



View of the contemporary model stored at the NMM museum Greenwich.

Chapter One

The Winchelsea project was designed to allow intermediate builders a chance to model an English 32 gun frigate without spending \$1700 on Boxwood, Swiss Pear or Holly. I aim to show that a model built at 1/4" scale using a less expensive wood will create a finished product just beautiful and elegant.

This model will be offered as a semi-scratch project. To begin, you can purchase the starter package which contains all of the material to build the skeleton of the model. This includes all of the bulkheads, keel and

stem elements, and stern framing. Plans for the project are also included. I am compelled to also mention that the plans will NOT contain the bulkhead templates and false keel patterns. These were omitted purposely to make it more difficult for unscrupulous companies in China and other countries to pirate. This is unfortunately a huge problem and drastic measures must be used to make pirating projects and kits more difficult. For this reason, if you intend to build the Winchelsea, you must purchase the full



starter package which contains the bulkheads.

In addition, various mini-kits for other aspects of the project will be offered. These are all optional and you may opt to build these from scratch using the plans as a guide. All of the details for the other elements will be contained on the plans.

To make this project affordable, the bulkheads and former will be cut from $\frac{1}{4}$ " light plywood. The other elements that are visible will be offered in two woods. You can choose which ever you prefer. You will see both versions in pictures throughout these instructions. It will be available in both ?????? and Alaskan Yellow Cedar. Both woods are very economical and build into fabulous models.

The Cedar version only needs to be finished with an application of wipe-on-poly while the ?????? version can be finished just as easily.

Let us talk a little about how to properly finish Alaskan Yellow Cedar.

Alaskan Yellow Cedar is a soft wood. I would say that it is comparable to Basswood but it has other properties that make it quite suitable for ship modeling. It has long been used for ceremonial carvings in the Pacific Northwest and Alaska.



The photos on the previous page show some samples of the intricate carvings made from Cedar. Note the absence of visible wood grain and warm golden color. For a soft wood, Yellow Cedar can hold a very sharp edge and carves beautifully. This makes it ideal for our purposes. The yellow color is not as obnoxious as Yellow Heart which is also a very hard wood and difficult to work with by contrast.

Regardless of which wood you choose, please have an ample supply of 220 and 320 grit sandpaper on hand. The 220 is perfect for removing the laser char on all of the pieces while the 320 grit creates a “glass-like” and smooth surface for finishing. I would avoid using any stains at all but you can choose from three different finishes.

- Sanding Sealer...this will protect the wood but keeps it a light yellow color. This creates the lightest color of the three finishes.

- Wipe on Poly...this deepens the yellow color a bit more but it will mellow over time. You will notice the mellowing in just a few days. It may appear very yellow immediately after applying but that will go away very quickly.

-Tung Oil and other Oil finishes...these types of finishes create a very deep and very yellow appearance that doesn't mellow nearly as much. It may be too “startling” for some of you but give all three finishes a try and choose the one you like best.

I usually first sand the surface with 220 grit. Then I use the 320 to give the basswood Cedar a super smooth surface that is clean and crisp. Wipe off any dust to prepare for finishing. I am using Wipe on Poly as my finish.

I apply it to larger areas with a soft lint free cloth. I leave it on for just a minute or two. Then I wipe off the excess with a clean cloth. This is great for most aspects of the hull and planking. But for the smaller intricate areas with small parts you must use a sacrificial paint brush. Work it into the nooks and crannies. Then take a clean brush to remove the excess. It works like a charm but will take some getting used to for most.



Cherry version of stem parts being assembled above

Laser cut stem and knee assemblies made from Cedar and Cherry woods.

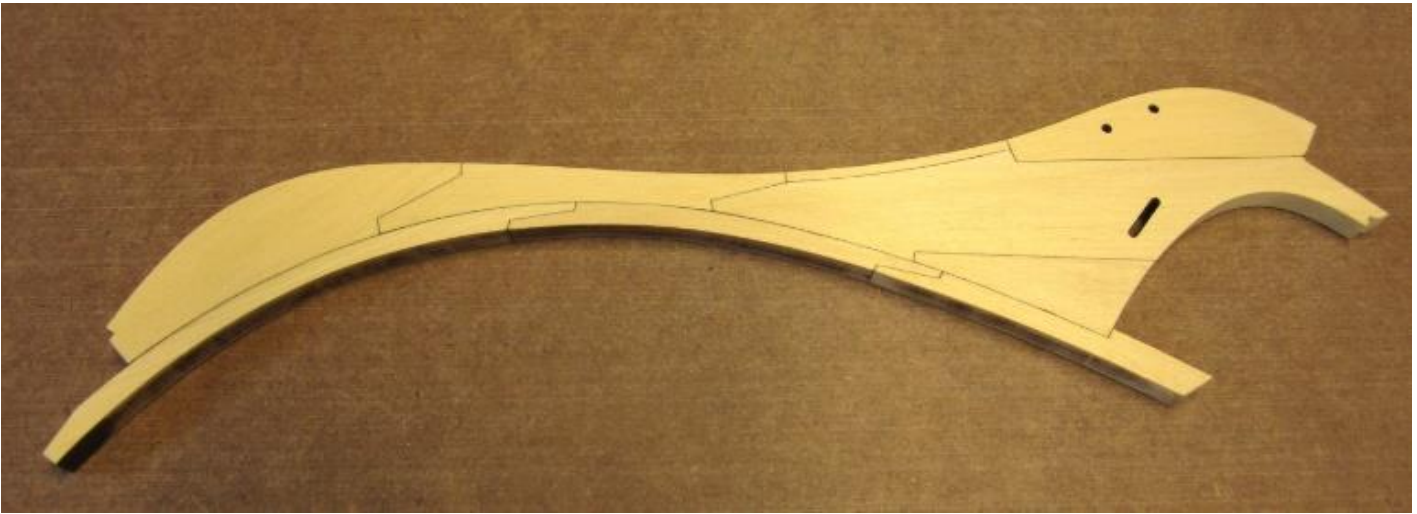


Assembling the Knee of the Head

If you examine the, you will find the components for the *knee of the head*. I am using this term “loosely” since this is a plank on bulkhead (POB) model. Many of the components that will make up the parts of this model are certainly not constructed as they would have been in actual practice. This is of course true with the bulkheads and bulkhead former which make up the skeleton of the hull. This was done to simply the hull’s foundation for first-time scratch builders. Even though this is the case, I have tried to show all of the other elements using the actual construction principles of the period. I have designed the knee of the head along with the stem pieces as they would have been constructed

when a frigate like this one was built in the 1760’s and 1770’s. There are some instances however, where some liberties need to be taken in order to *meld* these more accurate pieces onto the simplified POB skeletal design. I will occasionally point out each time when such liberties have been taken. This should give you a good idea of how this project is a true stepping stone from the usual mass produced POB kit on a path towards a more complex fully framed project.

There are eleven components for the head knee assembly and they are shown on the plans. If you purchased the starter package, these elements have been laser cut for you. To begin, the first nine laser cut pieces shown in the photo on the next page are



assembled first. All of the pieces will be 1/4" thick. The parts above are made from Yellow Cedar. The two remaining pieces are the Gammon knee and its extension piece not yet added in the photo. Those are laser cut from 5/32" thick wood and will not be added until the entire assembly of 1/4" thick parts have been glued together and tapered. They will be discussed in more detail later.

