

A simple, economical, easy to build and fast small planing boat.

**Builder threads on our forum:**

- [tech\\_support](#)
- [2ZTEE](#)
- [dbldipper1](#)
- [eril\\_n](#)
- [sgtdecker](#)
- [col555](#)
- [deering](#)
- [Stripedbass-2](#)
- [Stripedbass-2](#)
- [Bluefish2](#)
- [jlintvet](#)
- [tomster](#)
- [jsosborn](#)

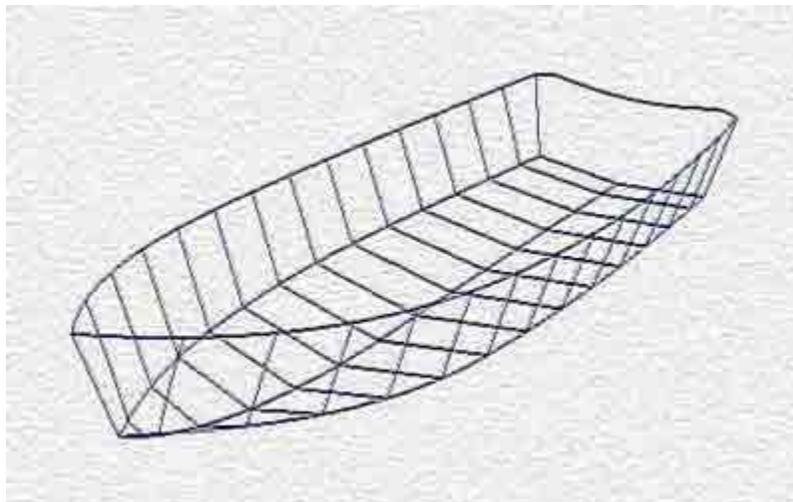
<b>Specifications:</b>		
<b>LOA:</b>	12'	3,65 m
<b>Max. Beam:</b>	56 "	1,42 m
<b>Hull weight:</b>	160 lbs.	72 kg
<b>Designed displacement/draft</b>	450 lbs./5"	205 kg/12 cm
<b>PPI at DWL:</b>	160 lbs.	80 kg
<b>Depth/Freeboard</b>	22"/32"	56/81 cm
<b>Capacity weight/persons per USCG</b>	650 lbs./ 3 persons	300 kg/ 3 persons
<b>Outboard recommended/USCG</b>	5 to 15 HP/15 HP	3 to 10 kW/10 kW
<b>Material:</b>	Stitch & Glue	composite

The Fast Skiff 12 has a program similar to our FL12 with a major difference: she is designed as a planing hull, without rocker and a moderate vee. She is designed for a first time builder and is an excellent introduction to the material and the building method we use for our large power boats: true composite hull, simple set up on a jig made of a pair of 2 by 4's.



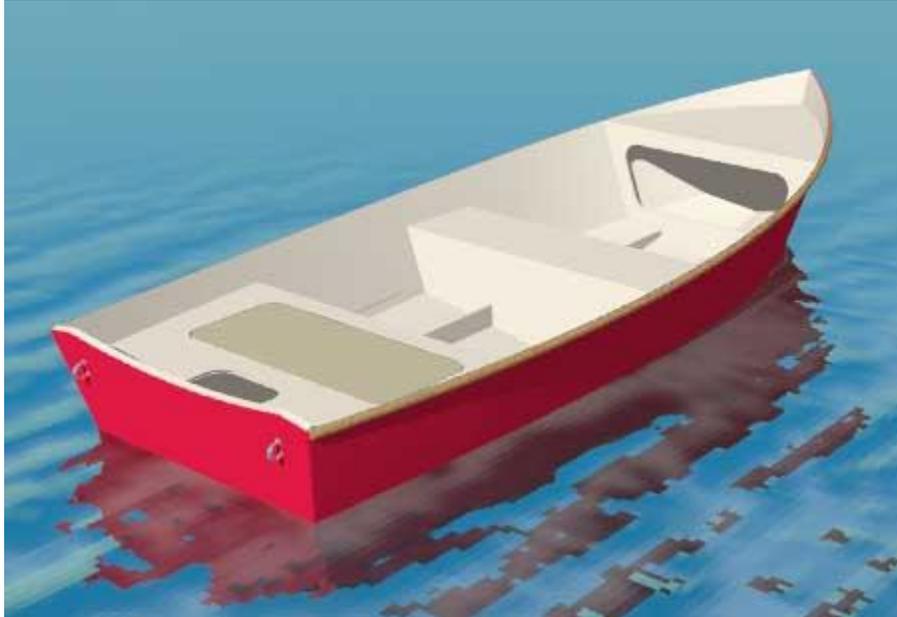
Speed and HP. At 500 lbs. displacement, at WOT, the max. speed will be: 5 HP : 15 mph  
10 HP: 21 mph This is for an engine in good condition at wide open throttle.  
In other words, the FS12 will plane with 2 light or one large person and a 8 HP outboard.

