

HMS Blandford 1720 Cross Section Project
10/6/2017

Building Instructions Part 1

Build Board and Keel Construction:

It is a lot easier to build a model if you use a building board. I am providing a saw-tooth type jig for this build, it is well suited for cross-sections.10/6/2017

The building board and jig do not have to be a work of art, unless you plan on making several models of this section it will be discarded at the end of the build.

The top can be made from plywood, Masonite or similar material attach the pattern to the top with spray adhesive, rubber cement or glue of your chose. Cut the center hatched section with a scroll or jig saw and attach it to the four support posts with wood glue and #4 finish nails or paneling nails.

The base needs to be a little thicker $\frac{3}{4}$ " is preferred $\frac{1}{2}$ " can be used but make sure the posts are long enough to maintain the overall height of the jig. The top of the jig is set at the waterline.

If you are building the model "Naval Board Model" style there will not be any exterior planking below the waterline. You can do one side that way and fully plank the other. That is the way I will build my model.

After the keel assembly is finished it will be installed as shown on sheet 2,

The keel assembly consists of three pieces false keel, keel and rising wood I like to use a dark colored wood for the false keel, such as walnut, bloodwood or rosewood to differentiate it from the keel. The keel rising wood and all framing should all be of the same species of wood (personal opinion). I like to use European beech wood, it looks like oak and is easy to work. Cheery, maple, popular and basswood are also good for framing. Make sure when you cut the notches for the frames you stay on the waste side of the lines, you need to use a hand file with the keel in a vice to fit the notch to the frames I use a small piece of scrap wood the same thickness of the frames as a gauge to finish seizing the notches, it is easier than handling the frames the tips of the frames are easy to break off. By drilling two $\frac{3}{32}$ " holes in the keel as shown on the drawing you can

glue two pieces of 3/32" tubing in the keel that will hold it in place on the building board. The brass pins make it easy to remove and replace the keel from the board and can be used for mounting the model to the display stand.

I have included a cross-section and longitudinal section in this set of drawings to show what the model will look like, everything shown in the sections will be detailed with patterns.

This should get you off to a start, the next package of drawings will contain all the frames.

Mike

Building Instructions Part 2

Frame Construction:

The nine frames are all double frames, the forward frames are shown in blue and the aft frames red and all the pieces are labeled with the frame and part number to make the frame assembly easier (without labels they all look about the same).

The finished frame thickness is, 1:32 = 1/2" 1:48 = 3/8" as shown on the side view of the frame drawings.

After attaching the patterns, you will cut out the parts allowing a small amount of white space around the part for final sanding to the finished size, leave the tops of the frames a little long for trimming to the Planksheer rail.

You will be assembling the frame over sheet 1 of each frame, placing the drawing under a piece of glass or plastic to keep glue off the drawing. Dry fit the parts over the drawing checking the joints between pieces and trim if required, they do not have to be perfect but a good fit looks better on the model.

Glue the pieces together, I use Elmer's Carpenter's Wood Glue it dries clear and if something goes bad you use water to disassemble stuff. After the two sides of the frame has dried for an hour, glue the sides together using clamps or a weight pressing the sides together. I like to leave the frame clamped for two hours (min) then drill the holes for the through bolts, use 20-gauge brass wire for the 1:32 frames and 22- gauge for the 1:48 frames. The outside and notch of the frame will require a small amount of bevel from frame four through nine.

Each frame has a small notch in the center of the spreader bar for a string or piece of wood to align and level the frames with, make sure everything looks good in the dry fit before attaching the frames to the keel. Before removing the pattern mark the location of the deck clamps and using a thin strip of check to see if they line up.

Remove the frames one at a time and glue them in place on the keel checking for square and level.

You have completed Part 2 of the build.

Part 2 Addendum:

Beginning with frame 5 through 9 the frames are beveled toward the stern, to create a trim line for the aft side of these frames complete the 5 frames and place frame 6 aft side up over frame 5 aft side up aligning the keel notches (the bevel for the keel notch is noted on sheet I of the plans) using small clamps to hold the frames together draw a trim line around frame 6, repeat this procedure for frames 6 through 8. For frame 9 using a small drawing compass set at the distance from the edge to the trim line on frame 8 with the point of the compass riding slightly below the edge of the frame draw a line parallel to the edge on the aft side of frame 9. You can use a drum sander in a Dremel, pad or belt sander.

After the frames are installed in the keel and the internal structure is complete you will do the finish sanding of all the frames.