When assembling the stem parts, create two finished assemblies first as shown in the photo on the previous page. Note how the three sections that make up the stem (very long thin curved assembly) has been glued together and left separate from the knee which is shown next to it. I found it much easier to create these two assemblies and then tweak the fit between both them. You may have to sand the edges a bit to get a nice tight fit between these two sections. Nothing major however.

This leads me to my next tip about assembling the laser cut parts offered by Syren Ship Model Company. This includes all of the pieces that make up the stem and knee. You may have noticed that the laser

char has not been removed from any of the edges on all of the parts shown in the photo.

All of these parts have been laser cut with precision for the tightest fit possible. I highly recommend you not sand any of the laser char from the edges because they will not fit together as nicely afterwards. In fact, the laser char acts to darken the seams which in many cases simulates the tarred seams used on the actual ship.



It is perfectly fine to apply your glue directly to the laser charred surfaces and join the parts together. This is best done using **TiteBond** PVA glue. There will not be

a weakened joint once dry if you use the titebond. The cherry parts shown above are not even glued together yet. You can see how tightly they fit together even when dry fit in a test run. But if you have to tweak the edges as may be the case when attaching the stem to the knee...it is perfectly fine. That joint edge is very long and after gluing up your initial assemblies may need some minor tweaking.

Tapering the head knee



Bobstay piece tapered toward the forward edge ...you can even taper the stem a little below this point if you wanted.

The entire assembly must be tapered. This taper extends from the upper stem piece towards the bobstay piece. The aft edge of the upper stem should remain 1/4" thick. It should gradually be reduced to 1/8" thick along the forward edge of the bobstay piece. The photo above shows this detail.

The taper is 1/8" at the top of the bobstay piece but it also gradually widens back to 1/4" as it works its way down towards the cutwater. This detail is very important. If you have ever seen a ship model with a short fat figurehead, it is probably because they failed to taper the stem properly. If the area where the figure sits were to

remain at 1/4" thick, you would be forced to create an extra wide figurehead. The outside edges of the bobstay piece are also rounded off. This was done to ensure that any rigging would not fray if it came into contact with the sharp edges. This was particularly true for the anchor cables. This *rounding off* should extend down to the edges of the cutwater but it becomes less extreme there. You could even extend the tapering down a bit further into the cutwater.



In addition to the softening of the forward edges, the same principle was applied to the bobstay holes and gammon slot. The top edge (around 2 o'clock for specific positioning) of each bobstay hole should be chamfered and softened. There were no sharp corners where any rigging would come into regular contact with an edge.

The top edge of the gammon slot was also softened considerably. It is hard to see this in the photo above, but the softening you see was done with needle files.

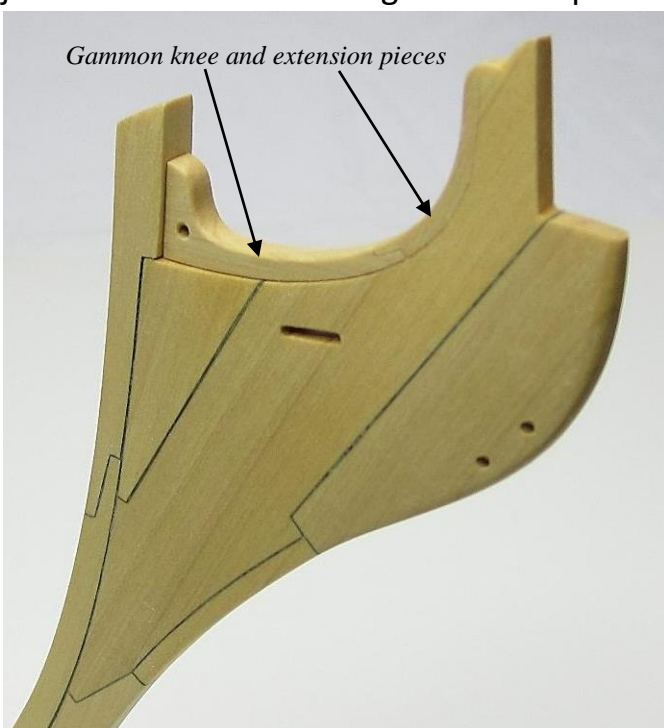


The gammon knee (standard) and extension piece

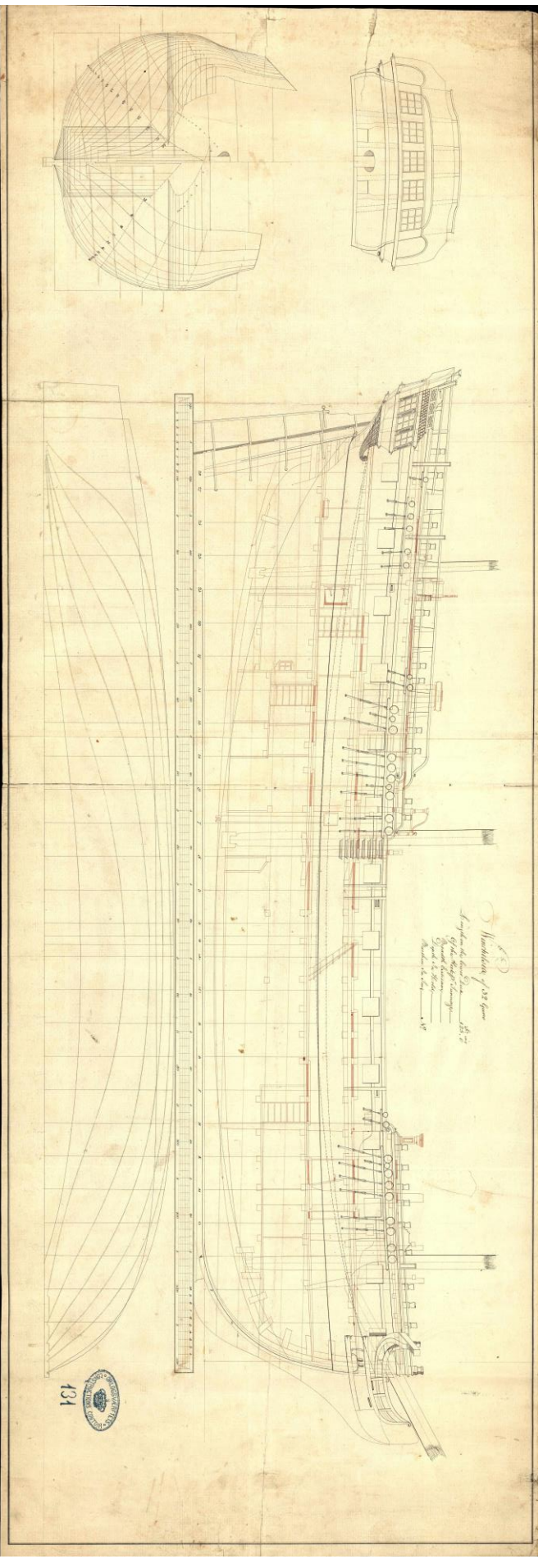
Now it is time to add the gammon knee. This piece is sometimes referred to as the *gammon standard*. On some ships of the period, the gammoning slot was cut through this piece rather than on the upper lacing as on Winchelsea. There is a hole through the standard to accommodate the main stay collar. These parts are laser cut for you from 5/32" thick wood.

