

LANIER – Dominator 1500 - INSTRUCTIONS

ADDITIONAL EQUIPMENT NEEDED TO COMPLETE YOUR DOMINATOR 500

General

3.2 to 4.2 Size two stroke R/C engine, muffler, and engine mount

Gas or glow fuel line

Minimum of 4 channel radio set required

(4-5) 70 oz servos for control surfaces

(1) standard servo for the throttle

3 Rolls of Top Flight Monokote covering

Sullivan SS-16-24 oz flex tank

30 minute Z-poxy

Thin Zap CA (pink)

Medium Zap CA (green)

Slow Zap CA (yellow)

Zip Kicker

Round Toothpicks

Dubro #144 12" 4-40 control rods (4)

Dubro #527 #4 sheet metal screws

Dubro #514 1/2 Foam rubber

Dubro #653 1/4-20 blind nuts (4)

Dubro #366 Large scale control horns (4)

(6) if you build the standard tail

Robart #308 small hinge points (20)

Tru Turn 4" racing wheels

Tru Turn 1-1/2" racing tail wheel

Tru Turn Spinner nut

Sullivan cable #505

Sullivan 4-40 clevis #526 (8)

Sullivan pull pull cable kit #520 *if you are building the standard tail.*

(2) yards (6-8 sqr feet) of 2oz fiberglass cloth

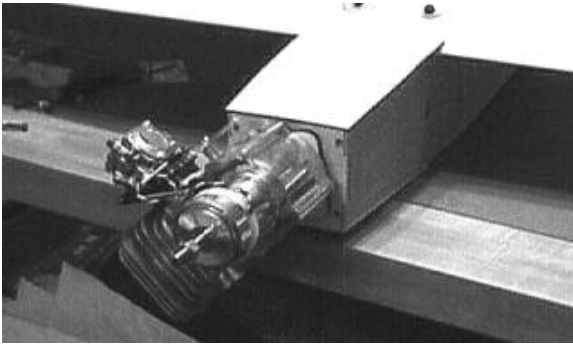
(2) 1/4-20 x 2-1/2" Flat head bolts

(2) 1/4-20 x 1-1/2" Flat head bolts

(2) 1/4-20 x 1" Flat head bolts

(6) 1/4 Fender washers

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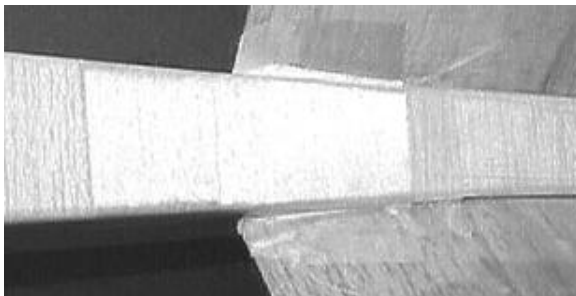


96. Now test fit the plate (B2) in place.
97. Sand the fuse sides square with each other, being careful not to sand through the fiberglass on the nose
98. Now cover your plane with monokote or similar plastic covering.
99. Install the radio components per the manufacturers recommendations.
100. Connect the ailerons with (2) 4-40 control rods (Dubro #144), z bends at the servo horn, and 4-40 clevis (Sullivan #526) with the connectors included with the torque rods.
101. Connect the elevator servos to the tail with (4) 4-40 Sullivan clevis (#526), and large scale control horns (Dubro #366).
102. Reinforce the aileron and elevator control rods by cutting a 3/32" groove in a piece of hardwood dowel 2" shorter than each control rod, then glue on the control rods with z-poxy and micro balloons.
103. Set the control throws initially to +/- 3/8" for all surfaces. After flight testing, adjust as needed.
104. Install the landing gear on the bottom of the fuse with (2) 1" x 1/4-20 flat head bolts, (2) 1/4" hole fender washers, and (2) 1/4-20 lock nuts (Dubro #652). Install the tru-turn 4" racing wheels on the 3/16 axles (Dubro #249) then secure with 3/16 collars (Dubro #141). Cut the axles to length with a cut off wheel and dremmel tool.
105. Set the cg to 4-1/4" to 5" from the leading edge. Keep the cg to the front for the initial flights, then adjust as needed.
106. Double check that all bolts are tight and use locktite where needed, and double check the cg, then charge your planes batteries.
107. Enjoy the plane and win some races.

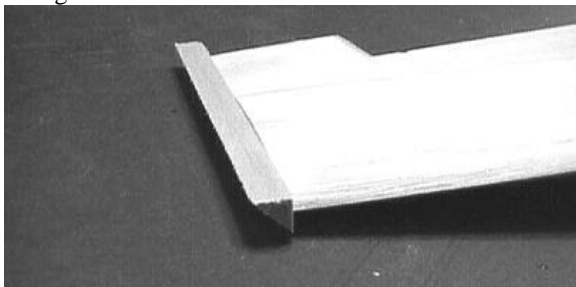
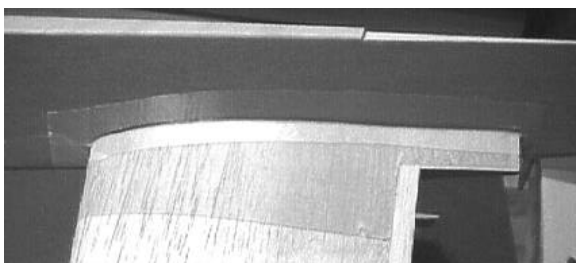
INCLUDED MATERIALS

6	3/8 triangle x 36
2	1/2 triangle x 36
1	24 x 18 ply luan or air ply (laser)
1	24 x 6 air ply (laser)
26	3/32 x 3 x 42 balsa sheet
3	3/32 x 3 x 24 balsa ribs
13	3/32 x 3 x 36 balsa sheet
3	1/8 x 1/4 x 36 hardwood
2	1/4 x 36 square balsa
1	1/4 x 36 sqr hardwood
2	3/8 x 5/8 x 42 balsa
2	3/8 x 5/8 x 36 balsa
3	3/8 x 1/2 x 36 balsa
1	1/2 x 12" square balsa
1	1/4 x 2 x 24 air ply dihedral brace
1	6" x 1" diameter hardwood dowel
1	12" x 1/4" diameter hardwood dowel
4	3/8 x 5/8 x 3/4 hardwood servo blocks (or one piece of 3/8 x 5/8 x 3" long)
1	3/8" square x 18" plywood servo rail
2	1/32" ply x 1" x 42" strip
2	router cut fuse sides front
2	router cut fuse sides rear
1	aluminum landing gear
1	3/8 router cut firewall

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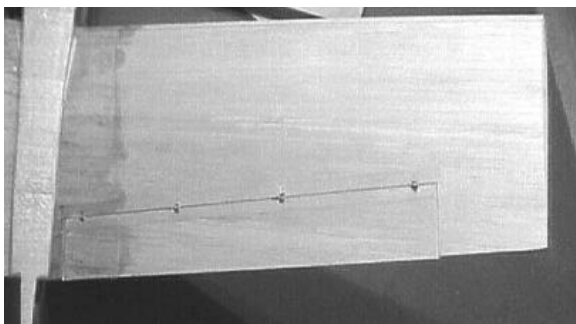


86. Reinforce the tail joint on top and bottom with fiberglass and ca.



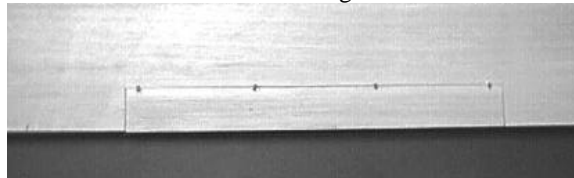
87. Cut a piece of 1/2" triangle stock to the length of all the tail surface tips. On the "v" tail and standard tail horizontal stab, install the balsa with the angle facing down. On the vertical stab, install the triangle facing up. Sand the edges flush with the airfoil of the surface.

