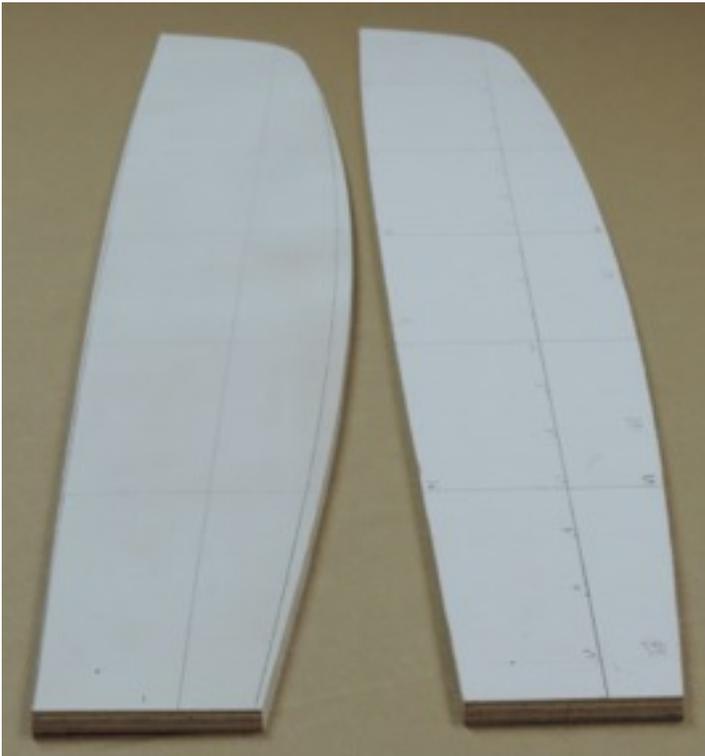
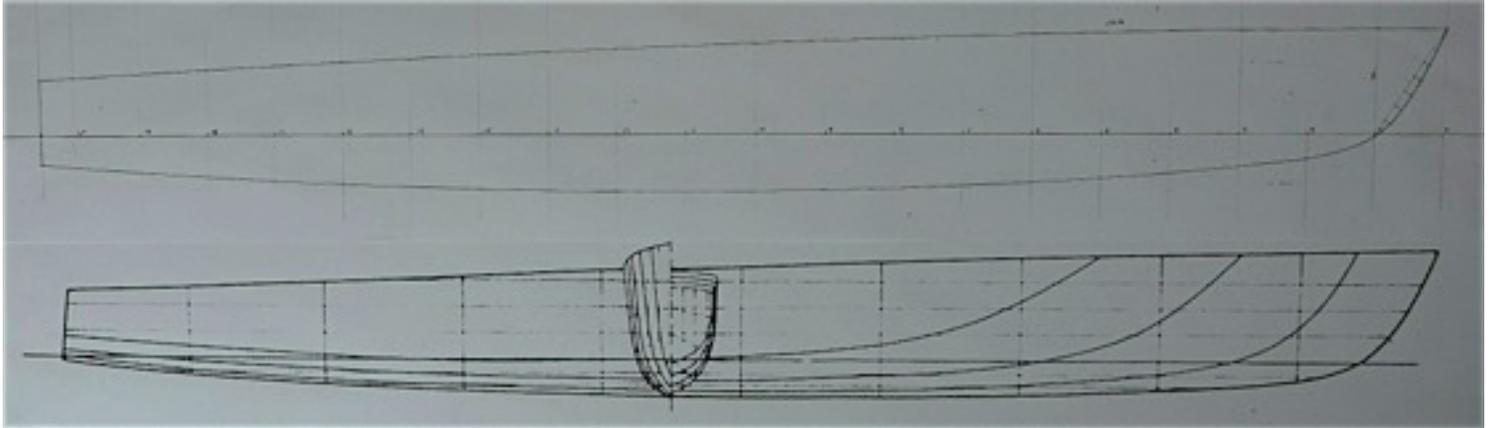


These photos show the construction of two tortured plywood model hulls.

I began by making a scale model of a Tornado hull because the panel profiles and keel angles were available online.

