Micro Folding Dinghy

Building the Micro Folding Dinghy

Offsets	Sketch 1	Sketch 2	Plans 1	Plans 2

Instructions :

1. Select two sheets of 1/4" ac exterior fir plywood, preferably with as few knots as possible. Note: one reader suggested that it might be possible to fit the whole boat on one sheet of plywood, but we have not tested this out yet for ourselves. If you are interested, you might want to look at this drawing to see if you can make it work.

2. First draw the baselines, and transfer all the points as shown on the plans. Next bend a batten around all these points and draw the outline of one side panel and one bottom panel. Now extend a line 3/8" out from the chines on both panels. This will determine where the finger joints/tabs will be. Starting with the side panel, mark off tabs every 6 inches starting with the bow and working to the stern. Remember the last tab will be 12 inches long and 2" wide because it will form the skeg. Repeat the process for the bottom panel, and also make the last tab 12" long but only 3/8" wide.

3. Next cut out the side panel and remove only the proper tabs, LEAVING THE FIRST TAB intact and then cut every other one out until you reach the skeg tabs which you leave intact. Next make a copy of this panel on another sheet of plywood. Check to see if the two panels match, and make any necessary adjustments. Now, mark the panels port and stardboard. Go ahead and drill out the "spreader" holes with a 3/8" bit at this time.

4. Follow this up by making two rubrails out of ash or any other rot resistant and flexible wood. The rails should measure 1" wide, 1/8" to 3/16" thick and 57 3/4" long. Attach these with epoxy to the port and starboard panels, making sure that the rails are on the OUTSIDE of each panel. Again, make sure the sides are mirror images of each other- one port and one starboard.

5. Cut the bottom panel out, and then REMOVE THE FIRST TAB followed by every other. To avoid mistakes and to make this process clearer, just lay the side panel you just cut out next to the bottom panel you plan to cut. You will now see how the tabs interlock.

6. Assembly. Don't be afraid to use a whole roll of duct tape here as well as some wood blocks to hold the whole thing together. An extra pair of hands here is a definite plus! Tape everything together just as if it were already assembled. You will see that the interlocking tabs will make this process much easier. At this point it is better to have the sides perpendicular to the bottom. Later they will flare outwards when you use the

spreader sticks. Don't forget to use lots of duck tape on the outside of the hinge line, and hold the side panels at their appropriate distance with wood braces/blocks on the inside. Screw these blocks in place; however, remember to keep them clear of the hinge line and allow enough room to apply the cloth hinges.

7. When you have everything aligned, apply masking tape to the outside border of where the cloth hinge will be (1" from the hinge line). This prevents the ultra sticky 3M 5200 from spreading everywhere. Now the fun part starts. Apply a good layer of 3M 5200 onto each side of hinge line where you will apply the #4 duck cloth. Do not put any in the "crack." Press the 2 " wide canvas hinge in place and tack it down every inch with 1/4" stainless steel staples, leaving an inch or two of canvas hanging off both ends. This extra piece will be tied into the cloth end panels later. If you have any spilled or unwanted 3M 5200 on the boat, go ahead and wipe it off now with some mineral spirits.

8. Wait for a few days for the 3M 5200 to fully cure, and don't move anything until everything is fully dried. Next, remove all the tape and blocks, and check out the hinge to see if it will bend inwards. The hinge will probably be a little stiff, but if it doesn't move then carefully cut into the hinge line from the outside, but don't nick the canvas. You just want to trim into the excess goop that squeezed out through the joint. Now block things up again square. To make the cloth ends make a template first out of some thin cardboard, and trace the open ends onto it. Transfer the pattern to some vinyl or canvas cloth. We used vinyl but the 3M 5200 didn't stick too well to it so a light weight (10-12 oz) canvas/duck cloth should work better. Extend the margins of this pattern by 1 1/4" before you cut it and remove the corners as shown on page 1 of the plans. Next fold over the top hem/margin and sew it over. Now all you have to do is attach these pieces to the ends with 3M 5200 and some staples. Tie in the extra piece of hing material you left over with some 3M 5200, and again, wait for everything to dry. Last, water proof the hinge by rubbing 3M 5200 into the whole length.

