm
1		Base Wing support on the fuselage x94 mm
2		Aileron control horn reinforcement *88 mm

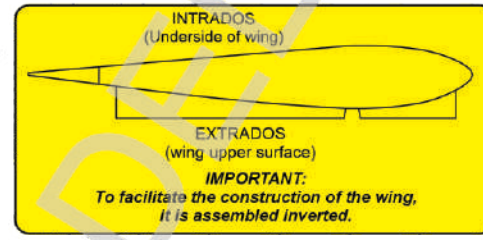
ACCESSORIES AND COMPLEMENTS

QUANTITY	DESCRIPTION
4	Plans Scale 1:1
1	Carbon fiber landing gear
1	Tail skid metal rod
1	Sander
2	Decals
1	Assembly instructions

WING CONSTRUCTION

SPECIAL NOTE: The SUPER STICK's wings are built on a 1:1 scale plan. We recommend placing the plan on a flat surface, allowing the parts to interlock while the glue sets. Study the plan and read this instruction before beginning the process.

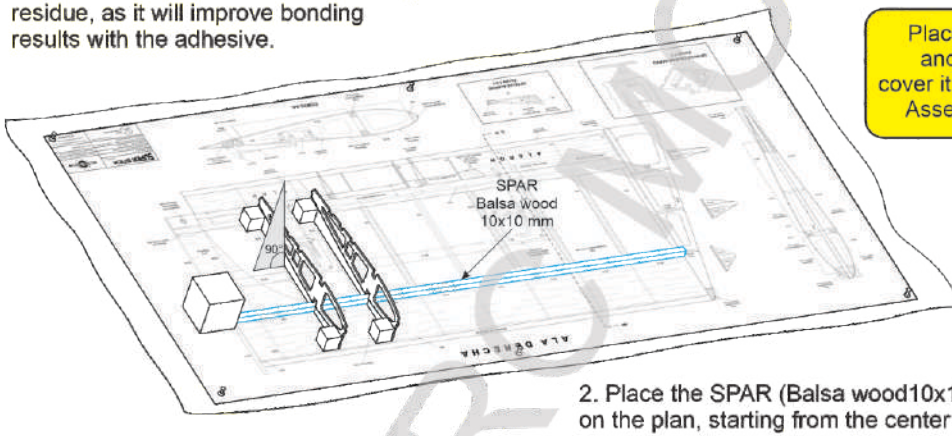




IMPORTANT:
To facilitate the construction of the wing, it is assembled inverted.

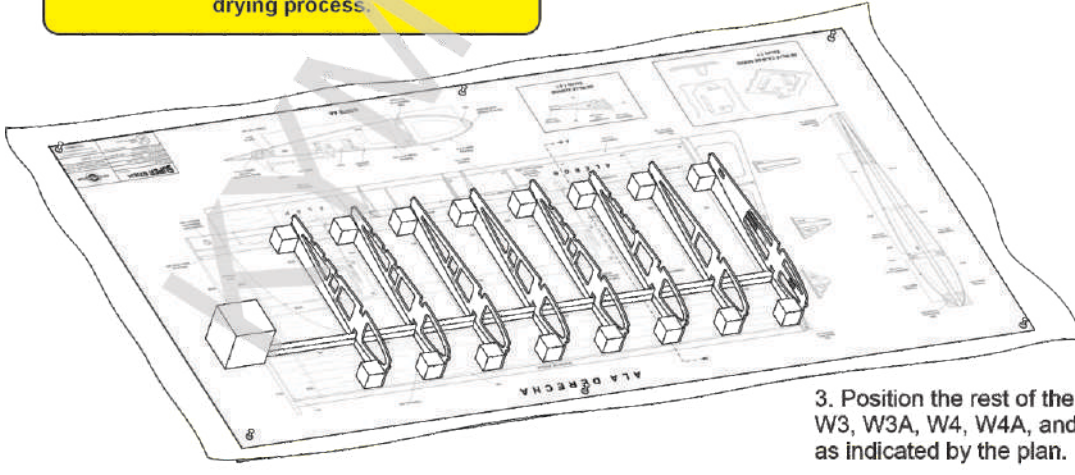
1. Remove the pieces corresponding to the Wing marked as W from the templates. Sand the edges to remove laser cutting residue, as it will improve bonding results with the adhesive.

Place the plane on an anchor surface and cover it with a Clear Plastic. Assemble on the plan.

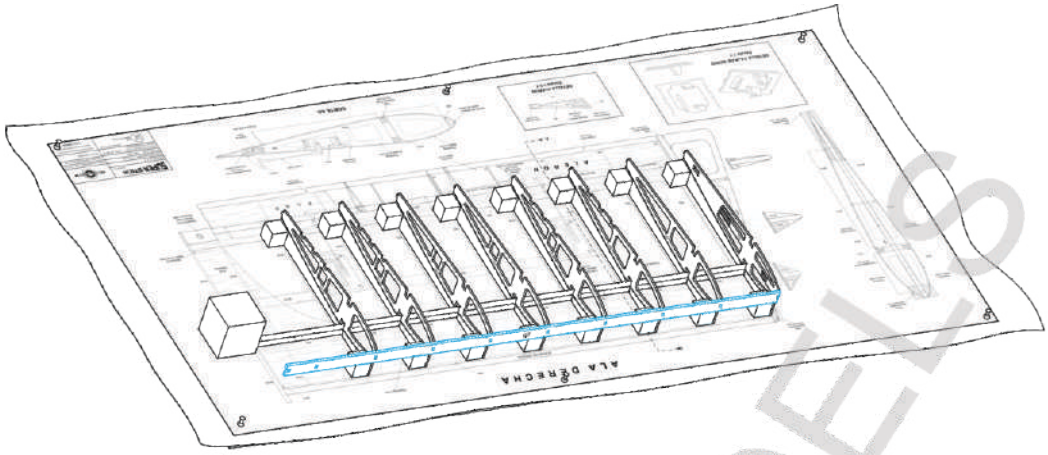


2. Place the SPAR (Balsa wood10x10x800 mm) on the plan, starting from the center of the wing. Position and anchor the RIBS W3A on the surface, using wooden blocks or 90° guides to achieve perpendicularity on the surface.

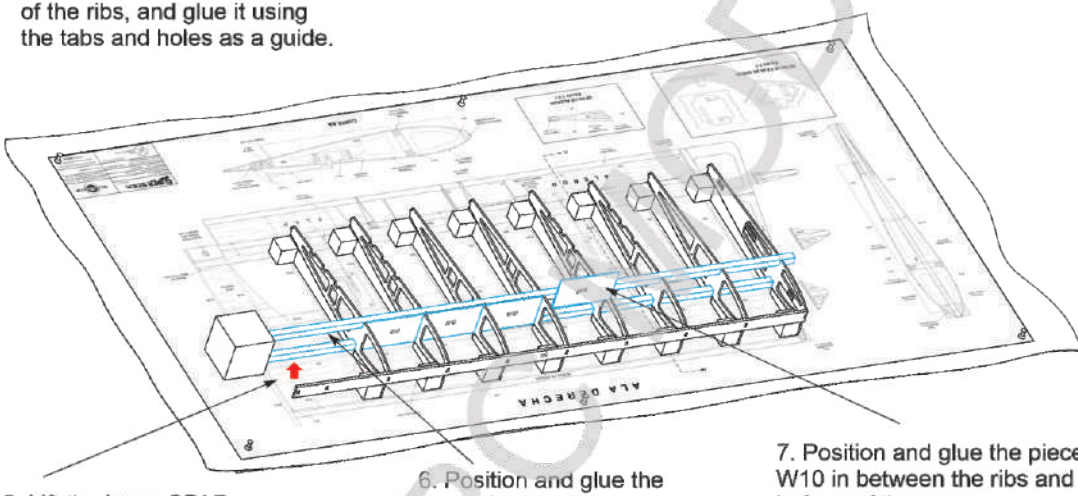
Note: Pin the pieces to the assembly surface; this will prevent warping during the adhesive drying process.



3. Position the rest of the RIBS W3, W3A, W4, W4A, and W5, as indicated by the plan.



4. Position the piece W8 in front of the ribs, and glue it using the tabs and holes as a guide.

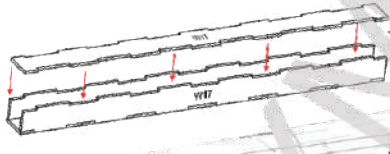


5. Lift the lower SPAR to its final position within the ribs and glue it in place.

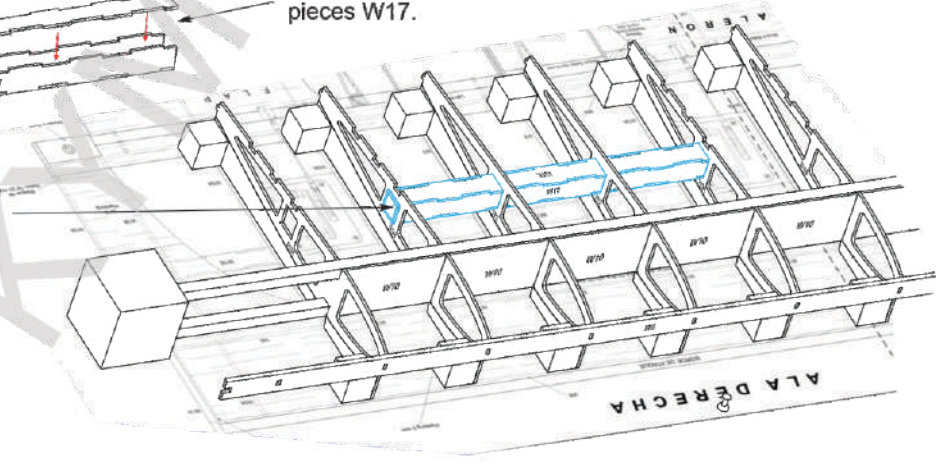
6. Position and glue the upper SPAR (Balsa wood 10x10 mm) in place.

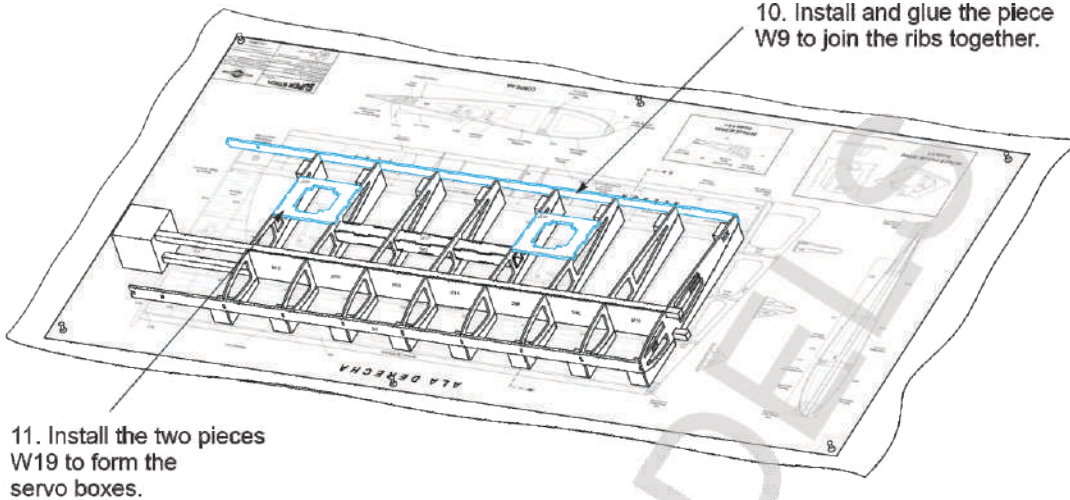
7. Position and glue the pieces W10 in between the ribs and in front of the spars.

8. Assemble the cable box using the pieces W17.



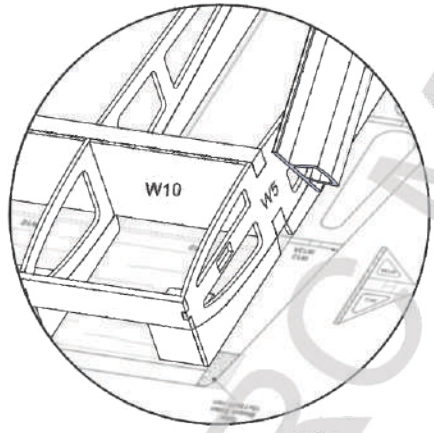
9. Install the cable box between the ribs as shown in the plan.



