

Building a Melonseed or any boat the fast and easy way

Dave Lucas

I'm going to tell you how to build a complicated, fancy hull really simple and fast. When you're finished it will look great and no one will know that you made it in only a week. One requirement is that you use a 4 1/2 inch grinder to fair the hull. This will be a strip planked hull put together with glue and brads and glassed over inside and out. This is not for the builder who wants to build a boat the traditional way and use all the fancy little details that make old traditional boats unique. This is for the guy who wants a great looking, strong, traditional looking boat and doesn't want to take years doing it.

First you have to make a mold unless you know someone who has already made your boat and has one. If several of you want to make the same boat, build a mold and share it. Making a mold is fun, just get some cheap half inch plywood and lay out the sections from the table of offsets. Mike Wick has the plans for this Cortez melonseed so you can borrow his. He even has the patterns for the rest of the parts. This is not hard, it's fun to measure the distances and draw the curves with a long batten around the nails you put in. Don't need to loft anything, the wood will tell you when it looks right. You take these sections and put um on your strongback. This one shown here is way overbuilt by Roger Allen but he's a genius fanatic boat builder.



Next you need some wood to make the hull. These are 16 foot long cypress 1 x 8's from ProBuild, cost \$22 each. I've also used cheap ass "white wood" from Lowes. A 16 ft 2x6 ripped 3/4 inch wide and those ripped in half make lots of planks. It doesn't really matter what you use since this is all covered with lots of glass. I like cypress because it feels good. You'll

also need something fancy for your transom. Mahogany is about \$10 a board foot. The stem can be anything.



Take all of these boards and rip them into $\frac{3}{4}$ inch strips. I cut mine at a three degree angle on both sides to reduce the gap some. It is not necessary to have a tight seam between planks. They'll be filled later with thick epoxy and will make a stronger hull with epoxy packed in. Next you put on your keelson, this can also be any width you want, a two inch wide one from the stem to the transom is the easiest. I've made some with narrow ends and wide middles like the plan shows and the skinny ones are actually easier to plank up to.



Mark where the sheer is and secure a board across at that point. This will remain a permanent part of the mold. Put on the first plank, gluing at the stem and transom. Here's the deep, dark secret. Go to harbor freight and buy a \$20 brad gun that shoots brads and staples. You can use readily available steel brads or order stainless steel brads, it doesn't really matter when it's all done. Secure the planks with $1\frac{1}{2}$ inch brads.



Now comes the hard part. You have to squirt tight bond III glue on the plank and add another plank on top of it. Squirting on the glue takes the longest time of all of this. I use an overlapping herringbone pattern to make the front alternate. It doesn't really matter if any of this fits perfectly, it all gets filled later. As you work your way up you can reach in and pack thickened epoxy to the edges where the planks meet the stem and transom for a strong joint. These are the only connections that stay on the hull when it's lifted off.



Keep working your way up till you get to the football. That's where the planks come together at the transom. Since the hull's wider at the middle this has to happen. At that point you can plank the rest from the top down, tapering the ends to fit. As the planks go up the hull they require more and more twist. You need something to clamp on to them and twist with. I use a ten inch crescent wrench. This is where your helper comes in handy, you can nail as he twists the planks. You'll need to put a screw in once in a while to pull the plank into the mold but the planks will pretty much take their own shape, don't pull them into a hollow. You'll get a stair step going as the planks go on and you twist them. Don't worry too much about this. When you sand the hull they'll come out. You have $\frac{3}{4}$ inches of wood to work with. After you pop each plank in place with the brads come back with a hammer and tap them all in tight. Some of the brads are going to come out the surface, inside and out, can't help it they sometime follow the grain. This is why you have to use a grinder to fair, these brads would destroy a blade.



So far this whole planking process has taken, are you ready for this, three days if you have a helper. You could do it in one day if you don't mind your back breaking and it's good to let the glue harden. The glue is really just to hold it till you glass it. Next is my favorite part. I love to sand these hulls and watch the smooth shape come out. You can do a good job with a 4 ½ inch grinder with 50 grit discs. Just keep it moving in different directions. This is where I have the advantage of an open shop. I turn on large fans to blow the dust out into the woods. I don't know how you'll do this if you can't blow it out. There is a whole lot of dust. After the initial sand job mix up some epoxy thickened to the soft peanut butter stage and smear it all over with a spreader, packing it in all of the gaps. After it's hard you have to grind it all over again, your finish sander or even big random orbit won't hack it, have to use the grinder. Once you get back to mostly wood switch to the six inch random orbit with 60 grit paper, yes a six inch, not the standard five inch you all have. Porta Cable on Amazon for about \$80. It'll make a world of difference. Then you glass the outside. Use as much glass as you feel you need. I beat the hell out of "Laylah" so I used a layer of 1708 or 25 oz biaxial cloth and another layer of 10 oz cloth inside and out. When I run up on an oyster bar I don't worry about gouging through the glass. Make a skeg somewhere along the line and glue it on with thickened epoxy, there are no fasteners other than brads in this boat.