A long extension piece is connected to the forward end of the standard with a scarf joint. It should sit flush against the top of

the *head knee assembly*. Take your time here and periodically check how it fits to avoid removing too much wood. Do avoid the urge to remove more wood from the top edge of the upper stem. It is very important that the distance between the top of the gammon slot and the top edge of the stem be correct. Otherwise you will not be able to correctly position the cheeks later in the project. Try and keep your filing and adjustments restricted to the bottom edge of the gammon knee and extension pieces. Do not sand the edges of the scarf joint connecting two gammon parts. Leave the laser char and just glue them together for the best fit. Then glue the finished gammon knee parts atop the stem.



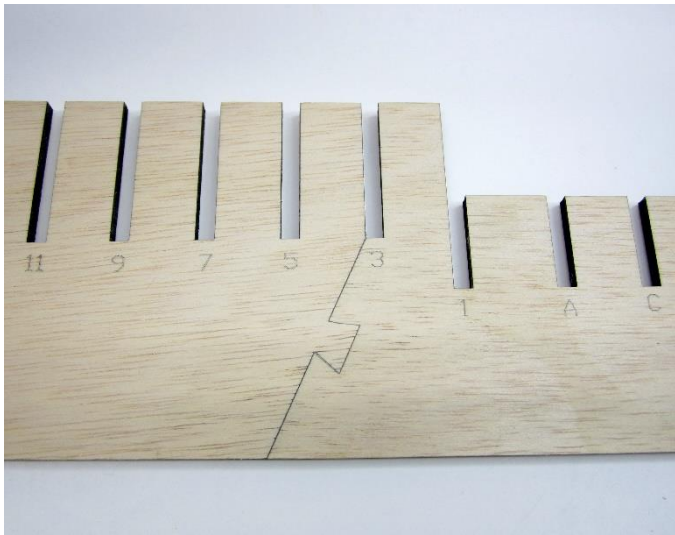
Contemporary model of the Winchelsea in the NMM in Greenwich along with the original draft for the Winchelsea. You can see how well the model duplicates every detail of the draft.



The build photo on the previous page shows the standard and extension pieces glued into position. Then I softened the top edges of the entire gammon standard and extension piece. Also Note that the inside edge of the stem still has its laser char intact. I do not want to remove this yet.

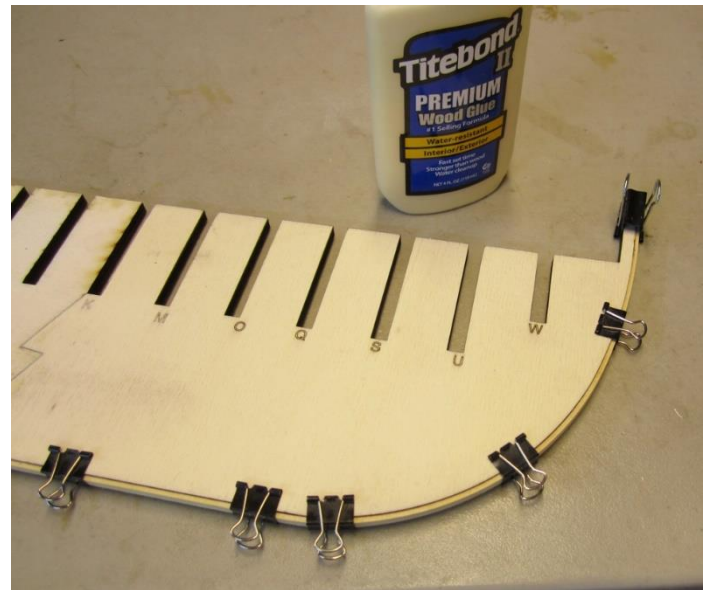
The char was left on purpose because I want to see how it fits onto the bulkhead former with rabbet strip first. I try to avoid sanding the edges that connect to other pieces until I can see how they are going to fit together. Once I dry fit them together I can tweak it so it will fit together tightly.

Bulkhead Former and rabbet strip...



The next step was pretty straight forward. The three laser cut sections of the bulkhead former (or false keel) were assembled. They were glued up using TiteBond on a sheet of glass. You should use a very flat surface when gluing them together.

When the glue dries, it will be time to add the rabbet strip. This is of course a modeling convention and not actual practice but it is a very effective way to do it.



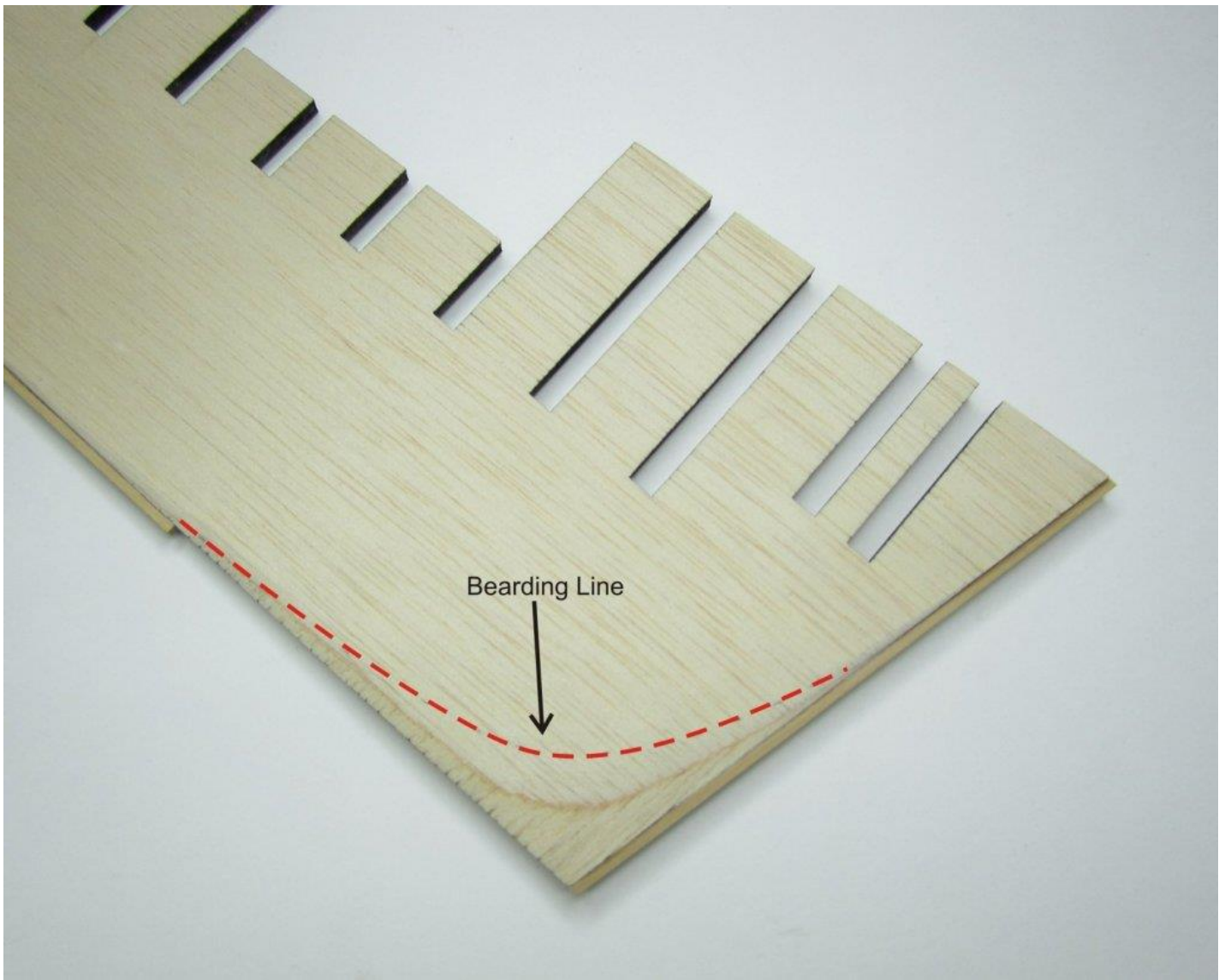
The rabbet strip is $5/32'' \times 1/16''$. This strip should be centered along the edge of the bulkhead former. It will leave a “rabbet” on both sides. It is best to glue three or four sections of the strip in position rather than use really long strips. The starter package includes 4 strips for this purpose.