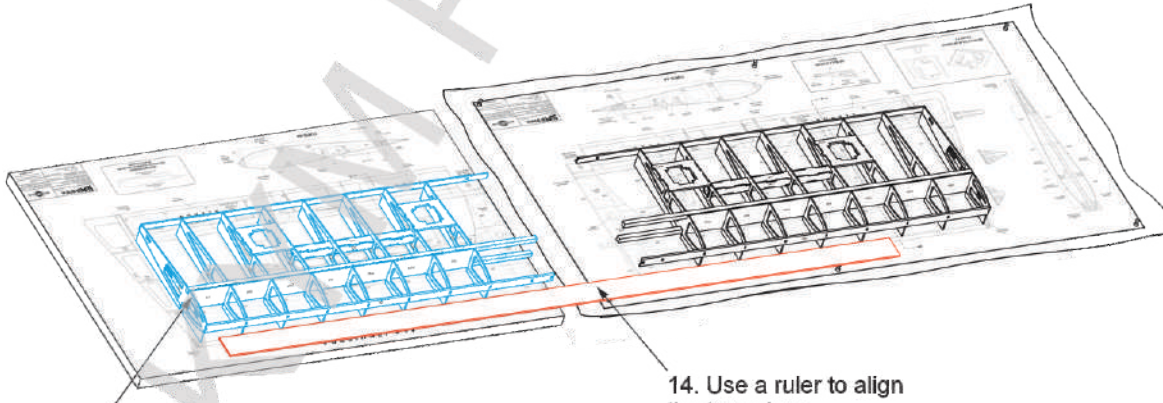


10. Install and glue the piece W9 to join the ribs together.

11. Install the two pieces W19 to form the servo boxes.



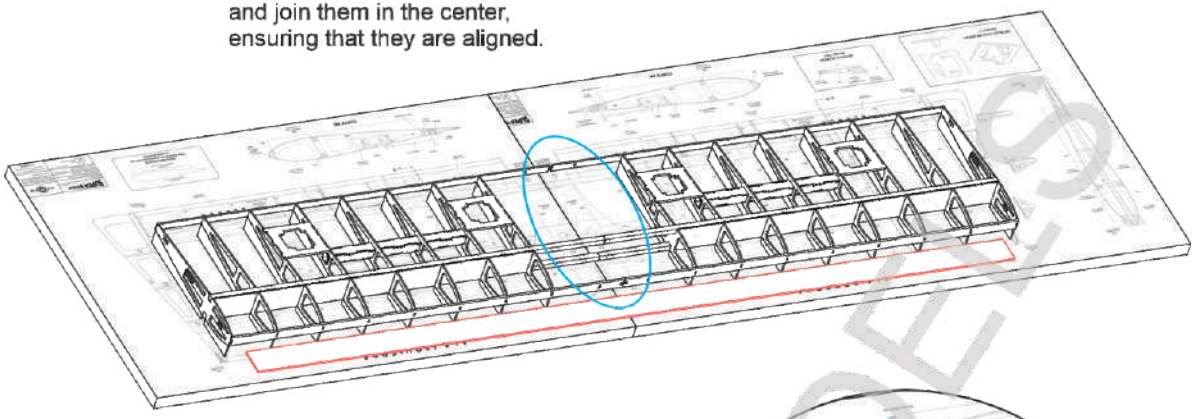
12. Trim the excess material from the two spars and sand them until the surface is even with rib W5.

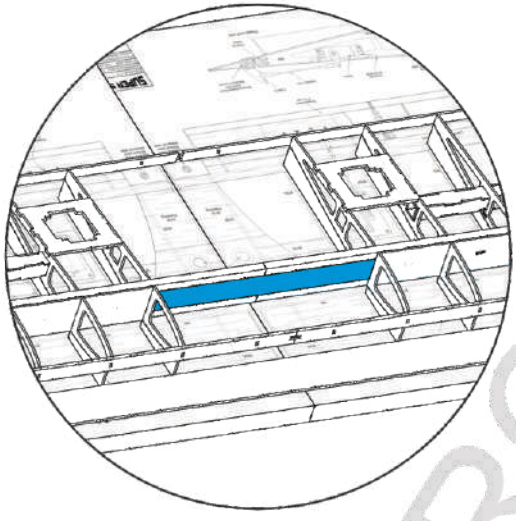


13. Build the Left Wing using the same technique as the Right Wing.

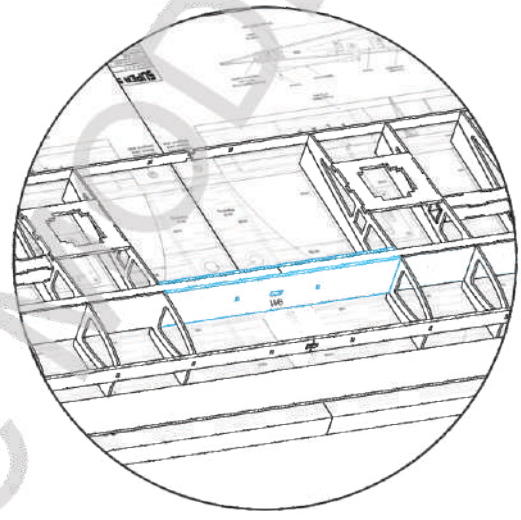
14. Use a ruler to align the two wings.

15. Assemble the two wing sections
and join them in the center,
ensuring that they are aligned.

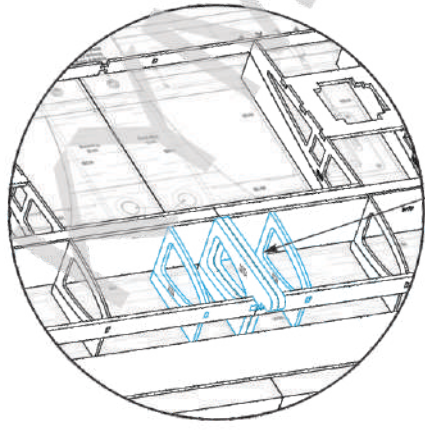




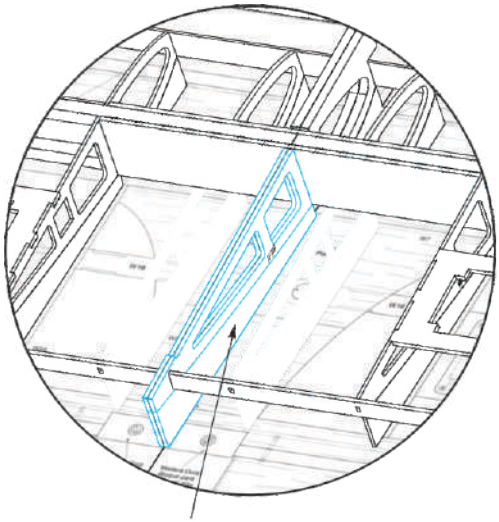
16. Position and glue THE CENTER,
joining the two wing sections
in the middle of the SPARS.



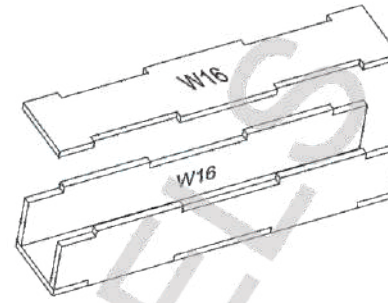
17. Position and glue the pieces W6
and W7 in front of and behind
the center of the wing.



18. Glue the two pieces W1A
and install them in the center
of the wing, in front of piece W6.
Do the same with pieces W2A.

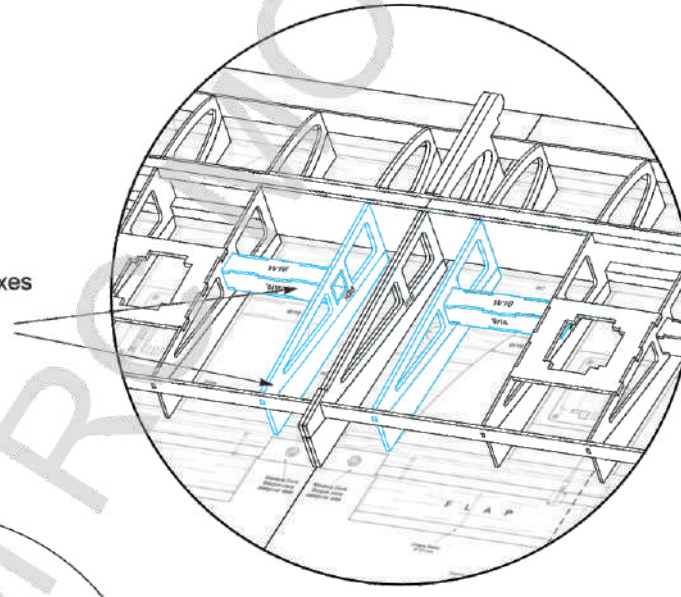


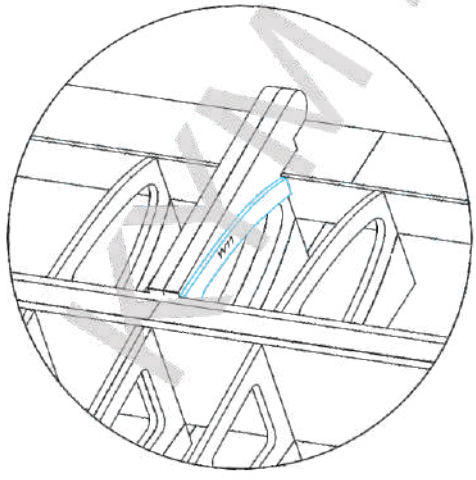
19. Glue the two pieces W1B and install them in the center of the wing, behind piece W7.



20. Assemble the 2 boxes for short cables using the pieces W16.

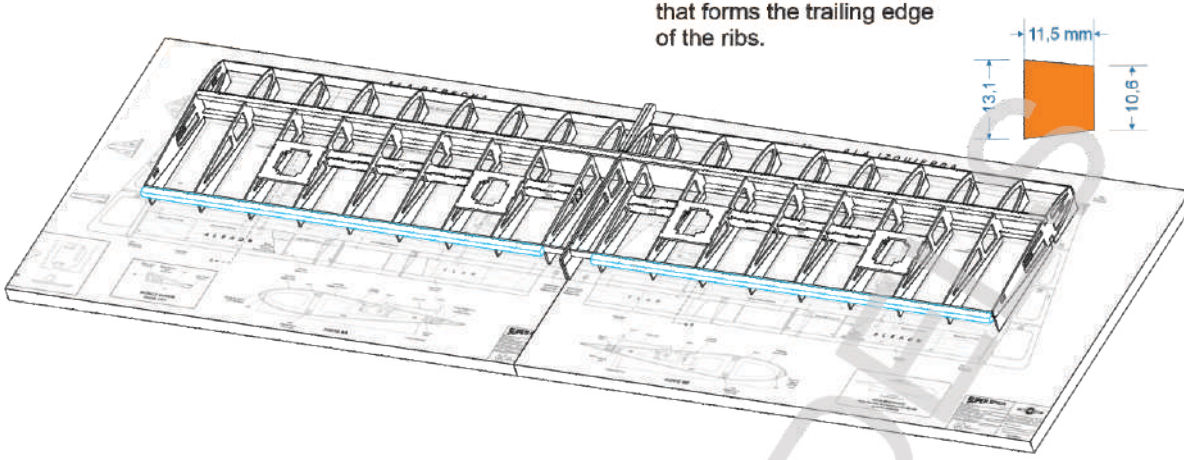
21. Install the servo cable boxes and, at the same time, glue the ribs WB2 that form the center of the wing.



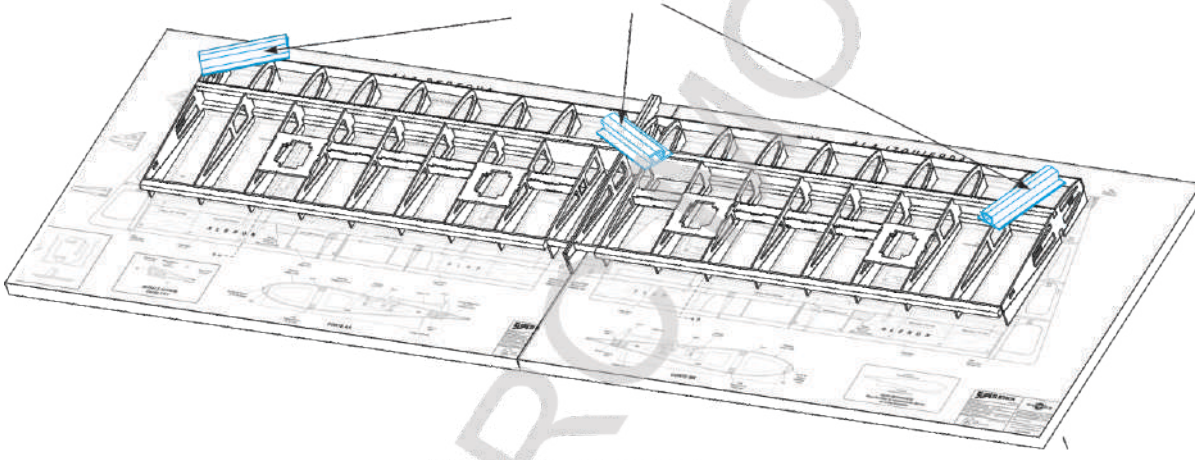


22. Glue the pieces W11 on each side of the ribs W1, using the marked guide.

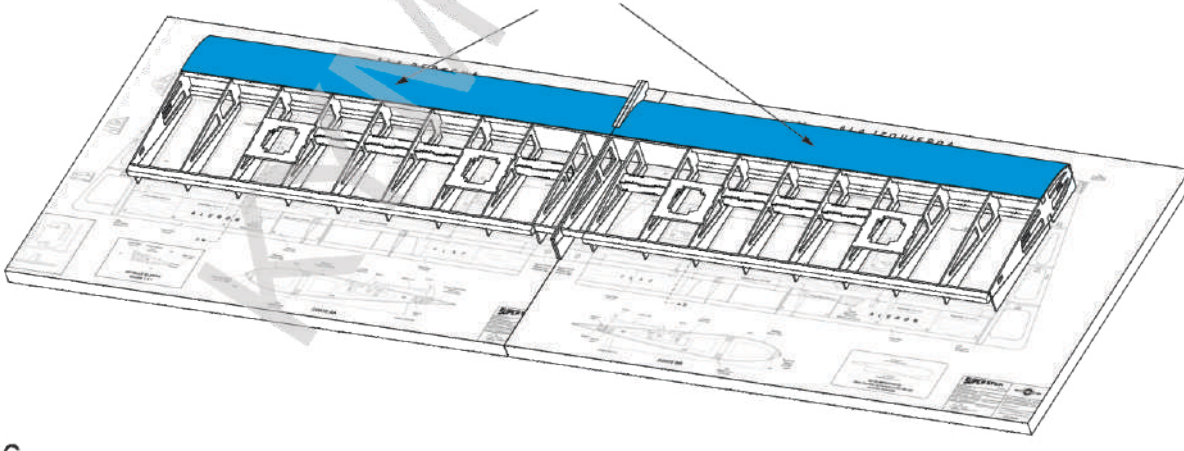
23. Install the balsa wood profile that forms the trailing edge of the ribs.