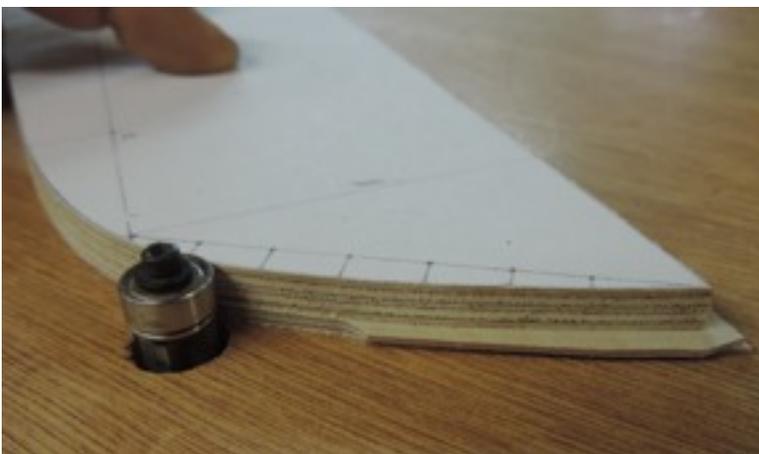
The Tornado shape doesn't have nearly the displacement I need for a trimaran main hull, so the second model has a different panel profile and is much wider at deck level (see last page).

The photo below shows the Tornado hull lines (bold) and the profile of the hull panels (light).



On the left are the hull panel templates for both hulls. The template on the right is for the Tornado hull.

The router table was used to cut out two identical panels from 1 mm plywood (below).



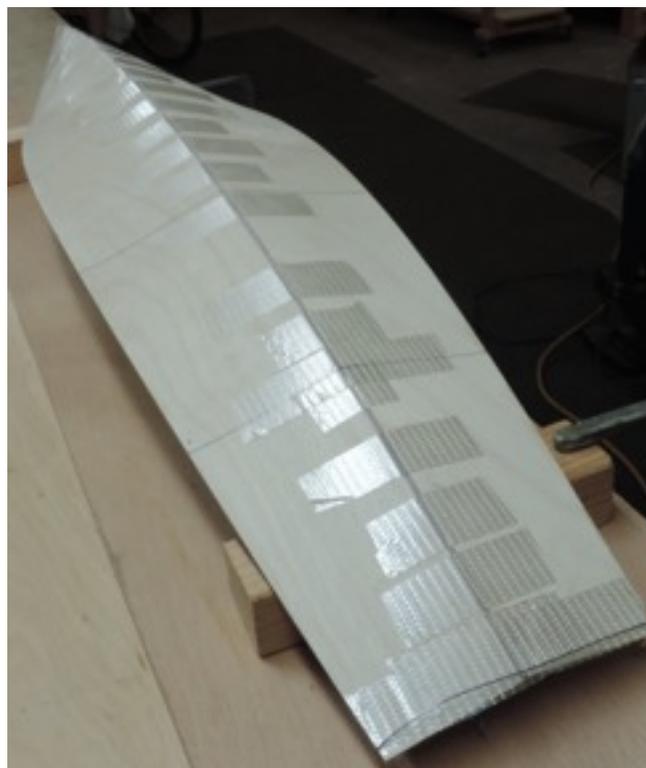
A sheer clamp is glued on to both panels.