The USCG calculations give a maximum of 15 HP with tiller steering. We consider 15 HP excessive on that size boat, not only because of the speed but because of the weight of the engine on the transom.



We show a standard layout that can be customized. The middle frames should stay where we show them because they cover the butt blocks. The other frames can move if necessary.  
From the bow, we cover the bow part of the boat with a casting deck. There is plenty of storage

under that fore deck with access through an opening in the frame.  
The middle seat is sealed but can be fitted with openings or a hatch.  
The aft deck allows a person sitting on it to steer the boat without having to lift the tiller in turns.  
The aft deck shows a cut for the outboards clamps and fuel fitting.  
We also show a hatch that is simple to build, does not require hardware but stays in place even in rough weather.



The boat will be well balanced with a tiller man sitting on the aft deck and a passenger forward but when single handed, the tiller man should sit in the middle and use a tiller extension. A tiller extension is a simple PVC pipe.

This is not particular to our boats!

All small boats are sensitive to weight distribution and it is good seamanship to keep the boat properly trimmed.

The plans show limber holes and a notch in the frames to run a fuel line from the bow to the stern, along a stringer.

The transom is designed for a standard 16.5" shaft but can be cut lower or raised higher, between 15 and 20" if you have a different shaft length.

There is a small skeg (keel) that helps tracking and protects the bottom.

Our assembly method uses butt blocks that are hidden under the mid seat and act as locators during the construction: no need to measure the location of the frames and the butt blocks are invisible!

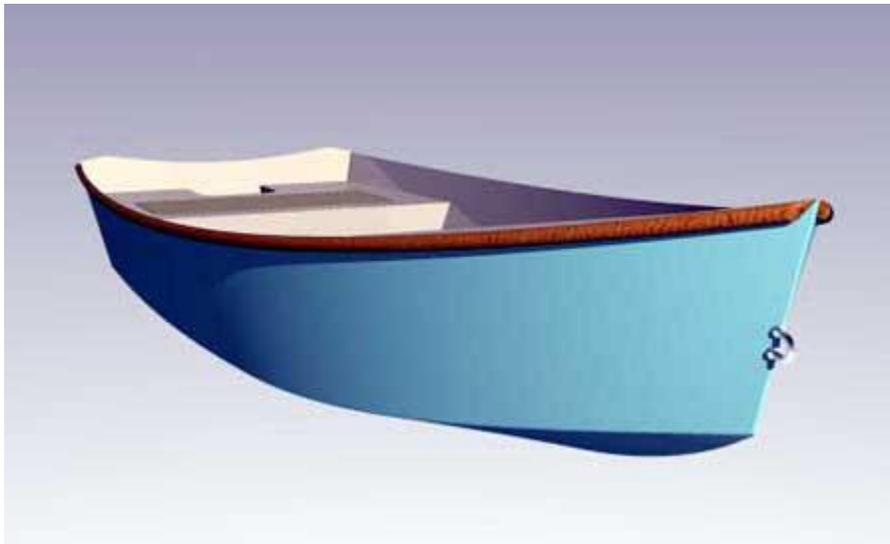


### **Comparisons:**

Difference between the FL12 and FS12:

The FL12 is a displacement hull. That means that she will move easily through the water at displacement speeds, with oars or a small outboard. The FL12 will not plane even with a large outboard because of the rocker in the hull. The transom of the FL12 is above the waterline at normal trim and she can be lighter than a planing boat.

