

## Chapter Two

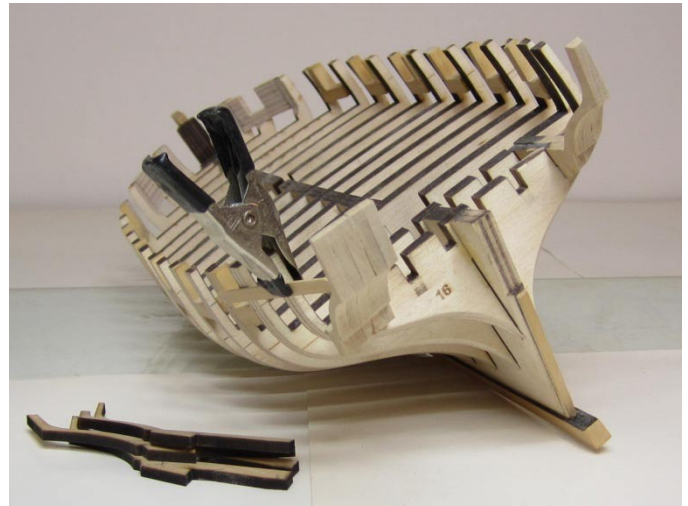
### *Framing the Stern...*

To begin framing the stern, I cut out the stern frames. These are labeled as parts x, y, z and zz on the plans. They were cut from 1/8" thick boxwood. I was careful to align the pieces with the grain of the wood properly for the most strength. Align them so they follow the grain of the wood sheet as much as possible. Having the long extensions go against the grain would make them very weak.

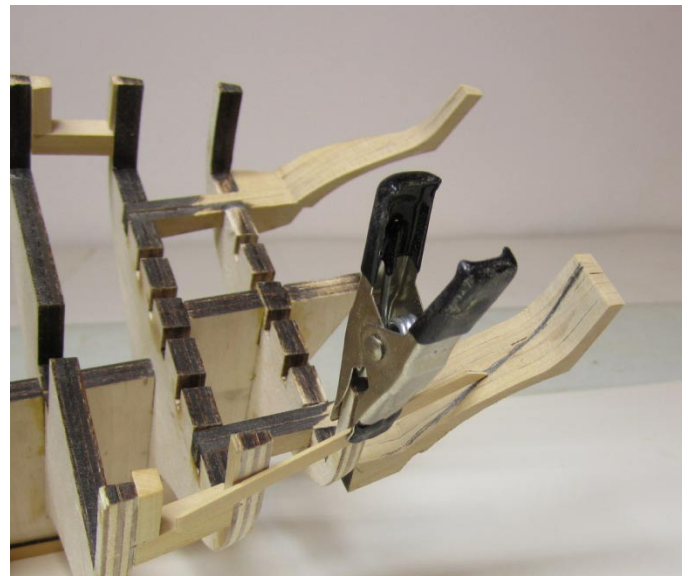
In the photo above you can see the parts x, y, and z being tested in their respective slots cut into the last two bulkheads. Note that stern frame "z" is doubled up. I could have just as easily cut it from a single piece that was 1/4" thick but since I was using the 1/8" thick sheet already I found it easier to just double them up. It doesn't really matter in the end. Parts "zz" can be seen in the foreground. Do not glue them into position just yet.

It is best to start with only frames "z". Double them up by gluing two of them together and glue it into the slots (port and starboard). Then glue three "zz" stern frames to the outboard side of those. Once again...you can cut these from thicker material but I chose to cut all three "zz" stern frames from 1/8" stock.

The photo above right shows the stern frames Z and ZZ glued into place. Next up it was time to fair the outboard sides of these stern frames to conform to the hull shape. In that same photo you



might be able to see that the starboard side has been faired already. To do this, I ran a longish strip of wood down the side of the hull. You can see it clamped to the bulkhead above. There is no need to clamp it. I just need to do so in order to show you the strip in place. As I ran the strip down the hull the aft end was traced on the inside of the stern frames. This created a close representation of what the faired shape of those stern frames would look like. See the image below.



