MoJo 65” Build Instructions

Thank you for buying the Mojo Kit!!

With the thinned wing and lengthened tail, this big, beautiful, beast is more capable and agile than you would think. You won’t feel like you’re flying a kite because of the sharper leading edge and higher wing loading… Still lands like a pussy cat, and there is plenty of control authority to get you out of a jam when you need it! Still plenty stable to torque roll on the deck, up close and personal, and no wing rock in harriers. Snaps are crisp and knife edge is very clean.

This plane is perfect for a YS 110 or Saito 120. I had plenty of power with the YS 110 swinging a 16 x 6 APC prop. If you opt for something else, try to stay under 36 oz for your power plant for CG considerations. You’ll need servo’s that put out at least 120 oz of torque for aggressive 3d. The extra torque will give you the power you’ll need for hard snaps, pinwheels, waterfalls and clean rolling harriers. Wing tube and landing gear are included, so you’ll need to round up your favorite hardware to complete the kit. I used a 16 oz Sullivan tank held on with Velcro straps, 3 ¼” wheels, 4x40 carbon fiber pushrods, DuBro adjustable control horns and ball links on mine.

I welcome your feedback. If you have any questions at all, don’t hesitate to drop me an email at PaulSwany@Swanyshouse.com or post a question on www.theProBros.com and I’ll answer it as fast as I can. Don’t forget to visit me at www.Swanyshouse.com … You never know what I might be cookin’ up!

Thanks again and have fun building and flying your MoJo!!!

MoJo 65” Build Instructions

Prepare the main fuselage tubes

1. ___ Gather the glassform epoxy tubes. You have two pieces of ½” (.505) x 54 ½”, 1 piece of ½” x 12” and 1 piece of 7/16” (.417) x 3”.
2. ___ The main tubes need to be lengthened by 1 ½” to 55 ¾”. Cut the 7/16” tube in half. Wrap the tube first with a piece of masking tape to keep it from fraying and use a hack saw. See fig a and b.
3. ___ Cut 2 pieces 1 ½” long from the ½” x 12” tube. You can make the cut a little long as you can trim it later and you have lots of extra. Use masking tape and a hack saw. See fig b.

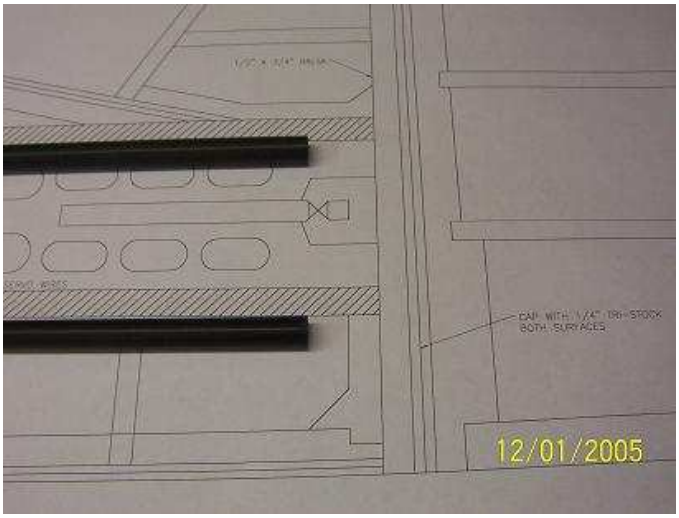

Fig. a

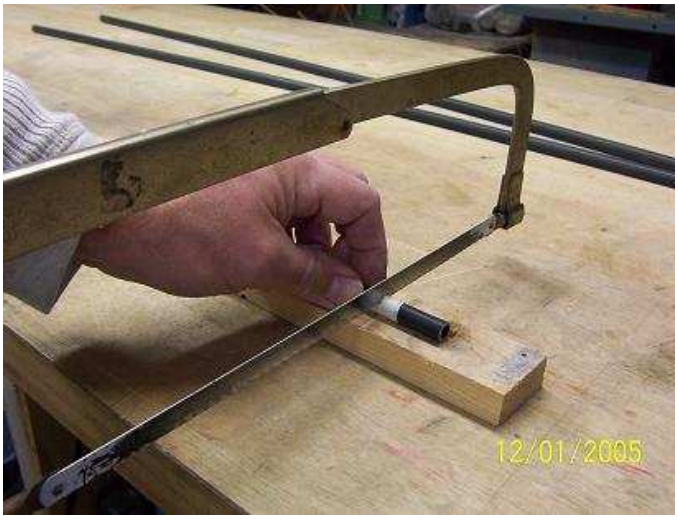

Fig.b

4. ___ Insert the 7/16” x 1/12” tube into the main ½” x 54 ½” tube. Use some epoxy. See fig c
5. ___ Glue the ½” x 1 ½” tube on the end with a little epoxy. Set aside to dry. See fig d
6. ___ When the epoxy is dry, sand the joint a little to bring it flush. You will need to slide the fuse stringers over these tubes, so make sure you don’t have any high spot for the parts to get hung up on.
7. ___ Square the end of the tube with a sanding block.

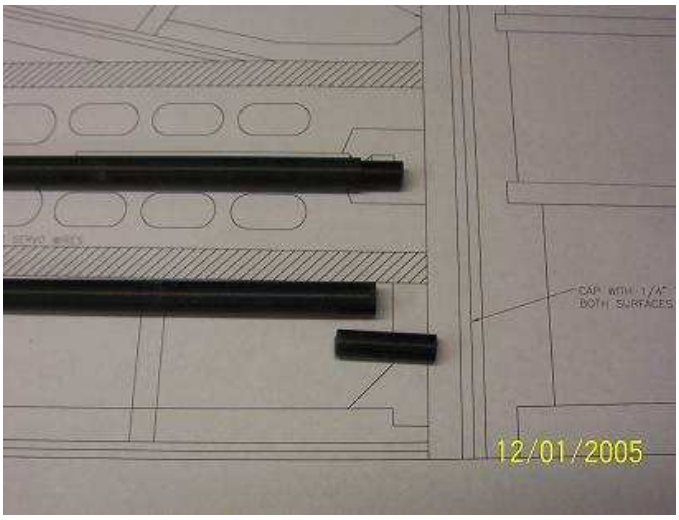

Fig. c

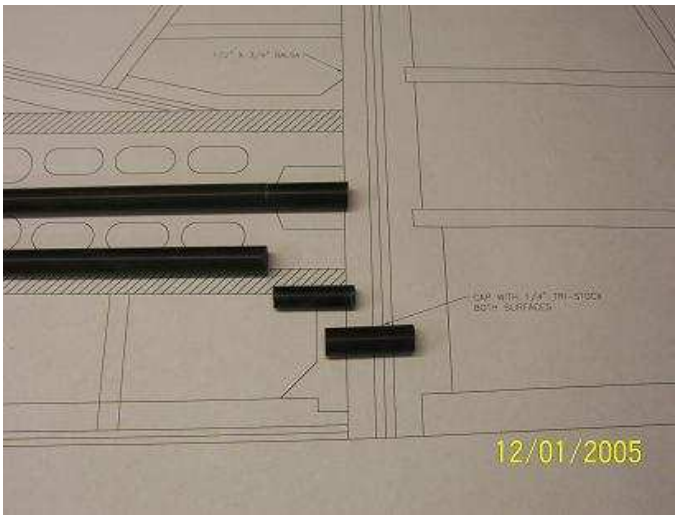

Fig. d

MoJo 65” Build Instructions

Build the Motor mount assembly

8. ___ Gather the parts to build the motor mount core of the fuselage. Retrieve the ½” balsa fuselage center section, two .505 ½” CF tubes and two maple blocks. Notice that the maple blocks have a rounded out section that the tube fits in. See fig 1 and 2.