The FS12 is a planing hull without rocker. A planing boat must withstand heavier bottom loads and the transom must be able to transmit the thrust of the engine to the hull. For those reasons, the planing boat hull must be stronger and heavier. With her immersed transom, the FS12 will not row as well as the FL12.



**Building method:**

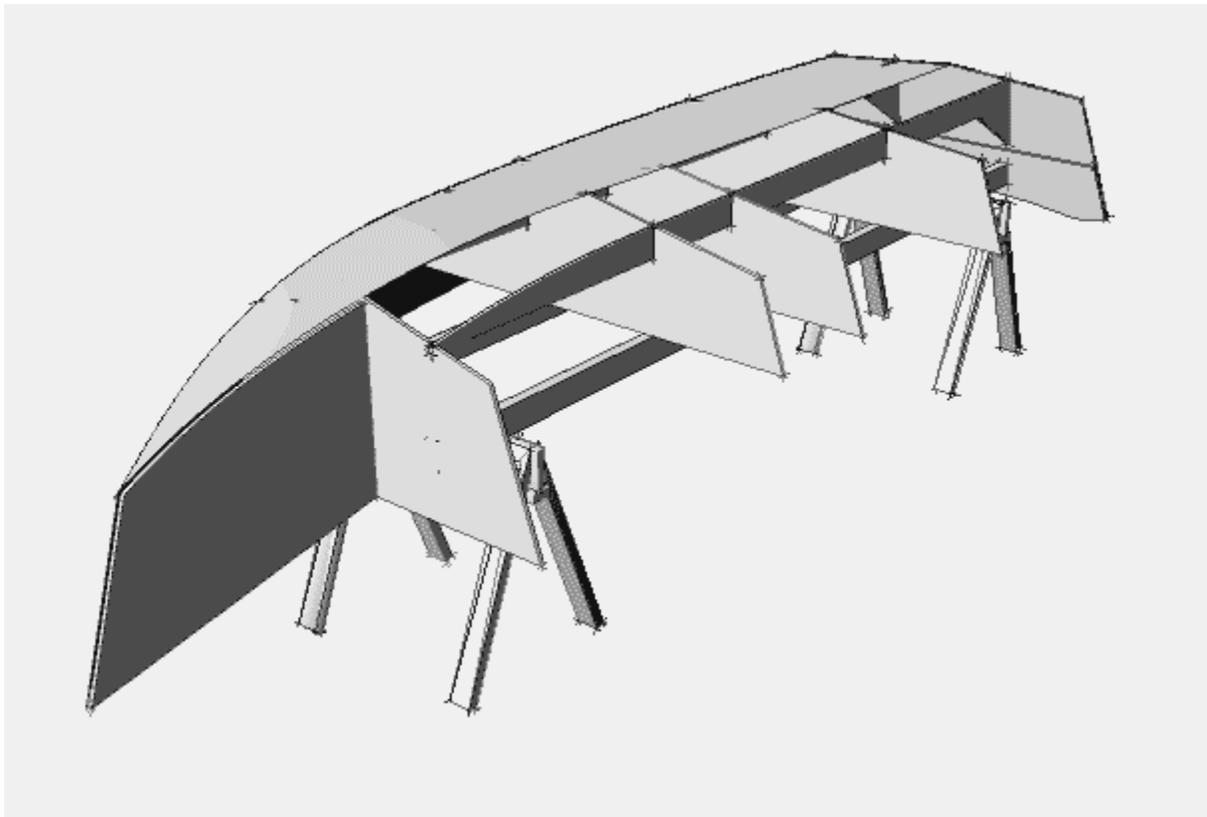
The FS12 can be built in two different ways: with or without a jig.