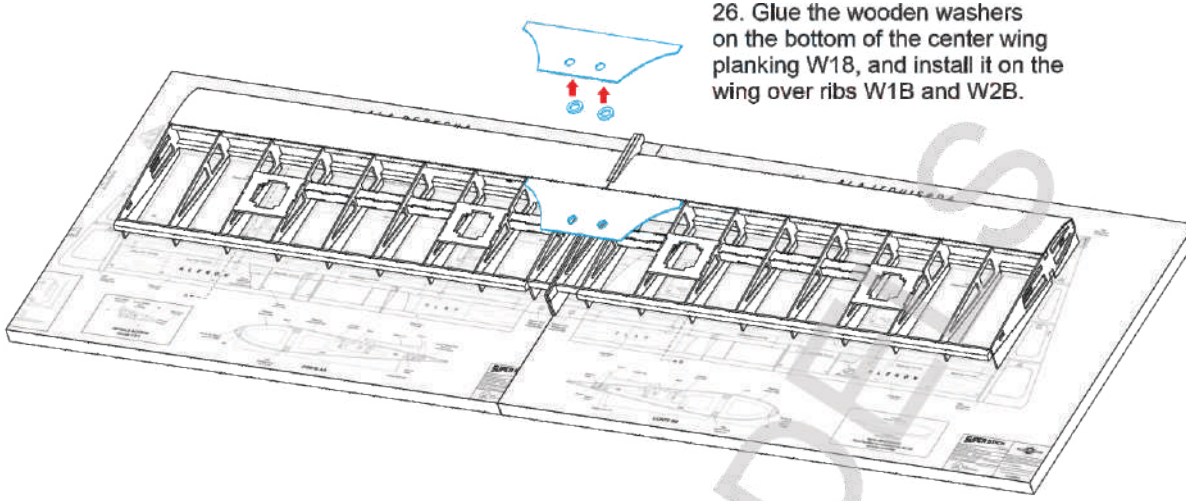
24. Sand the edges and prepare the surface for installing the wing planking.



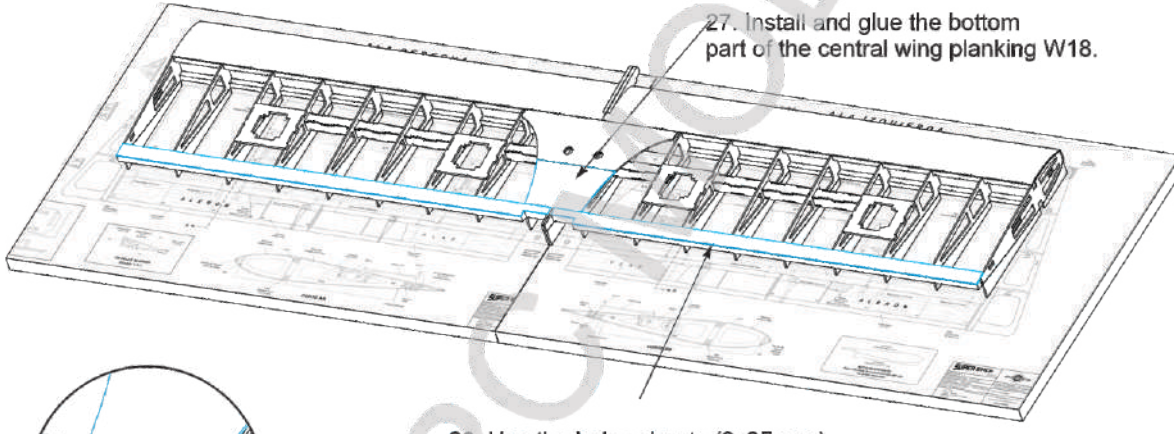
25. Install the balsa sheet planking (2x100 mm) on the top of the ribs.

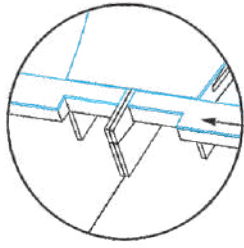


26. Glue the wooden washers on the bottom of the center wing planking W18, and install it on the wing over ribs W1B and W2B.



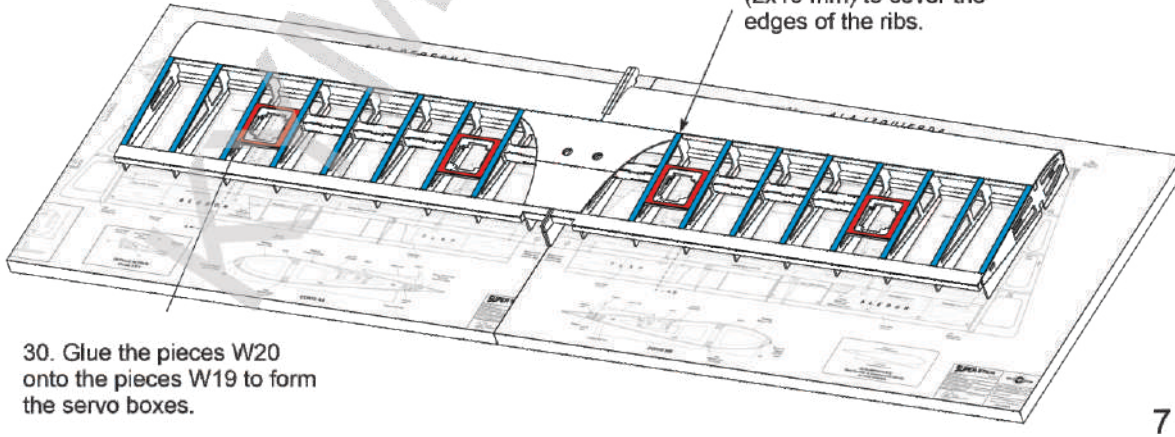
27. Install and glue the bottom part of the central wing planking W18.



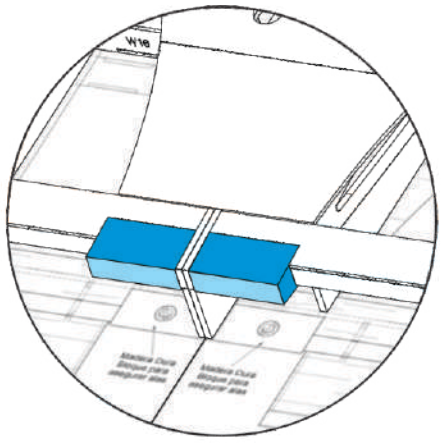


28. Use the balsa sheets (2x25 mm) to form the planking for the wing's trailing edge.
Trim the excess material as shown in the plan.

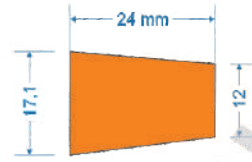
29. Use the balsa sheets (2x10 mm) to cover the edges of the ribs.



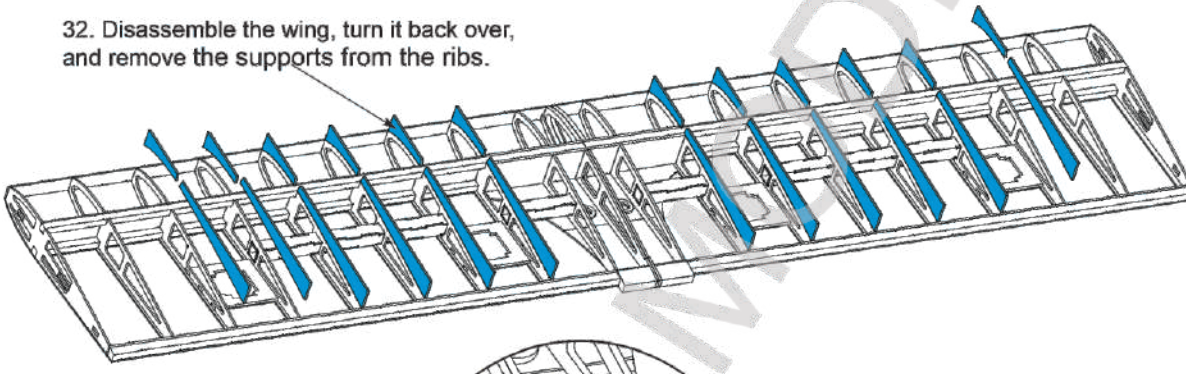
30. Glue the pieces W20 onto the pieces W19 to form the servo boxes.



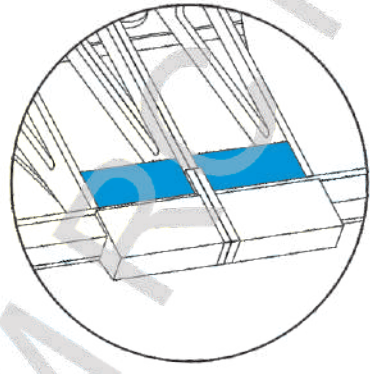
31. Install the two hardwood blocks in the center of the wing, on the lower part.



32. Disassemble the wing, turn it back over, and remove the supports from the ribs.

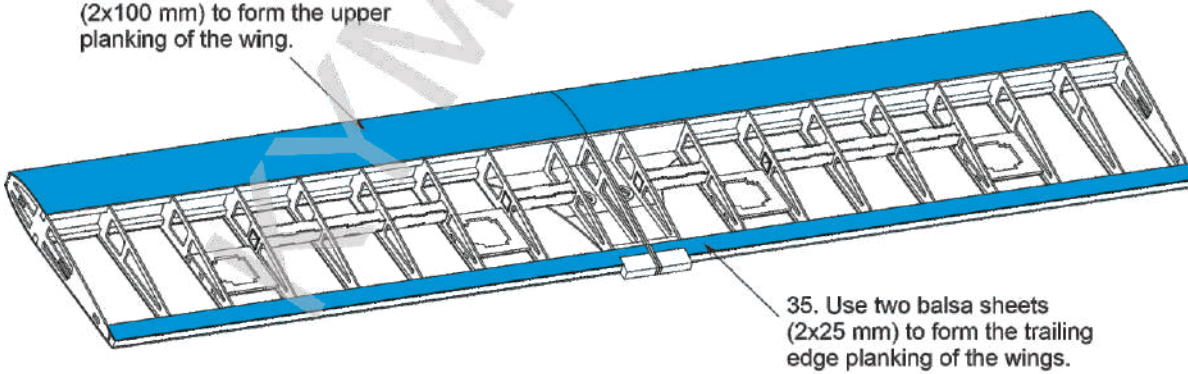


NOTE:
Sand the surface with the sander and prepare the wings for installing the planking.

