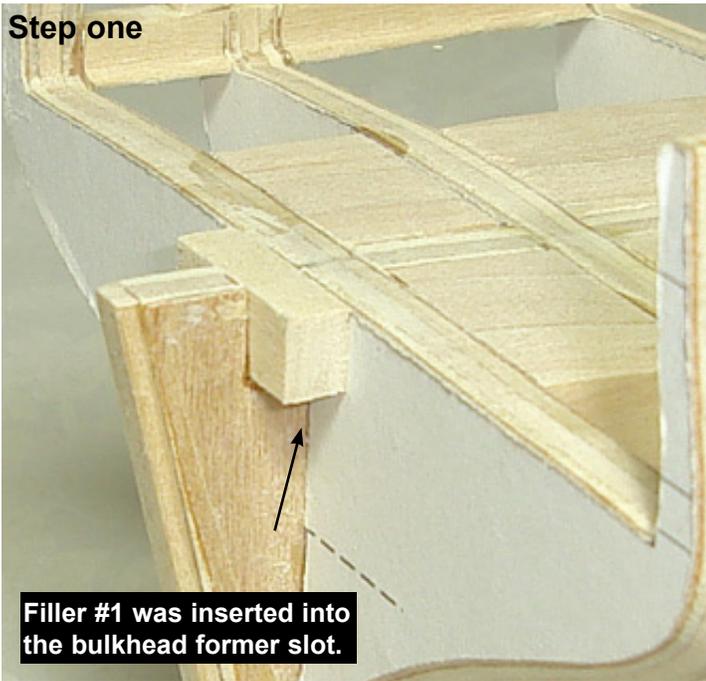
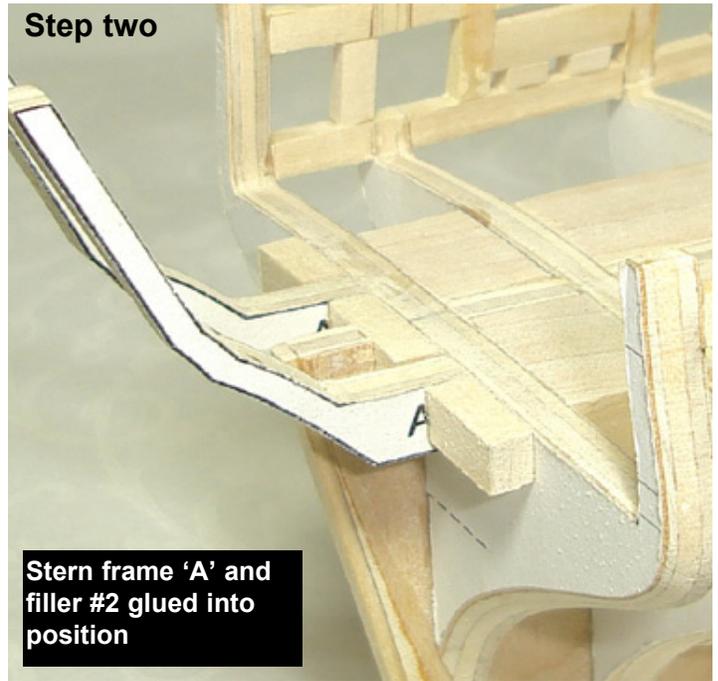


Step one



Step two



## Chapter Four - Stern Framing

A stern framing template has also been provided for you. It is color coded just like the gun port templates in the last chapter. Framing the stern of any ship model can be a challenge. The stern framing for the Syren has been simplified for you and step-by-step instructions will guide you through the process.

**Step One** — Use a 1/4" x 3/16" strip of Basswood and cut stern filler #1 to the length shown on the stern framing template. Be certain that these filler pieces are cut to their proper length. These pieces will determine the overall width of your stern ports.