9. ___ Pin the ½” center section to the plans. Make sure to use some wax paper under the parts. See fig 1.

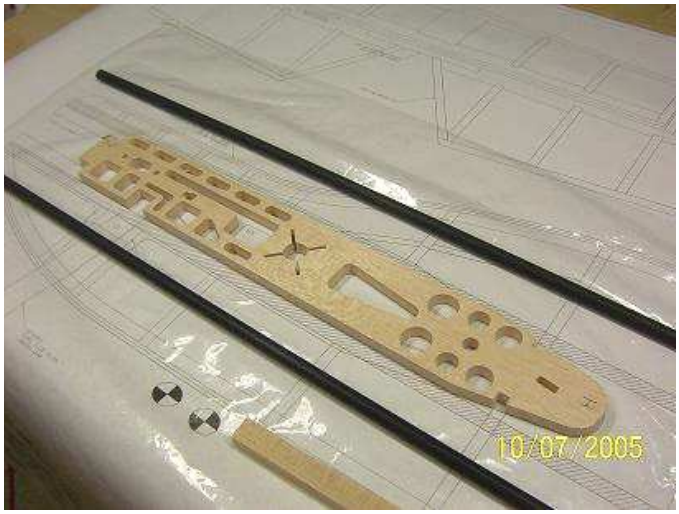

Fig. 1

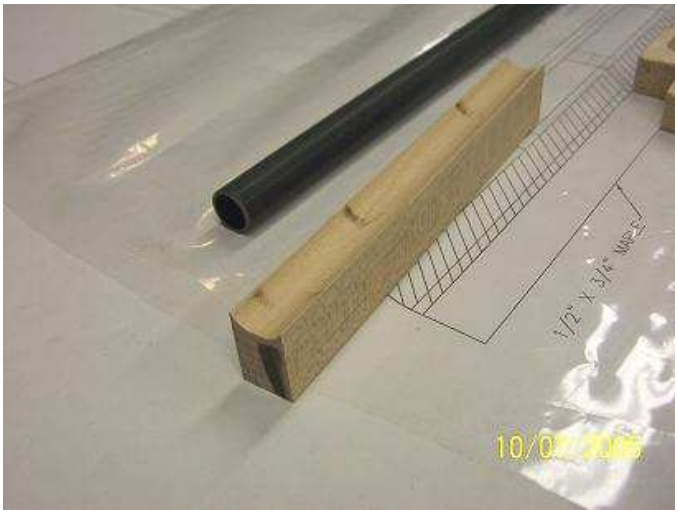

Fig. 2

10. ___ Dry fit the maple blocks to the ½” balsa center section. Dry fit the tubes to the block. Make sure the tubes fit flush in the saddle of the maple block and the ½” balsa center section. See fig 3 and 4.

Fig. 3

Fig. 4

11. ___ Fit the 1” maple block to the center section for the landing gear support. See fig 5.

12. ___ Cut a 3/16” x 1” slot in the lower CF tube for the servo wires to pass thru. Refer to the plans for location.

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13. ___ Once you are happy with the fit, use epoxy or poly glue to join the maple blocks to the center section and the tubes to the center section assembly. Make sure the servo wire slot lines up with the center section. See fig 5 and 6.

14. ___ Apply clamps and pins to keep everything lined up and square. See fig 5 and 6.

Fig. 5

Fig. 6

15. ___ When everything has been allowed to dry, unclamp and unpin the assembly.

16. ___ Dry fit the 1/8” ply doublers. Use the anti rotation hole and wing peg holes to line everything up with.

17. ___ When you are satisfied with the fit, glue the bottom doubler to the fuse with poly glue (much easier to control than epoxy for this)

18. ___ Glue the top 1/8” ply doubler on and weight the assembly down and allow to dry. Make sure your holes are lined up and that nothing shifts when you apply weight. See fig 7 and 8. (disregard the cross piece shown in fig. 7, that will be installed later.)

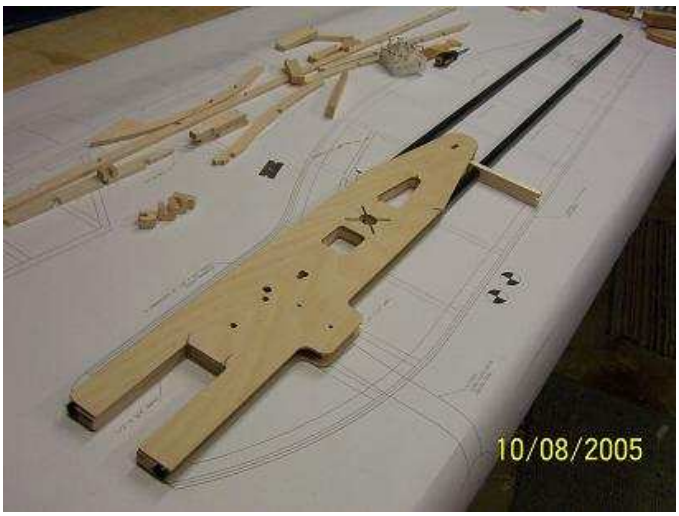

Fig. 7

Fig. 8

MoJo 65” Build Instructions

Build the Fuselage

19. ___ Gather the fuselage cross pieces.

20. ___ Begin sliding the cross pieces onto the tubes. Use the plans for reference. Make sure the cross pieces slide down the tube without too much force. Open the holes some if you need to. Do not glue at this time. See fig 9 and 10.