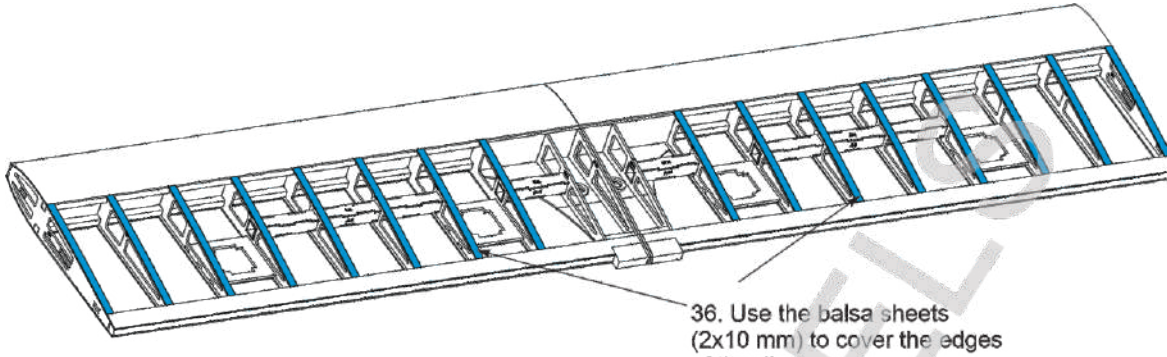


33. Glue a pair of balsa wood blocks (15x20 mm) in the center of the wing. Shape the angles with the help of a sander.

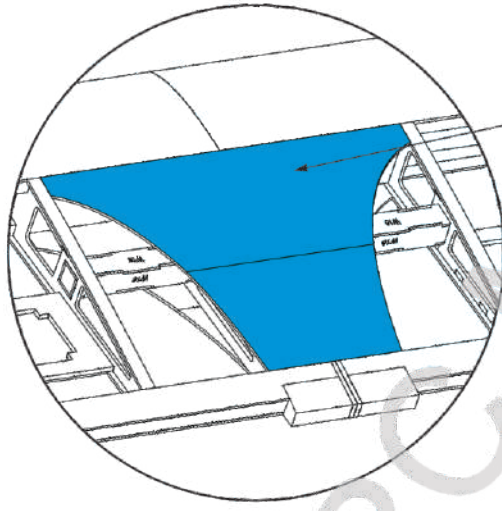
34. Use two balsa sheets (2x100 mm) to form the upper planking of the wing.



35. Use two balsa sheets (2x25 mm) to form the trailing edge planking of the wings.

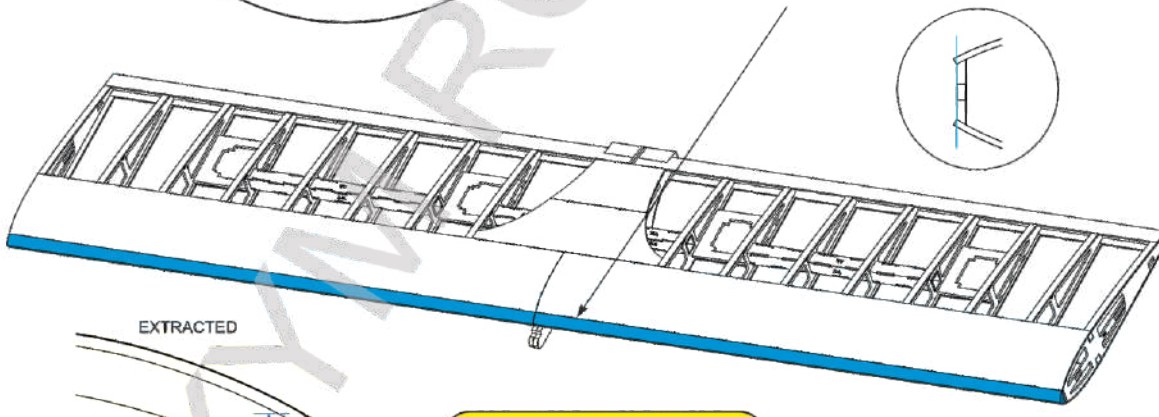


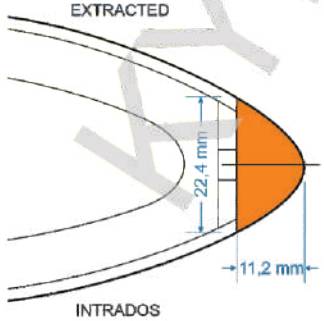
36. Use the balsa sheets (2x10 mm) to cover the edges of the ribs.



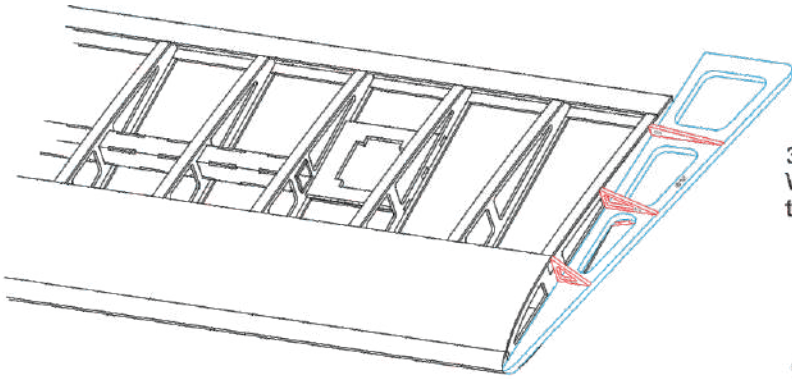
37. Install and glue the pieces W18 to form the planking of the center of the wing.

38. Use the balsa wood leading edge to form the wing's leading edge.
Before gluing, sand and level the surface.

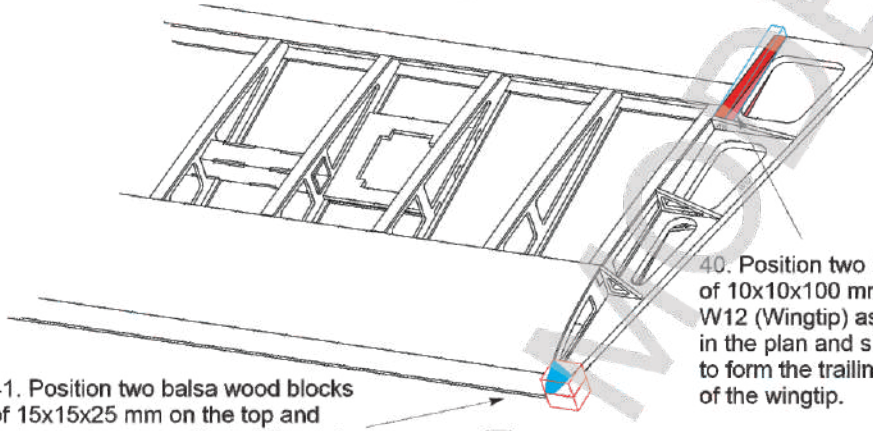




IMPORTANT NOTE:
The leading edge profile is **NOT** symmetrical. Refer to the plan for the details to ensure it is placed correctly.



39. Use the pieces W12, W13, W14, and W15 to form the wingtips.



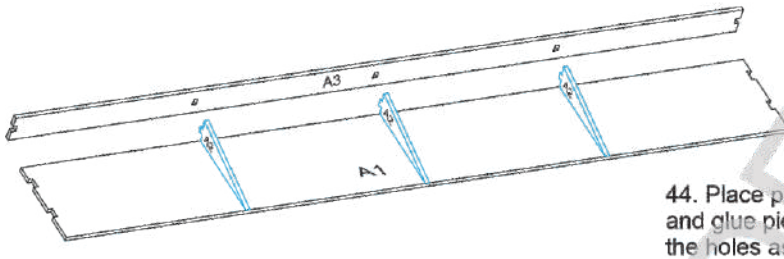
40. Position two balsa wood blocks of 10x10x100 mm on the piece W12 (Wingtip) as indicated in the plan and shape them to form the trailing edge of the wingtip.

41. Position two balsa wood blocks of 15x15x25 mm on the top and bottom of the piece W12 (Wingtip) as indicated in the plan, and shape them to form the leading edge at the wingtip.

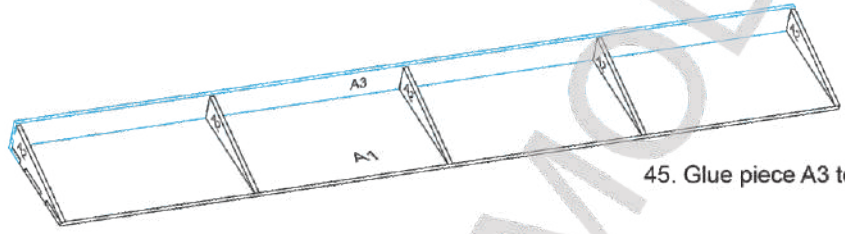
42. Position and glue the wing's trailing edge in the flap section, using the corresponding balsa profile.

CONSTRUCTION OF AILERONS AND FLAPS

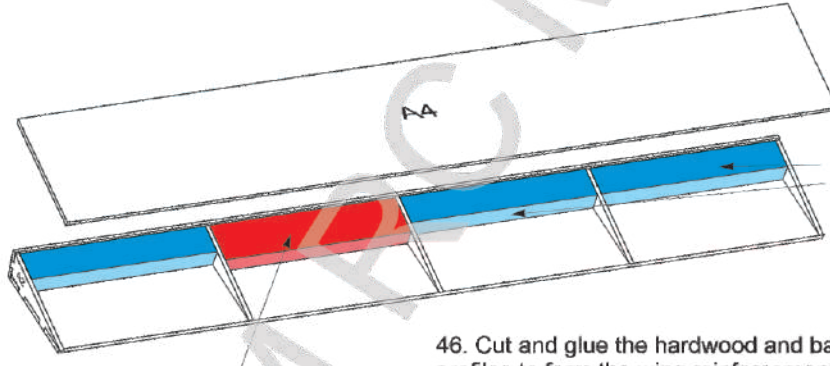
43. Using pieces A1, A2, A3, and A4, construct the ailerons.



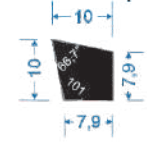
44. Place piece A1 on a flat surface and glue piece A2 onto it using the holes as guides.



45. Glue piece A3 to the front part.

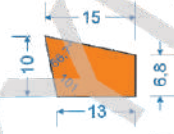


Balsa wood profile

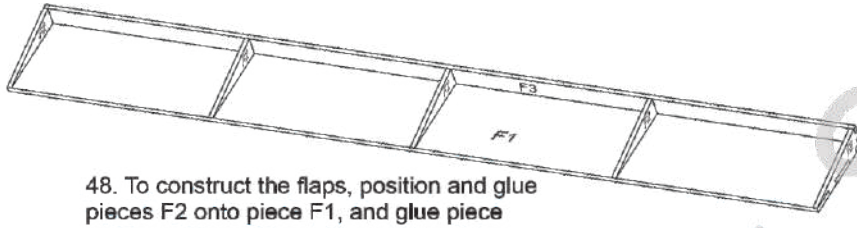


46. Cut and glue the hardwood and balsa wood profiles to form the wing reinforcements.
Keep in mind where the control horn will be located so you can use the hardwood profile in that space.

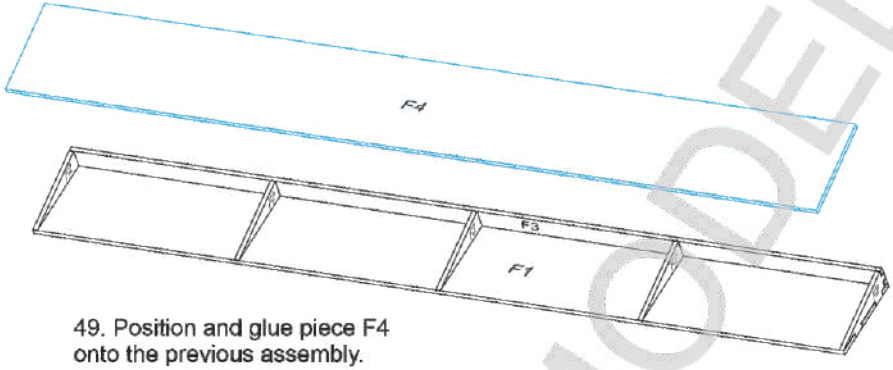
Hardwood profile



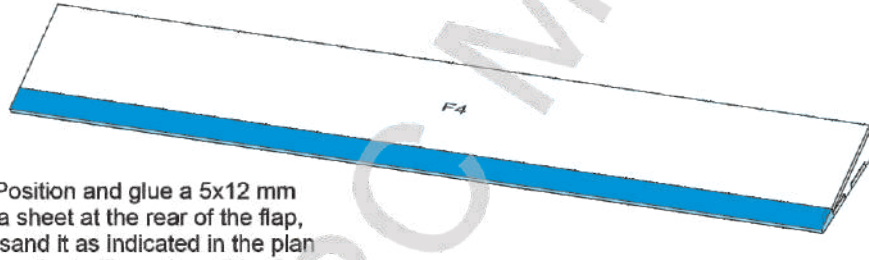
47. Position a 5x12 mm sheet at the rear of the aileron and sand it to form the trailing edge of the aileron.



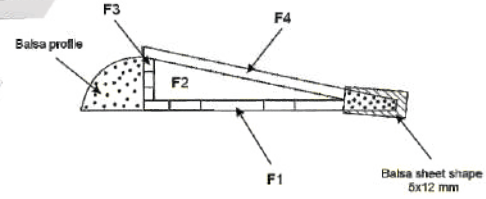
48. To construct the flaps, position and glue pieces F2 onto piece F1, and glue piece F3 onto the leading edge.



49. Position and glue piece F4 onto the previous assembly.

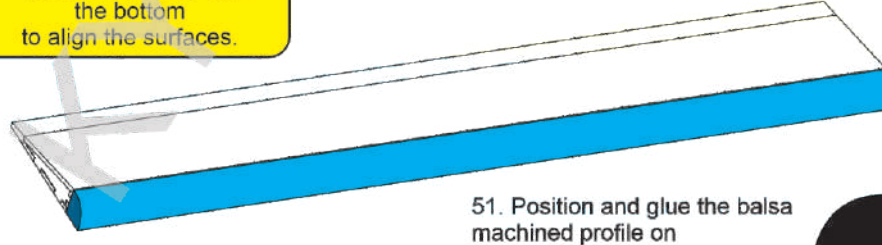


50. Position and glue a 5x12 mm balsa sheet at the rear of the flap, and sand it as indicated in the plan to form the trailing edge of the flap.