FINAL ASSEMBLY

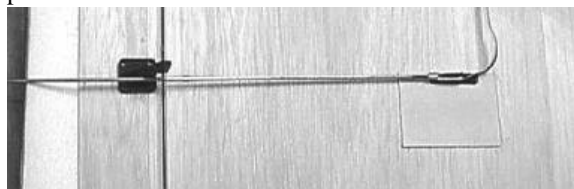


88. Hinge the tail surfaces with (4) robart hinges (#308) on each surface. You may need to trim

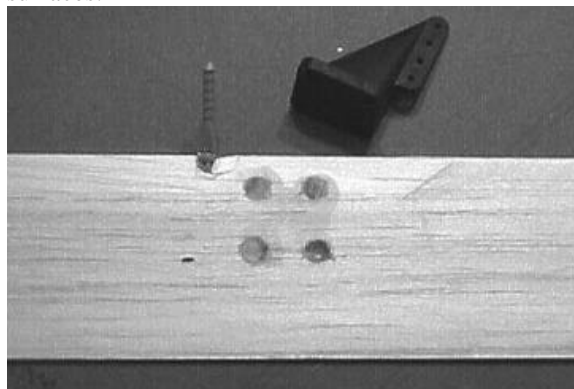
1/4" from the TE side of each hinge.



89. Hinge the ailerons in the same manner, with (4) robart hinges in the locations illustrated on the plans.



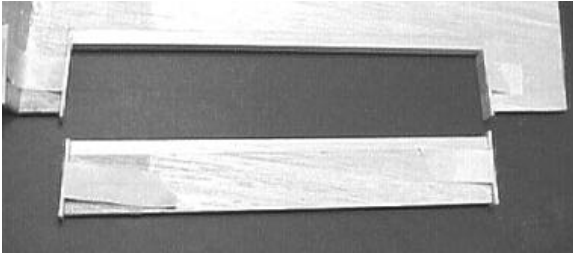
90. Use the plans as a guide to help you locate the control horns (Dubro #366) on the control surfaces.



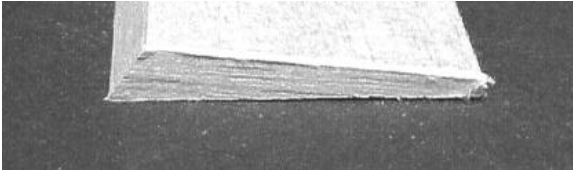
91. Mark the location for the holes with a pencil, then drill them through with a 1/4" drill bit.
92. Fill the holes with small pieces of 1/4" hardwood dowel and epoxy. When cured, redrill the holes for 4-40 bolts.
93. Test fit the fuse front block (B2) over the tank area of the fuse. Taper the rear edge so that it fits flush against the le of the wing. Trim the front edge even with the firewall.
94. Install your engine control rod (Sullivan #505) in the fuse. It's very important that you install the control rod housing now, as you might not be able to install it after you install the tank.
95. Assemble the Sullivan 16-24 oz tank per the manufacturers instructions. Be careful not to crimp the fuel lines.

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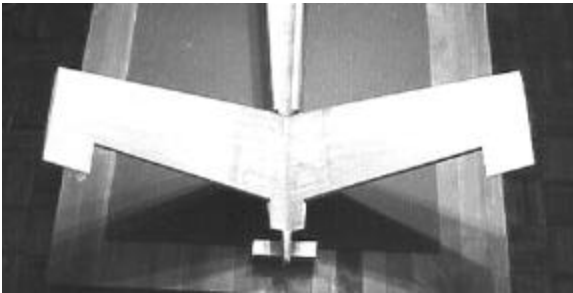
76. Cut (4) 3/8" x 1/2" balsa to size to fit on the rear of the tail, and the front of the control surfaces.



77. Glue some scrap 3/32" rib balsa on each end of the control surfaces.

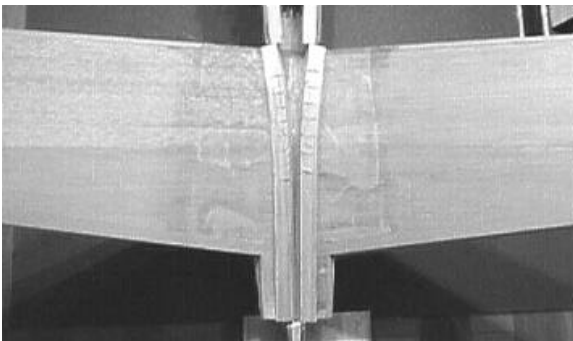


78. Sand the le of the control surface to the shape illustrated.



79. With the wing mounted on the fuse and squared to your work surface, align the tail to the work surface and wing. ****MAKE SURE FOR THE STANDARD TAIL, THAT YOU MODIFY THE TAIL SADDLE AREA TO THE SHAPE ILLUSTRATED ON THE PLANS TO CORRECT THE INCIDENCE****

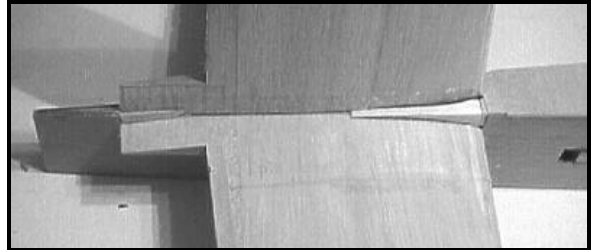
80. Glue the tail to the fuse with 30 minute z-poxy and let set until cured.



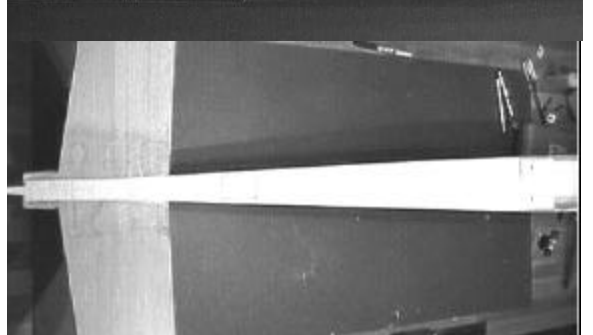
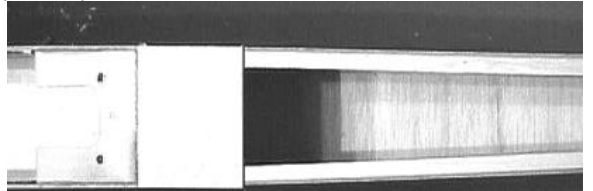
81. Use 3/8" triangle balsa to fill in along the top of the tail, then sand it flush to the top of the fuse.