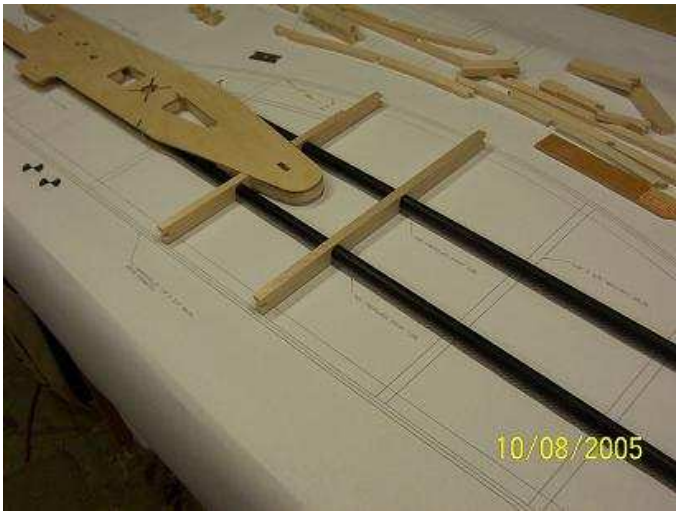

Fig. 9

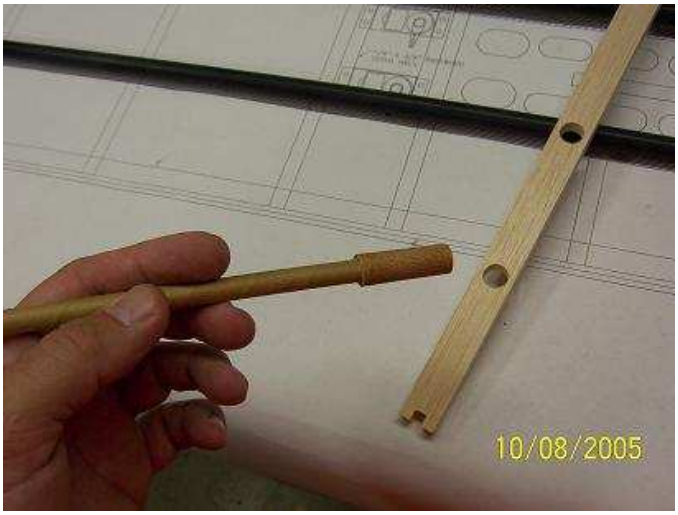

Fig. 10

21. ___ Retrieve the 1/8” ply and 5/16” balsa horizontal stab saddle pieces. Glue together with epoxy or poly glue. See fig 11.

22. ___ Install the remaining fuse cross pieces and horizontal stab saddle. See fig 12

23. ___ When everything lines up per the plans, pin things down and glue in the horizontal stab saddle with epoxy or poly glue. Do not glue the fuse cross pieces at this time. You may need to move them some to align with the fuse spine pieces. See fig 12 and 13.

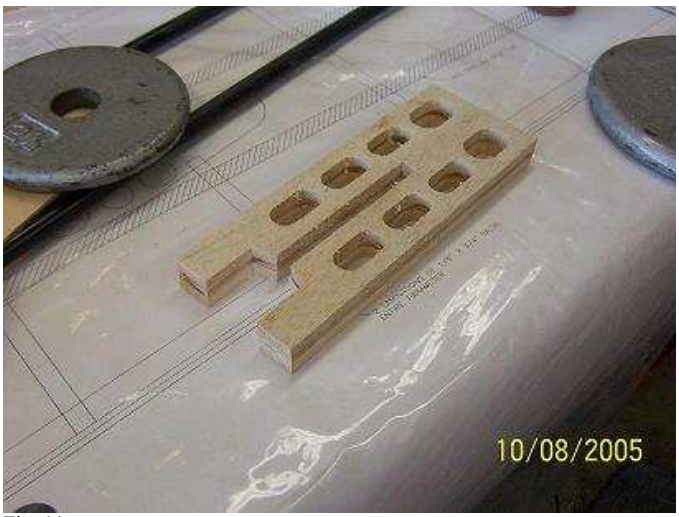

Fig. 11

Fig. 12

MoJo 65” Build Instructions

24. ___ Begin installing the fuse spine pieces. Carefully fit each piece and make sure the spine is fully seated in the fuse cross pieces. See fig 13 - 17.

Fig. 13

Fig. 14

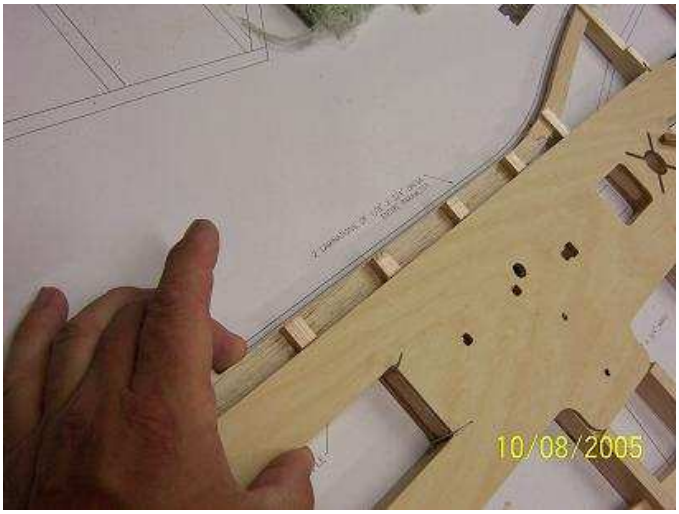

Fig. 15

Fig. 16

25. ___ When installing the bottom fuse spin at the chin area, add some 1/8” x 1/4” balsa on each side. See fig 17.

26. ___ Once you are happy with the fit, glue the spine pieces to the cross pieces with thin CA. Glue the cross pieces to the tubes with thin CA at this time.

27. ___ Slide in the lower landing gear maple block between the fuse cross pieces and glue in place. Add a piece of ¼” x ½” balsa per the plans. See fig 17.

Fig. 17

MoJo 65” Build Instructions

28. ___ Install the fuse handle. Use some 1/8” x 1/4" balsa on the spine at the top of the handle area for the handle sheeting to mount to. See fig 18

29. ___ Install the 1/8” handle sheeting. See fig 19.

Fig. 18

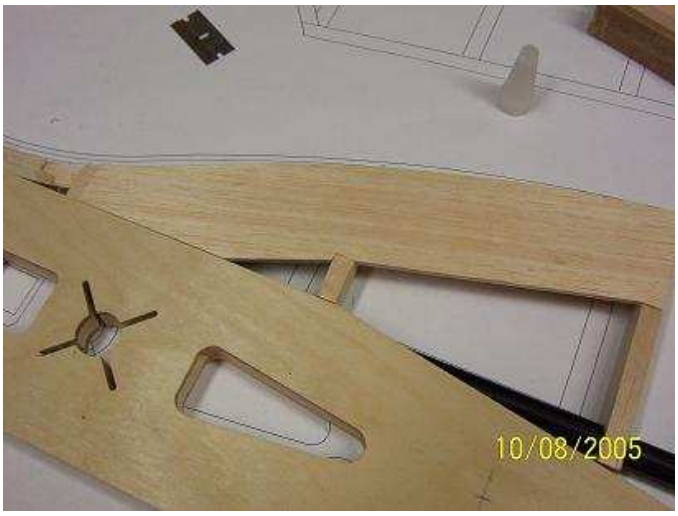

Fig. 19

Fig. 20

Fig. 21

30. ___ Turn the fuse over and install some ¼” x ½” balsa at the bottom edge of the handle per the plans. See fig 20

31. ___ Install the other 1/8” balsa handle sheeting. See fig 21.

