Classic Cajun Pirogue

Thank you for purchasing my plans. My first suggestion is to pick up a 3 ring binder with sheet protectors and use it for your plans. The binder will keep your plans clean and easy to reference as you build your pirogue. Should you have any questions while building your pirogue don't hesitate to email unclejohn@unclejohns.com for support.

Your boat may be built from 12' to 15' 7" using two sheets of 1/4" plywood. The amount of fiberglass cloth and paint required will vary with the length built and the amount of coverage. As will the length of the material used for the rub rails will be determined by the length of the boat. And, the number of screws needed will be determined by the number of clamps you have. It is for this reason a normal materiels list has not been included.

materials needed: The materiels needed will vary with the length boat you build. You will need two sheets of 1/4" plywood, exterior grade. For the rub rails two 3/4" x 1 1/4" clear lumber at least four inches longer than your boat. Glue, paint, fiberglass cloth and resin. A dozen 3/4" screws.

plywood: The basic difference between most marine plywood and exterior plywood is that marine plywood does not contain voids. Both contain essentially the same glues. Taping the seams and edges with fiberglass will effectively seal the edges. Exterior plywood is considerably more economical and is a standard stock item at lumberyards. We have had good results with both A/C fir and B/ C pine. Lauan mahogany is used by many small boat builders. Lauan is pretty, easy to work with and very economical.

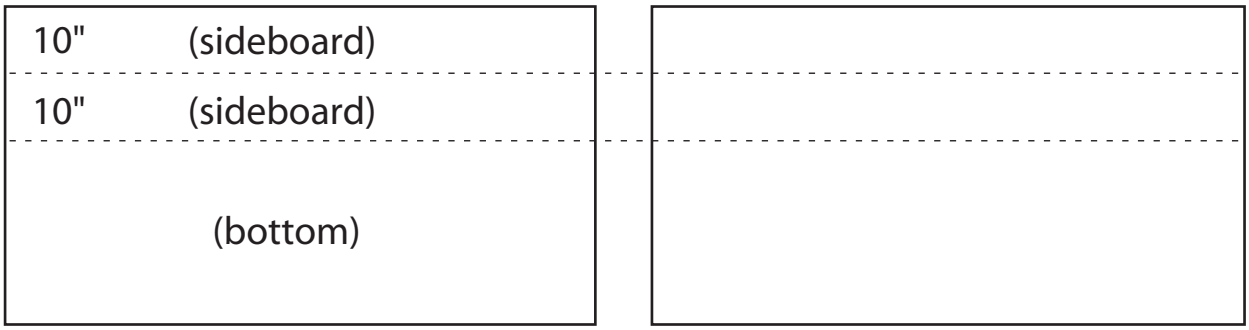
paint: Epoxy must be protected from sunlight or it will degrade. If you use polyester resin you should use oil based paint. With epoxy, use Acrylic Latex. Prior to painting wipe the boat down with acetone. This will give you better adhesion. It is very important to give paint time to cure, this can take 9 to 10 days, before you 'hit' the water. If you wish to stain your boat and use a clear finish you should use a water or alcohol and not oil based stain. Allow the stain to dry thoroughly before applying the resin. A good marine varnish will protect the epoxy and show the beauty of the wood.

glue and fasteners: There are numerous waterproof and water resistant glues on the market. For the most part, glues, nails and screws hold the structure together prior to tapeing the seams with fiberglass. Once the seams are taped, the fiberglass will provide a strong waterproof joint. For this reason, the type of glue is of less importance than tapeing both sides of all seams and joints with fiberglass.

NOTICE: Care should be exercised in the completion of the steps involved in constructing this boat to assure a sturdy craft. The safety of this boat is determined by the builder and user. This craft has not been rated for either number of occupants or maximum weight capacity. The purpose of these plans is to provide the builder with a set of easy to follow building instructions. Uncle John's assumes no liability for the finished project. As with any water-craft, life-jackets should be worn and caution exercised in regard to weather and water conditions.