If you examine the plans you will see that the rabbet strip does NOT extend all the way to the stern. It stops short several inches from the end of the bulkhead former. The last section of the keel is shaped in a way that it will fit over it. You must account for this when adding the rabbet strip. See the photo on the next page.

The last piece of rabbet strip should be added along the stern post as shown in the same photo.

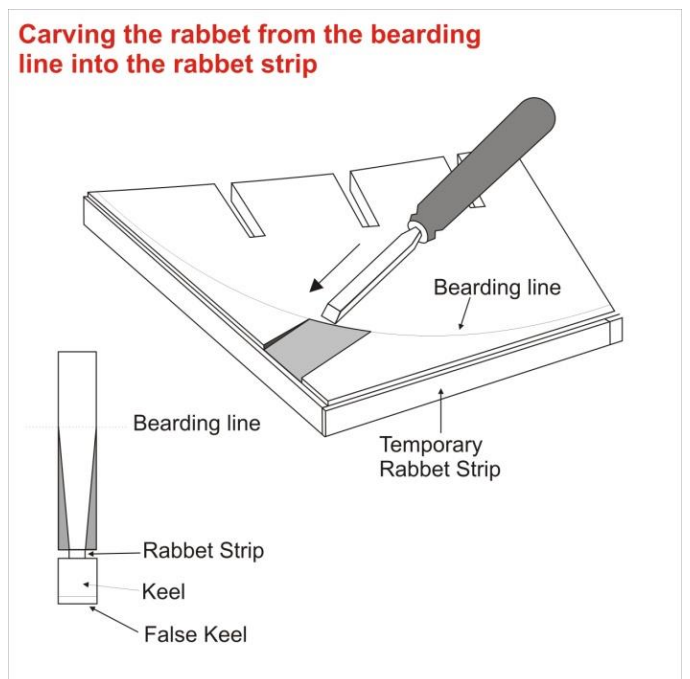
Beveling/taper to the bearding line...

Next you will taper from the bearding line down towards the rabbet strip. Because I could only etch the bearding line on one



side of the bulkhead former you will need to transfer that line to the other side. Then begin tapering the BF down to the rabbet strip. The illustration (right) shows this well except that the rabbet strip won't extend to the end of the BF as previously mentioned. But a temporary length can be used if it makes it easier to bevel towards the edge and create a consistent thickness.

You can use chisels or just sandpaper to achieve the bevel and taper. You should also continue a slight bevel forward. Carry the bevel along the rabbet strip and up the stem. Don't forget to remove that





temporary length of the rabbet strip when you are done.

Adding the Stem Knee Assembly and Keel Sections...

Now it is time to add the stem knee assembly to the bulkhead former. Glue it to the rabbet strip as shown in the photo above. You may have to adjust the inside curve of the stem knee assembly so it fits snug against the rabbet strip.

Carefully glue it into position on top of a flat surface. This should ensure that the assembly is centered along the rabbet strip creating a consistent rabbet down the port and starboard sides.

The keel is made in four lengths using 1/4" thick Yellow Cedar. The first section that attaches to the gripe and lower stem will be the trickiest. This joint is not a true boxing

joint. This is a simplified model convention that will give it the same appearance. The joint is not that complex but you will want a tight fit. The first keel section is laser cut for you but may still need some minor tweaking to give it a nice fit. When you are satisfied, glue it into position. I darkened both edges of the joint with a lead pencil to match the tarred seams of the knee assembly. But if you didn't sand away too much laser char from the joint it will only need to be touched up with the pencil so the seam appears consistent. A photo is shown below. Note how the "false keel" strip will fit along the bottom of the keel and gripe. It will be 1/16" x 1/4" and the notch for it should be refined so it will fit. The false keel will not be added until all four lengths of the keel are installed. To be honest maybe the false keel will be slightly thicker than 1/16" and closer to 5/64".

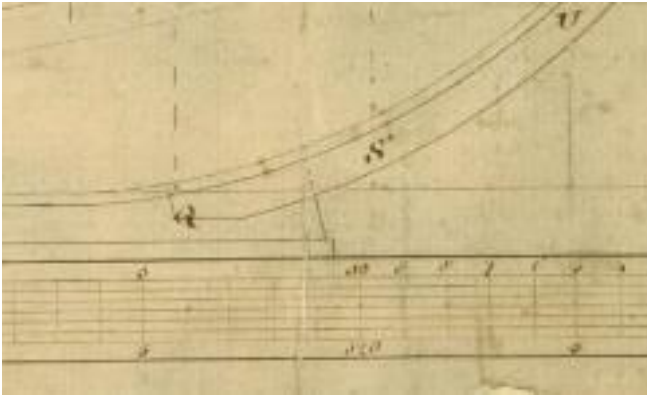
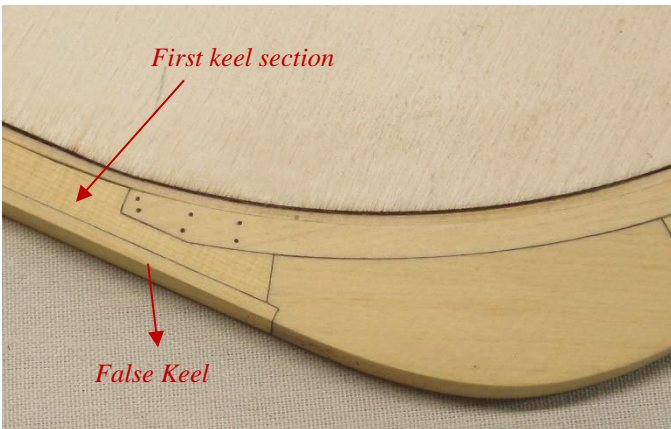


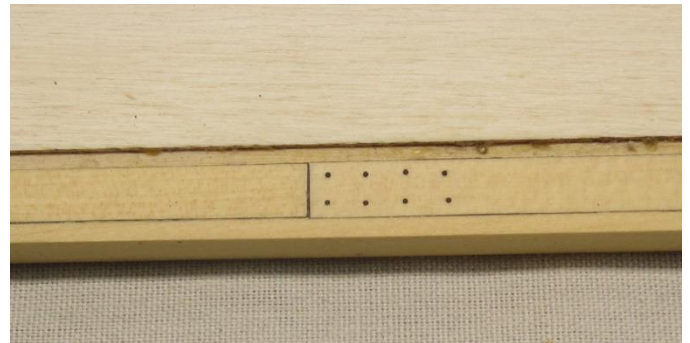
Image of the boxing joint from the original draft is shown above. The simulated boxing joint on our model is shown below.