Lift the hull off the mold and flip it over and sand the hell out of the inside till it's more or less smooth then fill and glass it. I used the same glass schedule as the outside. Here's Stan with big Bertha the 7 inch grinder doing it. Not me, it's too heavy.



There, see how easy it was? That gets you a strong hull and you can get on with the rest of the boat. Remember that epoxy is really, really strong and will hold stronger than the wood it's connected to. You can just glue it, pop it together with brads and get on with it. You'll see from these pictures that lots of unconventional methods were used.





Notice that the centerboard trunk is not square but tapered. That's to give more room for the crew to step over when tacking. The board is longer and tapered than a short square one. A couple of other details, put a three inch pvc pipe in for the mast. That way you can drop it right in and it won't go in crooked and break the hell out of things when you're taking it in or out and lose control. A 16 foot lever can take out the deck real easy. Turning blocks are under the deck for the halyards. A narrow cockpit keeps water out when you turn over and the deck is comfortable to sit on.



There are lots of ways to make the cockpit; all of the boats have had different shapes.



We do not use oil paints anymore; we use acrylic latex paint, house paint. Always use a primer, the bulls eye stuff and gloss paint. Gloss has more solids for a tougher finish. These boats live on their trailers and when it gets scratched you just paint more on and it blends perfectly. Trust me on this; just give it time to dry hard, at least a week.



I'm not going into all of the details here, if you run into problems and have questions with you can ask me. Remember that nothing about the building of this boat is "traditional" except its looks. We tried bird's mouth masts and they didn't work with these big Beetle Cat sails. The pressure of pulling up the peak was too much for them. We built three of them; even carbon coated one of them, no good. They bent too much and the sail shape went to hell. We ended up with Douglas fir masts. Two 16 ft 2x4's with a $\frac{3}{4}$ in slot routed down the middle glued together and tapered from three inches

to two inches at the top. Make sure to select light wood when you're at the lumber yard. Sails, I hate to have to say this but use Chinese sails from Lee. The stock beetle cat sails cost about \$650 and are beautiful. My Laylah has never been out run by any of the other boats we've built (whether I'm sailing it or not) and we think the reason is that her sail has a perfect shape because it doesn't have battens. The roach on the others cause a crease down the back because the battens don't keep it smooth. When you order your sail specify a straight leech without battens. You don't need the extra "stolen" size and its way easier to reef and roll up on the spars with none of these little sticks in the way.



I would recommend this Beetle Cat sail for any melon in this size range. Or any other traditional boat for that matter. You can make up your own logo. It's 112 sq ft, has a good looking peak angle and is a standard sail. Always go bigger and have reef points. You can't stretch out a small sail when the wind's light. Laylah was the first of the series of these boats (11 have been built) and underwent a lot of modifications to make things easier and simpler. Cam cleats are used everywhere a line needs to be adjusted, the main sheet , centerboard and haylards. That's it. If nothing else I hope I've shown you not to let the hull keep you from building a boat, hulls are easy. And if you want a boat to use in your lifetime you don't have to plant the tree to cut the wood to make the boat from. A lot or you will want to make every little piece perfectly the old way to have the experience of the building, Barry Long is an example. His boats are exquisite in every aspect. He's taken two years on some 13 footers and he's enjoyed the process. I could do one in two months using this fast way but it wouldn't be a show stopper. His site is probably listed here somewhere, check it out. For some this takes too long and you lose interest. Good luck and go for it. Dave Lucas, Lucas Boatworks and Happy Hour Club skipjack@tampabay.rr.com

Dave shares more of his melonseed building expertise:

By adding this three inch crescent to the bottom we got full control



My tabernacle is perfect, I can raise and lower the mast easily and all of the lines stay where they are. Notice lack of gooseneck on boom.



I can't stress enough how crappy store bought goosenecks are for these boats. They'll fail every time because they're too small and the big sail puts a lot of twist on them. Make your own and you'll be a happy man. There's not much stress on either of the jaws, this or the gaff.



My halyards go through the deck to turning blocks and back to the cockpit



Sail snaps, this arrangement works pretty good.



Notice the pvc hoops stained to look like wood.





You only need four hoops on this short luff

You'll want to break down and go for a high price swiveling main sheet cleat and the thing that sucks is they don't sell them as a one piece unit, you have to match the block with the other part. It'll cost you about \$150. Make sure it's high enough so the sheet clears the deck when the sail is all the way out. higher than you think.



Ass end of the boom, double blocked sheet is all you need. You have to put stops at the ends of the traveler so the lower sheet block doesn't go over and hang up which it'll do every time you tack. . Also move the end block on the boom about a foot forward of the traveler, if you don't it'll wrap around the rudder, especially on jibes. Put a couple extra open bails on the boom to run the sheet through just to keep it up so it won't knock you hat off every time you tack. We run our booms two feet up the mast above the deck so we can see under and to get it up a little higher where the wind is better. The main sheet is 3/8 inch for ease on the hands, halyards are 1/4 inch. That's all there is, there ain't no more. Dave