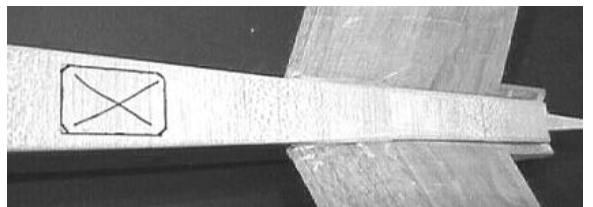
82. *For the standard tail, reinforce the top and bottom with fiberglass and ca.*



83. Use the 1/2" square balsa to carve filler blocks for the joint.

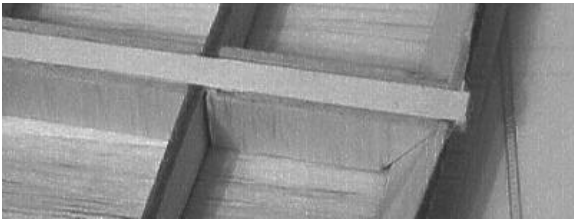


84. Sheet the top of the fuse with 3/32" balsa, from f3 to the rear of the fuse.



85. Mark the area shown on the top of the fuse and cut the opening for the servo hatch.

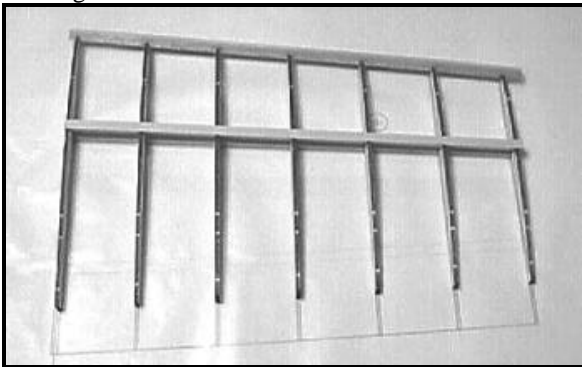
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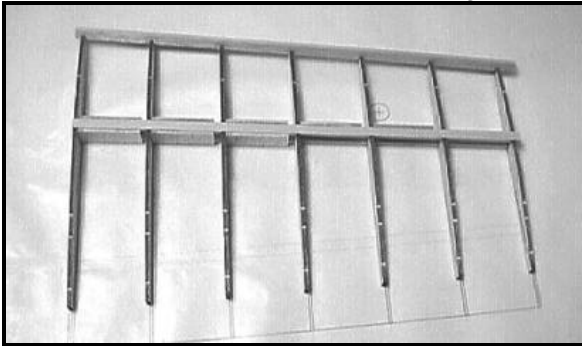
66. Make sure the shear webs at the center section are flush to the center rib.
67. Glue another 3/32" sheet to the bottom side of the tail surfaces.



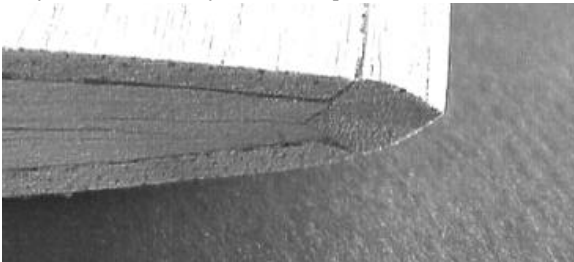
68. Sand the ends of the tail surfaces flush with a sanding "t".



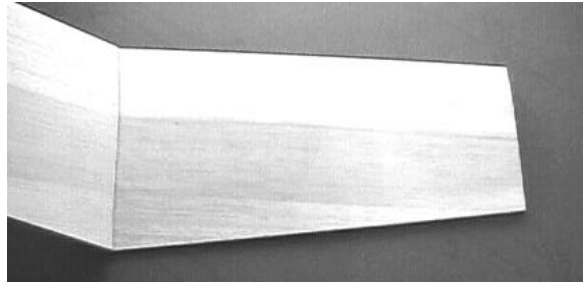
69. For the vertical stabilizer use ribs 1r through 7r.



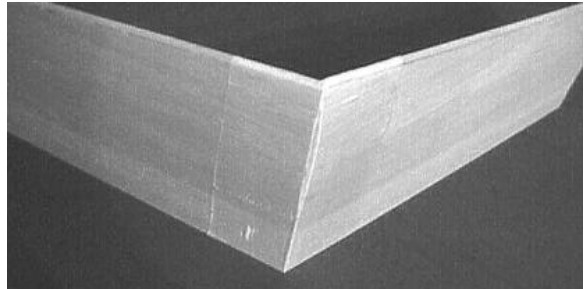
70. For the vertical stabilizer, install shear webs on the front and rear of the main spars.



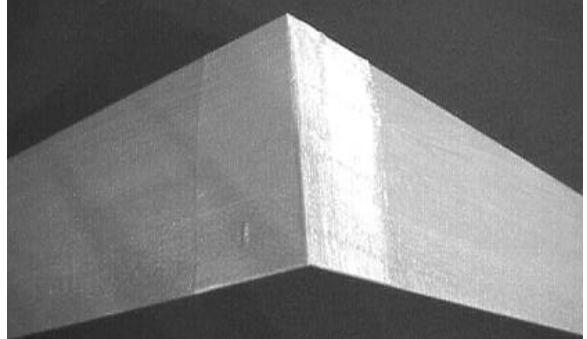
71. Sand the le of the tail to a point. The airfoil is illustrated on the plans.



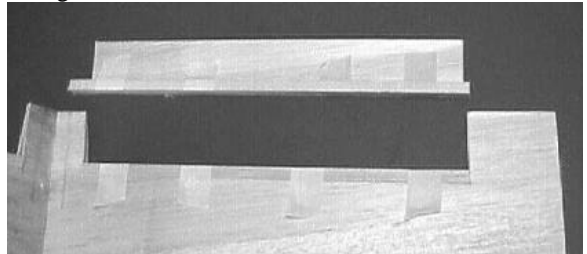
72. Test the fit of the tail sections, then glue with 30 minute z-poxy.



73. Using a 6" x 13" piece of 2oz fiberglass, reinforce the center section of the tail using the same method you used to reinforce the wing.



74. Make sure you cover the top and bottom with fiberglass.



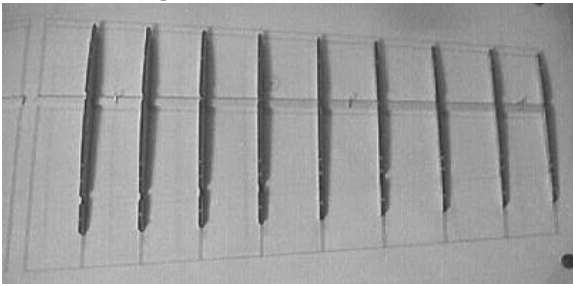
75. Cut the tail surfaces from the tail using a razor saw to the dimensions shown on the plans. Sand the ends so you have 1/4" clearance on each side.

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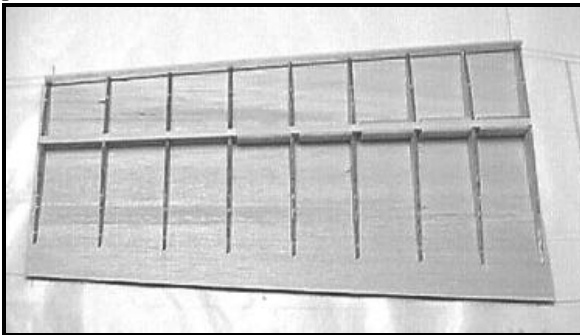
53. Drill (4) 1/4" holes through the wing into the ply wing blocks. As you drill a hole, insert a 1/4" bolt into the hole to keep the wing aligned during drilling.
54. One at a time, insert the 1/4-20 blind nuts (Dubro #653) in the wing blocks, then pull into place with the wing bolts and fender washers. Secure in place with some 30 minute z-poxy.