9. Finally, make the spreader sticks. Remember, the ends of the sticks are beveled fore and aft and up and down to fit the angled sides Test and trim these pieces until you get a good fit. Finally, fill the screw holes, sand the hull, and varnish or paint the dinghy. For a tow line you can drill two 3/16" hole on each side panel near the top of the bow. Pass a 1/8" cord through both holes and tie a knot on each end (with the knot on the outside). This cord may seem a little small and it probably is, but anything larger will prevent the sides from folding down easily. You're now done so go test your dinghy out!

Panel Offsets- In inches

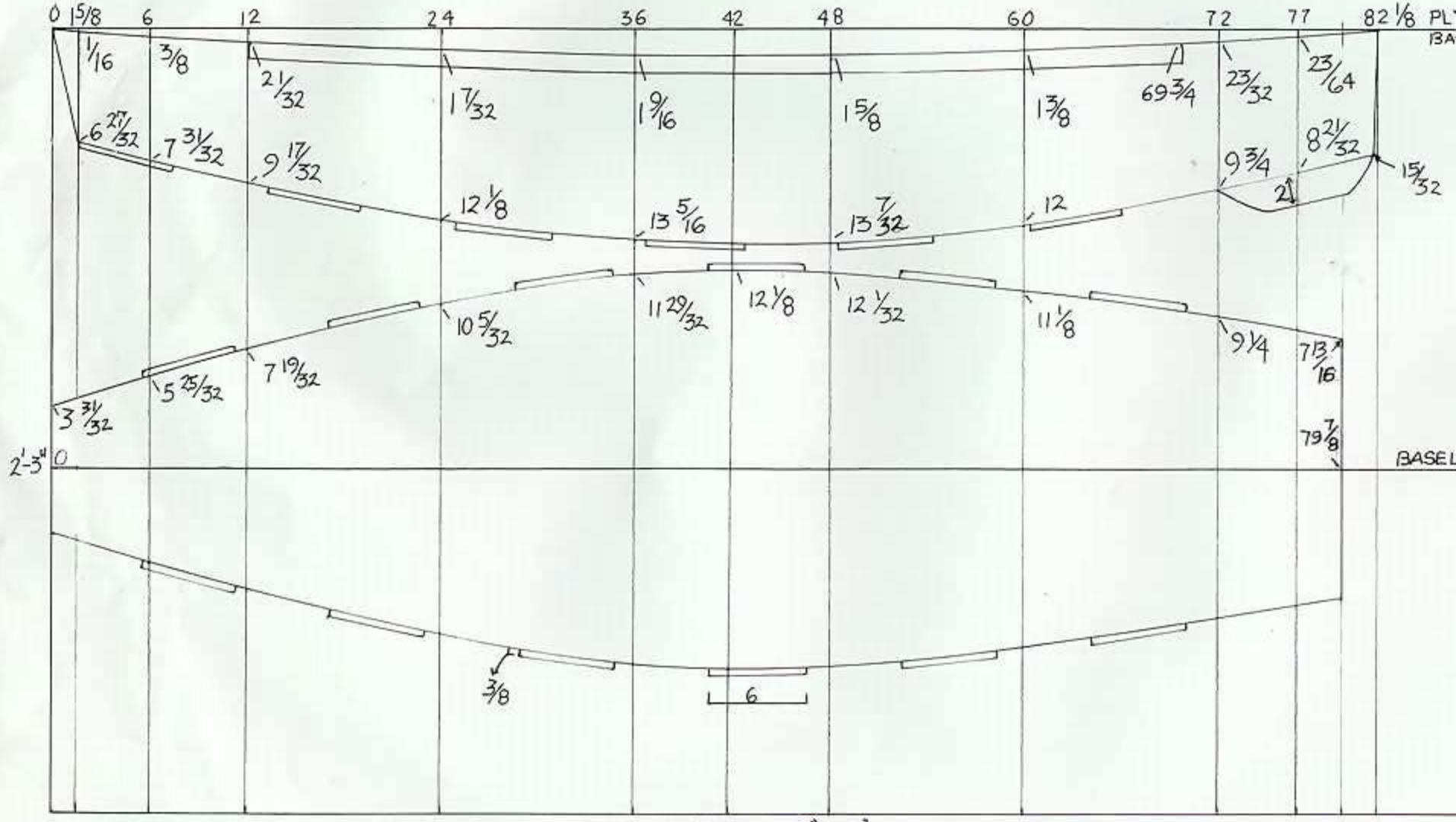
Side Panel

Baseline	Sheerline	Chine
0	0	6 7/16 *
1 5/8	1/16	6 27/32
6	3/8	7 31/32
12	21/32	9 17/32
24	1 7/32	12 1/8
36	1 9/16	13 5/16
48	1 5/8	13 7/32
60	1 3/8	12
72	23/32	9 3/4
77	23/64	8 21/32
81 25/32	0	7 5/8 (bottom of keel)
82 1/8	0	7 9/16*

Bottom Panel

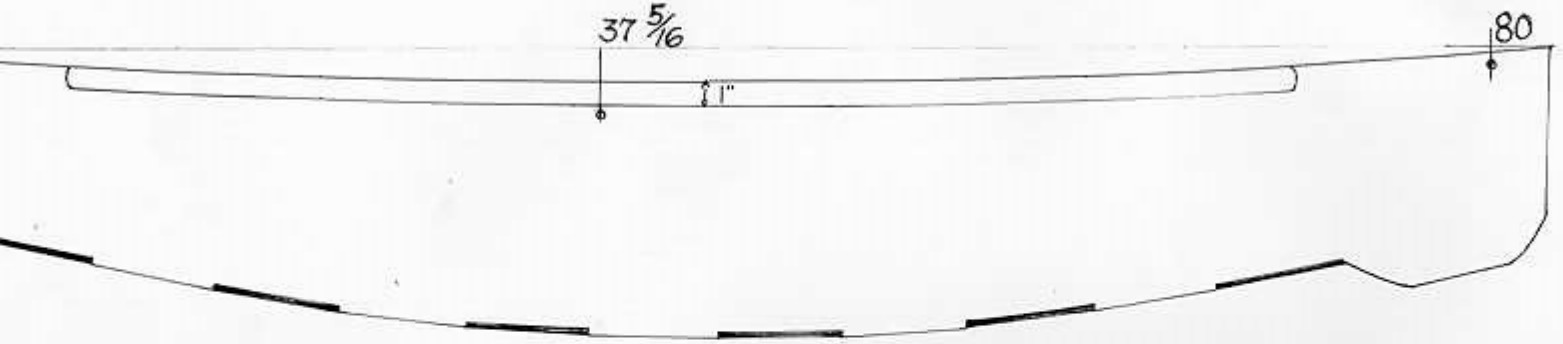
Baseline	Chine (Duplicate for other side)
0	3 31/32
6	5 25/32
12	7 19/32
24	10 5/32
36	11 29/32
48	12 1/32
60	11 1/8
72	9 ¼
77	8 11/32
79 7/8	7 13/16

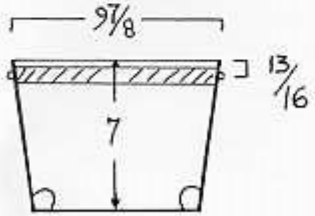
MICRO FOLDING DINGHY

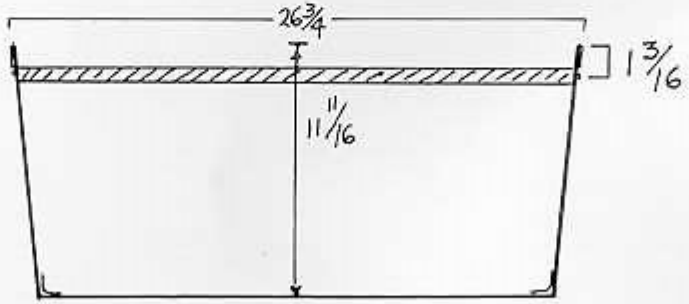


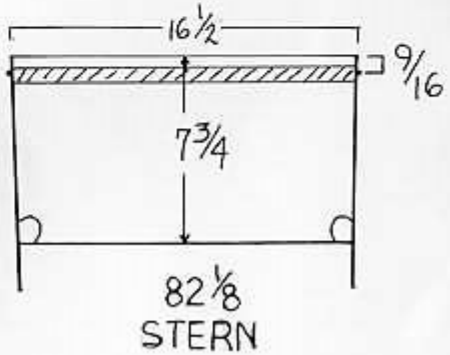
SCALE: 2" = 1'