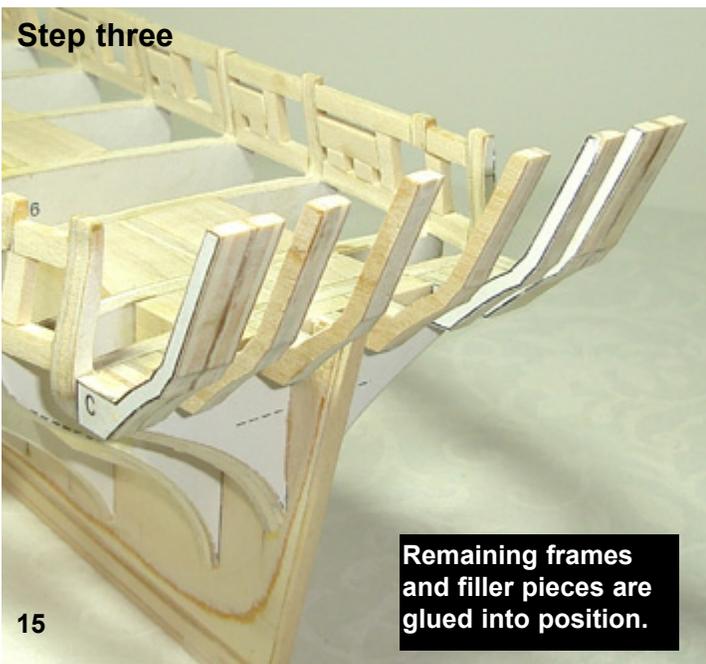
Place filler #1 into the slot in the bulkhead former just behind bulkhead #26. Each filler piece should be set flush

to the top of bulkhead #26 as shown in the photo provided. Filler # 1 should be centered (side-to-side) in the bulkhead former slot. This will ensure that the entire stern assembly is centered once it is completed.

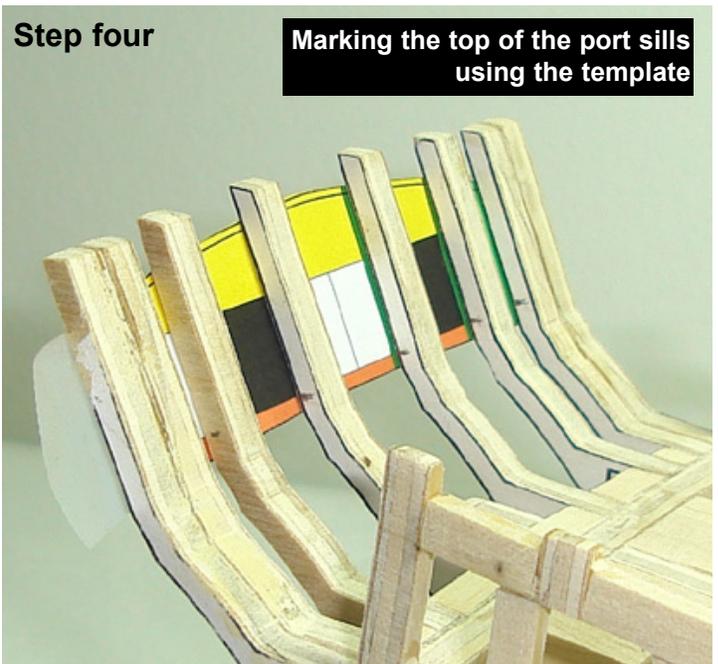
**Step Two** — Glue stern frame 'A' to the side of filler #1. There are two frames marked "A". One is glued to each side of filler #1. Once again these frames are set flush to the top of bulkhead 26. Once they are dry, glue the fillers (#2) to the sides of each of those frames. Measure their lengths precisely (1/4" x 3/16").