BUILDING THE TAIL

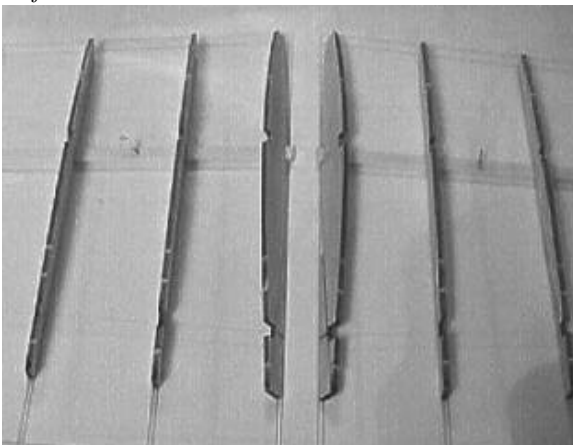
55. **READ THE NEXT STEPS CAREFULLY TO MAKE SURE YOU ARE BUILDING THE STANDARD OR "V" TAIL.**
56. The instructions are written for building the "v" tail, with the changes for the standard tail in *italics and the photos are in boxes.*



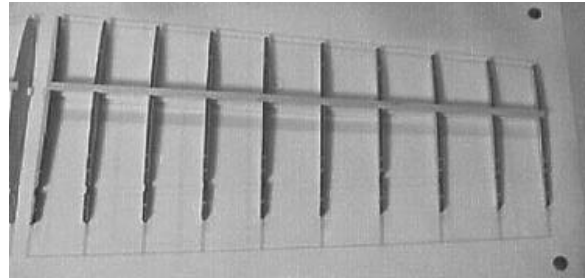
57. Cut (2) 1/4x 1/8 hardwood spars to length on the plans. Install ribs 1a through 10 and glue in place with CA.



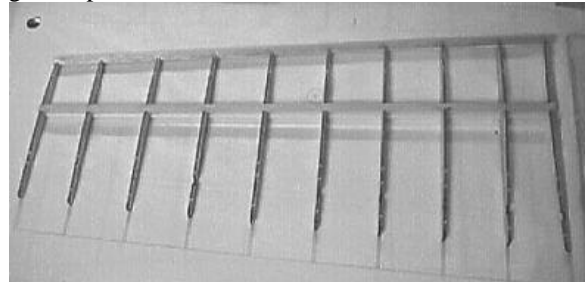
58. *For the standard tail, use ribs 1b through 9, align rib 1b at 90 degrees to the building surface.*



59. Use the laser cut dihedral gauge to set the angle of the center ribs at 55 degrees.



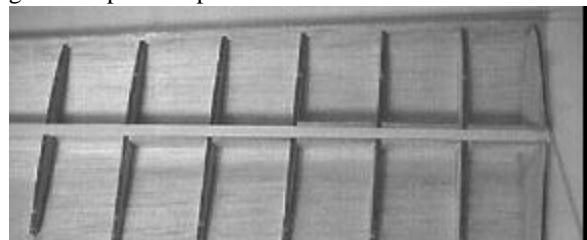
60. Cut the upper 1/4" x 3/8" hardwood spars and glue in place.



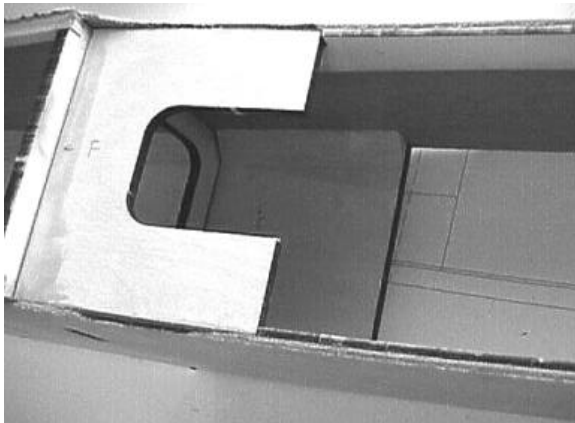
61. Cut the 1/4" square balsa to length, then glue in place in the notches on the front of the ribs.



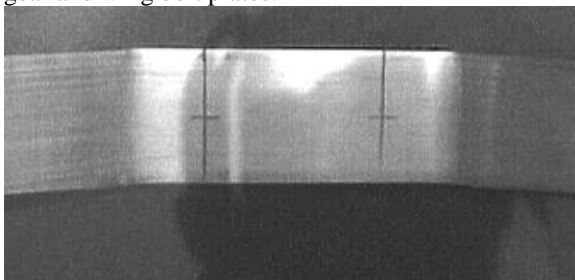
62. Edge glue (2) pairs of 3" x 36" x 3/32" balsa as was done for the wings. Trim to the outline shown on the plans.
63. Glue the sheeting in place with slow ca or white glue and press in place until cured.



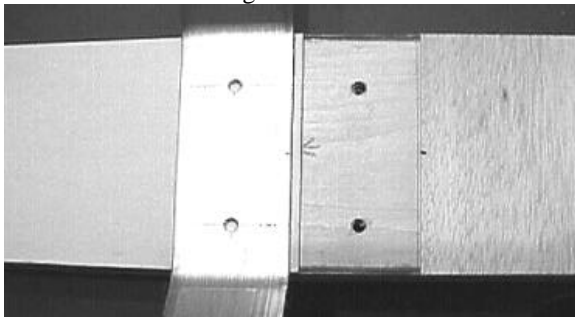
64. Turn the tail surface over
65. Use scrap 3/32" balsa to make shear webs on the tail, as shown on the plans.



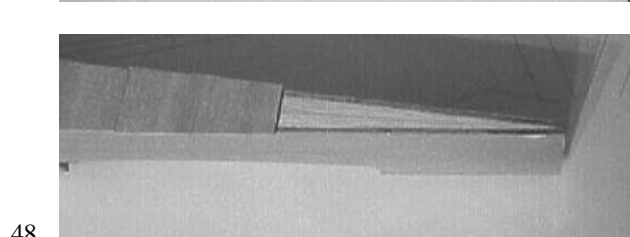
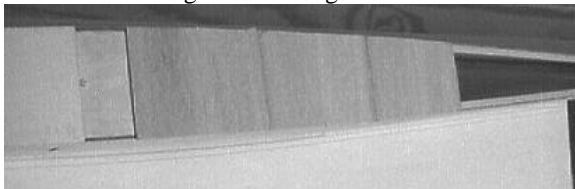
45. Add 1/2" triangle stock to reinforce the landing gear and wing bolt plates.



46. Mark the location of the mounting holes on the gear as shown on the plans, then drill (2) 1/4" holes in the aluminum gear.