In that same photo you can see six bolts simulated on the lower stem piece. I pre-

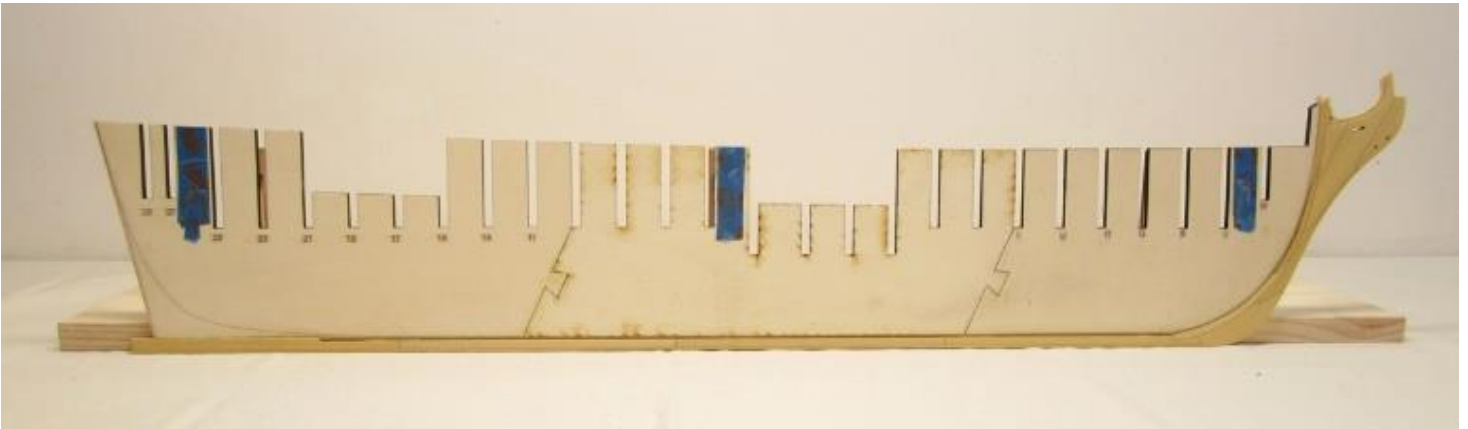


drilled the holes using a #77 drill bit. They are just simulated and the holes don't go all of the way through to the other side. You could use wood or bamboo for the treenails. You have probably read about the many techniques used to create treenails. In this case however, bolts were used. They were probably made of copper or an alloy that would not rust or corrode. I am not particularly fond of the look of copper wire being used for these bolts so I switched to a black monofilament. I am using 15 pound black monofilament as I prefer this to shiny metal wire. You can use whatever you prefer.

Add two more lengths of the keel. The scarf joints between these two sections would have had the typical "Z" shape to them. However, the "z" shaped seam would not be shown on the sides of the keel. The "Z" profile would actually be located on the top and bottom faces of the keel. This is fortunate for us model builders because it will not be seen. The sides of the keel will only reveal the straight seams that would fall on either side of the scarf joint. Therefore, it provides a good opportunity to simplify the joint entirely. I have chosen not to create a scarf joint at all. Instead the two lengths are simply but against each other with straight joints. There are eight bolts that would have secured each scarf joint. To help simulate the actual "Z" shaped joint, the eight bolts are simulated on the fore side of the joint on the starboard side.



On the port side of the keel the bolts are simulated on the aft side of the joint. The holes will obviously not line up as if the bolts were actually going all the way through the keel. The holes should only be drilled part way through. Since only one side of the keel can be viewed at a time it would be impossible for someone to discover that it is not a true "Z" shaped



scarf joint. Be sure to center the keel pieces along the rabbet strip so you have a consistent groove/rabbet on each side. I used the black monofilament for these bolts as well.

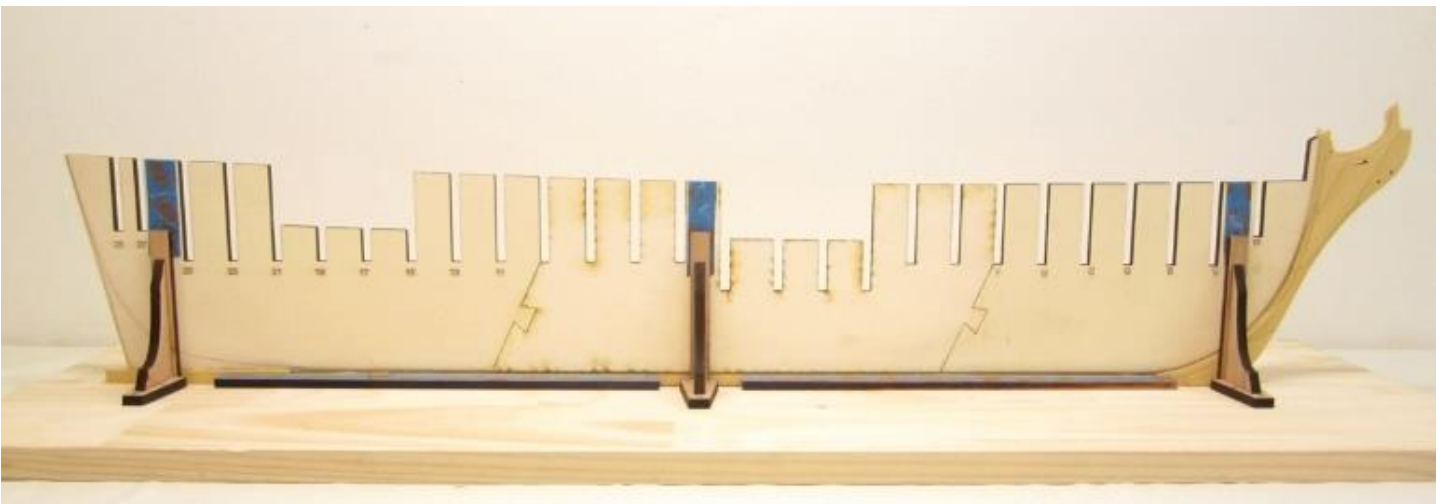
The fourth and final length of the keel is shaped a little differently. The rabbet strip doesn't extend to the end of the bulkhead former as mentioned earlier. You will notice that it is much longer than need and this is by design. We will trim it back much later in the project after the hull is planked and the stern post is added. The completed keel and stem assembly can be seen above.

At a $\frac{1}{4}$ " scale this will be quite long. It may be difficult to keep it from bending and twisting which would be the kiss of death for a model like this. There is nothing

worse than noticing that your hull is shaped like a banana after you finish framing the gun ports or planking the hull. There are fortunately some steps you can take to prevent this from happening.

Creating a build board with brackets to keep the keel assembly straight and true!!!

A project like this one is not something that you will finish in a few months. You will be investing a great deal of time and money building the Winchelsea. Even though building an appropriate build board isn't the most fun you will ever have, it is something that you should absolutely spend time creating. The issues that can come up without one could be very serious as mentioned and spending a little time now will save you a lot of heartache.



The photo on the bottom of the previous page shows my build board set-up. There will be two phases. The first is to use a sturdy base to temporarily fit several right angle brackets to. In addition, several long strips of wood will be glued along the base board that the keel will fit into. The brackets will help keep the false keel straight and prevent it from twisting. They are screwed into the base board.



The three pairs of brackets will eventually be removed after the hull has been planked from the wales up to the sheer. At that time, the hull will be very rigid and hopefully straight and not twisted.

The brackets will then be replaced with a work cradle for the remainder of the project.

