

WOODWORKING SKILLS

Very often we receive emails asking us how much wood working skills are needed to build one of our boats. The answer is simple: none because, except for a few, we do not design wooden boats. While most of our designs use wood or plywood as one of the materials, the building of our boats never requires wood working skills. (Pictures courtesy of J. Pikorn)

We expect the builder to be able to cut some sheets of plywood or wooden strips according to a full-size pattern or from dimensions given on the plans. There is never any beveling, fancy assemblies, or need for special tools. Tolerances are wide: gaps of 3/8" (10 mm) are acceptable and these gaps, covered by fiberglass are better than a tight joint. The fiberglass is structural. Very few tools are needed: a jig saw and a drill are nice, but all these boats can be built with hand tools. No need for a plane, chisels, table saw, band saw, planer, miter saw and other routers or jointers. We show all the required woodworking skills below:

Step 1: Scribe the panels from the patterns or from the plans.



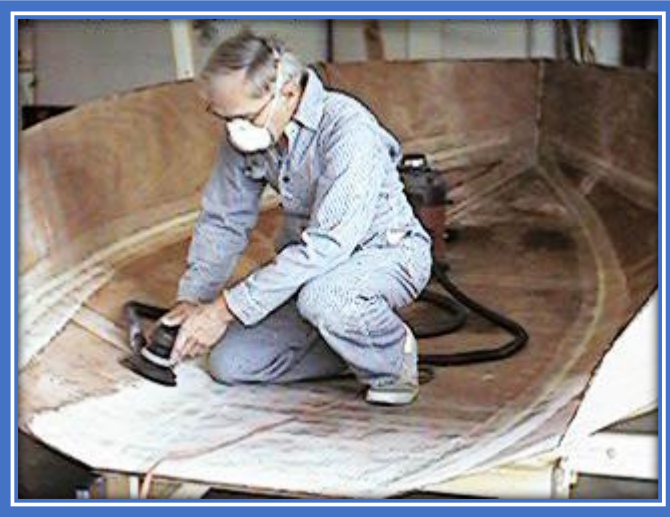
Step 2. Use a batten to scribe a smooth curve between points.



WOODWORKING SKILLS

3. The only required wood working skill

The sander may be the most important tool.



This does not mean that we don't like wood: used in combination with today's resins, fabrics and fasteners, it is a major part of our building technique, but we use wood in an essentially different way. With modern materials easily available, it does not make sense to limit the use of wood to old assembly techniques relying on difficult to use glues, elaborate assemblies, and outdated fastening systems.

Plywood panels for small stitch and glue boats, plywood or strips as a composite sandwich core may be part of the structure but our design and engineering are fundamentally different from wooden boat building.

Just compare the structure of our Phantoms with traditional wooden skiffs: no wooden structural members, no stiffening battens on the panels. Instead we use proven fiberglass boat engineering: tabbed stringers and bulkheads, fiberglass keel and chines. Wood is an excellent material when used as part of a modern composite* : it is after all a unidirectional fiber product, easily available worldwide at a moderate price. Plywood is a composite: multi directional layers of fibrous material bonded with modern resins.

Some of our builders have used their wood working skills to produce very classic looking boats with nice varnished trim, fancy breast hooks and other great details but a smooth and fair fiberglass finish is aesthetically very pleasant too. With our building method, you have the choice.

In larger boats, these optional wood working skills can be used on the cabinetry, but unskilled wood workers can build these parts just as strong and finish them with some easy to install prefabricated moldings.

Wood working habits can be a handicap if the builder tries to apply wood working standards to a composite boat. Wooden boat builders working on a composite hull must change their thinking pattern. The requirements are different: tight fitting joints are required in wooden boat building but should never be used in composite boat building. For example, in a composite boat, fiberglass or stitch and glue, the edge of bulkheads and stringers should not bear directly on the hull shell. It is the resin fillet and fiberglass tabbing (tape) that transmits the loads to the hull. If the load is transmitted through the edge of panel, the stress concentration may result in failure. This is a textbook rule, not a personal opinion.

WOODWORKING SKILLS

The engineering rules for composite boat building are well documented. This leads to another difference between wooden boats and composite boats: wooden boats are designed using rule of thumb scantlings, but composite boats are engineered. The building may be easier but not the design.

What if you like wooden boat building?

- You can today build a better wooden boat thanks to modern resins. Plans for wooden boats are available in the public domain but compare the cost and labor required to build such a boat with our boats.
- A wooden boat must be built from selected and expensive species of wood: these are frequently more difficult to find and more expensive than our fiberglass and resins. Some of us may feel concerned about the ecological impact of using rare woods. Our method uses wood species that are replaceable and produced as a crop.
- To build a wooden boat, you need a full array of specialized and expensive tools and the skills to use them.
- Wooden boat building is much more difficult than our methods: you must learn to loft full size from a table of offsets and correct the inaccuracies of the plans. Increasing the difficulty means that you increase the chances of making mistakes.
- The labor and time required to build a wooden boat is far superior to a composite boat: at least 5 times more, frequently 10 times more.
- The finished product will be less strong and require more maintenance than a composite hull. It will have a lower resale value.

The ideal compromise: If you love the looks of a wooden boat, a feeling that we understand, a great compromise is to build one of our composite hulls and finish it like a wooden boat. Because we use wood as a component, many parts can be left with their natural look and varnished. Epoxy resin and fiberglass are transparent.

If you still have doubts about the skills required, please look at our tutorials: no wood working skills are required to build our boats. Also see the description of the building methods linked to the plan's pages: Phantom, Serpentaire, Vagabond, etc.

() Composites combine the properties of different components to produce a material with superior characteristics. Fiberglass as used in boats is a composite. Our stitch and glue structures are composites, foam sandwich or strip planked hulls sheathed with structural glass are composites.*