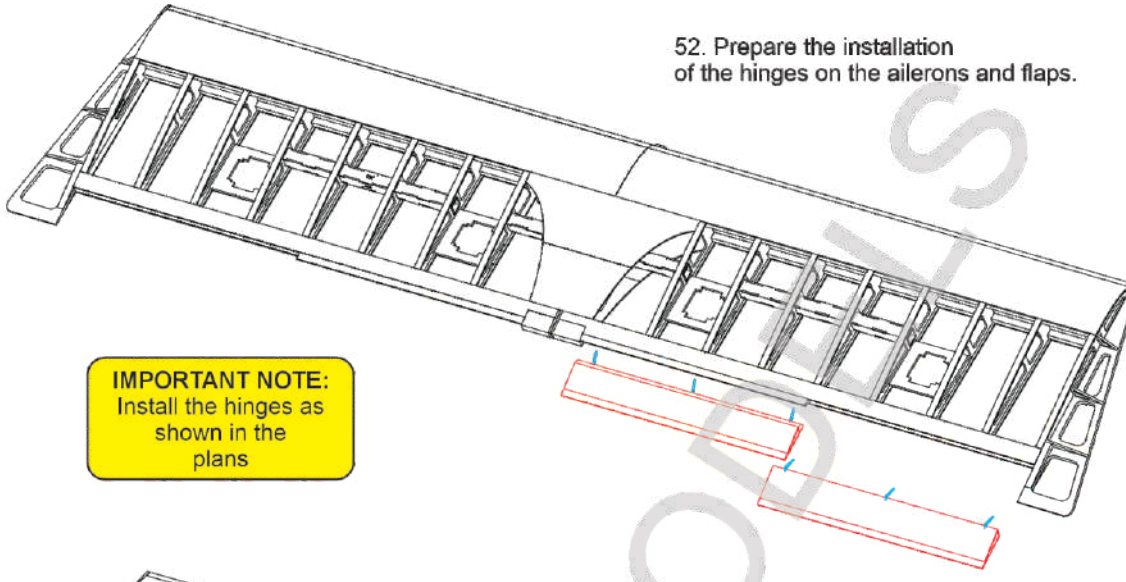
FLAP DETAIL

IMPORTANT NOTE:
Sand the leading edge profile of the flap on the bottom to align the surfaces.



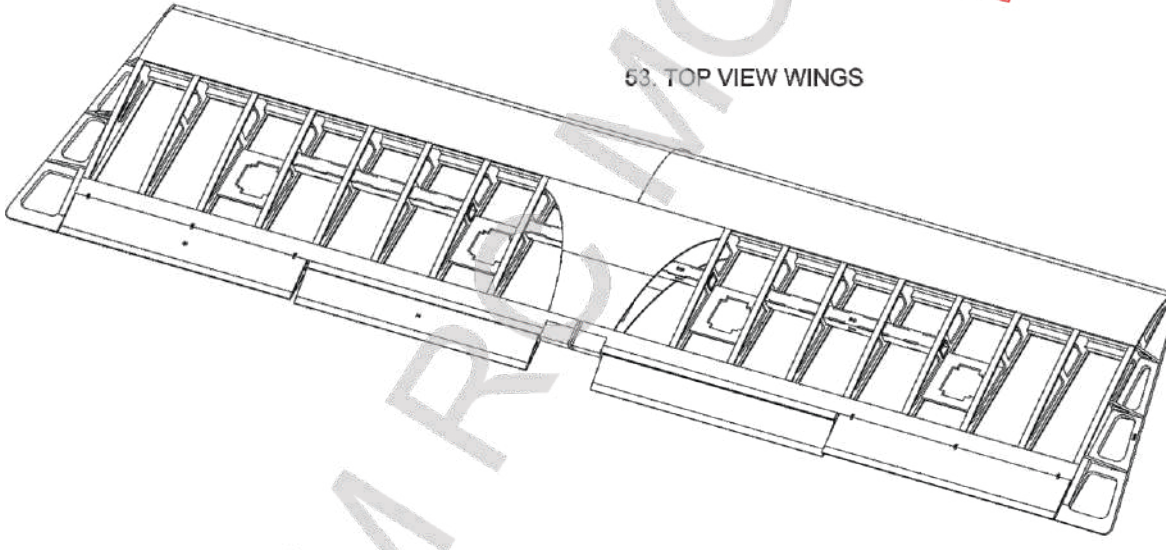
51. Position and glue the balsa machined profile on the leading edge.

52. Prepare the installation
of the hinges on the ailerons and flaps.

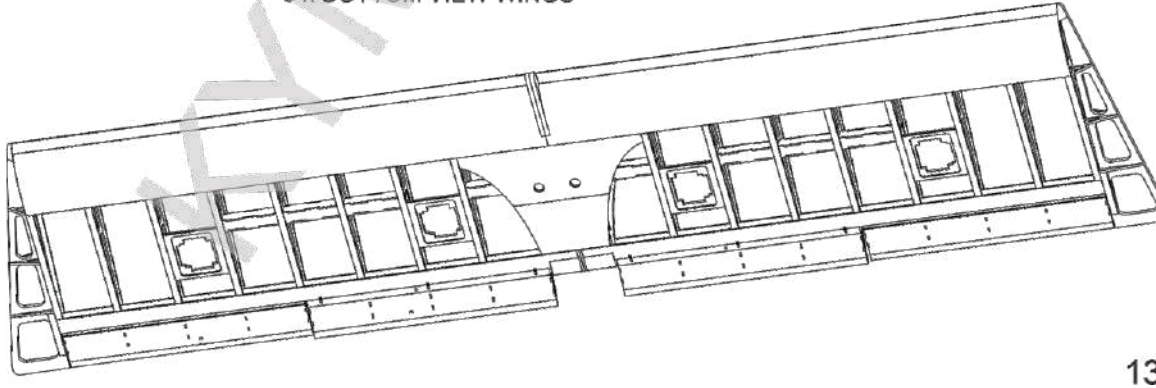


IMPORTANT NOTE:
Install the hinges as shown in the plans

53. TOP VIEW WINGS



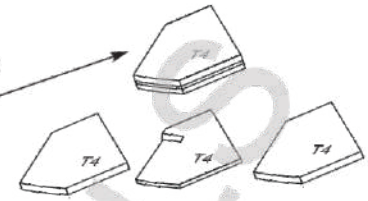
54. BOTTOM VIEW WINGS

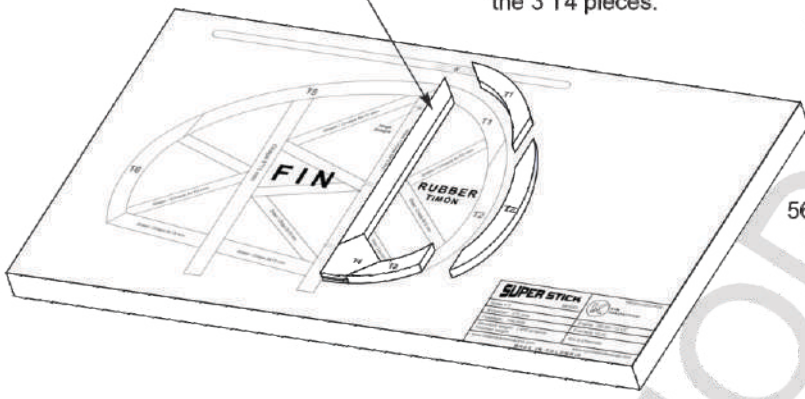


CONSTRUCTION OF THE RUDDER.

Balsa Sheet
8x15 mm

55. Shape the reinforcement for the horn using the T4 pieces.
Create a sandwich with the 3 T4 pieces.

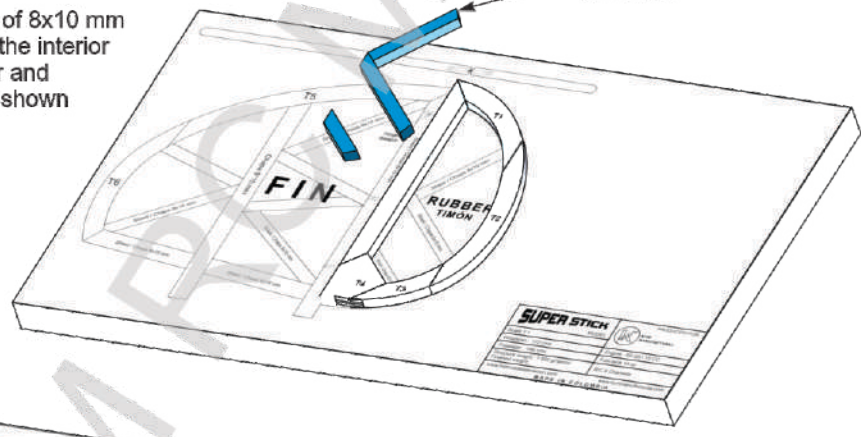




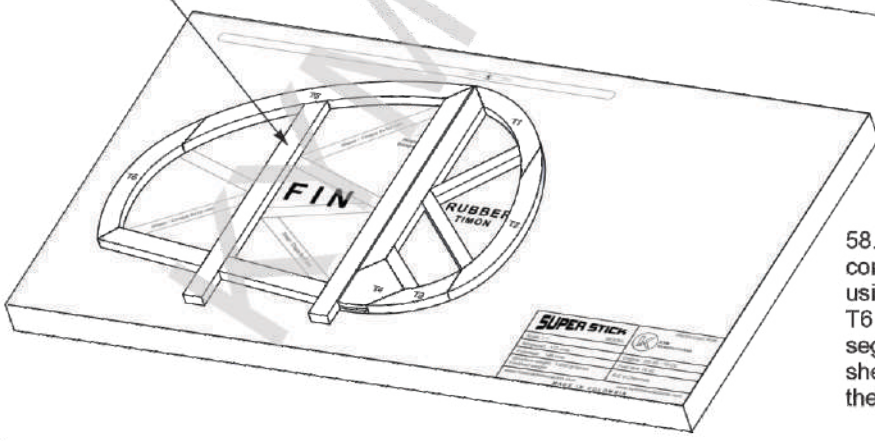
56. Place and glue the T1, T2, T3, and T4 pieces onto the plan and use an 8x15 mm balsa sheet to start building the rudder.

Balsa sheet
8x10 mm

57. Cut the segments of 8x10 mm balsa sheet that form the interior structure of the rudder and glue them in place as shown in the plan.



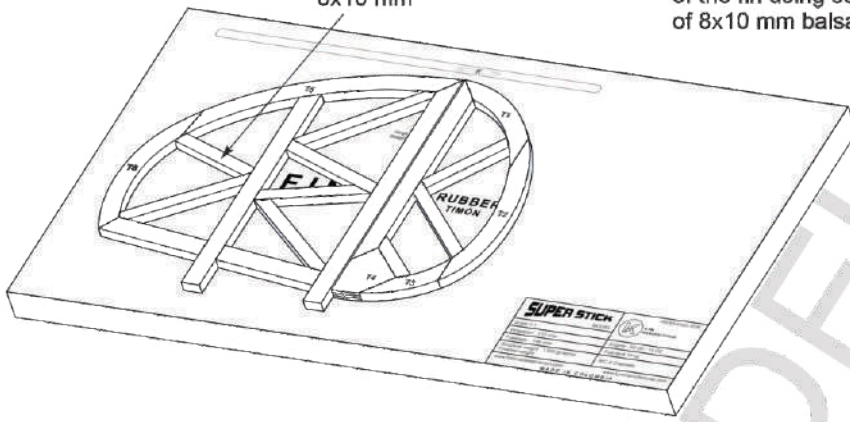
Balsa Sheet
8x15 mm

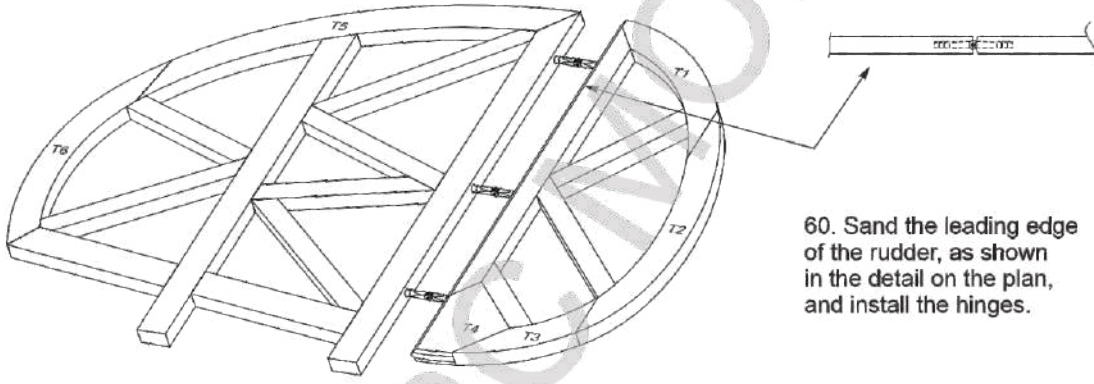


58. Continue with the construction of the fin, using the T5 and T6 pieces, and cut the segments of 8x15 mm sheet as indicated on the plan.