The brackets and long strips are available for purchase at Syren and are part of the 1st installment of laser cut parts, but it is easy enough for you folks to create something very similar. I don't like to use metal right angle brackets because they are more likely to scratch and mar the wood if you are not careful.

The wood brackets are made from cherry and have slotted bases which will allow you to adjust their position after screwing them to the baseboard. I also chamfer and round off all of the hard edges which will help me avoid scratching or denting the wood as you will no doubt be removing and inserting the hull several times as you build it.



To ensure a snug fit blue painters tape is used along the top of the bulkhead former to make it slightly thicker and thus creating a very snug fit. I have even applied the blue tape along the inside faces of those long wood strips and the brackets to further prevent scratching and denting the wood.



After more thought I have switched the right angle brackets to basswood because they are softer and less likely to dent the cedar.

Now it's time to start adding bulkheads!!!

The first thing you want to do is dry fit all of your bulkheads into their slots. If you bought the laser cut bulkhead set, they were designed to be a snug fit. You will probably have to sand the slots a bit to get the best fit.

I have glued the 27 bulkheads in their slots. I was careful to make sure they were squared up to the bulkhead former. There are probably twice as many bulkheads than the usual POB kit on the market. This will ensure that the planks lay nicely without any issues. Now you might notice all of

those clips in the photo. These are simple binder clips. They come in a variety of sizes. I often see many people trying some wacky things to try and prevent the bulkhead extensions from breaking while you fair the hull etc. I have tried many things as well. This time I am going simple. If you just angle the clips so they are both on the extension and on the main bulkhead, they will stiffen up the area that is prone to splitting and breaking. It really does make a difference. I encourage all of you to try this at some point.

In addition, if you have some longer bulkhead extensions like those shown at the stern, they have an even bigger tendency to break off because they are longer. So for these you may want to try using some "L" brackets. These metal



brackets are really cheap and also do a great job protecting the bulkhead extensions. You can place them on one side or even both sides of a bulkhead extension and use the binder clips to hold them in place. This will absolutely prevent the extension from breaking while you fair the hull.

When installing the bulkheads I made sure that the laser etched reference marks were facing the correct direction. All of the numbered bulkheads have the etched side facing aft.....the lettered bulkheads are facing forward. This is very important.

At the bow, the three "bow fillers" were glued into position following the plans (BF1, BF2 and BF3). These were pretty straight forward although I made sure that the tops were level on both the port and starboard sides.

Rather than add the stern frames at this point, I will start fairing the bulkhead first. This will make it easier to install the gun port framing for the sills, etc. That will be the next step after I finish fairing the bulkheads which will take a while. This hull



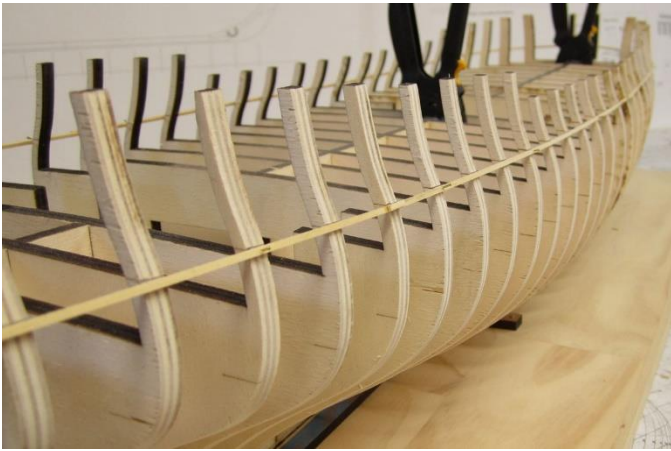
is a beast. But you really should fair the outboard side of the hull before adding the port framing.

Port framing...

I didn't break any bulkhead extensions and the binder clips worked out great. This is a big hull so it took a few days per side to fair. As is typical there is a fair amount of material to remove at the bow, especially close to the keel at the bottom of the bow fillers. I just took my time and before I knew it I was done.

Once completed, I used a batten (scrap 1/8" x 3/64" strips) to locate a smooth run for the TOP of the gun port sills. The top of the batten was initially lined up with the laser-etched reference lines for the sills. Then after viewing it at many, many angles I tweaked it until I got a nice run from bow to stern. There are no dips and it matches port and starboard.

Even though there are laser etched reference lines there are so many factors that could cause them to be higher or lower by just a hair. This will throw off the run of the ports so the batten is an absolute



must. It's the only way to spot where the run of the ports needs adjustment.

Then I used a sharp pencil to mark the top of the batten and then removed it.

Port Framing...

Building the skeleton and framing is not that much fun. But it is necessary and important to get right.

The bottom port sills were added first. Even though you really only need them between the bulkheads where the gun ports are located, I recommend that the bottom sills are placed between every bulkhead. It really makes everything solid. If you cut the sill to the correct length it also squares up the bulkheads really



good. Even the best attempts at squaring them to the false keel doesn't always work for many reasons. Having said this, you really don't want to measure the distance between the bulkhead extensions to find the length of these sills. There is too much room for error as that distance is most likely wrong. Small shift in your bulkheads fore or aft on either side (even just a hair) will screw up finding the correct length for your sills.

The best place to measure the length of your sills is up close to the bulkhead former/false keel. See the photo below left.

You will still need to angle the sides on some of these where the sills slope to match the sheer of the gun deck. But before you glue them in position, check the fit near the false keel. It should fit there first. This is a better method than even using the plans to measure the length of the sills.

The sills are cut from $\frac{1}{4}$ " x $\frac{3}{16}$ " Cedar strips.

You might note that the three sections at the bow for the sills are laser cut. That makes it much easier.

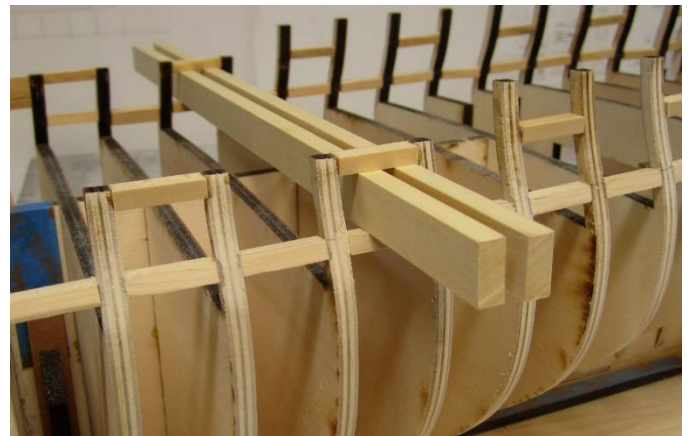


Lower sills have been completed as shown above. Here is a picture of the bow area.