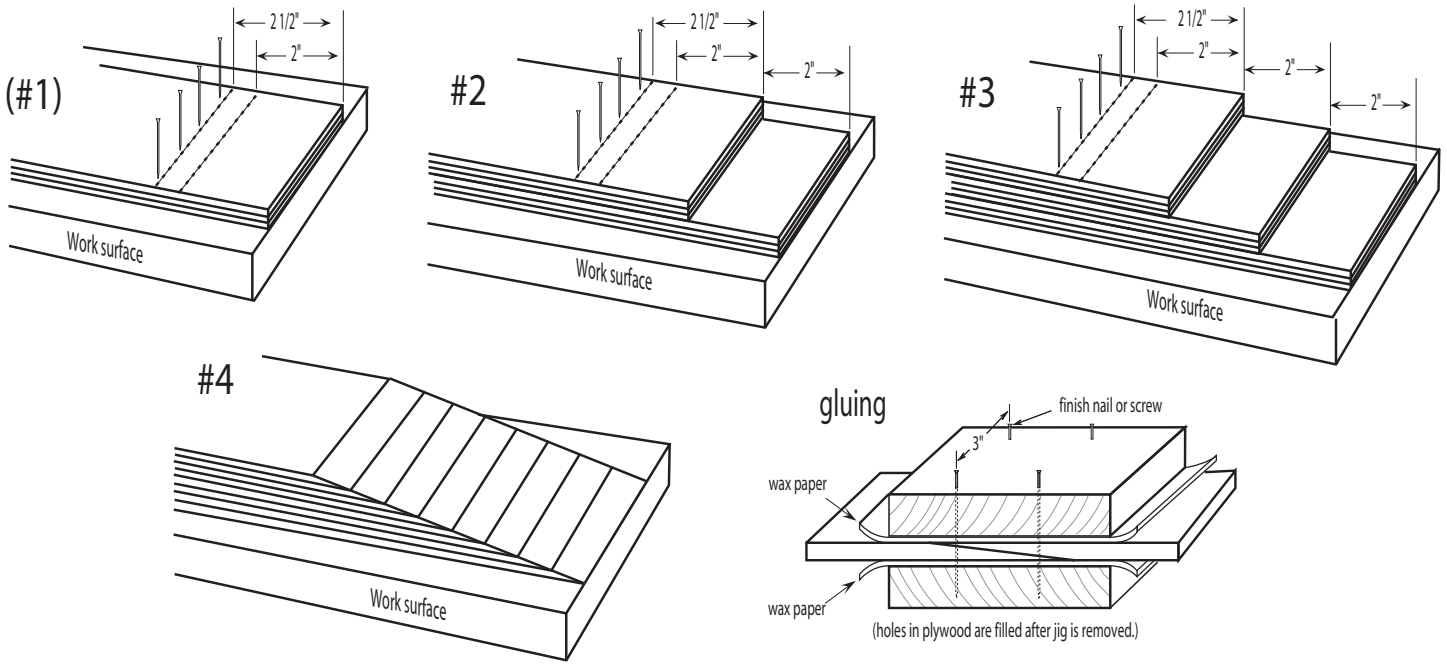
sheet #2 cutting the side boards and bottom

Cut the side boards and bottom pieces from two sheets of 1/4" plywood.



joining the side board and bottom pieces

Scarf all of the pieces of the same width at the same time. By doing them all at the same time, they will all have the same angle. Stack the pieces offsetting each from the one below by 2". A piece of scrap placed on top will aid in achieving a smooth bevel. Tacking the pieces to a flat work surface will stabilize them while you are scarfing. (#1) Place the first piece on the work surface and tack it down at least two and one half inches from the end. (#2) Place the second piece on top offsetting by 2" and tack it down. The tacks should be placed so as not to be in the area that is to be worked. (#3) Continue to stack the pieces as shown . (#4) Using an electric plane, belt sander, random orbit sander or even a piece of coarse sandpaper wrapped around a piece of two by four "grind" the pieces until a smooth surface is achieved .