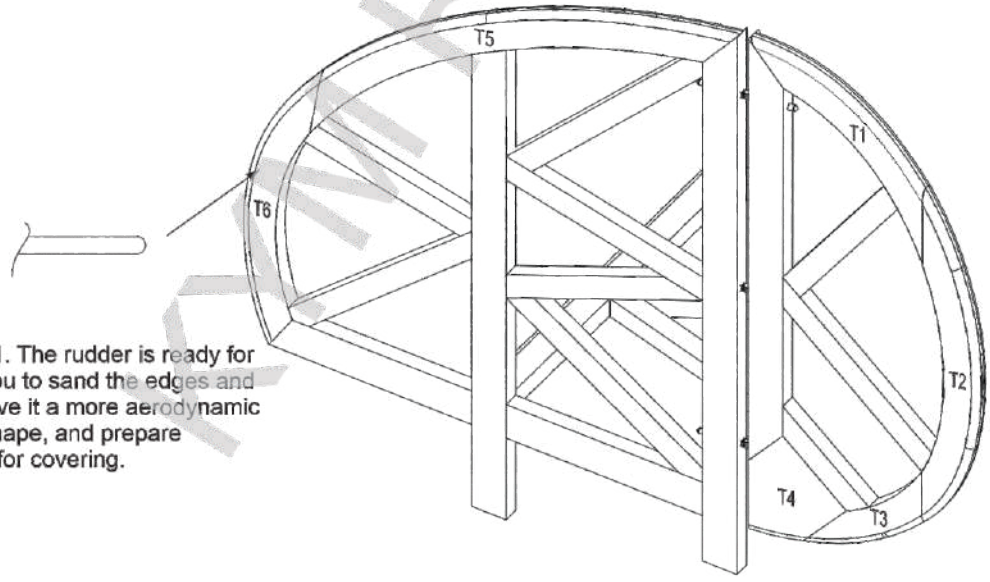
Balsa Sheet
8x10 mm

59. Construct the internal structure of the fin using segments of 8x10 mm balsa sheet.



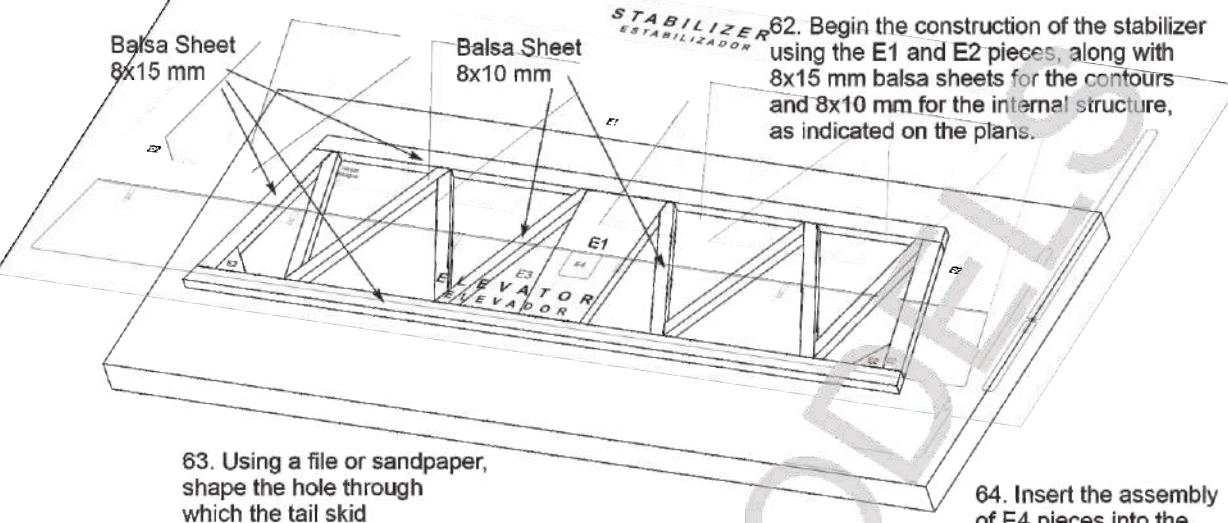


60. Sand the leading edge of the rudder, as shown in the detail on the plan, and install the hinges.



61. The rudder is ready for you to sand the edges and give it a more aerodynamic shape, and prepare it for covering.

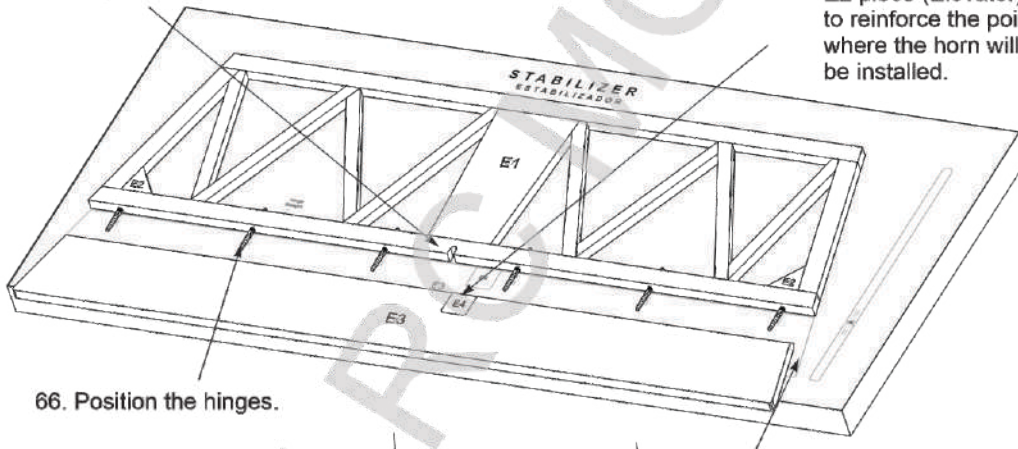
CONSTRUCTION OF THE STABILIZER.



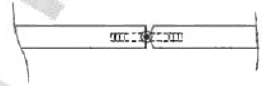
62. Begin the construction of the stabilizer using the E1 and E2 pieces, along with 8x15 mm balsa sheets for the contours and 8x10 mm for the internal structure, as indicated on the plans.

63. Using a file or sandpaper, shape the hole through which the tail skid should pass.

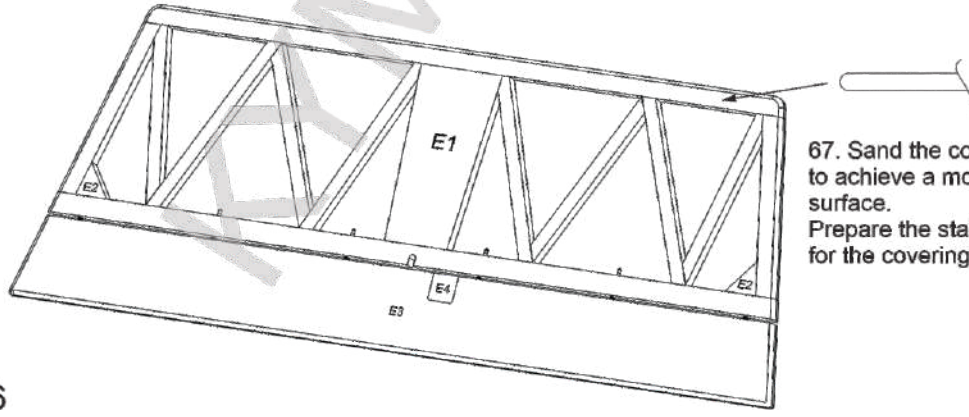
64. Insert the assembly of E4 pieces into the E2 piece (Elevator) to reinforce the point where the horn will be installed.



66. Position the hinges.



65. Sand the leading edge of the elevator, as shown in the detail on the plan.

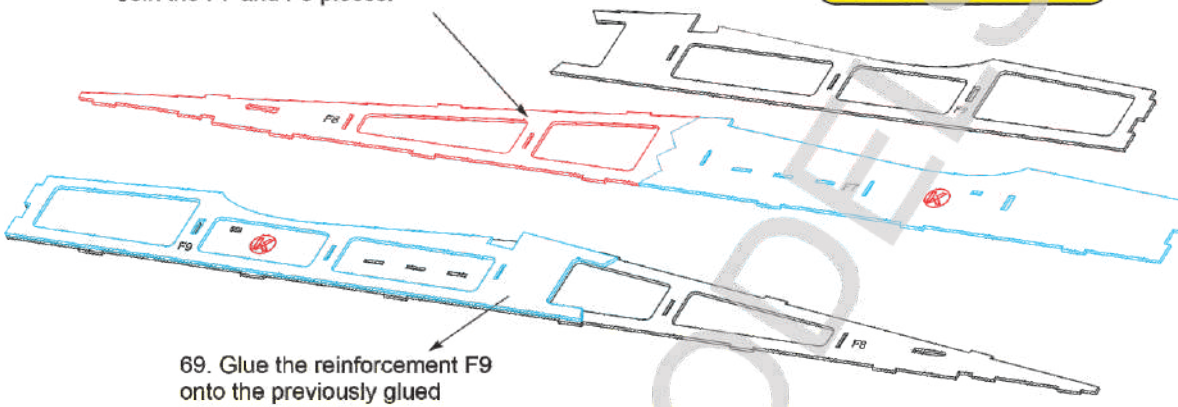


67. Sand the corners and edges to achieve a more streamlined surface.
Prepare the stabilizer for the covering process.

CONSTRUCTION OF THE FUSELAGE.

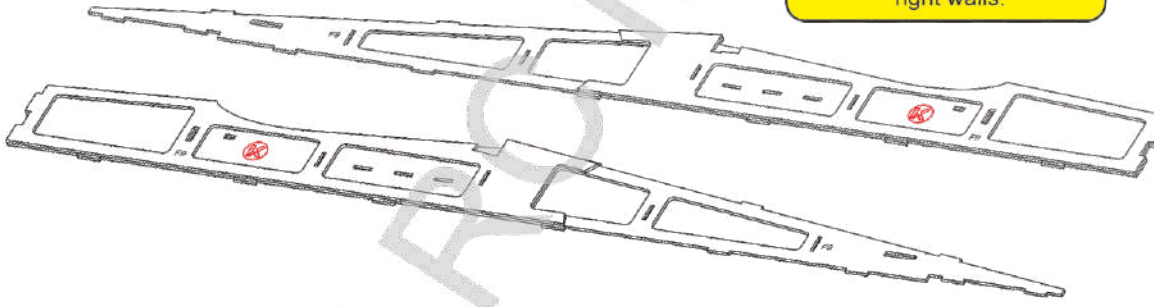
IMPORTANT NOTE:
Sand the assembly joints to ensure better adhesive bonding.

68. Begin the fuselage construction process by assembling the side walls. Join the F7 and F8 pieces.

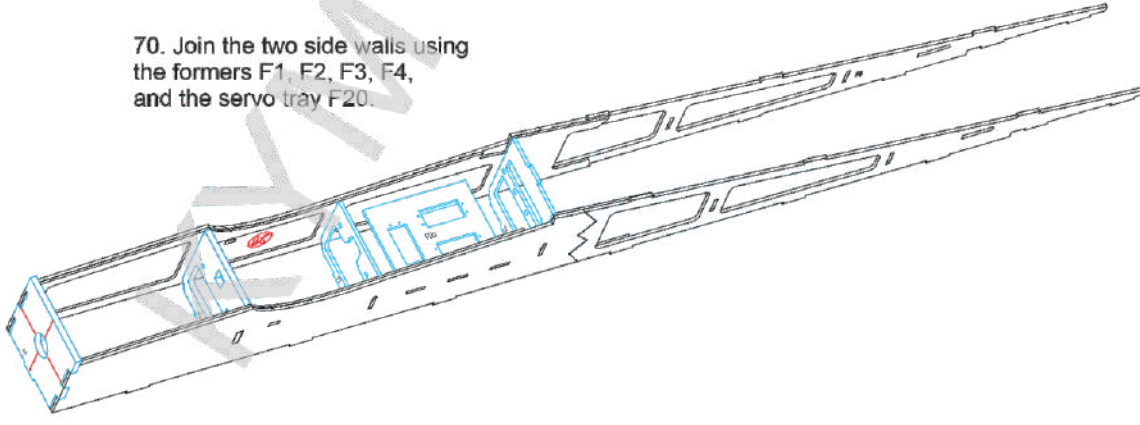


69. Glue the reinforcement F9 onto the previously glued assembly of F7 + F8.

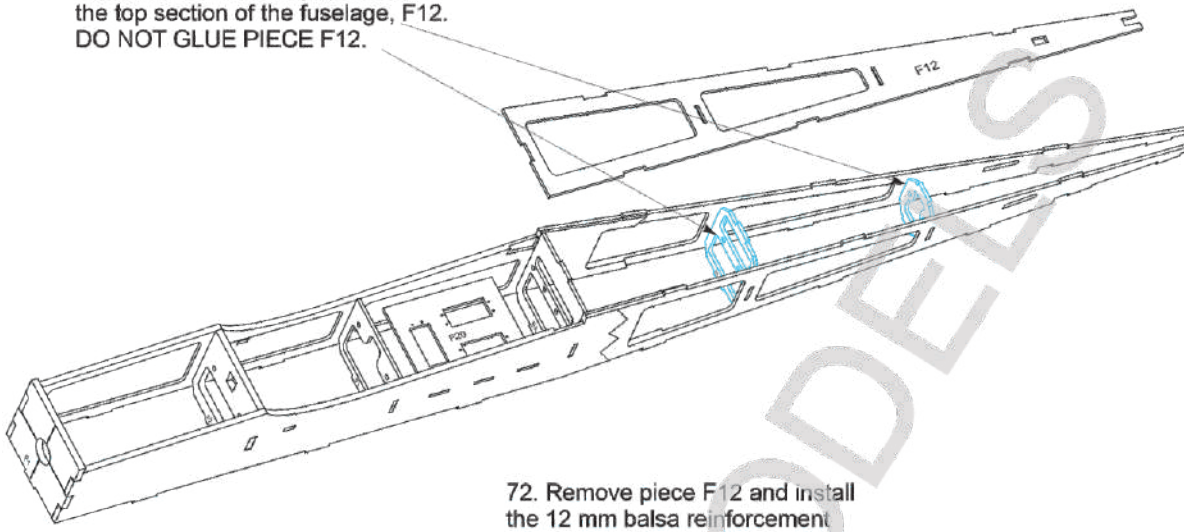
IMPORTANT NOTE:
Remember to construct both the left and right walls.