Once done this was repeated for the upper sills or lintels. I used a spacer the correct height to place them all easily without measuring. I only added these where the actual ports were located and a few other important locations. These are all shown on the plans. You will need some extra timbers where the fixed blocks are located and it is always good to add a few extra at the bow. We will be cutting a few of the bulkheads soon to complete the port

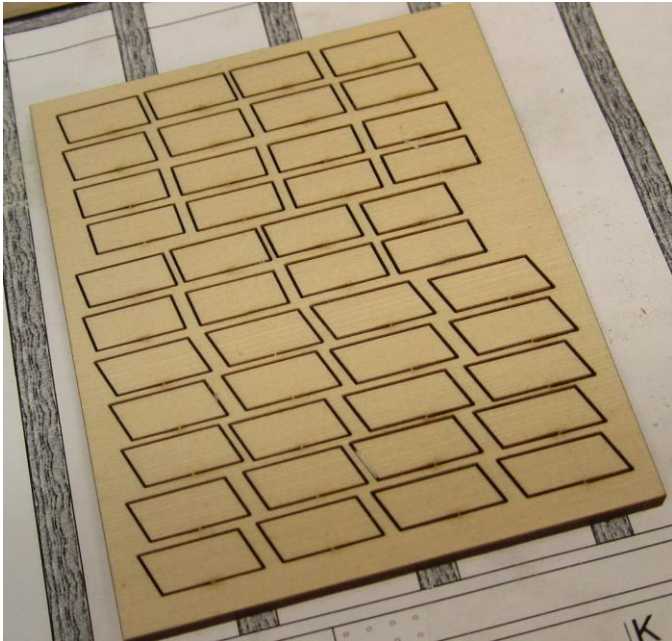
framing and having the sills between every extension is needed for this.



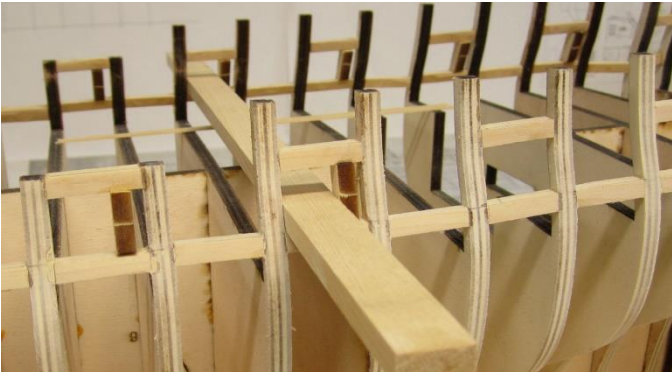
Once all of the sills and extra timbers are added. You should fair the outside of these flush with the faired hull.

Then the port sides/uprights are added.....I have laser cut these for those of you who bought the laser package for the first chapter. There are many shapes and angles to choose from. You still have to bevel the top and bottom where it's needed because

they must be perfectly vertical just like the bulkheads.



I used a spacer for these too so the port openings were all the same width. You can take the measurement from the plans.



Now here comes the fun part!!! There are a few ports that need to have the bulkhead extensions cut free before you can add the uprights.

It's not very difficult to do. Just go slow. You can see in the photo above (right) that I have marked the bulkhead extensions that need to be cut free. I also noted the bulkhead letters. This will need to be done at the stern too. You will need to repeat



this when you frame the last aft port and q gallery entrance.



I cut a scroll saw blade into short lengths so I could insert it into my Xacto blade handle. Use a fine tooth blade. Then slowly cut away the extension of the bulkhead. Don't worry about getting close to the port sills. Cut 1/32" away from the sills so you don't mar them. Then sand the rest away flush with the sills when the piece has been removed.





The last photo on the previous page shows what this will look like with the bulkhead pieces removed and after it was sanded flush on top and bottom.

Examine the framing plan carefully to find the placement for these uprights. There is an overhead view of the bow area that will be very helpful. Install the last few uprights to complete these two ports at the bow. The photo above shows how the model will look at this stage. You won't have to worry about the gallery framing yet. That won't be done until after we install the stern frames next.

Stern frames.....

The stern frames were added after I placed the last "bulkhead 29" pieces in position. They were glued into place so the many slots for the stern frames lined up which should position them close to the angles we need....but not perfectly. These bulkhead "29" pieces are glued directly to the last bulkhead. Don't force the stern

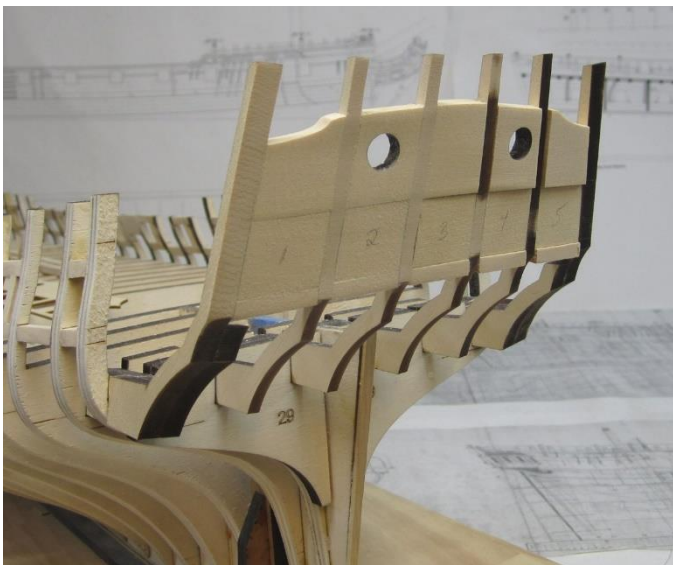
frames in position. They should be a snug fit but not too snug. Note how the outside stern frames are two pieces glued together. Examine the plans carefully.



Then I taped some tick strips to the frames using a "stern framing guide" I developed for the project. They were taped to each frame as shown above to help you locate where the stern lights (windows) would be located. The locations for the top and bottom sills of the windows were transferred to each frame. When taping the strips to each frame, line them up with the top of each stern frame.



I then inserted some stern window guides laser cut to shape ($3/64$ ") between each frame. These are the exact shape and size for the openings. Spacers are numbered 1 through 5 from left to right. I didn't glue them in at all. They are just pushed between each frame and they stay in position really well. If they don't, use a rubber band or a clamp. We will be removing them after the sills and framing for the windows are completed. You should



line these up with your tick marks that were transferred from the stern framing plan. It doesn't matter if you add the top or the bottom framing (sills) first. The top pieces were all laser cut but still require some beveling on the sides to conform to the

curved shape of the stern. I just used a $3/16 \times 1/4$ " strip to make the lower sills. It's tricky getting the angles correct so I had a few do-overs. But this is a crucial part of the build so I was very careful to get a good fit. They were thicker/wider than what was needed so I could fair them once they were glued in position inboard and outboard. The window templates were a godsend!!! If my sills were too wide they spread the frames apart and the template fell out. This is a good indication that you still need to sand them a bit more for a perfect fit. Only when after positioning the sills and they didn't make the window template fall out, did I glue them in permanently. You might find it easier to do the top and bottom pieces of the center window opening first and work your way out. Then do the next pair #2 and #4 etc.

Then I started fairing the fore and aft sides to thin down the transom framing to about $3/32$ " thick along the top edge of the upper sill pieces. This is the time to do the inboard side because you have good access to it before the quarter gallery framing is added.



This is what it looks like after the fairing was completed (last photo on the previous page). I still have to fair the port and starboard sides and bulkhead 29 to conform to the shape of the hull. You should do that now before starting to frame the qgallery openings. You can see the dashed lines on the stern framing guide that will give you an idea of how the stern should be shaped after you finish fairing it.

I left the center window guide in position to show you guys how well they worked. This was a much easier way to align and frame the stern than the previous methods I have used.

One last note about the stern framing. If you bought the laser cut package for the first chapter, you will see that I included the 3/64" thick laser cut transom. We are not going to glue this on yet. But if you hold this transom against the framing you will see that the openings for the windows are smaller than your framing. This is correct. The transom, when finally positioned, will leave a small lip around the window when viewed from the inboard side. This is how it was designed. When it comes time to insert the window frames this lip will act as a stop and give the windows a clean appearance when viewed from the outboard side.