MICRO FOLDING DINGHY

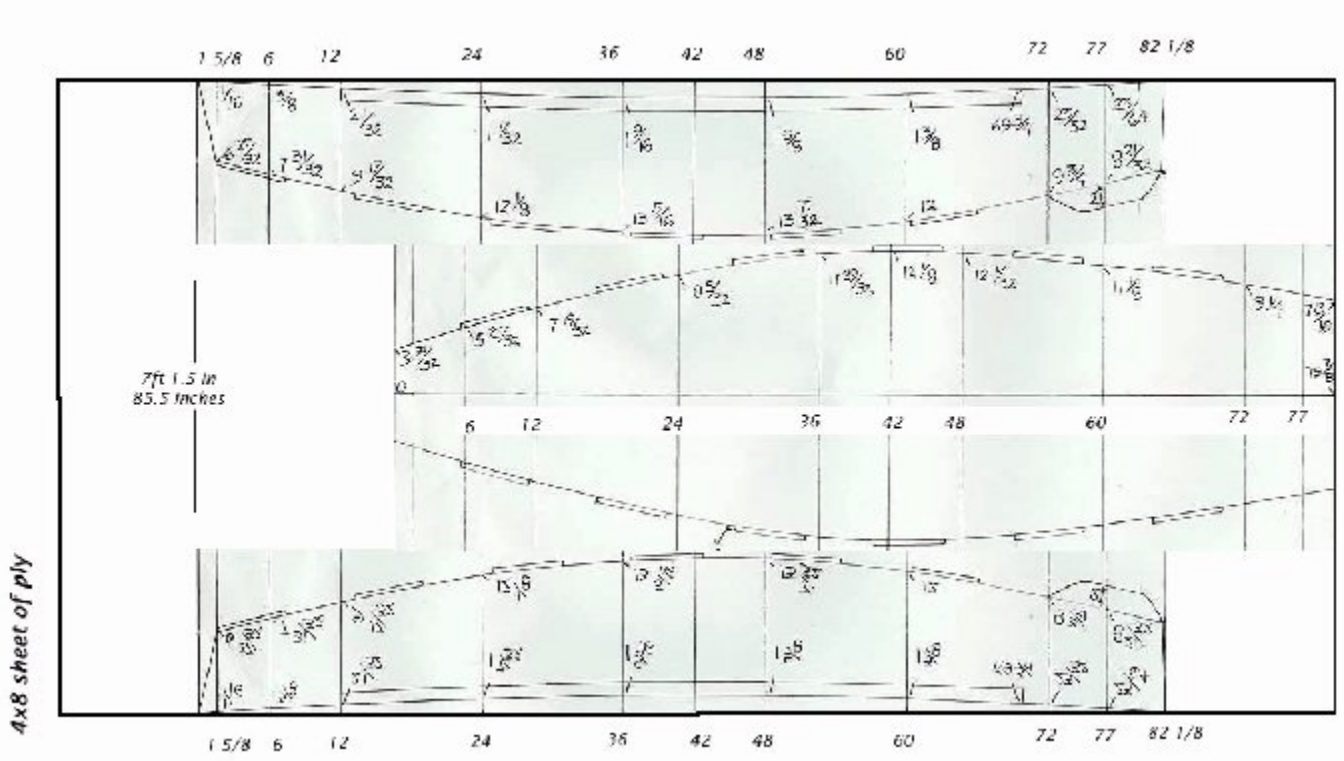








SCALE: 2" = 1'


1 5/8
6
12
24
36
42
48
60
72
77
82 1/8
7ft 1.5 in
85.5 inches
4x8 sheet of ply