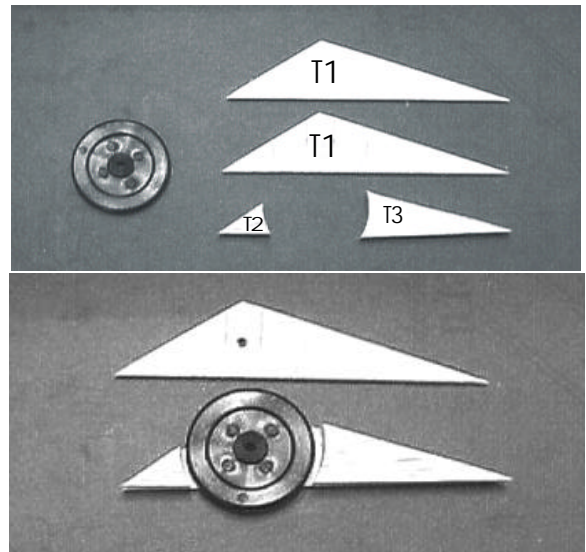


47. Mark the location of the aluminum landing gear on the landing gear block with a pencil, then drill a 1/4" hole for the gear mounting bolts.

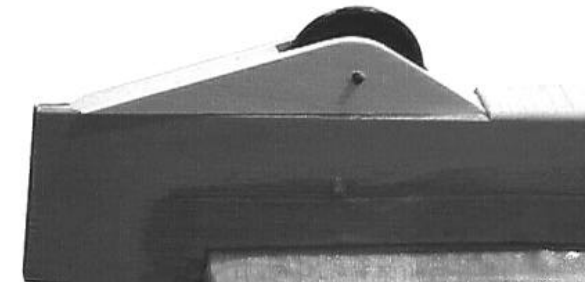


48. Starting at the rear landing gear mark, sheet the

bottom of the fuse with cross grain 3/32" balsa. Do not sheet the last 5" with balsa.



49. Locate the laser cut tail wheel bracket parts t1, t2, t3. Laminate 2 of the t2 and t3 with ca, then laminate the t2 and t3 to one side of a t1, then ca the other t1, aligning the axle holes.



50. Trial fit the bracket to the fuse with the wheel installed. You will have to recess the balsa on the fuse to fit the wheel. Glue the tail wheel bracket to the bottom of the fuse with 30 minute z-poxy. Sand the sides flush when dry.

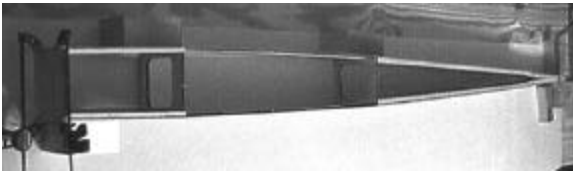


51. With the bottom fully sheeted, install 2 pieces of 3/8" triangle along the wing saddle area of the fuse.

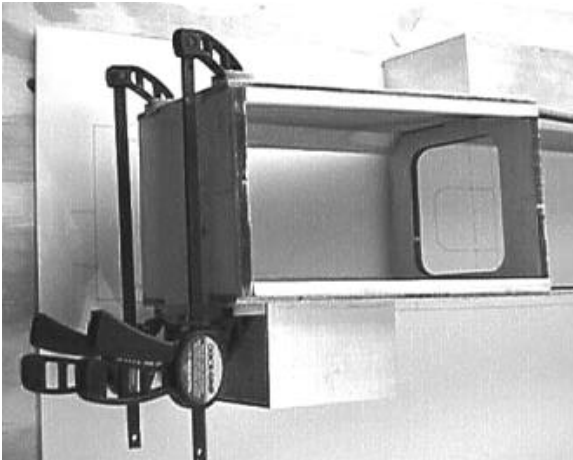
MOUNT THE WING

52. Align the wing on the fuse and measure that it is square. Adjust so that measurements from the wing tips to the point of the tail are equal. When all is aligned, clamp in place.

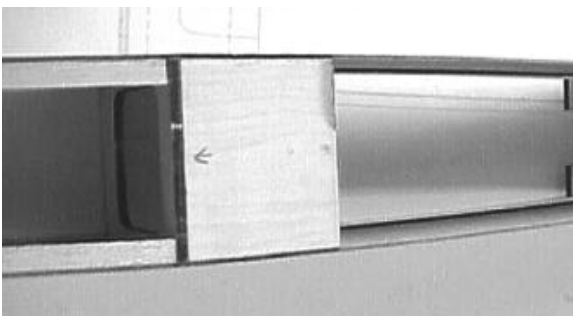
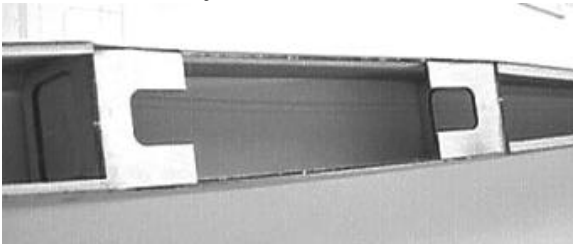
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37. Insert formers F2 and F3 into the slots in the fuse and doublers with the arrows facing the top of the fuse, but **do not glue yet**.

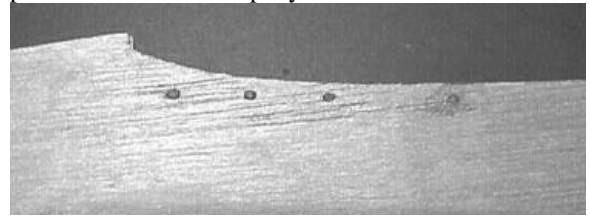


38. Align the fuse over the plans, then glue the firewall in place with 30 minute z-poxy, keeping everything aligned.
39. Now glue the formers in place with CA, and wick some into the joint at the tail.

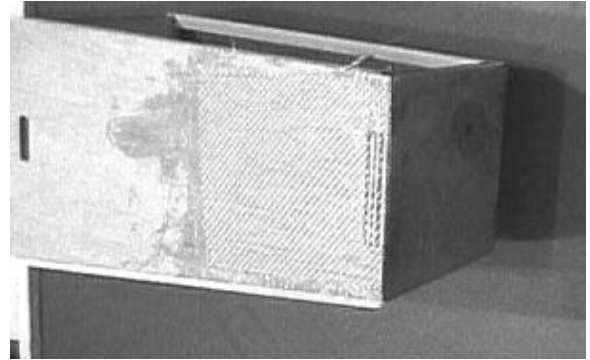


40. Test fit the 2 wing blocks and the landing gear block on the fuse, and sand as needed. Glue in

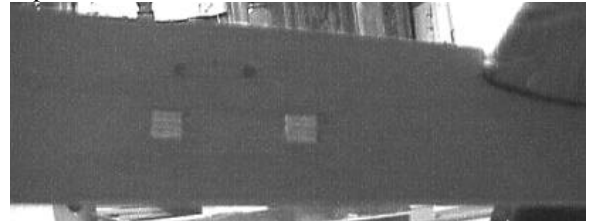
place with 30 minute z-poxy.



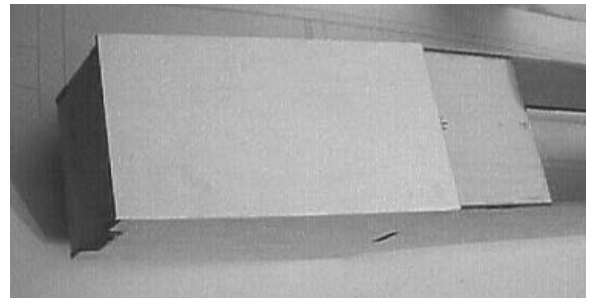
41. When dry, pin in place by drilling, then inserting toothpicks (not included) into the blocks. Wick thin CA into each toothpick to secure, then sand flush with a sanding block.