The FS12 can be built the same way than the FL12 and other small boats, by the sharpie method. The hull is shaped by bending the side panels around the frames and transom and the bottom panel is added.

Our detailed building notes show a better and more precise method using a jig made of a pair of 2x4's and two sawhorses.

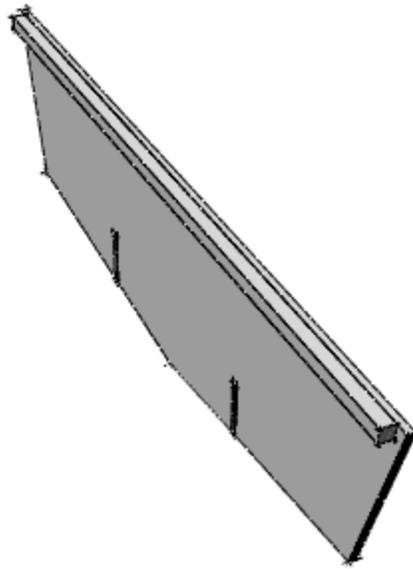
Unlike the sharpie method and origami style variants with folded panels, this method guarantees a straight bottom, essential for good performance at planing speeds.

It does not increase the amount of labor, quite the opposite. The inside fiberglassing is much faster with this method.



Here is a step by step description of that method. The construction method is described in further detail in the 15 pages building notes shipped with the plans.

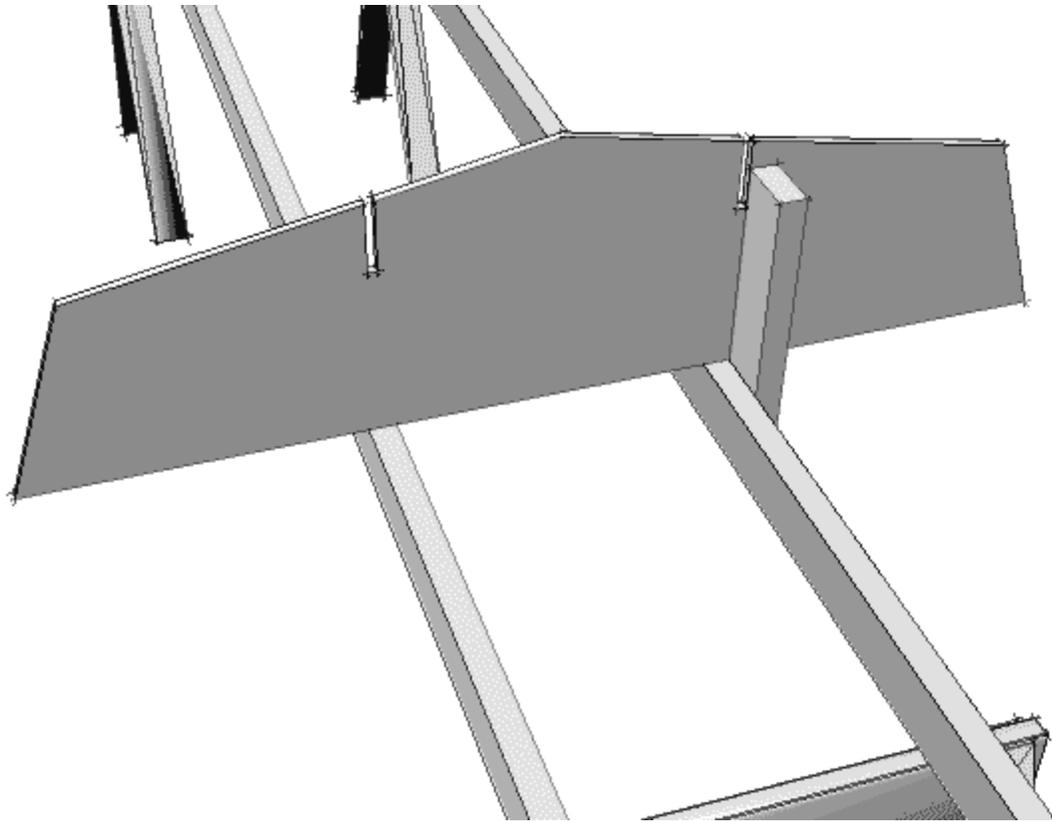
We start by cutting hull parts from plywood, flat on the shop floor. The plans give all required dimensions measured from the edge of the plywood sheets. Our technical support web site explains how to use those dimensions. The frames are fitted with a cleat, a batten epoxy glued to their upper edge.