The panels are taped together,



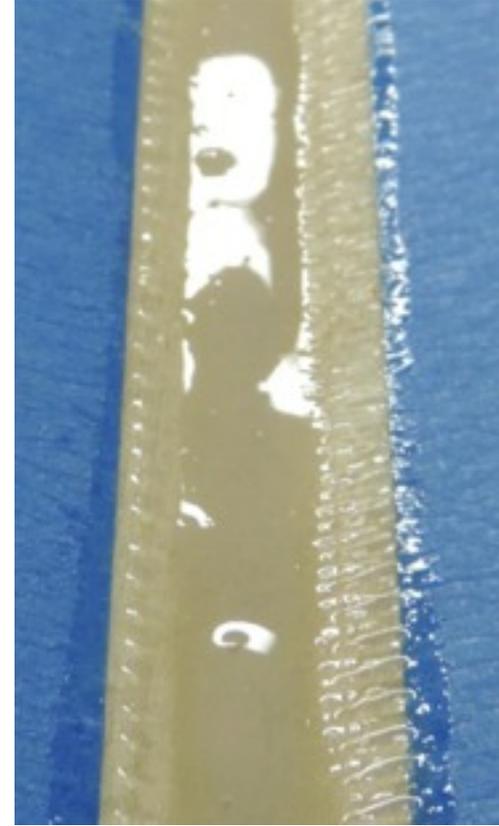
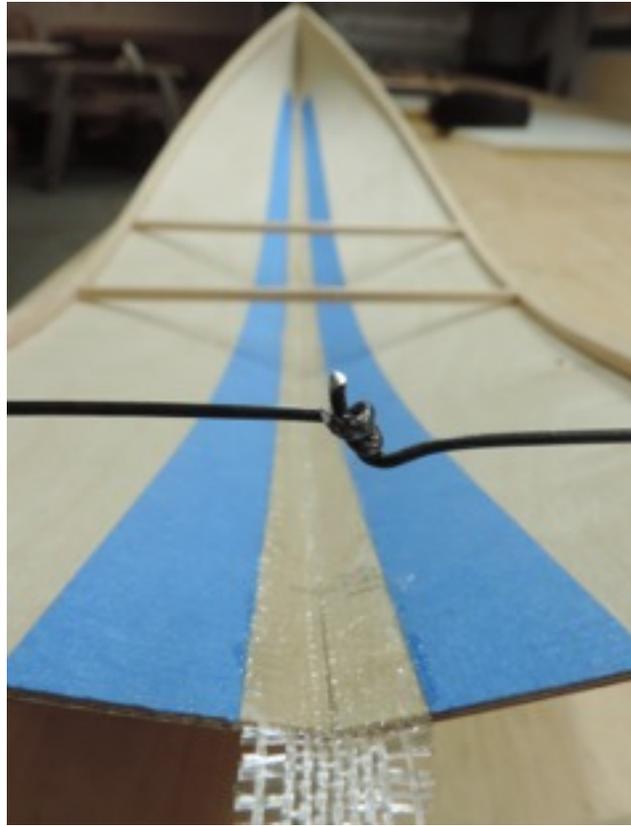
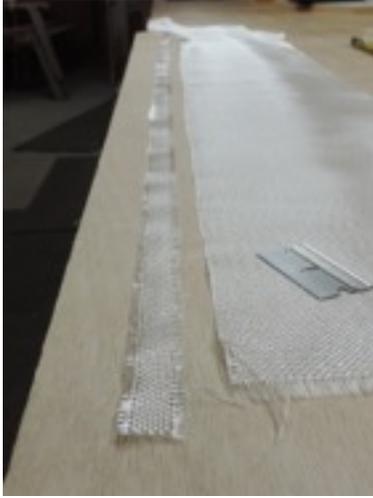
spread apart with sticks and taped tighter.



Keel angle templates and locations taken from the Tornado design. Sure is ugly.



My first two attempts broke (very loudly) on the keel line using just a bead of epoxy. The latest model uses a 1/2" wide strip of 4 oz cloth with a bead of epoxy over it. This puts the glass in tension and the epoxy bead in compression. This seems reliable but a full cure is necessary before folding.