42. Cut a 3-1/2" x 12" piece of fiberglass, then secure it to the firewall and fuse sides with super77, then CA.



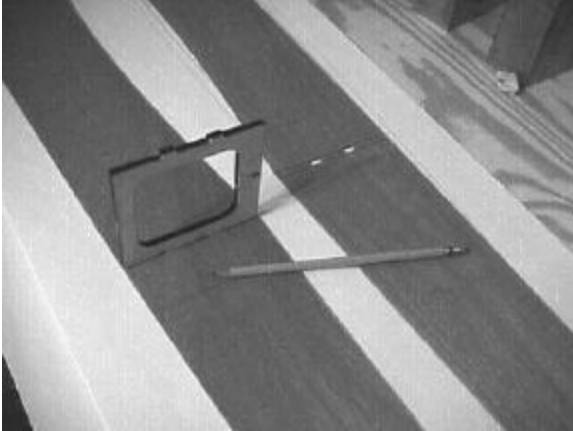
43. Cut then glue (2) 3/8" sq. Hardwood servo rails in the holes provided in the rear of the fuse. Place your servos in the rear of the fuse to make sure you leave enough space. You may need to adjust one of the holes if you use servos other than standard size.



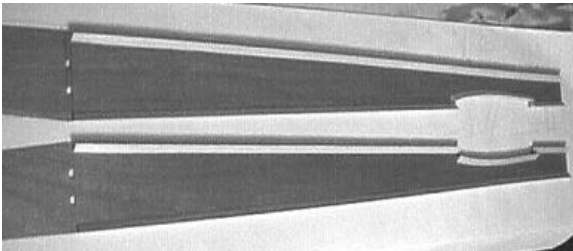
44. Glue the bottom laser cut fuse plate B1 in place. Keep the front and rear edges square with the fuse.

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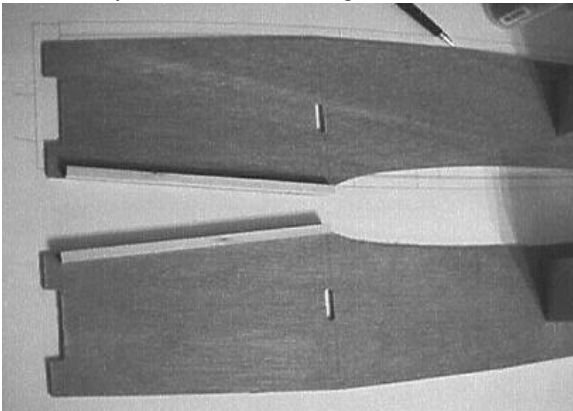
27. Turn one of the fuse sides over to make sure you assemble a left and right fuse side.



28. Mark the locations of the formers F2 & F3 on the fuse sides, using the formers themselves. Trial fit the former in the holes. You may have to sand the corners of the tabs to fit the round holes.
29. **NOW YOU MUST DECIDE IF YOU ARE BUILDING THE STANDARD OR “V” TAIL. IF YOU WANT TO BUILD THE STANDARD TAIL YOU MUST ADJUST THE TAIL SADDLE TO THE ILLUSTRATION ON THE PLANS TO CORRECT THE INCIDENCE.**

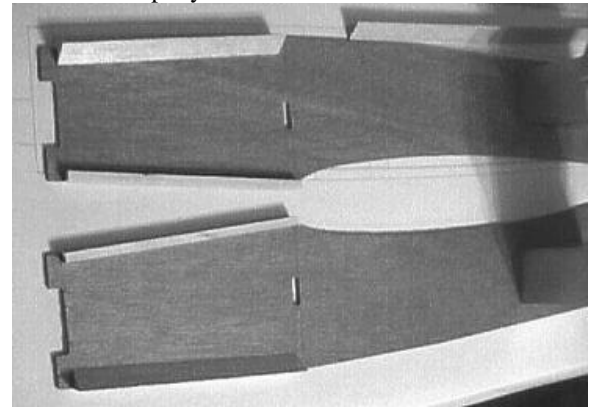


30. Using the plans as a guide, glue the 3/8 triangle stock in the positions shown on the fuse sides, make sure you make a left and right side.

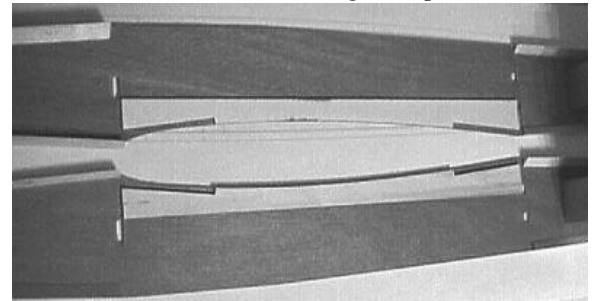


31. Cut (2) pieces of 1/4" square hardwood to the length shown on the plans. Glue in place with

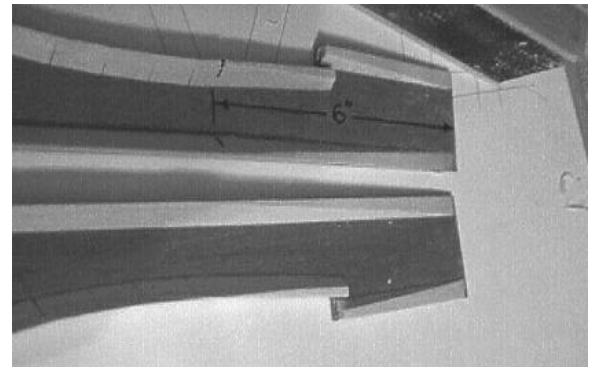
thick CA or epoxy.



32. Cut (2) pieces of 1/2 triangle stock to fit between the firewall and former F2, then glue in place.



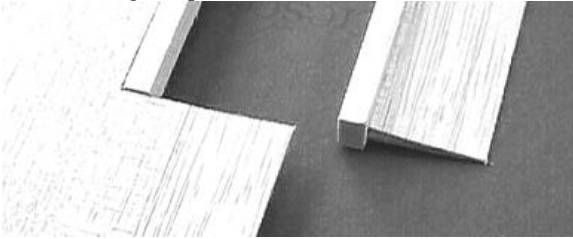
33. Locate the 1/8 ply doublers F4 and check their position over the left and right fuse sides. Spread a thin coat of 30 minute z-poxy on one side of each doubler, then position on the left and right fuse sides, aligning the rear tab opening and the firewall notch. Weight these down on a flat surface until cured.



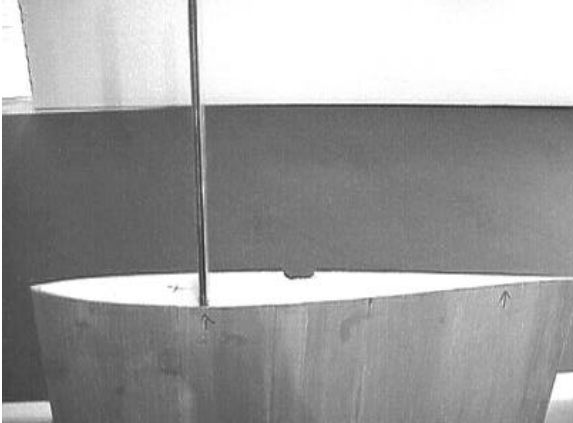
34. Sand a slight taper on the inside edge of the tail portion of the fuse sides.
35. Lay the two fuse sides together and align the tail edges together, then hold together with a piece of masking tape.
36. Drill the firewall to match your chosen engine mount, and also drill holes for your fuel lines.