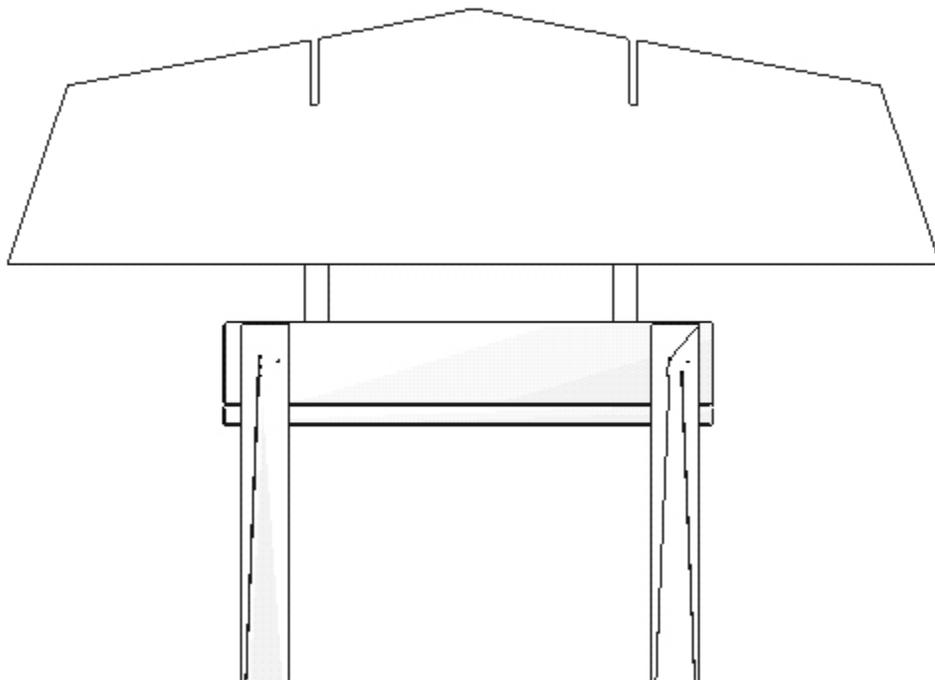
We assemble the hull on a pair of 2x4's (beams) on sawhorses. The plans give the dimensions for those beams. Those beams are called strongbacks.