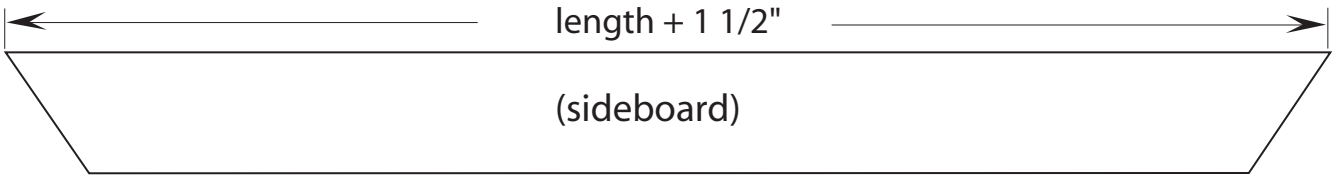


Some individuals prefer to use a butt joint. Quicker and easer but not a pretty and more difficult to hide. To use a butt joint, simply butt the two ends together and fiber glass both sides with four to five inches of cloth

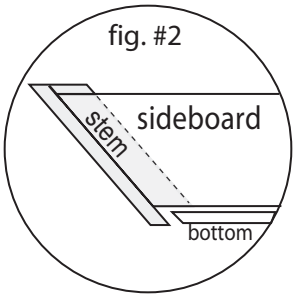
sheet #3 attaching the side boards

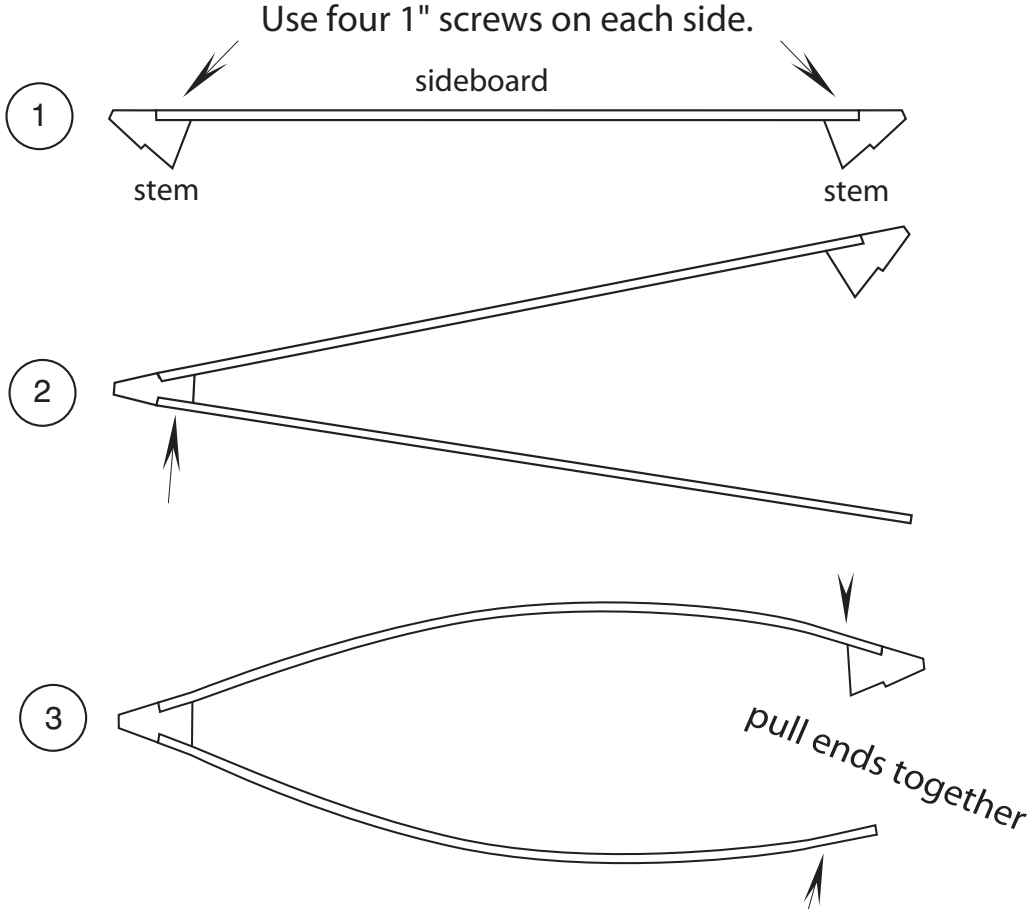
Cut sideboards to length with a forty-five degree angle on each end. (see fig. #1). Stacking the sideboards and cutting both at the same time will assure identical lengths. The length of the boat will be determined by length of sideboards. We do not recommend building less than 12 feet.