32. ___ Sand the ends of the fuse cross pieces flush with the spine. See fig 22.

Fig. 22

MoJo 65” Build Instructions

33. ___ Install the first layer of 1/8” x 3/4” balsa. Start at the nose and work your way back. See fig 23.

34. ___ Install the second layer of 1/8” x 3/4" balsa capping over the first. See fig 23 – 28.

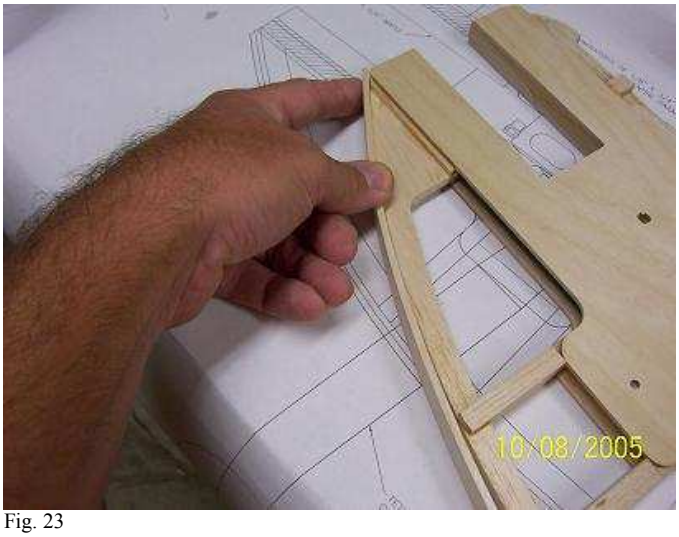

Fig. 23

Fig. 24

Fig. 25

Fig. 26

Fig. 27

Fig. 28

MoJo 65” Build Instructions

35. ___ Install the ½” x ¾” balsa rudder post. See fig 29.

36. ___ Build the vertical stab and rudder per the plans. Cap the rudder leading edge with ¼” tri stock. Do not glue the vertical stab to the rudder post or fuse. See fig 30.

Fig. 29

Fig. 30

37. ___ Mount the vertical stab to the fuse and rudder post, centering it between the ¾” width. See fig 31.

38. ___ Taper the rudder post to blend into the 3/8” rudder at the top. Cap the rudder post with ¼” tri stock. See fig 32.

Fig. 31

Fig. 32

Except for locating the servo rails, The fuselage is finished at this point!

MoJo 65” Build Instructions

Build the horizontal stab and elevator

1. ___ Locate the CNC machined parts for the stab. The leading edge brace, center support, stationary trailing edge, elevator leading edges are all cnc machined.
2. ___ Cut a piece of 3/8” sq basswood for the elevator joiner per plans. See fig 33 and 34.

Fig. 33

Fig. 34

3. ___ Use epoxy to glue the joiner to the elevator leading edge parts.
4. ___ Pin elevator leading edge assembly to plans.
5. ___ Pin remaining CNC cut parts to plans. See fig 33 and 34.
6. ___ Stick build the rest of the stab with 3/8” sq balsa per plans. Use thin CA to wick into the joints once your happy with the fit. See fig 33 and 34.
7. ___ Sheet the stationary portion of the horizontal stab with 1/16” balsa. See fig 35.
8. ___ Cap the trailing edge of the stab and leading edge of the elevator with ¼” tri stock. Make sure your hinge line is tight and gap free. Sand to true the fit if necessary.

Fig. 35

MoJo 65” Build Instructions

Build the wing panels

1. ___Check the fit of the spars in the ribs. Make sure the spar fits flush with the rib outline. Sand to fit if necessary. See fig 36
2. ___ Glue the ply doubler to the anti rotation pin hole on the root rib. See fig 37

Fig. 36

Fig. 37

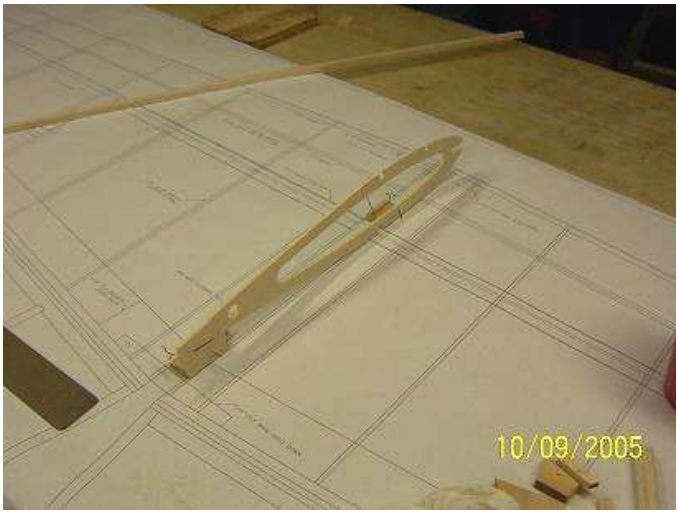

Fig. 38

Fig. 39

3. ___ Lay the plans on your building board and cover with wax paper or parchment. Now pin some scrap balsa blocks to the plans on the inside line of each rib. This will help when pinning the rib tabs to the plans.
4. ___ Pin the root rib to the plans. See fig 38
5. ___ Continue laying out the ribs being carefull to align each one to the plans. See fig 39.
6. ___ As you work your way down the wing, keep the main spar and sub spar fully seated in the bottom notch of each rib. See fig 39

MoJo 65” Build Instructions

7. ___ When you get to the half rib that holds the aileron servo, install the 1/8” ply servo. The wing is built right side up and the servo will face down. See fig 40
8. ___ Glue two pieces of 1/8” x 3/8” x 7/8” basswood on the back side of the servo mount where the servo mount screws will go in.