With this reference line drawn as shown, I was able to quickly remove most of the excess wood with a sanding drum on my rotary tool. When I got close to the line I stopped and finished fairing the outboard edge of the stern frames by hand.



You can see how the outboard edges were faired in the photo above.

The remaining stern frames, x and y were glued into position. To finish off this step, the two stern ports were framed. The port sills and lintels were framed using 3/32" thick boxwood. Take the details from sheet one of the plans. To make this task easier, I used a printout of the stern framing as a template. This template was taped to the stern frames so I could mark the proper locations for the port sills and lintels. I wanted to make sure they were not glued into place too high or too low.

On the plans you can see how the port sills will hang down below the transom and onto the counter. That is OK. Once you sand them so they are faired, it should look like the photo shown above. Try and get some really tight seams against the stern frames. The ends of the port sills and lintels will have some interesting bevels to achieve a tight fit. Try not to have your sills and lintels cut too long. Even a slightly longer piece will force your stern frames apart and cause your ports to be misshapen. Refer to your template often by holding it against the stern to check that your stern frames and port framing having shifted or moved. Make any necessary adjustments before moving along to the next step.

The stern frames should be faired just like the bulkheads were. The stern transom has a gentle

curve. The counter has the same. Take your time fairing the transom and counter but be careful not to snap any stern frames.

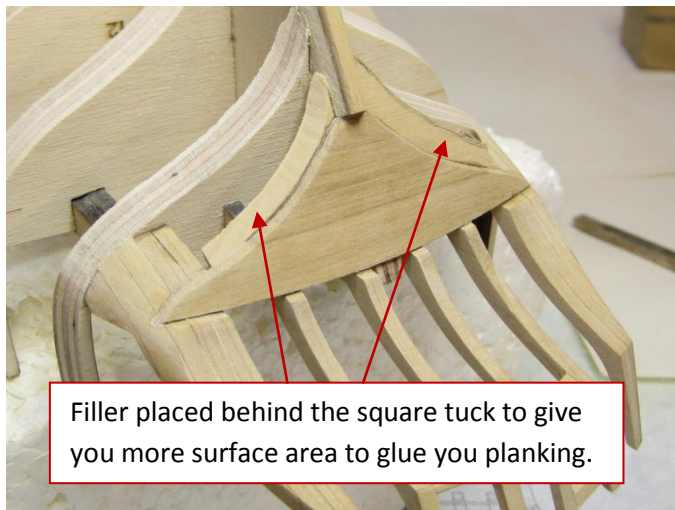


### ***Start creating the square tuck...***

One of the unique features to Cheerful and other cutters is the square tuck. I have rarely seen this modeled correctly and so I have made a point to try and simplify its construction. To begin, cut the square tuck piece from 1/32" thick boxwood. You will find the template on sheet one of the plans (just below the stern frames).

The shape should be very close so it fits very well. That is if your stern frames were glued into position correctly with the right angles and such. If they shifted at all after installing the stern port sills and lintels, or spread apart you may have some issues. Don't glue this square tuck piece into position until any issues are resolved and the stern framing matches your template.

You can see in the photo above how it sits in the notches of each stern frame after fairing them. Study its placement on the framing plan (sheet one). This 1/32' thick piece should flex easily. It will need to flex in order to create a gentle curve port to starboard. This piece should be faired to match the contour of the hull also as shown above.



Finish this step by placing two filler pieces behind this square tuck piece. You will be gluing the plank ends here and need more surface than the 1/32" thick sheet can give you. You can use any scrap you have. I used pieces that were 1/4" thick. Once glued to the back side of the square tuck, they were faired as shown in preparation to receive the planking. Another view of the finished stern is seen below. This completes work on the skeleton of the model and we can now start planking the hull.