fig. #1



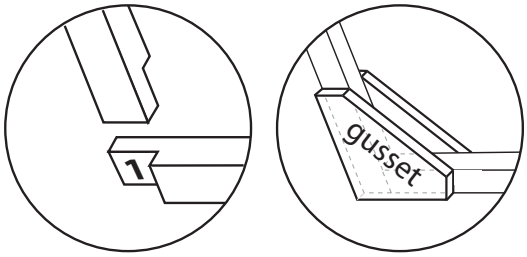
Align stems and sideboards as shown in fig. #2. Attach sideboards to stems in sequence (steps 1 through 3 shown below) using both a waterproof glue and four 1" screws on each side of the stem. It is common to remove the screws after the glue has cured and fill the holes. The compound angles of the stems will cause the sides to bow outward and upward creating a rocker (or bow in the bottom).





sheet #4 assembling and attaching the rib sets

Use waterproof glue and clamps to assemble the ribs. Each rib is numbered. To assure proper assembly, simply "match" the numbers. The ribs have been machined to join at the proper angle when aligned. 1/4" plywood gussets may be added to each side of the joint to strengthen the rib set.



The kit contains three rib sets. Attach wide rib set "B" in the center of hull (fig.#1) aligning the bottom of the sideboards as shown (fig. #2), glue and fasten with 1" screws. Rib set "A" is beveled forward, rib set "C" is beveled aft. If you wish to widen your boat, copy the center rib "B" and use four rib sets: one "A", two "B" and one "C".

three rib sets . . . 25" bottom

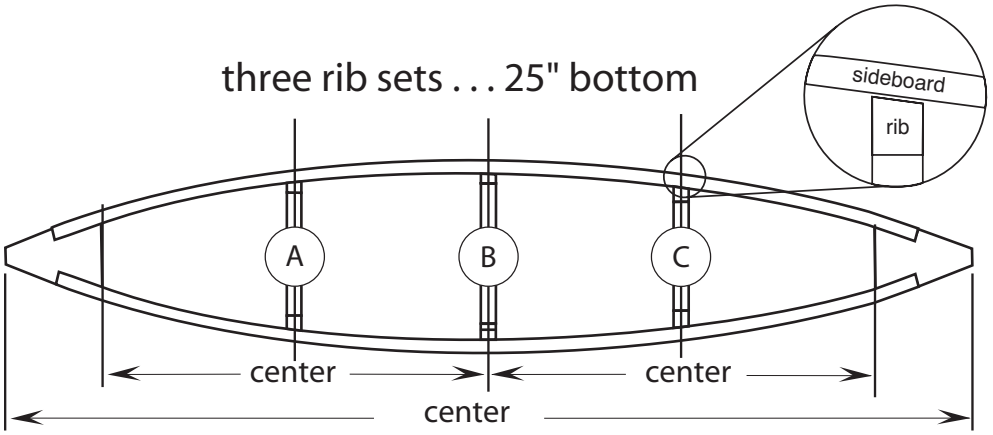
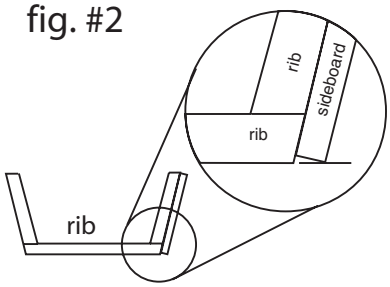