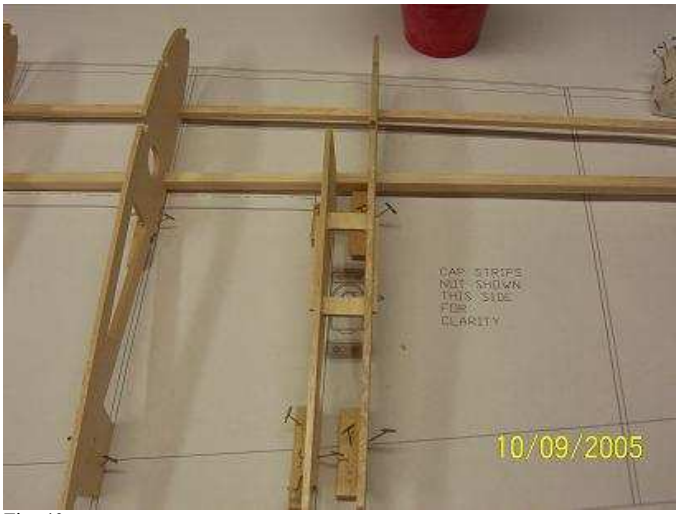

Fig. 40

Fig. 41

9. ___ Continue with the remaining ribs. See fig 41.
10. ___ Repeat for the other wing panel. Use the anti rotation pin to keep the two wing panels aligned. Lay in the top spar and glue to the ribs with thin CA. See fig 42.

Fig. 42

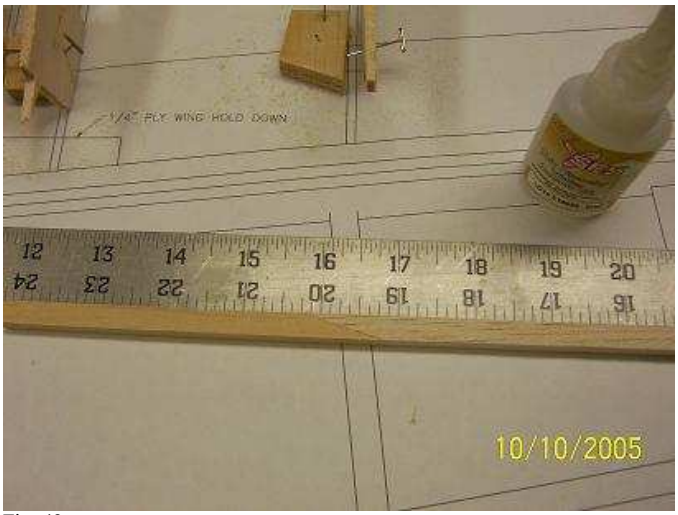

Fig. 43

11. ___ The leading edge of the right wing panel will have a cap screw going thru it for the wing hold down peg. You’ll need to use some hardwood in this area for strenth. We’re going to make a scarf joint with a piece of 5/16” basswood. Take your 5/16” sq balsa leading edge and cut off one end at an angle for more gluing surface area. Grab a piece of 5/16” sq basswood and cut per the plans approx. 4” long. Cut it at an angle that matches the one you cut in the 5/16” sq. balsa leading edge. Dry fit and verify that the joint will be true. When your happy with the fit, use some medium CA to glue the joint. See fig 43.

MoJo 65” Build Instructions

12. ___ Mount the scarfed leading edge to the right wing and glue in with then CA. Glue in a 5/16” sq balsa leading edge on the left wing panel.
13. ___ Glue in the leading edge sub spars. Top and bottom. See fig 44 and 45.
14. ___ Verify that the trailing edge of all the ribs line up. Sand to true if neccessary. See fig 44.

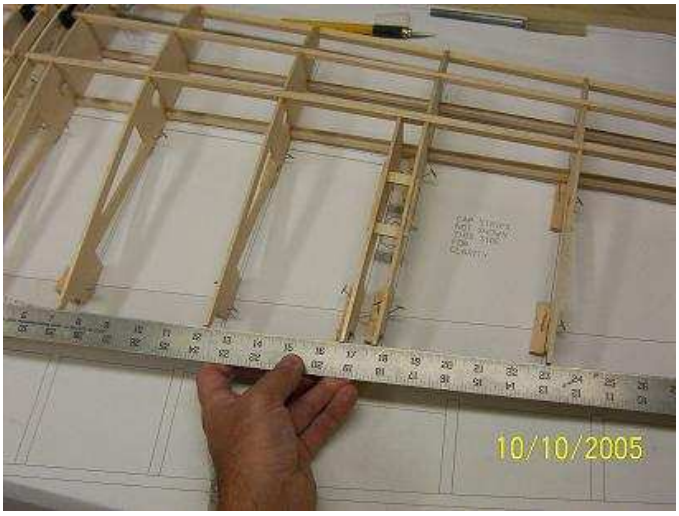

Fig. 44

Fig. 45

15. ___ Glue on the trailing edge. See fig 45
16. ___ Glue on the trailing edge for the other wing and verify that the root rib is kept true by using a 1” spacer between the root ribs. See fig 46.
17. ___ Install an antena tube in the right wing panel. You’ll thank me later.
18. ___ Dry fit the trailing edge wing attachment peg. Make sure it fits flush with the trailing edge. When you’re happy with the fit, glue it on to the left wing panel with epoxy.

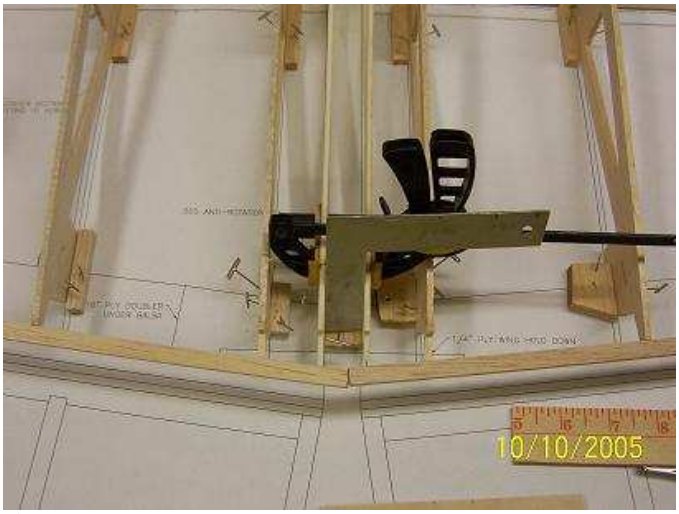

Fig. 46

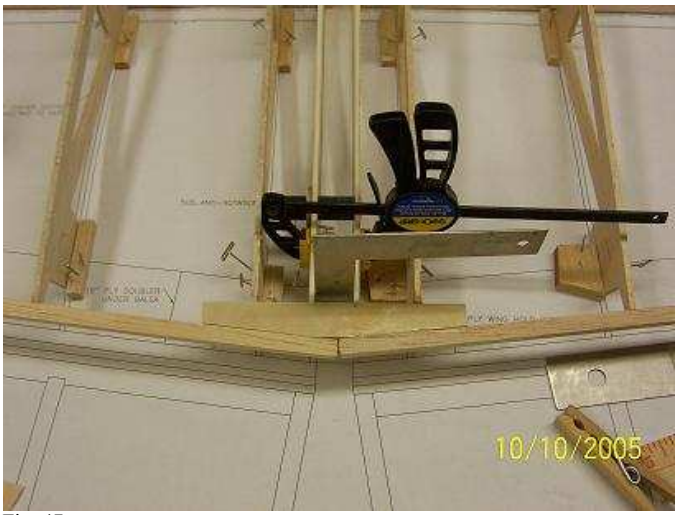

Fig. 47

MoJo 65” Build Instructions

19. ___ Glue some ¼” hardwood supports around the movable end of the wing peg. See fig 48