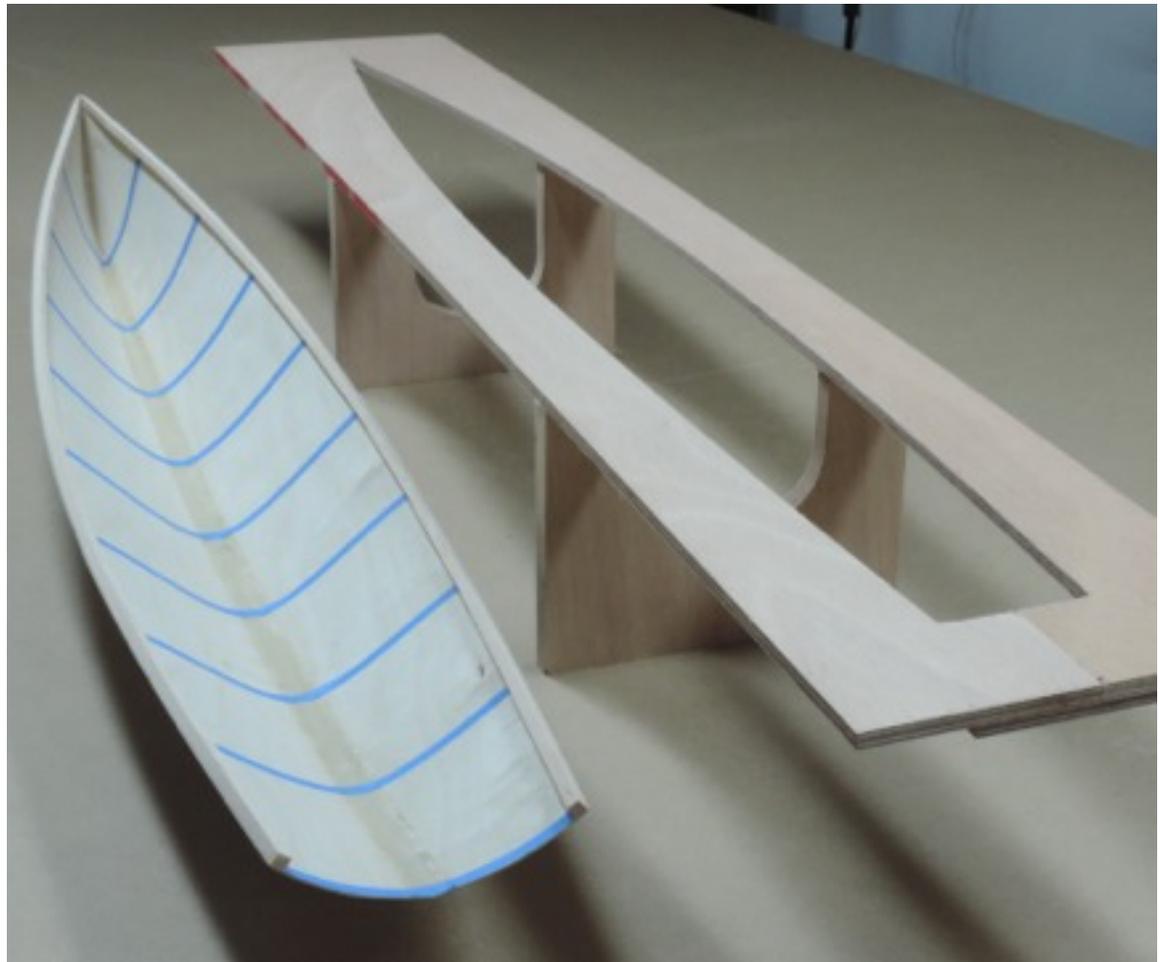


The stem area is not glued at this point and only taped together.

The deck jig has cradle-like frames. This eliminates the need for cross ties and in a full size hull would allow the hull and jig to be tipped from one side to the other for easier access to the inside of the hull.

On a full sized hull, all the interior structure and most of the deck must be installed before removing the hull from the deck jig.

