

Photo Essay
How to Build a
Carolinian
Carolina Style Dory



Plans for this boat may be found at:

<http://www.spirainternational.com/>

How to Build a Carolinian Carolina Style Dory

The Carolinian is one of the easiest to build Spira International framed boats. It is an 18' Carolina style dory suitable for many lake, river and coastal ocean conditions. It is typical of the Spira International framed hull boats. Construction grade lumber is all that is required to complete this rugged, handsome boat.

Like all Spira International framed hulls, you begin by building the ribs. These are constructed of commercial grade 2x4s using a simple lap joint bonded using epoxy glue. They are screwed together to ensure the epoxy is held in close contact with the parts until the adhesive cures. You could also use one of the new polyurethane adhesives, such as "Gorilla Glue."



Note how the frames are notched in the center for the keelson to be installed at a later time. Note also that all frames are straight. There is no need for curves in dory style hull frames, making them very simple to construct.



Once the frames are completed, they are assembled on a strongback jig, a simple beam that holds them in the correct locations and raises the assembly to a comfortable working height

The stem, transom, keelson and other longitudinal elements are attached to the ribs using epoxy and screws.



The hull is then “faired.” This means cutting the frame elements to the correct angle so that they meet the plywood planking flush. This is best accomplished with a hand plane, or if you prefer traditional methods, a drawknife. Be careful though, the drawknife can remove too much material if you get into an area where the grain runs at an angle to the milled sides. It takes some practice to use correctly.

After fairing, the planking plywood is leaned up against the framing and the framing serves as a sort of template so that you can draw out the hull shape on the plywood.



Once the ply is cut out, it is then epoxied and screwed (or nailed if you prefer) in-place to form the boat sides. You have joints between frames so you can later reinforce them from the inside.

After trimming the oversized sides to the edges of the longitudinal elements, the bottom planking is installed in the same manner as the side planking: using the hull as a pattern, tracing out the shape, cutting oversized and epoxying in-place.



Butt blocks are installed on the inside wherever two pieces of plywood come together. Screws are run through the outside of the hull into the butt blocks and they are epoxyed in-place. Next any cracks are filled with epoxy, filled with silica or microspheres to the consistency of putty, then a layer of epoxy and fiberglass tape is applied wherever any joints appear on the bottom of the hull. This ensures everything is well sealed against the water and elements.

This builder elected to cover his hull with fiberglass and epoxy. You can elect to or not, but it's most rugged and abrasion-resistant if you do. There are many books and web sites on how to apply fiberglass for best results. Two layers is even better for many sea boats or hulls used in rivers where rocks or gravel is common. It adds significant abrasion resistance to your hull as well as strength.





After the outside of the hull is completed, you may flip it over and remove it from the strongback jig. The inside should be saturated with epoxy as well. This seals and strengthens the wood to ensure your boat lasts.

A coat of primer followed by a good quality marine paint, completes your hull and insulates it from the elements. This should be applied inside and out. Instead of paint, some builders elect to varnish their hulls. Modern polyurethane varnish holds up better than the traditional natural varnishes.



Install seats, oarlocks, motors, cleats, and whatever other gear you want (don't forget your required safety gear too) and it's time to go fishing and taking the family out for some fun!