20. ___ Glue a piece of 1/16” ply over the peg. Make sure to not get any glue on the movable part of the peg. Again, make sure the peg is fastened to the left wing panel. See fig 49

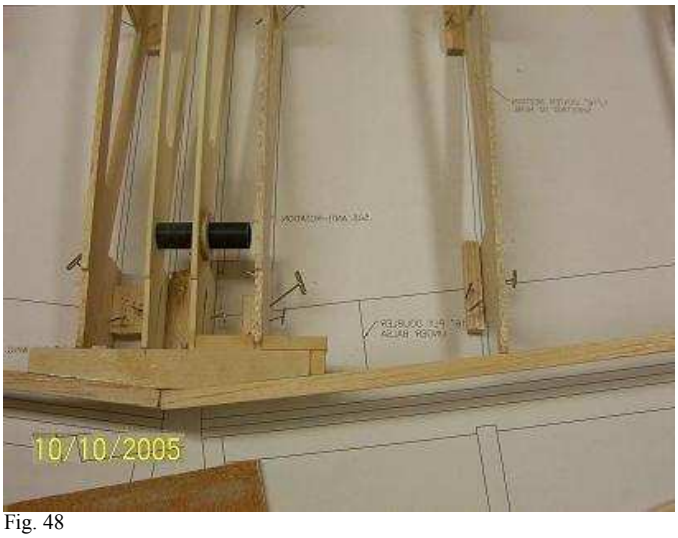

Fig. 48

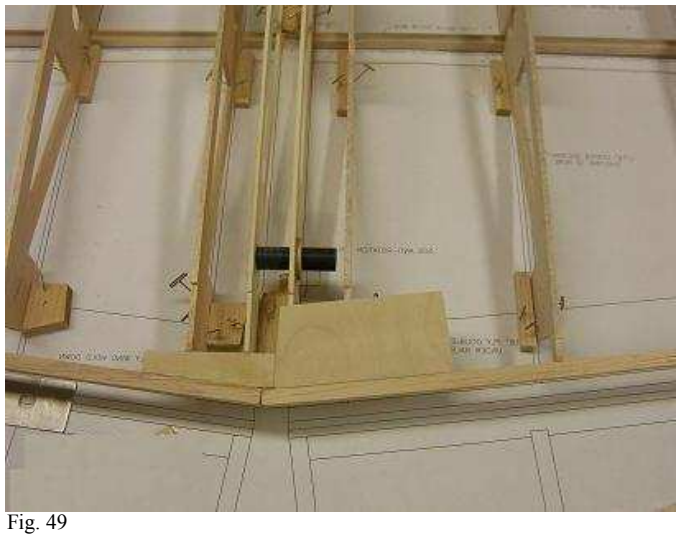
Fig. 49

Fig. 50

Fig. 51

21. ___ Grab a piece of the supplied 1/16” x 4” balsa sheet and cut it in half length wise. Use this to sheet the trailing edge. I scarfed in a piece of 1/16” ply on the trailing edge sheeting over the peg slot on the right wing panel. This will be the location for the 10x32 nylon attachment bolt. See fig 50 - 51.

22. ___ Dry fit the leading edge wing peg. Make sure the cut out on the wing peg is on the right wing panel. See fig 52

23. ___ When you’re happy with the fit, glue the peg into the left wing panel. See fig 52.

24. ___ Add a piece of ¼” sq. hardwood on the right wing panel to strenthen the peg slot. See fig 52. Note: the small piece of ¼” x 3/8” basswood that holds the blind nut will be installed at final assembly.

MoJo 65” Build Instructions

25. ___ Install the sheer webs cut from 1/16” x 4 balsa. I used poly glue and pins to get a really strong bond. See fig 53.

Fig. 52

Fig. 53

26. ___ Time to install the leading edge sheeting. I used one piece of 1/16” balsa sheeting and wraped mine. However you may opt to use two pieces that to to the 5/15” sq balsa leading edge and then cap it with a piece of 1/8” x 3/8”. I like the wrapping method as it gives the cleanest leading edge. Start by grabbing 2 sheets of 1/16” x 4” balsa sheeting and edge glueing them. I like to lay them flat on my bench edge to edge and tape them together. Then turn the taped sheet over, open the taped joint and glue with medium CA.

Fig. 54

Fig. 55

27. ___ Cut the leading edge sheeting to size. 33” long, 6 1/8” wide and one end tappering to 3 3/4” on the other end.

28. ___ Dry fit the sheeting and make marks where you want it to go lenthwise. When you’re happy with the fit, lay a bead of medium CA on one edge of the sheeting and glue it to the bottom sub spar. See fig 54.

MoJo 65” Build Instructions

29. ___ Pull the sheeting up and use some thin to glue it to the lower half of the rib. See fig 55 and 56

30. ___ Wet the sheeting really good. Then wet it again. Make sure it’s good and flexible. You’re going to bend it all the way around the leading edge. When you’re satisfied you can make the bend and have something to hold the sheeting all the way across, pull it tight and use thin CA to glue it to the top sub spar. See fig 57.

Fig. 56

Fig. 57

31. ___ Prepare the center section sheeting by edge joining 3 pieces of 1/16” x 4” balsa cut to 5 ¾” wide. See fig 58.

32. __ Install the center section sheeting and cap strip the ribs. See fig 59.

Fig. 58

Fig. 59

33. ___ Repeat the leading edge center section sheeing and capstripping for the other wing. Note: the cap stripping on the tip rib is 1” wide. See fig 60.

34. ___ Unpin the wings from the board.

35. ___ Cut 3” from the ¾” phenolic tube. Cut the remaining piece in half. See fig 61

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36. ___ Insert the tube into the wing and place a ply rings on each rib the tube passes thru. See pic 62, 63.