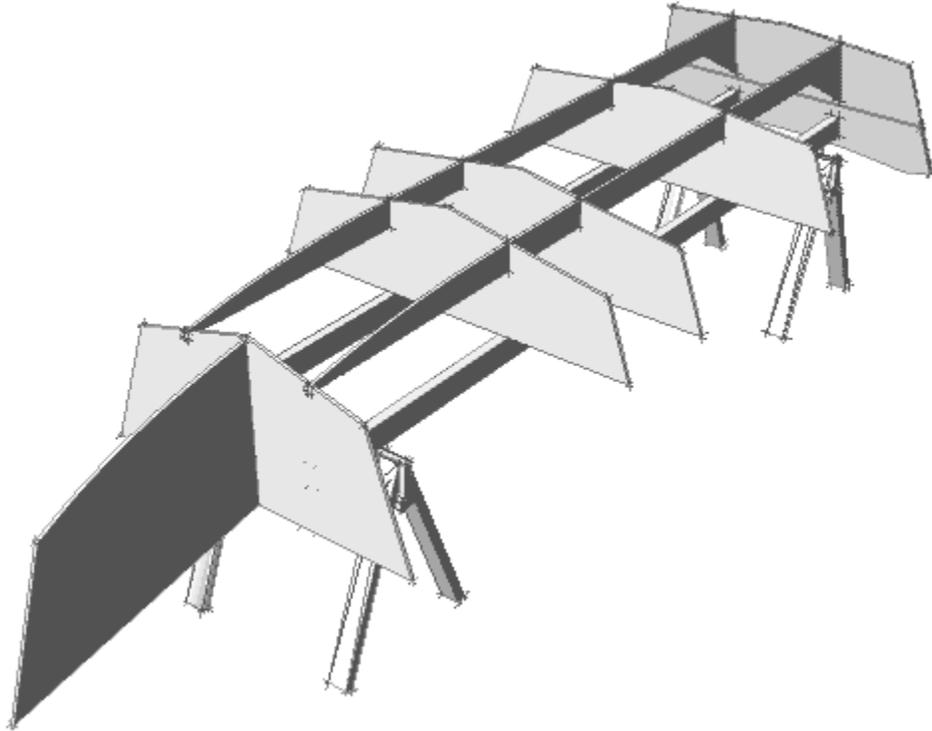
On the strong backs, we place the frames. The plans show the exact location of each frame.



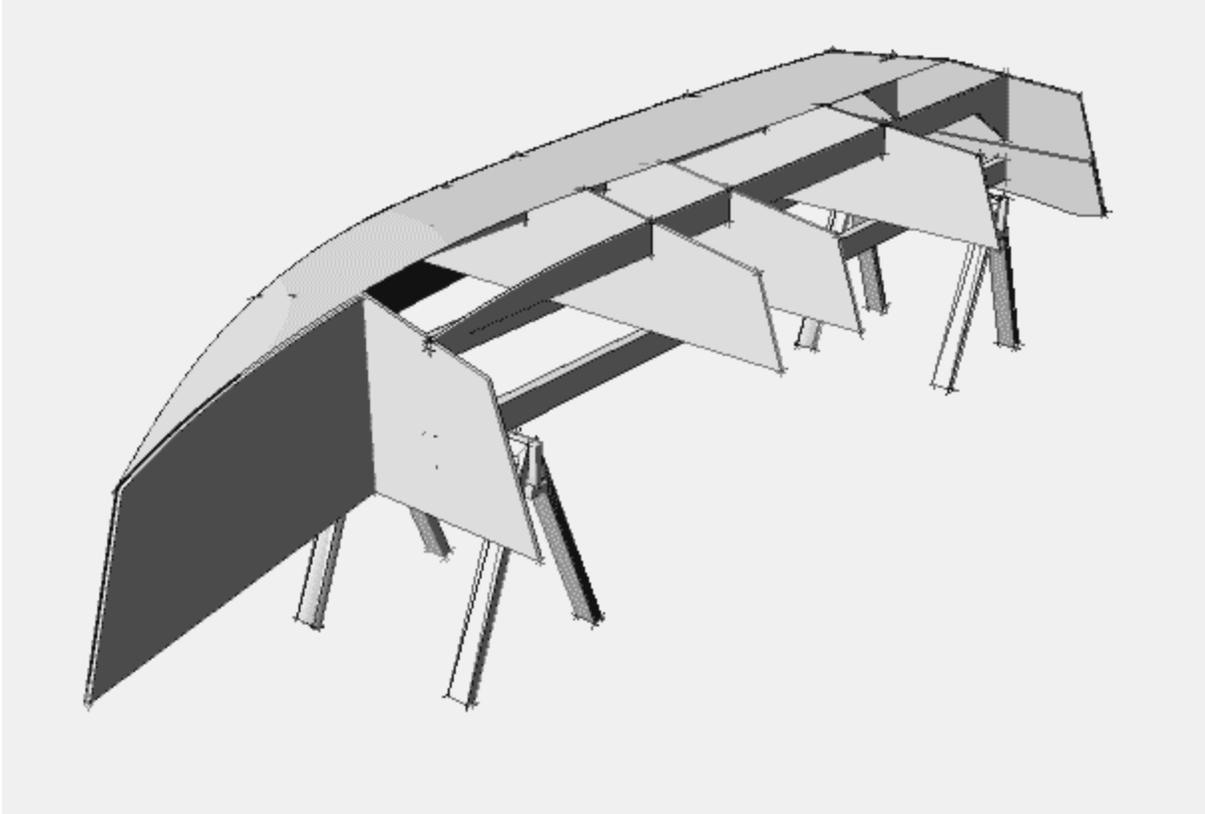
The frames are aligned and centered. The stringers fit in the notches and will automatically align the frames.