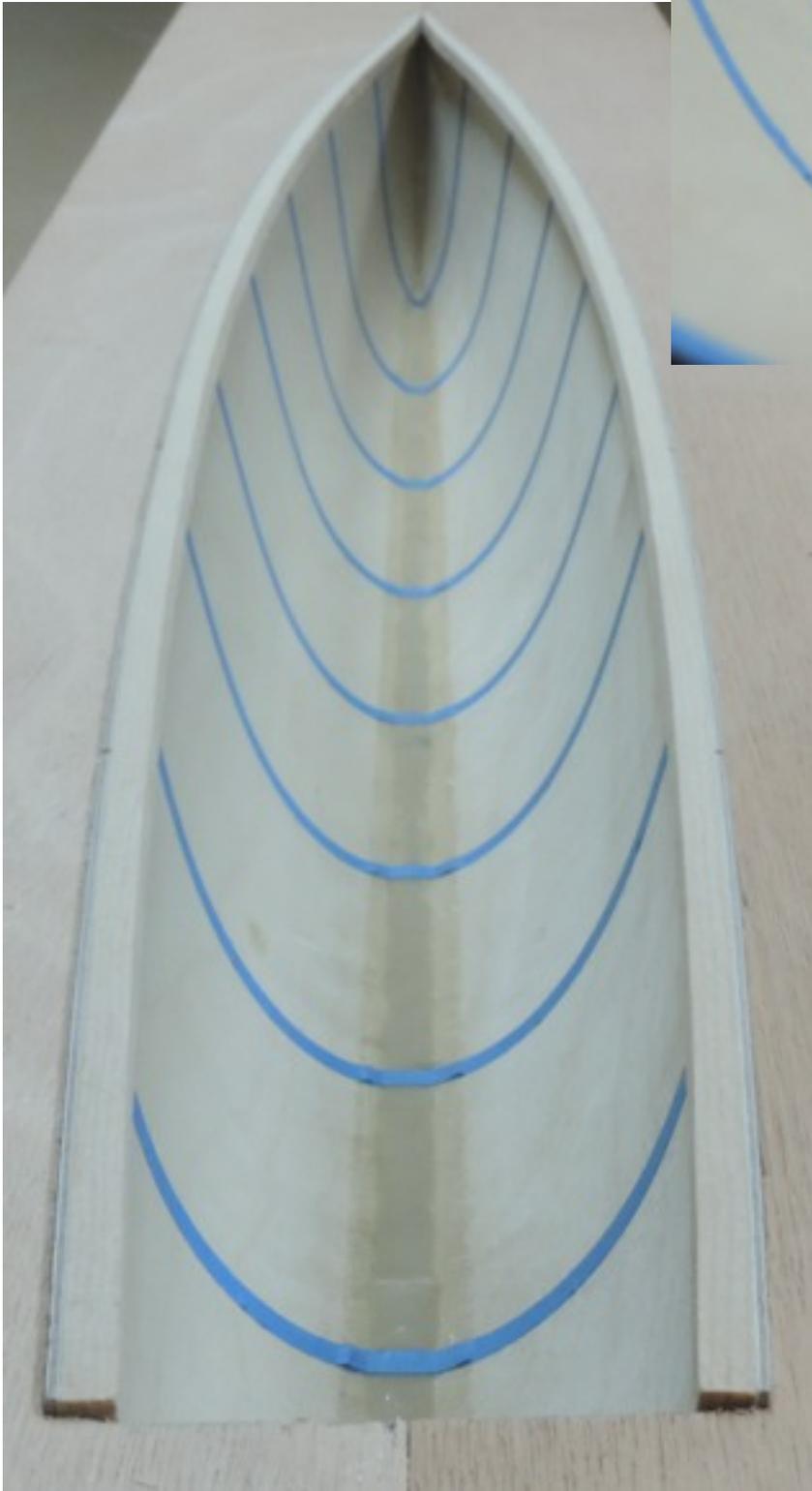
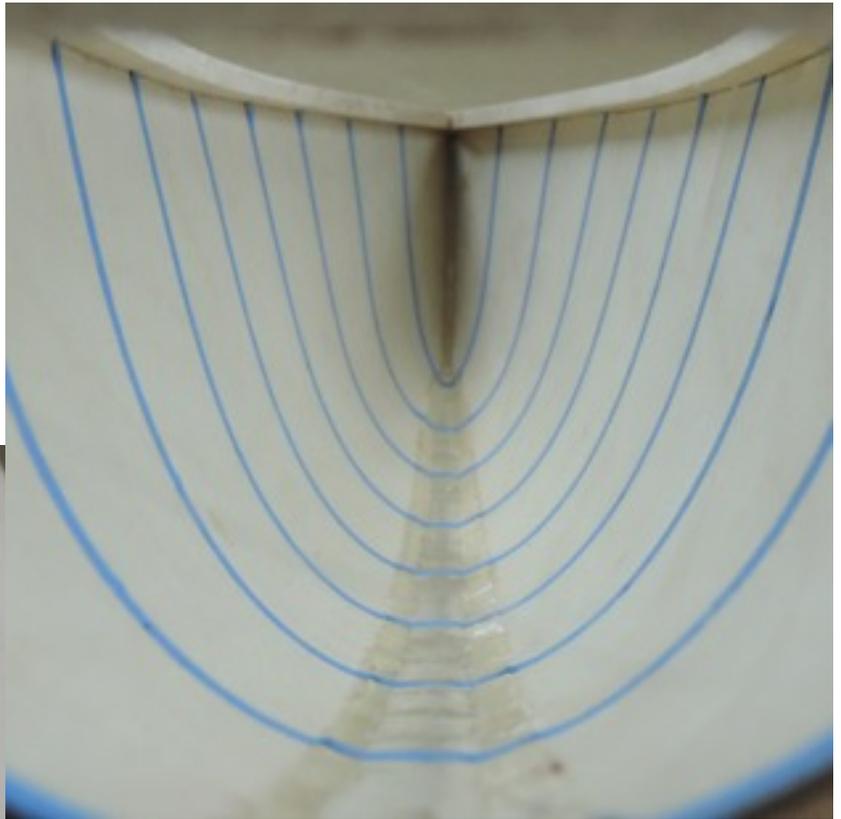
Being able to work with the hull on edge at a comfortable height seems necessary.



This hull has much more flare than the Tornado hull and was easier to insert into the deck jig.