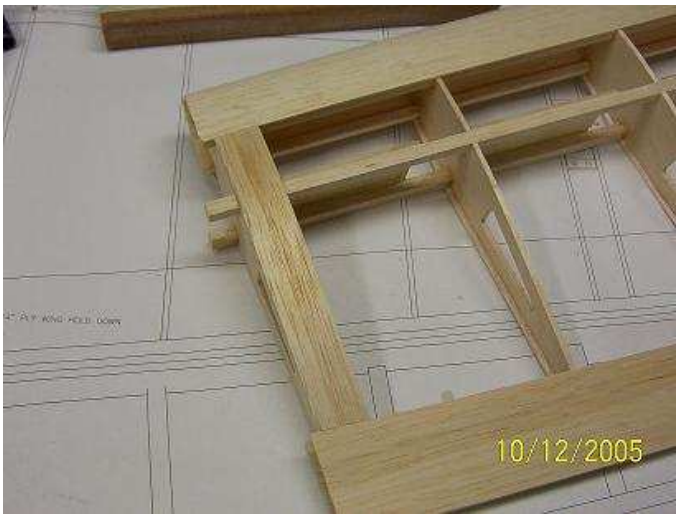

Fig. 60

Fig. 61

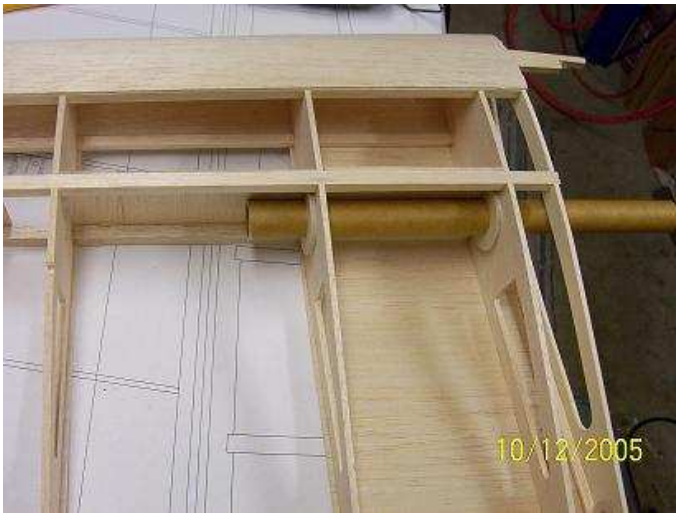

Fig. 62

Fig. 63

Fig. 64

37. ___ Apply thin CA to set the tube when it is in place. See fig 62 - 64

38. ___ Use 1/8” dowel as a stop in for the aluminum wing tube. See fig 64.

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39. ___ Plane the trailing edge to match the contour of the ribs. See fig 65.
40. ___ Install trailing edge sheeting. See fig 66.

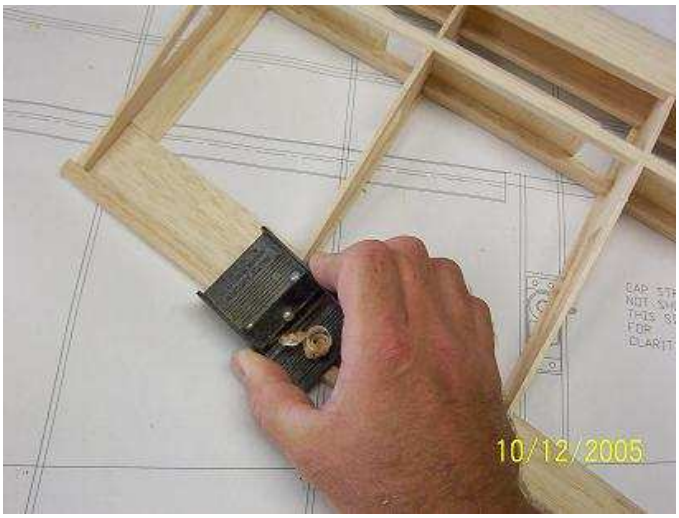

Fig. 65

Fig. 66

41. ___ Install center section sheeting and cap strips.
42. ___ Install a tip cap on the tip rib from 1/16” balsa.
43. ___ Build the aileron per the plans using the CNC cut leading edge. See fig 67.
44. ___ Install gusset cut from scrap at each corner. See fig 67.
45. ___ Cap the aileron leading edge with ¼” tri stock.

Fig. 67

The wings are finished at this point!

MoJo 65” Build Instructions

Mount the tail servos

1. ___ Install the servo rails using ¼” x 3/8” basswood. See fig 68.
2. ___ Locate your servos and install them. Add a piece of 1/8” x ¼” balsa and a covering anchor. See fig 69.

Fig. 68

Fig. 69

Fig. 70

Fig. 71

3. ___ Install some 1/8” x ¼” balsa wood to form a covering anchor and servo opening. See fig 70.
4. ___ Install a piece of ¼” x 3/8” basswood under the CF tube where the servo wire passthru slot is cut for extra strenth. See fig 71
5. ___ To facilitate easy servo wire routing, I remove the plastic connectors from the servo and extention. Then I slip on a little piece of shrink tube. Now plug each connector and slip the shrink tube over the connection. Shrink it with a heat gun and you now have a much smaller connection to deal with when routing the servo wires thru the tube.

MoJo 65” Build Instructions

Preassemble and test fit before covering and final.

1. ___ Temporarily fit and install the anti rotation pin cut from a piece of the ½” CF tube. See fig 72.
2. ___ Temporarily install the landing gear. See fig 73. Note: Tetherite Landing gear shown. Aluminum gear provided with the kit.
3. ___ Temporarily install the wing tube and wings.
4. ___ Level the fuse and check the wing incidence. It should be at 0 degrees. See fig 75.
5. ___ Temporarily install the elevator and control surfaces.
6. ___ Double check the fit of all components and make any last adjustments before covering. Now would be a good time to place all the componenets on your plane and double check the CG. Making adjustments before covering is always easier than after.
7. ___ Cover your model. Follow the instructions that come with the covering.

Fig. 72

Fig. 73

Fig. 74

Fig. 75

MoJo 65” Build Instructions

Covering and final Assembly.

1. ___ Cover the wing panels. See fig 76.
2. ___ Cover the fuse See fig 77.
3. ___ Open open the covering around the horizontal stab and tail servos and install the landing gear. See fig 77

Fig. 76

Fig. 77

4. ___ Install the center wing tube phenolic in the fuse. Center it so that an equal amount stick out both sides. Install the the 1/8” ply supports. DO NOT GLUE AT THIS TIME.
5. ___ Check the alignment of your tube with a square to make sure thewing is true. See fig 79, 80.

Fig. 78

Fig. 79

6. ___ When you happy with the fit and alignment, wick in some thin CA.
7. ___ Sand the phenolic off flush with the 1/8” ply ring.
8. ___ Install the elevator, horizontal stab and rudder. I fashioned a tailwheel from 1/8” music wire, G10 and carbon fiber strips. See fig 81 –83.

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9. ___Install the tail servos and linkage. Run the servo wires and extentions thru the bottom CF tube. Use a wheel collar and some thread to fish them thru. See fig 81 - 85.