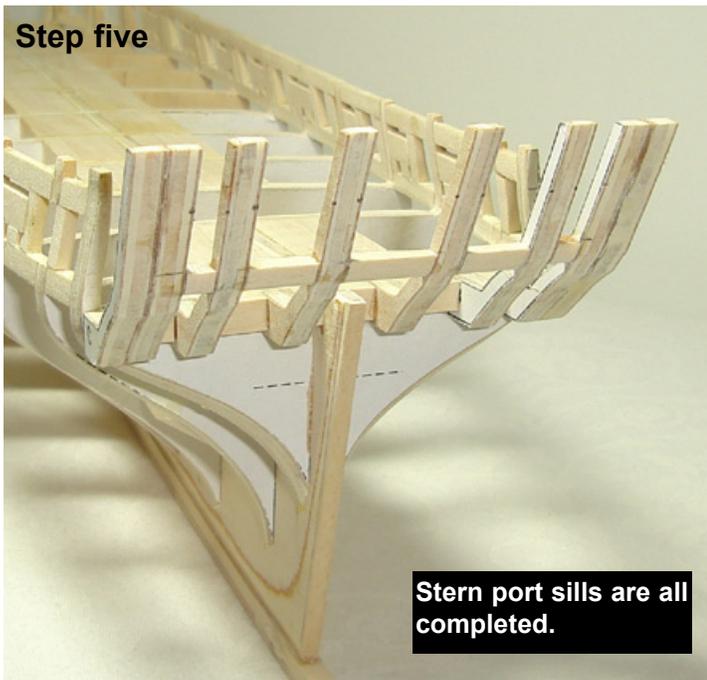
**Step Three** — Repeat this process again. Glue stern frames 'B' into position followed by fillers #3. Finally, glue

Step three



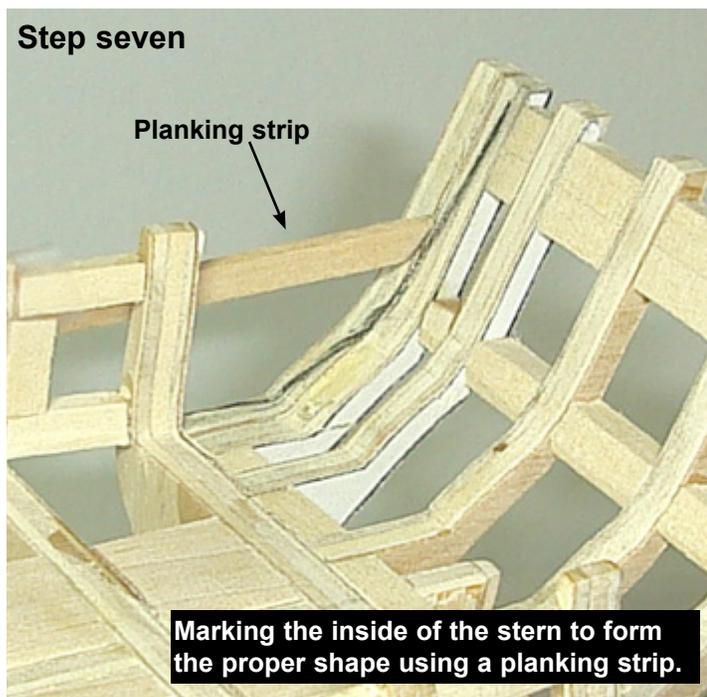
Step four





frame 'C' into position alongside those filler pieces. You will notice that frame 'C' was doubled in thickness. You should have four frames marked 'C'. Double them up before you glue them onto the model. At this stage be very, very careful because the stern frames are delicate. They can break quite easily but the next few steps will strengthen the whole stern assembly.

**Step Four** — Cut the stern template out with a sharp blade. Cut it along the line that represents the top of the upper counter. Tape it to the stern using the frames as a guide to line it up. This is a good way to see if the ports will be properly positioned later. Tape the template into position so the frames face inboard. Use a pencil to mark the top of each port sill (red) on the sides of each stern frame. See the photo provided. There are also some laser



### Step seven

Planking strip

Marking the inside of the stern to form the proper shape using a planking strip.



### Step six

Fill these two openings for added strength

Stern port lintels are all completed. Note how they were doubled in height by gluing two Basswood strips together.

scribed lines on each stern frame to help you establish the top of the port sills.

**Step Five** — Cut the port sills to length using  $3/16"$  x  $1/4"$  strips of Basswood and glue them into position. Glue them between each stern frame. Make sure the top of each sill is flat (the same way you framed the gun ports along the sides of the hull). Sand the port sills flush with the outside and inside of the stern frames. This sanding will actually fair the stern to shape. The stern actually has a slight curve to it when viewed from above. Your frames will actually get thinner in the process so be extremely careful while you are sanding. Double check that the 2 pound cannons will fit and your sills are not too high. Remember that the deck will be  $1/16"$  thick and you can place a copy of the cannon into position to see if the ports are the correct height.