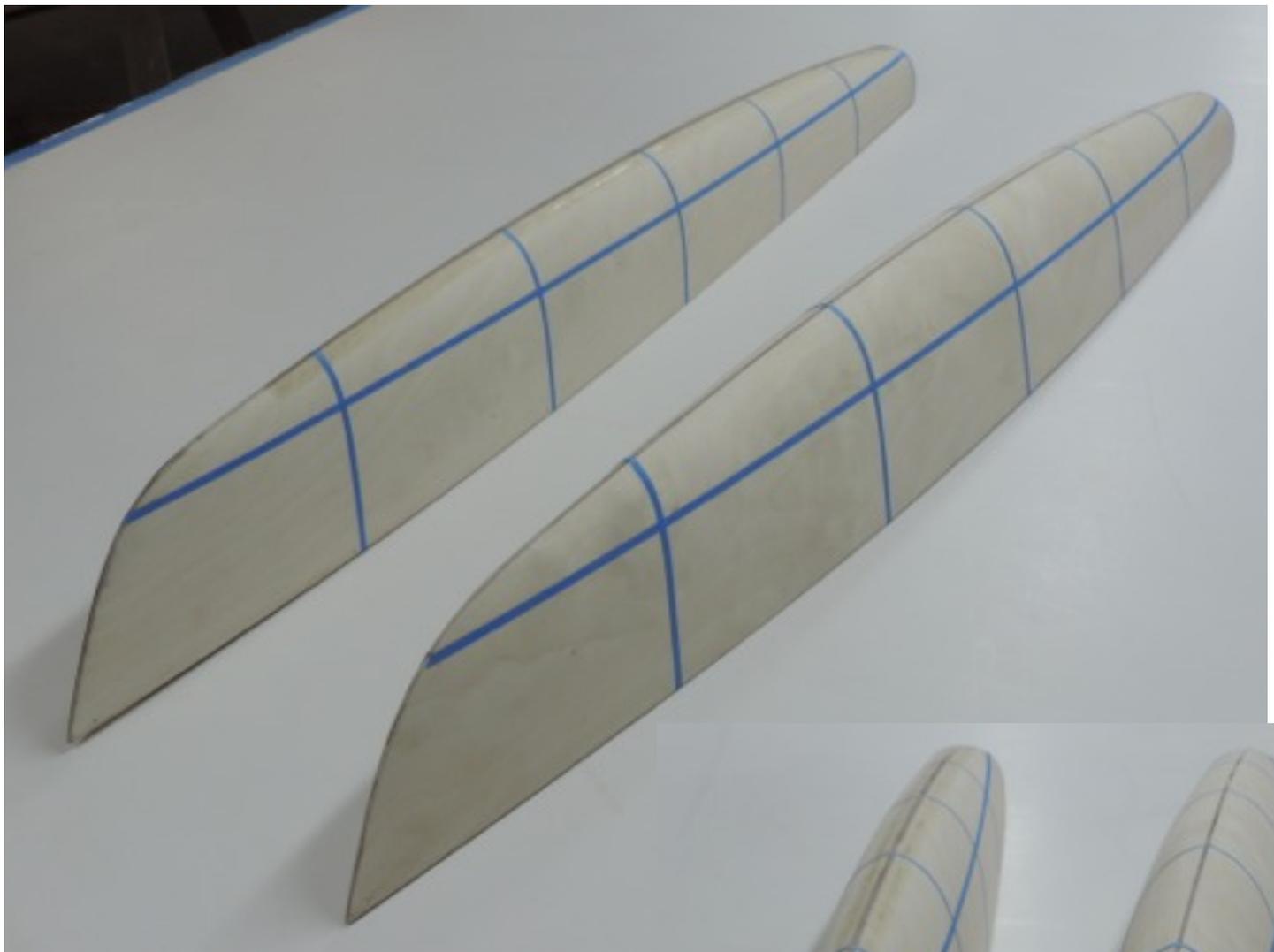
The hull is symmetrical and fair with nothing but the deck jig to support it.

The stem area takes a bit of pushing (and some super glue) to get it straight.



A thin plywood deck was glued on at this stage by syringing a tiny bead of 5 minute epoxy on the sheer clamps and pressing the deck onto it.





This photo shows the difference between the Tornado hull deck profile and the second model's deck profile.



While these were only first attempts at learning about the process, what I have learned from these two models makes me very interested in learning more. The models are really fair and incredibly stiff for their weight.

According to Meade Gougeon, the models scale up accurately to full sized hulls using just the panel profile, keel angles, and deck profile.

My next step is to determine the displacement of the bigger model, but at this point I have to guess at the displacement I need.

These models are 36" long for a full sized hull of 24' (at $1\frac{1}{2}'' = 1'$). That makes them 1/8th scale.