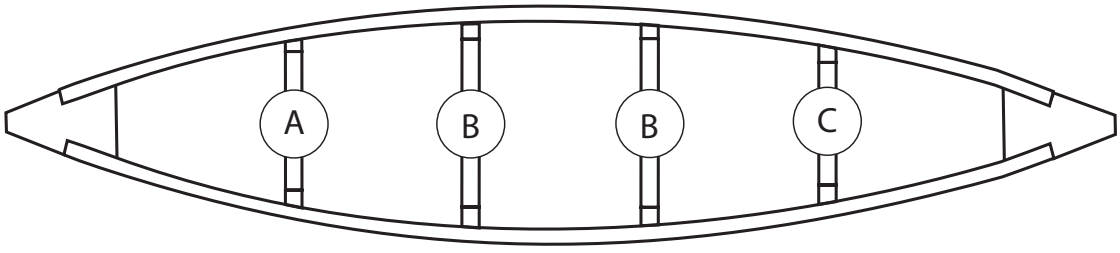
fig. #2



When using four rib sets (fig. #3), insert rib sets "B" between the side boards and position them so as to create a smooth curve in the side boards. Your "eye" will tell you when they are in the correct position. After positioning the "B" rib sets, position "A" and "C". You can control the width by positioning the "B" sets, the father apart, the wider the bottom. if you increase the bottom width beyond 27 1/2" you will need to purchase two additional sheets of 1/4" plywood.

(fig. #3)

four rib sets . . . 27 1/2" bottom

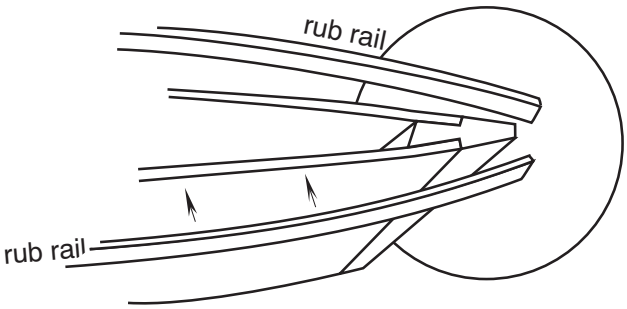


sheet #5

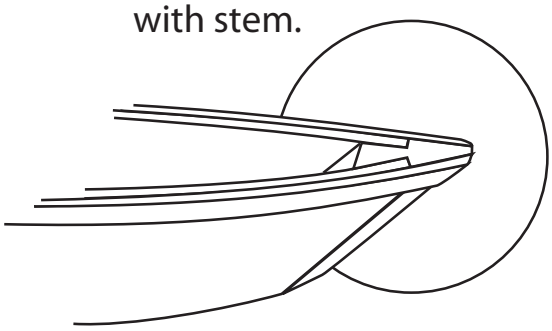
attaching the rub rails

Use ¾" x 1¼" clear (no knots) for the rub rails. Use waterproof glue, clamp or use ¾" screws, spaced 4" apart. Attaching the rub rail will stiffen and shape the boat prior to attaching the bottom. Begin in the middle of the boat and work to each end.