With the frames and bow mold up, stringers in the notches, your assembly will look like this:

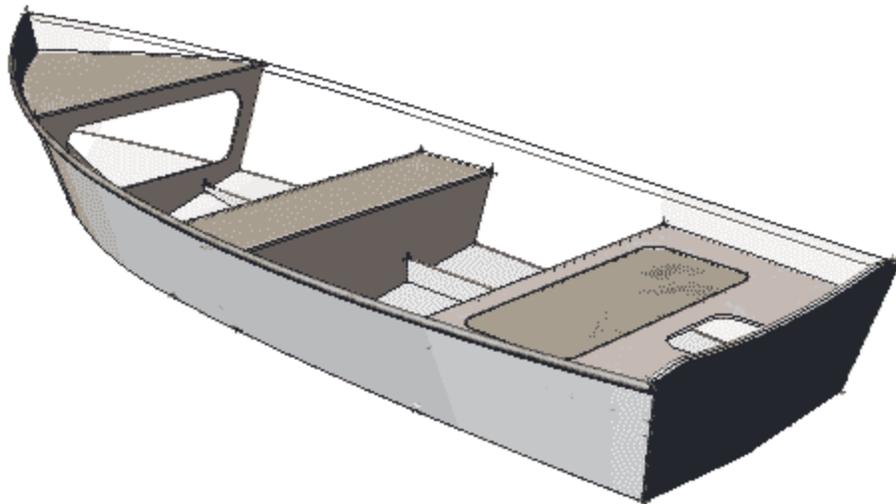


On that assembly, we drop the hull panels.



The panels are loosely stitched together to allow the plywood to bend smoothly. We use as few temporary screws as possible: 2 each side on the transom should be sufficient. After a final check for fairness, the hull is fibreglassed: tape on the seams first then apply the wide fabric.

The fibreglass hull is flipped over, framing is removed, and the inside of the hull is fibreglassed: seams with tape then wide fabric. The frames are then re-installed and bonded to the hull. The boat is complete and ready for paint.



The method is identical to the one used for large boats but does not require a true jig. The design was engineered for ease of building: the seat tops and aft deck are used as a building base and the frames are used as molds. The only temporary mold is a small bow mold. All the dimensions for the frames and transom(molds), bow mold, stringers and even the 2x4's used to support the frames, are on the plans. There is nothing to calculate or to loft.