Quarter gallery framing...

Framing the quarter gallery should be a piece of cake after the work you just completed on the stern framing. You have to cut that last BH extension free like you did at the bow so you can frame that last port opening. See above right.



Then frame the entrance to the qgallery using 1/4" x 3/16" strips. It's not difficult but there is one thing you should be aware of when you do this. Make sure you don't push the stern framing further aft when you glue those horizontal pieces into position. If they are too long, they will push the transom further aft. This will cause you many problems later on. You don't want to change the angle of the transom. It will





impact how your gallery will look and probably in a negative way.

You will also notice that strip of wood that was placed along the tops of the bulkheads. This is a 1/8" x 1/16" strip. You must fair the tops of the bulkheads and install this strip so it is flush with the outboard side. Don't worry about the inboard side. This only gets placed on the top of the quarter deck bulkheads. Check the plans and you will see this strip.

Make sure you position this strip at the proper height on the inside of the transom. Check and double check those measurements so it isn't too high or too low. This should give you a better idea of how the sheer of the quarter deck will look.

The hance pieces...

There are two hance pieces which need to be glued into position in the waste. They are 3/16" thick. There are laser cut versions if you bought the package for this chapter.

They can be seen in the photo above which shows how the framing looks at this point.



Shown above is the aft hance piece. Once glued into position it was faired outboard. Note how the top is flush with that 1/8" strip atop the bulkheads along the quarter deck. This is all shown on the plans.

Add the forward hance piece and we are ready to move on and tackle those bollard timbers.

The Bollard Timbers...

The last items to be completed were the bollard timbers. Like most projects, there is always at least one item that will prove very tricky and challenging. The bollard timbers aren't too bad though. Every model has at least one or two complex parts to shape. It's not unusual, but most kits usually drop the ball on how these items are presented.

I believe it's just a matter of breaking the process down into many steps ahead of time, so mentally it becomes a lot easier. Each individual step is not very difficult and once completed, you have shaped a very complex piece of modeling.

The bollard timbers at the bow are laser cut as blanks. Several extra pairs are included in the package just in case. You need to make a pair of these that match as mirror images. In the center, a chock spans the gap between them. Here are the blanks which are 1/4" thick.



Before you begin, it is important to fair the inboard side of the hull. The bulwarks and stem need to be reduced to 5/32" thick. Actually slightly less but not quite

1/8". You don't have to fair the entire hull inboard....just up towards the bow. It is easier to shape the bollards after fairing inboard and having the bulwarks thinned down.

Then place the bollard timber in position so the inside/forward edge sits flush with the rabbet as shown below. But make sure you sand all of the laser char off first. Not too much, just lightly remove the char with some 320 grit sandpaper. This will help keep the piece clean as you shape it. In fact, your hands should be washed and super clean once you get the char off. You will be handling these pieces a lot and they will get dirty otherwise.



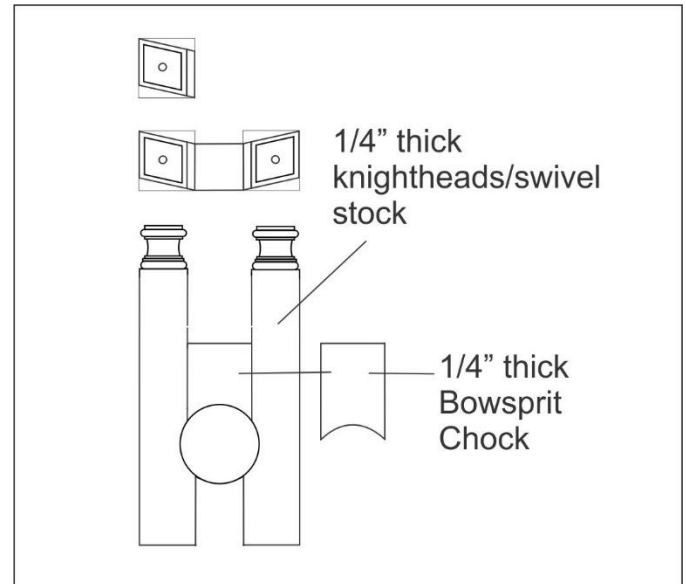
This piece will stand proud of the bulwark framing so that the exterior planking will be level/flush with it. Therefore, you must create a bevel on the front and back sides. Once placed in position, use a 3/64" thick plank that has been beveled (just like you would when planking) and position it along the bollard. Then draw a line down the edge which will determine the bevel needed. This needs to be done inboard as well. Note the bollard timber on the port side is already completed. I will attempt to

make a mating pair. There is a very detailed drawing on the plans for these parts.

The photo below shows the bevel completed on both sides. Note the finished example which I keep handy so I can make a matching pair.



Next, file the round cut-out that forms the top using a round needle file, sandpaper etc. You can use the shape created by the laser on the other two sides to guide you.

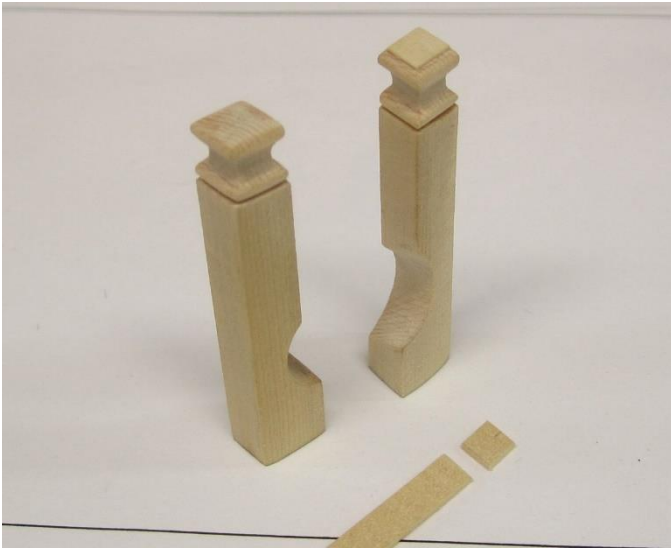


Then draw a line just below where you filed. Do this on all four sides. You will be filing a groove all around the piece as a carved detail. I actually used a #11 blade to make a stop-cut on the line. Then I chiseled a bit off towards the line on the top side. I then rounded it off so it looks like the plan.



This is what it looks like completed. But you will also notice that I cut a little skewed square from a 1/64" thick strip. It's very thin but still not thin enough. This should

be glued on top of the bollard timber to "simulate" a nice carved detail. This detail would be much harder to carve and file into the top so I cheated and glued a separate piece on top. After I glued in position, I sanded it even thinner to about half its original thickness.



This is what it looks like....next column...but we are not done yet!!! The circular slot for the bowsprit still needs to be filed on an angle to match the stem. You can position the bollard on the model and draw a line to follow along the top of the stem when you start filing. This is shown in the same photo. Once that is completed the bollard timbers are finished.

They can be glued on the model and then the cross chock positioned between them. Sand the char off before you do this. You will also need to sand the same angle into the bottom of the chock so the circular opening will accommodate the bowsprit. The photo shows this all done and the chock glued into position. It was sanded flush with the surface of the bollard timbers inboard and out.



This finishes the first chapter and all of the framework. In the next installment we will start planking the exterior of the hull.

