

Spira International Boat Building Articles

Worried You Don't Have the Skills to Build a Boat?

By Jeff Spira

Being a boat designer and supplier of plans for home built boats; I frequently get asked how hard is it really, to build a boat. People wonder if they have the skills to really get it done in a reasonable amount of time. Well, there are boat plans out there for all skill levels. Some are so complex you need to be an experienced shipwright, and some are so simple, you can build one if you can follow simple directions but have never built anything in your life.

I get all sorts of questions about lofting a boat, full sized plans, and a host of other questions that more appropriate 50 years ago than today. There has been so much misinformation and confusing terminology, I thought it appropriate to try to explain in detail, the skill set necessary to successfully build a modern boat design at home.

First of all, look at the lines of the boat you're considering building. If it has a rounded bottom, or complex curves, it will not be an easy boat to build. If its lines are mostly flat curves designed around plywood, it'll go together quickly. All of the Spira International boats use flat curves designed for plywood.

Next ask the designer if the hull comes pre lofted – that is to say the final shape of the framing elements has been pre-determined. Back in the days of drafting tables and architect's scales, you could not determine the final dimensions of a boat hull because of inaccuracies in the drafting. You had to redraw the boat full size, and use long thin battens of wood as a spline to determine the hull shape full sized. From that full sized drawing you could then determine the dimensions of the framing elements you need to build.

These days with Computer Aided Design (CAD) inaccuracies in the drawing are no longer an issue. With a boat designed in CAD, the final dimensions of each frame can be determined well within the

accepted 1/8" accuracy. All you need to do then is build the frames in accordance with the drawings and all will be fair when the hull goes together. Again, all of the Spira International Boats are CAD designed and pre lofted

OK, lets look at the skill set you'll need to build a modern, pre-lofted, framed boat designed around plywood planking. First you need to be able to measure accurately. If you can read a tape measure down to within 1/8" and use it to make a pencil mark, you have the all the skills necessary. That's not a difficult skill to acquire.

Next you need to be able to cut a straight line using a handsaw. I like a back saw for this kind of work and have made a simple bench hook to hold the frame in-place while I make the cut. You could make this kind of cut with a circular saw, table saw, radial arm saw, or power miter saw as well. Again, this is not a difficult skill to acquire. If you've never used one of these saws, about a half hour practice on some scrap lumber will yield you ample skill to be able to build a boat.

Next, you need to be able to set up and use a hand plane, drawknife, power plane or disk sander to be able to fair the framing smooth so that the planking has a flat surface to be glued to. This is an extremely intuitive activity, not really requiring skill, only some patience.

You also need to be able to drill holes in wood, and operate a cordless power screwdriver. These also, are very simplistic activities with power tools and do not require any exceptional levels of skill. Learning what size pilot holes are required for different screw sizes can be sidestepped by simply buying special screw pilot bits that create the ideal pilot hole for each screw size.

Finally, you need to be able to properly mix epoxy. Again, there is no skill required, just an ability to follow directions closely. Epoxies must be mixed in the proper proportions to cure correctly with full strength. They also must be mixed thoroughly, so follow the manufacturer's directions exactly, and you can add this skill set to your boat-building list of skills.

That's about it. I know many of you are reading this in disbelief, but this list is truly all you really need to know how to do to successfully build a boat at home. The vast majority of the people who build my boat designs have never built a boat before, most had never even seen a boat built before, and only have a passing knowledge of using hand tools.

If you elect to build a wineglass transom, round bottom hull that must be lofted and carefully fitted with carvel planks, then oakum caulked, you're on your own, but if you select a pre-lofted flat or vee-bottom plywood covered hull, these skills are all that's needed to do the job. Don't get yourself off most days. There are adhesives used, but not to the extent of a stitch and glue boat.

When you sand epoxy, you should wear a respirator to prevent epoxy and fiberglass dust from getting into your lungs. Sawdust isn't as damaging to your system, but I still do wear a respirator when sanding large expanses of wood with a power sander.

Well, I hope this has helped you decide which of the two types of hulls to build. I would strongly encourage everyone to build a boat. It's a fun hobby and a great experience. It's also the parent and child project. I can't imagine a better experience for a child than to learn woodworking by helping to build a boat and take it fishing.

Visit my website at <http://www.spirainternational.com> to see the many different designs of boats you can build at home.