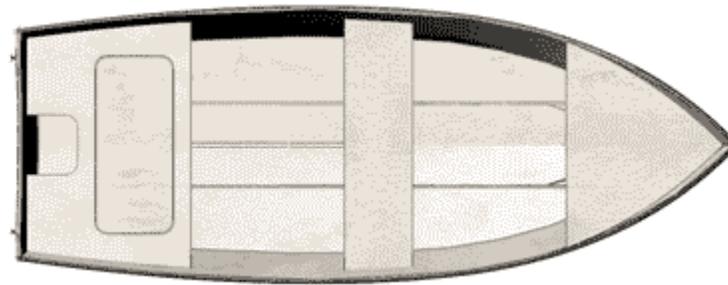


### **Required Skills:**

If you plan to build a larger power boat, the FS12 is an ideal first boat. You will build the FS12 using all the techniques required to build a larger boat but at a small scale, on a very simple jig and using very little materials.

As all our stitch and glue boats, the FS12 is easier to build than other plywood or fiberglass boats. We worked hard to keep the building as simple as possible: most of the plywood cuts are straight lines, the nice curves are created by well-planned bending around the frames. All the plywood parts have been precisely calculated: you cut them flat on the floor, no need for templates, no need to take measurements from the hull framing as in the plywood on frame method.

This boat can be built fast by a first-time builder. He should read our tutorials first but there is nothing difficult in the building method. No beveling, no tricky adjustments, no lofting at all, no calculations of any kind: we show dimensions for all the parts on the plans.



### Options:

Access under casting deck: the builder can leave the frame full and cut an hatch in the top.

Front seat: he can also replace the casting deck with a plain bench but that will require the addition of a breasthook.

Middle seat: optional cuts in the frame for access or hatch in the top (shown on the plans).

Aft deck: you can leave the top in one piece and provide access through a cut in the frame.

We do not show strakes, they will not add much to performance and tracking.

You cannot omit the stringers, sorry. They are part of the structure that stiffens the bottom, but you can cover them with a sole, fixed, or removable.

You can add a spray rail. This would be a simple batten, quarter round section, epoxy glued along the edge of the chine.

An important option is buoyancy.

You can make our FS12 unsinkable by pouring two-part foam in strategic locations.

The building notes suggest pouring the foam in unusable corners. The hull floats by itself: the density of our material is less than water (or plain fiberglass) but you will need foam to support the weight of the engine and the crew.

There is no "heavy duty use" option. The hull is very strong as designed.

### Bill of Materials:

*(Excerpts from our BOM)*

The BOM list materials based on our standard layout and includes a 15% waste factor for fiberglass. For plywood, we use standard sheets 4' x 8' (122 x 244 cm). Please read the building notes and see the plans for detailed specifications.

We recommend Marine grade plywood BS1088 for the hull, either Meranti or Okoume. Meranti BS6566 is acceptable as is marine Fir plywood or exterior plywood with no voids.

Note that exterior or marine fir without voids is difficult to find and that fir or exterior will check.

<b>Plywood 4x8' (122x244cm)</b>		
1/4" (6mm)	4	
3/8" (10mm)	2	
<b>Fiberglass (totals)</b>		
Biaxial tape 6oz.	100 yards	90 m
Woven cloth 9 oz.	10 yards	9 m
<b>Resin</b>		
Epoxy, total	4.5 gallons	18 liters

**Labor:**

The hull can be built in 20 hours, but a finished boat will require 40 hours or more depending on the level of detail and the skills of the builder.

**More:**

Visit our message board, help pages, tutorial pages and read our FAQ: most questions are answered there.

**Plans Packing List:**

6 detailed drawings with all dimensions required to cut the side panels, bottom panels, bulkheads, seats, and all parts from flat plywood sheets: no lofting, no templates required.

Nesting drawings for the best plywood layout, all parts nested.

- Drawings list:
- B277\_1 Concept drawing
- B277\_2 Plywood nesting for all parts.
- B277\_3 Frames
- B277\_4 Hull and Deck panels
- B277\_5 Construction and lamination schedule .
- B225\_c: Detail drawing for seat locker lid with framing and assembly view.
- Specific building notes for this boat with Bill of Materials.
- Help files reference list and more.

© 2016 - 2020 TwoMorrow Holdings LLC  
7485 Commercial Circle,  
Fort Pierce, Florida USA