Fig. 80

Fig. 81

Fig. 82

Fig. 83

Fig. 84

Fig. 85

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10. ___ Install the anti rotation pin in the fuse.

11. ___ Test fit the wing tube and wings. Make sure the wing fits tight with the fuse. Fig 86

Fig. 86

Fig. 87

Fig. 88

Fig. 89

Fig. 90

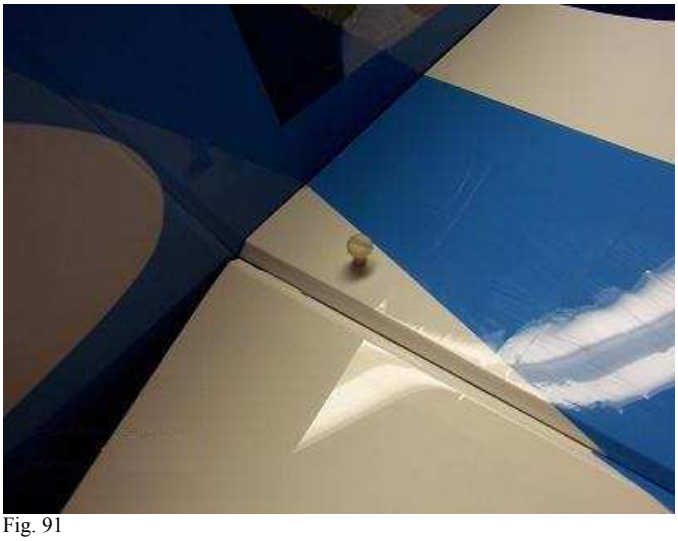

Fig. 91

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12. ___ Drill a hole thru the leading edge in the right wing panel at the location shown on the plans. Remove the wing from the plane. See fig 90

13. ___ Drill a hole in a 1/4" x 3/8” block that mounts on the leading edge wing peg. Install a blind nut on the block. Use some 5 minute epoxy to secure it to the wing peg. Run a bolt into the wing peg to hold the block on tight while the epoxy dries. See fig 87, 88.

14. ___ Reinstall the wing and drill a hole in the trailing edge sheeting of the right wing per the plans. Remove the wing and drill and tap the hole for a 10x32 nylon bolt. See fig 89 and 91

15. ___ You have two choices on where to install the radio gear… I originally installed everything in the fuse with the RX forward of the wing tube and the battery aft of the wing tube. I found routing the wires was troublesome, and dealing with the antenna is a problem. but everything stayed with the fuse. The other option is to install the radio gear in the left wing. I cut a hole in the #2 rib forward of the wing tube and installed the RX and routed the antenna thru an antenna tube. I mounted the battery and switch in the right wing in the area behind the wing tube. I think this is the best setup.

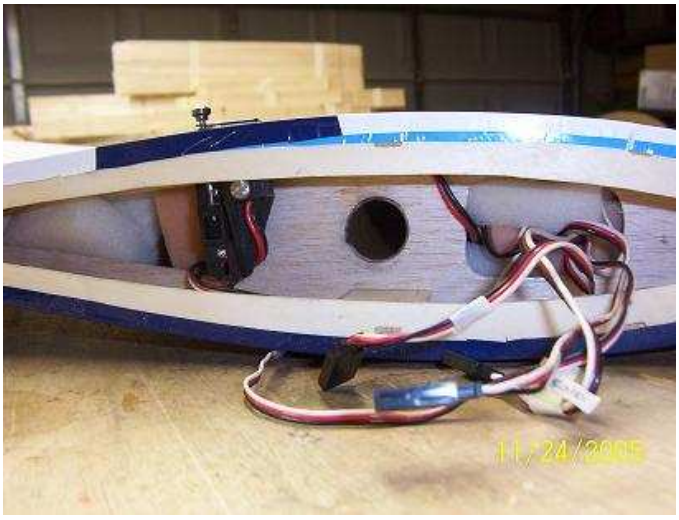

Fig. 92

Fig. 93

16. ___ Install your engine and throttle servo. You can move the engine fore or aft on the mount rails to adjust the CG. Route the throttle servo thru the channel in the fuse. See fig 94, 95

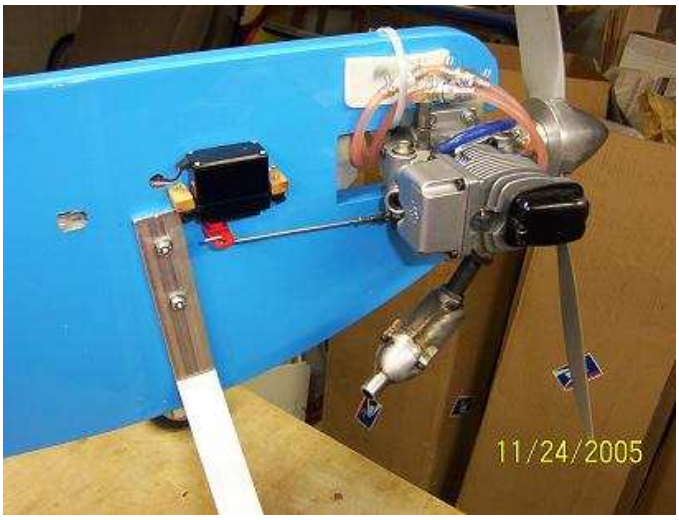

Fig. 94

Fig. 95

MoJo 65” Build Instructions

17. ___ Mount the tank on the fuse oposite the engine. Use velcro straps with ply mounting plates. See fig

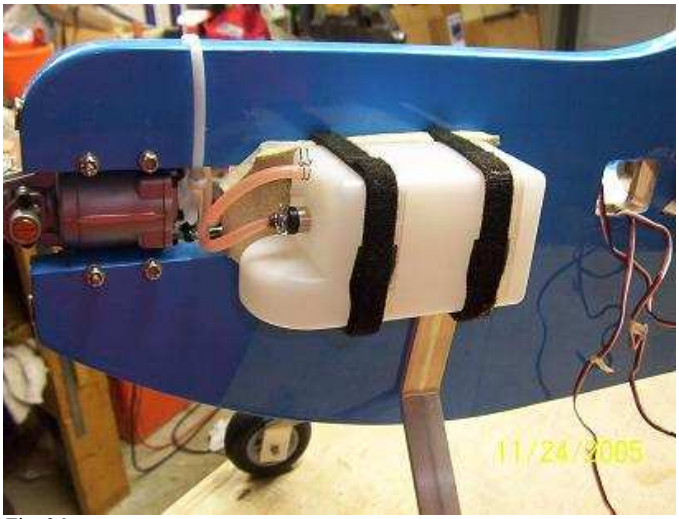

Fig. 96

Fig. 97

18. ___ You’re ready to ROCK!!! Make sure to range test and ***go have some fun!!!***