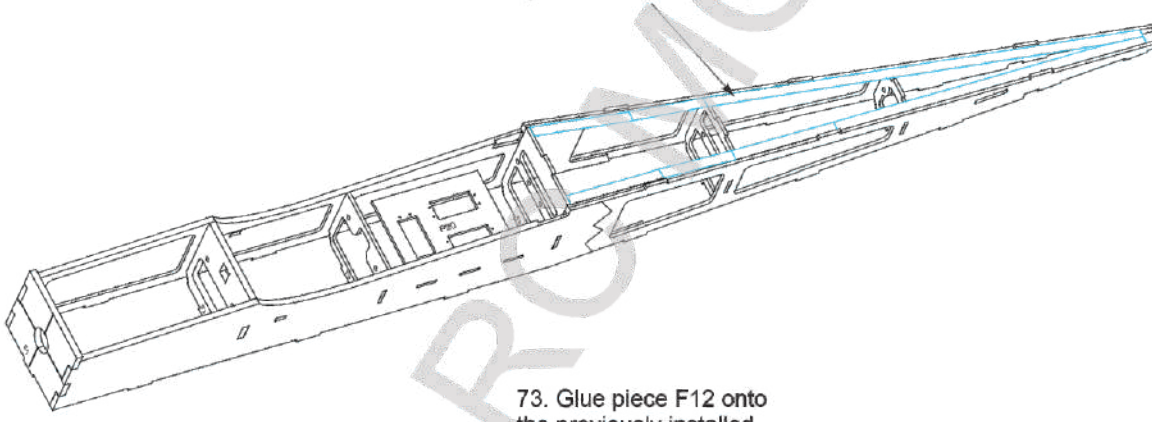
70. Join the two side walls using the formers F1, F2, F3, F4, and the servo tray F20.



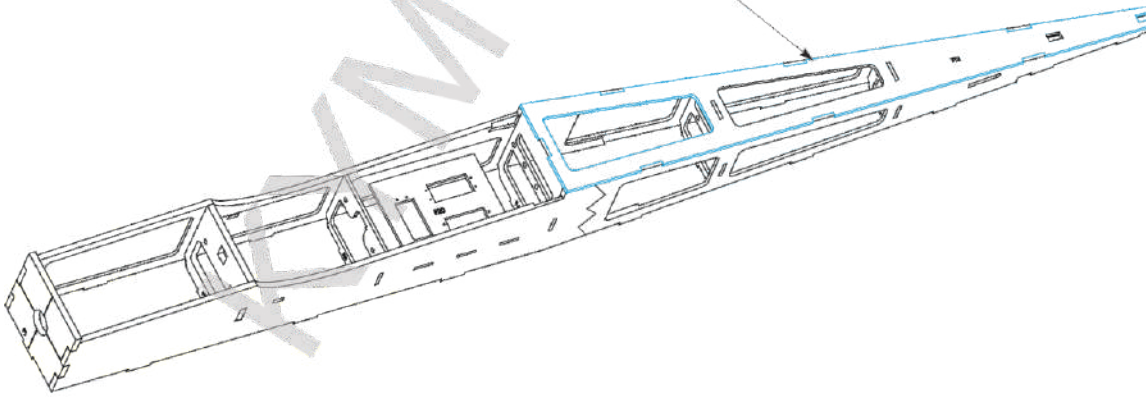
71. Apply glue to the sides of the formers F5 and F6 to pre-assemble the top section of the fuselage, F12. DO NOT GLUE PIECE F12.



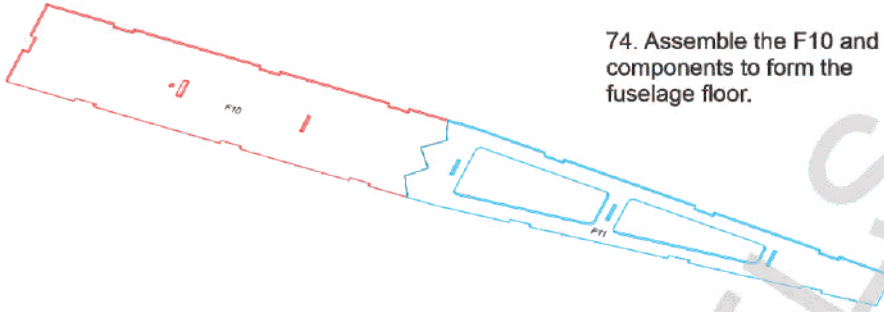
72. Remove piece F12 and install the 12 mm balsa reinforcement triangles as shown in the plan.



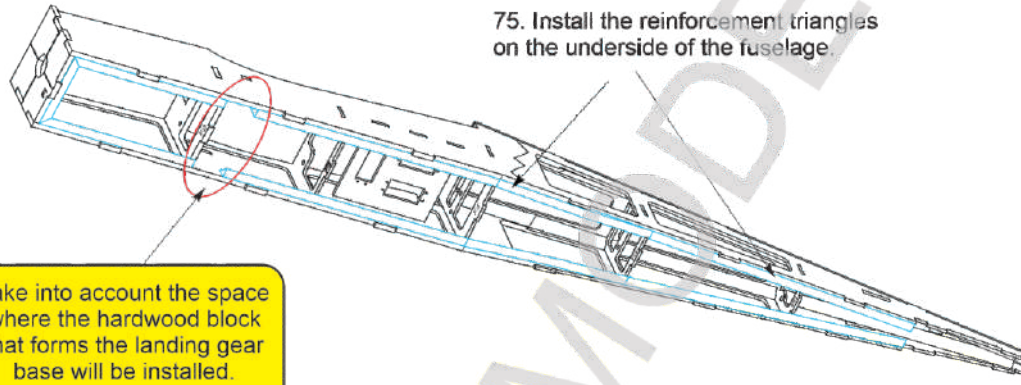
73. Glue piece F12 onto the previously installed reinforcements.



74. Assemble the F10 and F11 components to form the fuselage floor.

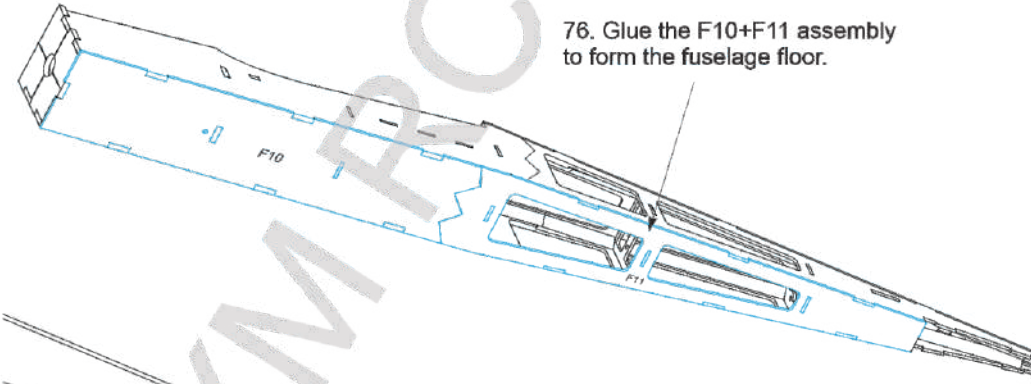


75. Install the reinforcement triangles on the underside of the fuselage.

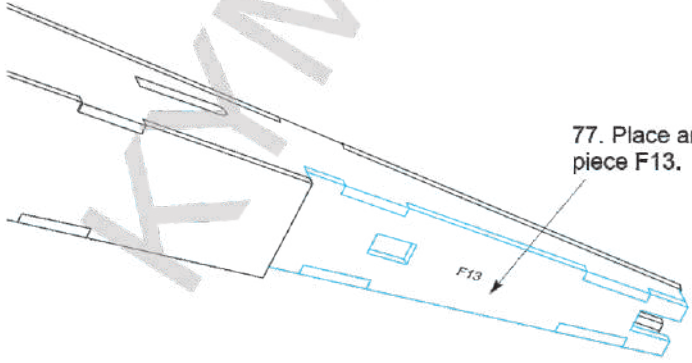


Take into account the space where the hardwood block that forms the landing gear base will be installed.

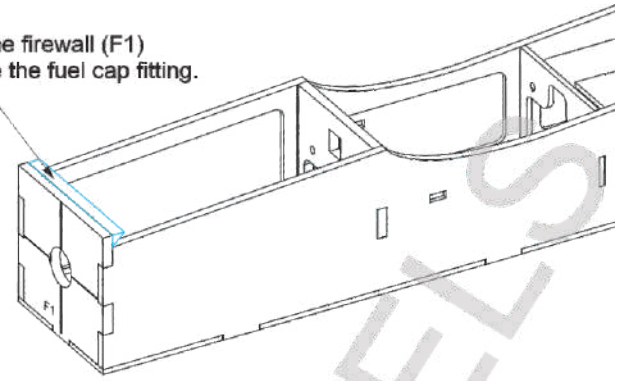
76. Glue the F10+F11 assembly to form the fuselage floor.



77. Place and glue piece F13.

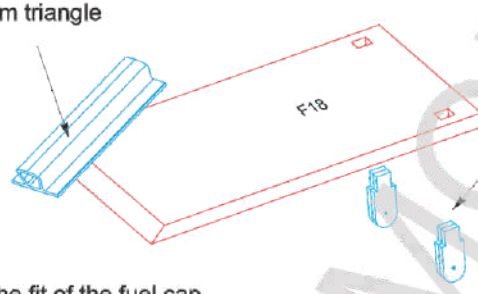


78. Position and glue the 8 mm hardwood triangle to the rear of the firewall (F1) as indicated on the plan, to create the fuel cap fitting.

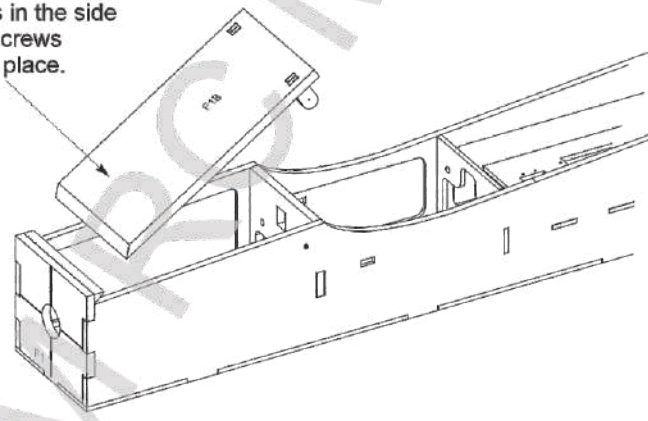


79. Sand the edge of piece F18 to achieve the proper angle of adjustment. Use the 8 mm triangle as a guide.

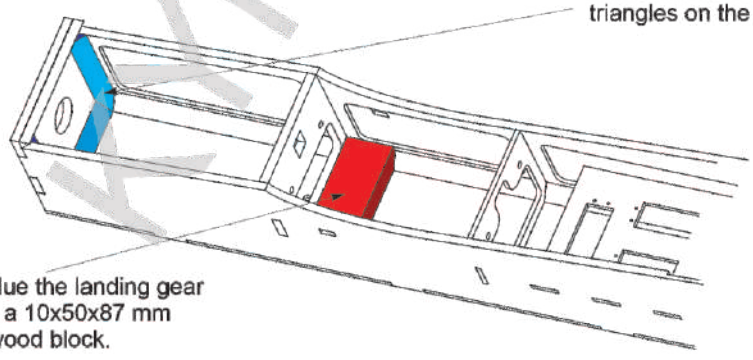
80. Install the assemblies of pieces F19 onto the fuel cap F18.