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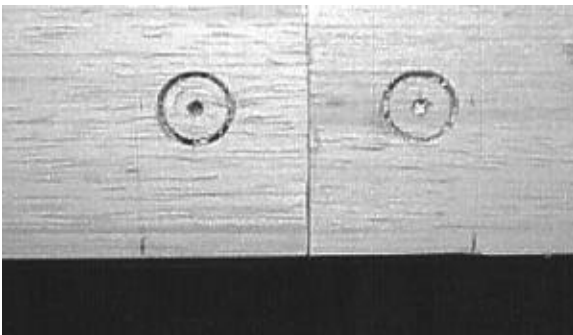
Sand the edges square.



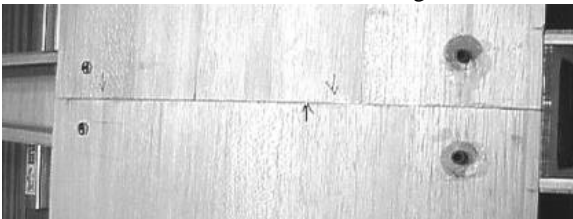
17. Cut the 3/8 x 5/8 to length to fit the top of the wing and the leading edge of the ailerons. Use a razor plane and sanding bar to trim the ailerons to shape.



18. Recheck that the center sections of the wing half are square, then check the fit with the 1/4" ply center brace. Adjust if needed. You can use the bottom shucks to cradle the wing halves. Use 30 minute z-poxy to glue the center brace and the two wing halves together. Hold in place with weights and tape until the z-poxy has fully cured.

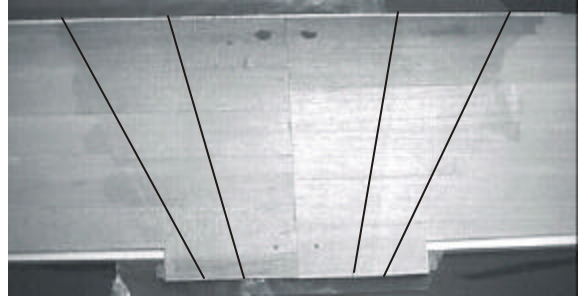


19. At the location indicated on the plans, cut two 1" diameter holes through the top wing sheeting and the foam cores, but not bottom sheeting.

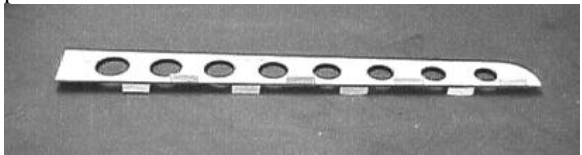


20. Taper one end of the 1" dowels to match the contour of the bottom sheeting. Trial fit the dowels in the holes, and mark the dowels with a

pencil at the top surface of the wing. Trim the dowels at the marks, then glue in place with 30 minute z-poxy.



21. Cut 4 pieces of the 2oz fiberglass to the 2 shapes shown on the plans. Using super77 spray glue, spray a light coat of adhesive to the 4 pieces of cloth. Position the top and bottom large pieces first, then the two smaller ones. Work out any wrinkles or bubbles as you go. Fasten the cloth to the wing using laminating z-poxy. Use just enough z-poxy to get the cloth wet, any more z-poxy just adds weight and does not add any strength.
22. Glue the rear wing ply plate at the location indicated on the plans with 30 minute z-poxy.
23. Cut (16) 1" pieces of 3/8 triangle stock, from fuselage scrap, and glue them to the (2) wing tips, as indicated in the photo.



24. Glue the wing tips in place using a mixture of 30 minute z-poxy and micro balloons. Hold in place with tape until cured, then sand the leading and trailing edges of the tip to match the wing. Slightly round the edges of the wing tip.

FUSELAGE

25. Place wax paper over the fuselage portion of the plans.
26. Locate the (4) pieces of the fuse sides, (2) front and (2) rear. Assemble the pairs at the finger joints, then align them over the plans. Glue with CA. Apply a second coat of CA to fill any gaps between the joints.

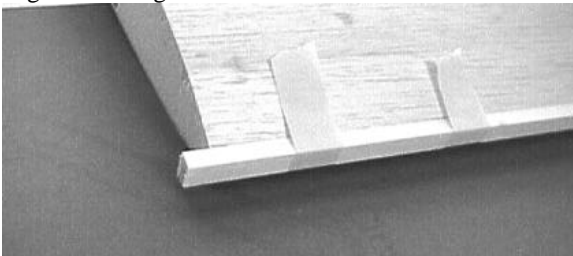
LANIER – Dominator 1500 – INSTRUCTIONS

up. Now align the wing core on the skin, followed by the top skin, then the top shuck. Press the assembly down and align the stack, making sure the balsa skins project around all sides of the core.

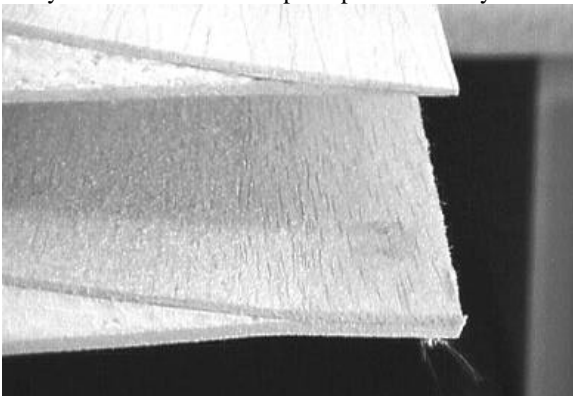
- Place at least 400 pounds evenly across the surface of the assembly. You can use books, magazines, or other weights. Let the assembly set over night before removing the weight.
- Assemble the other wing in the same manner, making sure you make a left and right wing panel.



- When dry, remove the wing from the shucks and sand all the sheeting flush to the wing cores, make sure you keep the center and outboard edges at 90 degrees.

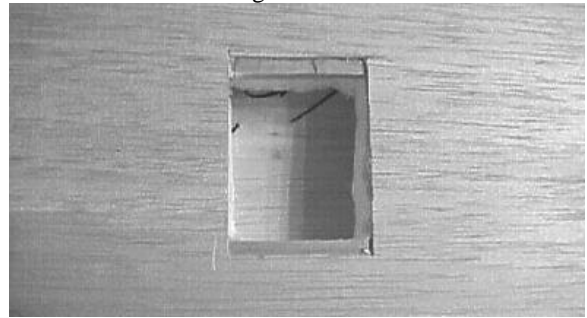


- Glue the 3/8 x 5/8 x 48" leading edge balsa to the le of both wings. Use white glue, spread thinly and hold in place with the masking tape every 2-3 inches. Leave tape in place until dry.

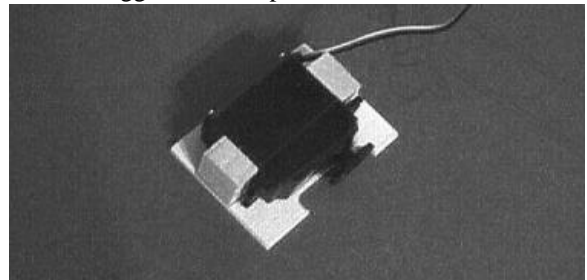


- Examine the airfoil shape illustrated on the plans. Using a razor plane and a sanding bar, shape the le and te to match the diagram. Sand

the te to a feathered edge.