Attach rub rails



Shape rub rails to blend with stem.



attaching the bottom

Turn the boat upside-down, tack bottom in place and mark hull shape, add ¼" all around fig #5, remove and cut bottom to shape. Replace bottom and glue in place. Trim bottom flush with sideboards fig.#6 and ease the edge, (fig. #7). When attaching bottom it should be remembered that the strength will come from fiber glassing the seams inside and out, not from the glue or fasteners.

fig. #5

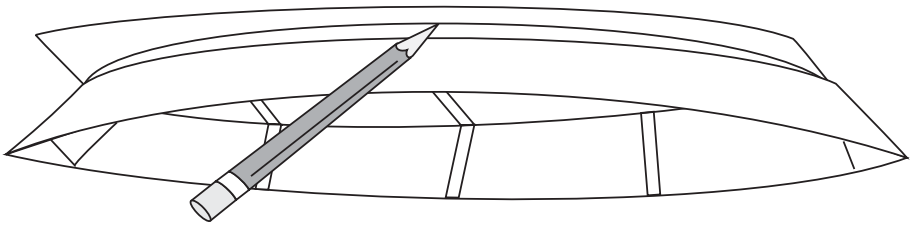
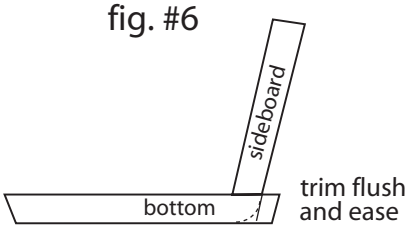


fig. #6



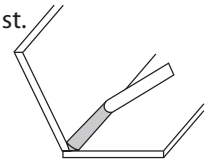
Using brads or small nails when attaching the bottom to the sideboards can prove to be difficult. The easiest method to attach the bottom is to use what I generally refer to as the "glue and stack" method. Put the glue on the bottom of the sideboards and ribs, put the bottom in place and "stack" weight on top to hold the bottom in place until the glue is set. Using a screw into the center of the rib bottoms is recommended. The main purpose of the glue is to hold the parts in place while the bottom is "faired" to the sideboards prior to fiber glassing. The fiberglass will "lock" the boat together and seal the seams.

sheet #6

fiber glassing

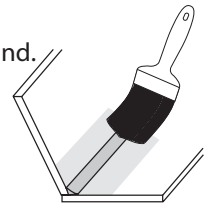
If you wish to stain your boat and use a clear finish you should use a water or alcohol and not oil based stain. Allow the stain to dry thoroughly before applying the resin. All seams and joints should be fiber glassed inside and out with 3" wide cloth for strength and to seal the edges. Epoxy resin is the best, polyester is the most economical and the easiest to obtain. Polyester resin can be found lumberyards and auto parts stores. A good source for epoxy may be found from www.raka.com

1st.



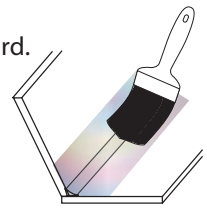
Use a tongue depressor to create a cove on the inside seams with a mixture of fiberglass resin mixed with filler or fine sawdust.

2nd.



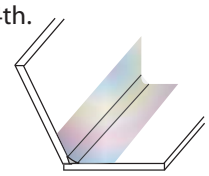
Paint resin on the area to be glassed. If you use polyester resin, for the first application, add one tablespoon of acetone to each ounce of resin, thinning the resin to increase penetration into the wood fiber and holding strength. This is not necessary when using epoxy and is only for the first coat using polyester.

3rd.



Put cloth in place and saturate with resin. When the cloth is saturated it will become virtually invisible. It is important to saturate the cloth but not to the extent to "float" the cloth off the surface. The texture of the weave may be floated with a second coat of resin. Overlap cloth by 2" where needed.

4th.



After the resin has cured, puncture any bubbles and re-glass. The edges of the cloth may be feather on by sanding to blend the cloth into the wood. Painting the entire boat with resin prior to finishing is highly recommended.

Taping the seams on both sides is the minimum recommended, the most common is to cloth the seams and joints on the inside and cloth the entire bottom on the outside. Painting the entire boat with resin prior to finishing is highly recommended. For maximum durability the entire hull could be covered with cloth.

We have designed a folding seat for our pirogue.

Step by step plans include full size templates and 'tricks' for building square.

www.unclejohns.com/boat/seat

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