**Step Six** — Measure  $15/32"$  up from the port sill to find the locations of the lintels. The stern ports should end up being the same height as those along the sides of the hull ( $15/32"$  x  $15/32"$ ). Glue the lintels (yellow) into position after cutting them to length. The lintels should be cut from a Basswood strip that is  $3/8"$  x  $1/4"$ . Simply glue two of the  $3/16"$  x  $1/4"$  strips together (edge-to-edge) in order to get a strip the correct height to use.

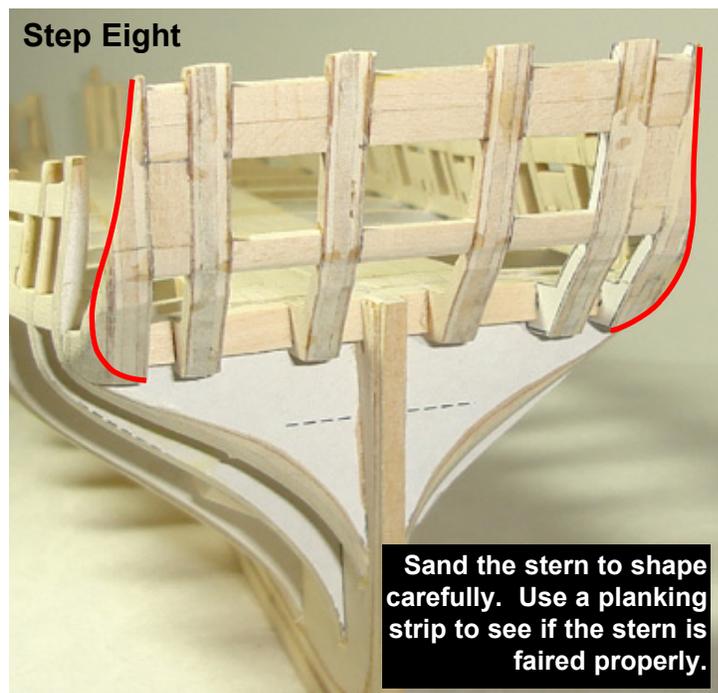
**Step Seven** — You will have to establish the correct shape of the stern on each side of the hull to facilitate the outer planking. To do this, hold a planking strip against the side of the hull. The hull should be faired properly at this point. You will notice in the photo that the end of the planking strip has been angled so it lays flat along the inside of the stern. As you slide the strip down the hull you can see how it captures the shape of the hull on the inside of the stern. Use a pencil to transfer this shape onto the stern as shown. After you create this reference line on both sides of the stern (P & S) you should notice the consistency in their shape and positions.

**Step Eight** — Before you remove the excess material it is recommended that you fill the two openings on the outside of each stern port. It will strengthen the stern even more. Remember it is quite fragile. Then sand the sides of the stern down to your reference lines. If you have a rotary tool, use a sanding drum to quickly remove the excess material. Only sand it part way to the reference line. These power tools can sand away a lot of material quickly and it is better to do the final shaping by hand. The stern assembly should be faired to accept the hull planking and can be checked for accuracy just like the hull itself.

Run a plank across the hull at different levels checking to see that it lays flush against the edge of the stern. Keep sanding until you are satisfied the plank will run smoothly around the “tuck” of the stern. This is the area where the hull planking butts against the lower counter at the sides. See the photos provided that show the stern on the prototype after it was faired for planking.

**Step Nine** — Some filler pieces will be added below the counter so you will have a surface to glue your hull planking to. You can use a solid block or you can use two strips of the  $\frac{1}{4}$ " x  $\frac{3}{16}$ " strips glued on each side of the hull. The later is shown in the photo provided. The strip under the counter should be set flush to the edge of the counter. The strip down the bulkhead former should be positioned so the rabbet strip is still raised and visible from the side. Examine the photo closely for their positions.

**Step Ten** — Sand the filler blocks or strips to shape until a test plank lays flush against them. This procedure can take some time because of their location under the counter and against the bulkhead former. Take your time shaping



these pieces as it will make your planking that much easier if faired properly. You can turn the hull upside down and it will be easier to shape them. However you should place some blocks under the deck to prop the stern and stem up. Don't let them rest on your work table because they may break under the pressure of your carving and sanding.