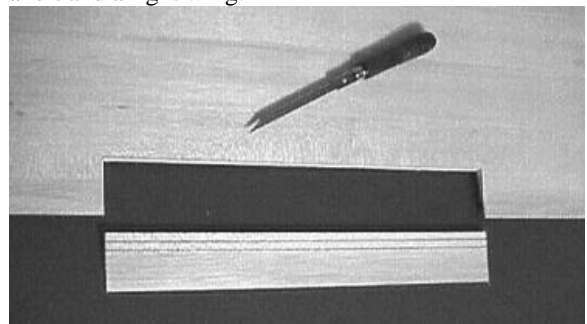
- Measure carefully, and using the laser cut servo plates as a guide, trim the lower sheeting for the servo hole. It's best to start small, then adjust the hole bigger to fit the plate.



- Using your servos as a guide, locate, then epoxy the hardwood servo blocks in place. When dry, drill and mount your servos.



- Use the plans as a guide and mark the wings for the location of the ailerons. Make sure you mark a left and a right wing.



- Use a razor saw to cut out the ailerons. Take your time to make sure you cut them straight.

LANIER – Dominator 1500 – INSTRUCTIONS

BUILDING INSTRUCTIONS

Before starting to build this kit, we urge you to read through these instructions while reviewing the plans. They contain some important building sequences as well as instructions and warnings concerning the assembly and use of the model.

We expect that you have some building experience to take on a built-up model. However, every minute detail is not covered. This is not a basic trainer. The plans and instructions together with the laser cut parts, and the simplicity of this kit will allow you to produce a first class DOMINATOR 1500.

BUILDING SUPPLIES NEEDED

Single edge razor blades
24" Sanding Tee w/ 80 grit paper
12" Sanding Tee w/200 grit paper
X-acto knife w/ #11 blade
Thin Zap CA
Medium Zap CA
Slow - Thick Zap CA
Zip Kicker
30 Minute Z-poxy
Laminating Z-poxy
Tee pins
Wax paper
Wire cutters
Pliers
Drill with bits: 1/16", 1/8", 5/32", 3/16", 1/4"

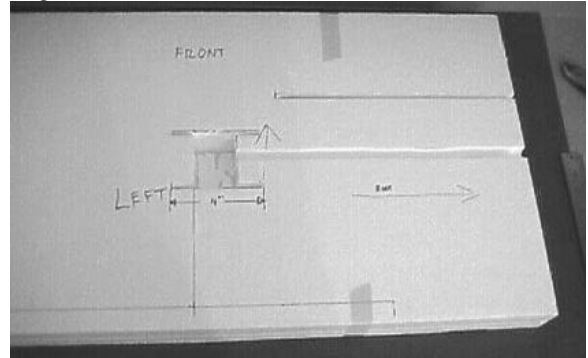
See the list at the end of the instruction book for a list of additional R/C equipment you will need to complete the DOMINATOR 1500.



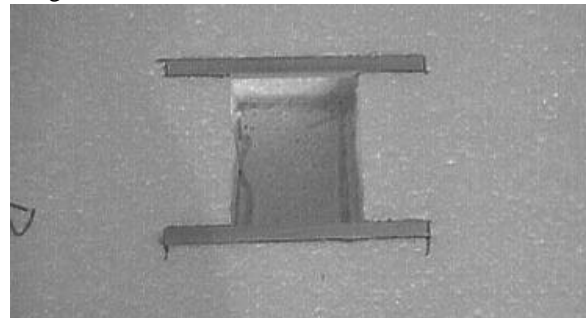
1. Edge glue (4) sets of (6) 3/32 x 42" balsa sheeting using white glue. Split (2) sheets in half, lengthwise and bond those to the other 6 sheets, making 6 and 1/2 sheets. Square the edges if necessary to assure good bonding. Align the sheets without gluing, then use masking tape to hold the sheets together on one side. Bend the

sheeting at the tape and spread a small amount of white glue on the edges. Flatten the sheets back out and wipe off any excess glue. Weight the sheets down on a flat surface until dry. Sand the sheets smooth while on the flat surface.

2. Trim the sheeting to approximate size, 1/4 to 1/2 larger than the foam cores.



3. Mark the wing cores as dimensioned on the plans for the ailerons servos and the center spar slot. You should decide now if you will have inboard or outboard ailerons, and locate the servo hole accordingly. Now is also a good time to cut the channel for the servo wires to run to the center of the wing. Make sure you mark a left and right wing



4. Trim a 1/4" x 4" slot, as dimensioned on the plans for the servo rails, then glue in (4) 4" x 1/4" square hardwood servo rails using 30 minute epoxy.
5. Prepare the cores by lightly sanding them with a 24" sanding bar to remove any fuzzies. Clean both the cores and the skins with a vacuum cleaner equipped with an upholstery brush to remove any dust. Mark a line 1/4" from the tee on the inside of the skins. This will be for aligning the plywood tee reinforcement.
6. Apply a thin even coat of laminating z-poxy to one side of a top and bottom 3/32" wing skin. Use a squeegee or old playing card to spread the z-poxy. Place the 1/32" x 42" plywood tee reinforcement on the lower skin, aligning with the line you marked earlier, and spread more epoxy on the top of the ply.
7. Place the bottom wing shuck on the flat sturdy surface, followed by the bottom skin, glue side

Lanier R/C

Dominator 1500

*Designed and Instructions
by John Helgesen*

**WARNING! THIS IS NOT A TOY!
THIS IS NOT A BEGINNERS AIRPLANE**

This R/C kit and the model you will build from it is not a toy! It is capable of serious bodily harm and property damage. It is your responsibility, and yours alone - to build this kit correctly, properly install all R/C components and flying gear (engine, tank, radio, pushrods, etc. and to test the model and fly it only with experienced, competent help, using commonsense and in accordance with all safety standards as set forth in the Academy of Model Aeronautics Safety Code. It is suggested that you join the AMA and become properly insured before attempting to fly this model. If you are just starting R/C modeling, consul your local hobby dealer or write to the Academy of Model Aeronautics to find an experienced instructor in your area.

Write to: Academy of Model Aeronautics, 5151 Memorial Dr. Muncie, IN 47302

LIMITED WARRANTY

Lanier R/C is proud of the care and attention that goes into the manufacture of parts for its model kits. The company warrants that for a period of 30 days, it will replace, at the buyers request, any part or material shown to the company's satisfaction to have been defective in workmanship or material at the time of purchase.

No other warranty of any kind, expressed or implied, is made with respect to the merchandise sold by the company. The buyer acknowledges and understands that he is purchasing only a component kit from which the buyer will himself construct a finished flying model airplane. The company is neither the manufacturer of such a flying model airplane, nor a seller of it. The buyer hereby assumes the risk and all liability for personal or property damage or injury arising out of the buyers use of the components or the finished flying model airplane, whenever any such damage or injury shall occur.

Any action brought forth against the company, based on the breach of the contract of sale to the buyer, or on any alleged warranty thereunder, must be brought within one year of the date of such sale, or there after be barred. This one-year limitation is imposed by agreement of the parties as permitted by the laws of the state of Georgia.