81. Check the fit of the fuel cap and make the holes in the side walls to install the screws that hold the cap in place.

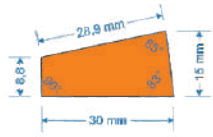


82. Install the reinforcement triangles on the firewall F1.

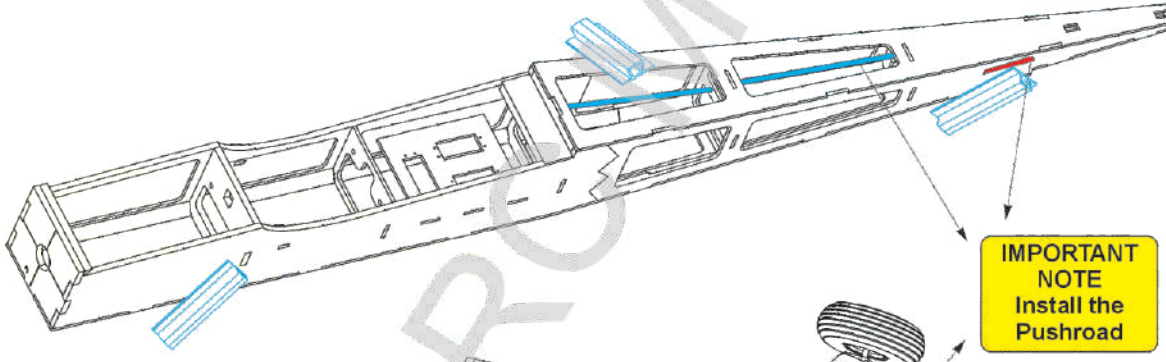


83. Glue the landing gear base, a 10x50x87 mm hardwood block.

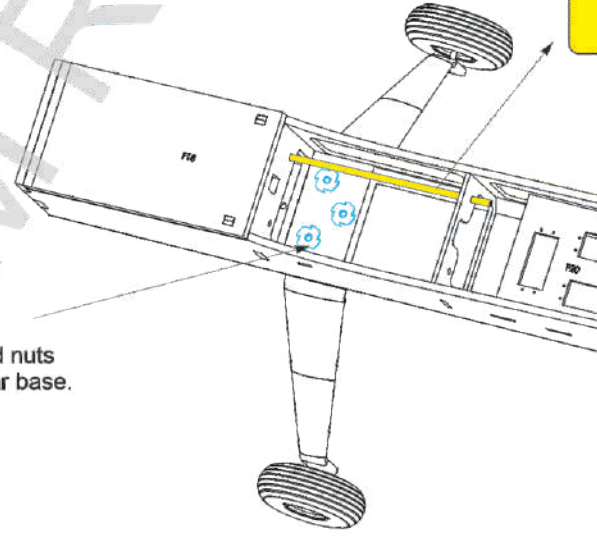
84. Glue the base of the wing support, a hardwood block.



85. Sand the edges of the fuselage to smooth them and create an aerodynamic surface.



IMPORTANT
NOTE
Install the Pushroad

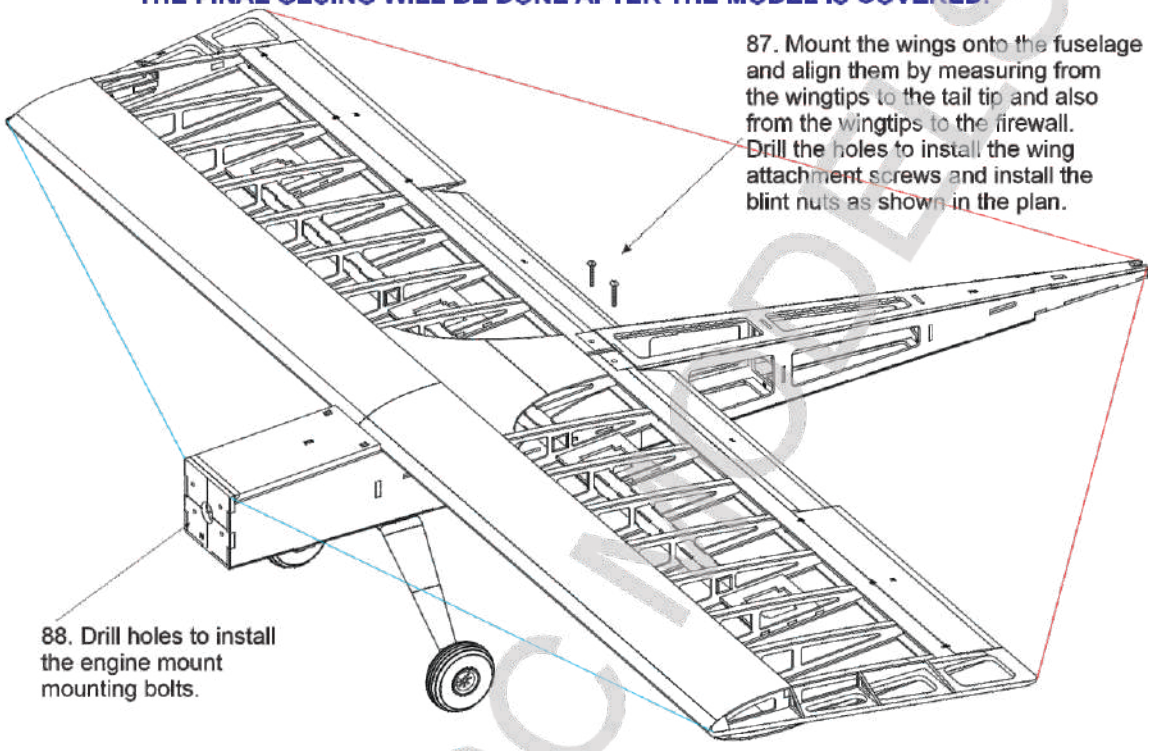


86. Install the blind nuts on the landing gear base.

ASSEMBLY OF THE AIRCRAFT

Once all the parts, WINGS, FUSELAGE, RUDDER, and STABILIZER, are ready, we will prepare the model for covering by assembling all the parts, accessories, screws, and servos before covering. This will help protect it.

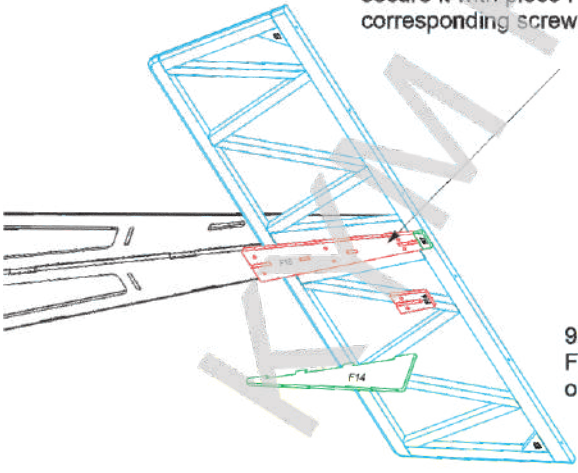
THE FINAL GLUING WILL BE DONE AFTER THE MODEL IS COVERED.

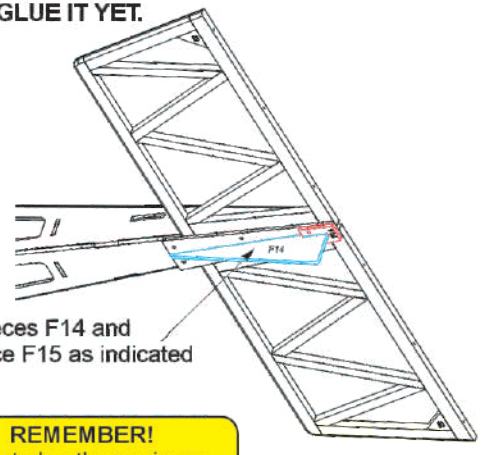


87. Mount the wings onto the fuselage and align them by measuring from the wingtips to the tail tip and also from the wingtips to the firewall. Drill the holes to install the wing attachment screws and install the blint nuts as shown in the plan.

88. Drill holes to install the engine mount mounting bolts.

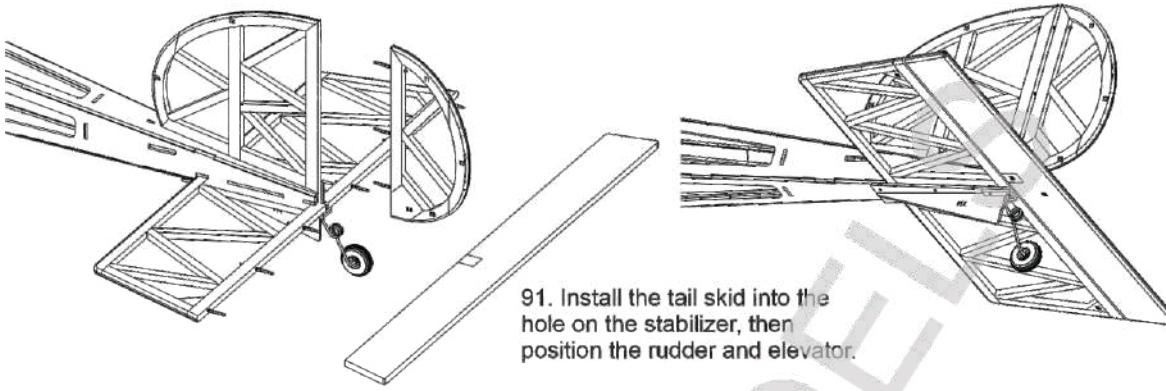
89. Pre-install the stabilizer as indicated on the plan, secure it with piece F15, and place the corresponding screws. **DO NOT GLUE IT YET.**



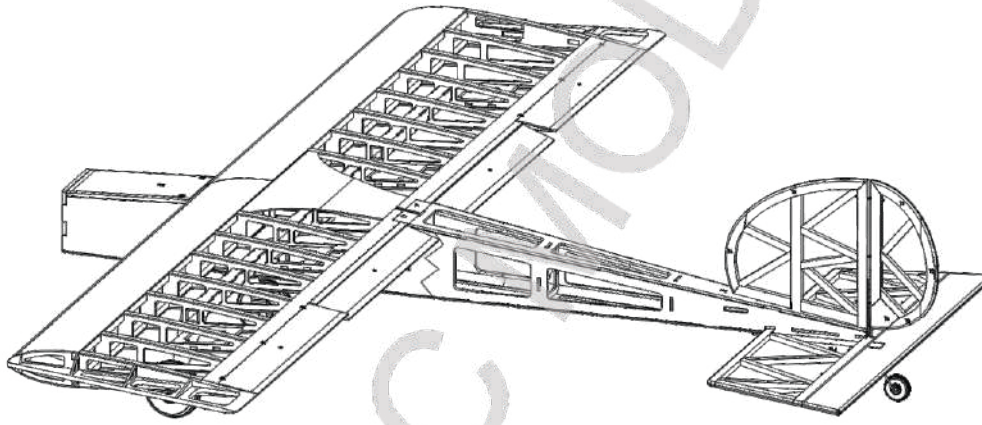


90. Mount pieces F14 and F16 onto piece F15 as indicated on the plan.

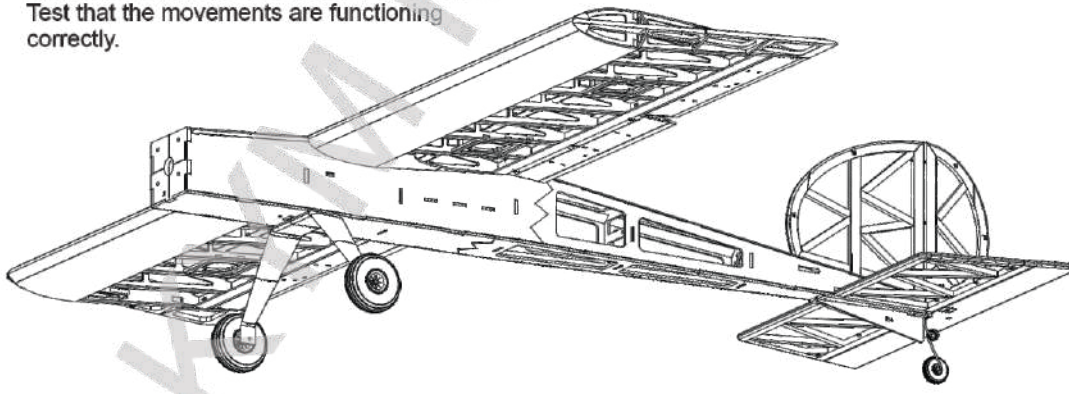
REMEMBER!
Do not glue these pieces. The final assembly will be done after covering.



91. Install the tail skid into the hole on the stabilizer, then position the rudder and elevator.



92. Once all the parts of the model are ready and assembled, you can proceed with the installation of all accessories and electronics. Test that the movements are functioning correctly.



93. It's time to disassemble the parts and begin the covering process.