Chapter Two – Cant Frames and finishing up the framing....

Let us talk about the jig first. BUT before you do anything, make sure the hull is positioned correctly on your build board. Line up the forward face of the last square frame with the corresponding lines on your baseboard. Slide it forward or aft if needed because you will be lining up the cant frame jig with your baseboard plan.

Take the laser cut square shown below and glue it to the underside of the last square frame cross piece. The laser etched guide on the square should help you with positioning it.



It will look like this. The fore cant frame jig is resting on top which will be added next.



Place the cant frame jig in position. The "puzzle piece" connection was left a little loose on purpose to give you some room to adjust it. Not a lot...its not a sloppy fit. But there is just enough room to adjust it side to side based on what we will do next. This next step is super important....



Use your square to check that the notches in the top of the jig match the cant frames as drawn on the baseboard. The machine square I have actually fits right into the slots making this pretty easy. I got these from MicroMark. They are pretty common and if you have one this works perfectly. There is also a laser etched line down the center of the jig to help with alignment.

The forward edge of each slot....should line up with the aft edge of the cant frames as drawn on the baseboard. This is important. Its worth mentioning it again. The forward edge of each



slot....should line up with the aft edge of the cant frames as drawn on the baseboard. See below. Check this on both sides of the hull obviously. Try and get it as close as you can.

Then tape the cant frame jig to the first square frame cross piece. Remember, there is some wiggle room so you can adjust as needed to get your slots lining up as close as possible. But dont be upset if they are off by a hair. Just get them as close as you can.



Next up, and you will do this for every cant frame....take the two strips laser cut and marked "1", and glue them into the forward slots. Make sure the numbers face forward. Slide them all the way into the slots. This is also important. The top of these strips should be flush with the top of the jig.

Note the laser etched line on the forward side. This line references the outboard edge of each cant frame. We are starting with the most forward pair for a few reasons. The most important reason being to help firm up the cant frame jig at the correct height and "lock" it into position. Every cant frame after this first pair will also have a corresponding numbered strip. You will be progressing aft with one cant frame pair at a time. Just like this.

You can see below how this jig will work. I have placed the square against the strip. Note how it rests against the forward edge of the strip and at the same time...The bottom of the square shows it lining up with the cant frame drawing on the baseboard. The angles match. We are talking about the aft edge of the cant frame. The cant frames will all sit against the forward edge of those numbered strips.



Below you can see the forward pair of cant frames glued into position. I of course sanded the char off the edges first. But dont sand the heel of the cant frame. Only remove the char from the inboard and outboard edges. These frames are cut to length with tight tolerances so dont sand the heel end that gets glued to the angled wedge on the apron.



Note how the outside edge of the cant frame lines up with that laser etched reference line that was on the numbered strip. Also note that the top of the cant frame is flush with the top of the numbered strip. This first cant frame is important because it locks the jig in at the correct height as well and stiffens it all up.

One down and ten to go. Repeat this process working aft with the remaining cant frames. Remember to just work on one cant frame pair at a time. Some of these forward cant frames are made in two pieces with a simulated chock like the frames. We shall discuss this when I get that far.

Next up will be cant frame "2". You can see the numbered strips sitting on top ready to go. But now that the jig is in position its pretty easy and should go quickly. No need to sand the bevels into the heels of each cant frame. All you really have to do with each cant frame is sand off most of the laser char on the inboard and outboard edges and glue it into position. The apron has all the correct angles in for each cant frame already.



Work continues on the fore cant frames....

The forward 3 cant frames are in one piece. They were sanded and glued in position as mentioned above.

The remaining 8 cant frames are built up from two pieces as shown below. They are all 1/4" thick. But they are the same as assembling the square frames. Just sand the simulated chock joint for a tight fit as before.

Then remove the char and glue them in.



I proceeded to install them working my aft. All is going well.

The outside edge of each cant frame is lined up with a laser etched line on each lettered strip in the jig.

As mentioned earlier, the top of each frame is

also flush with the top of the strip but this isnt as important. If while putting the two halves of a frame together you over-sand the scarf joint, It will become shorter. That is perfectly fine if not excessive. Any small differenced like that will be corrected while fairing the hull. So dont get worried if that is the case.



I did not do any progressive fairing of these. I wanted to wait until all of the forward cant frames were installed.

In hindsight...after completing all of them, I thought it probably would have been better to work from aft towards the bow. At least after those three "one-piece" cants were added up front. It doesn't matter in the end, but getting the last two cant frames in was a bit fussy between the existing square frames. I couldn't get my fingers inside the hull and that far back to position them too easily. It would have been easier to work my way forward towards the first three. But in the end it wasn't too bad. In fact it went pretty quickly.

Once they were all added I could do some fairing. This took a while as one would expect. I only finished the port side. I will do the other side this weekend.



It came out very well indeed and the bow is shaping up. I am quite happy with the shape these cant frames created. This is a long and narrow hull. It has a very interesting shape.



Here is a picture with the hull upside down. You can see how I faired the cant



frames as they sat on the apron notches. They were faired carefully into the rabbet. This meant also sanding and fairing the sides of the apron to match the run of the frames into the keel.



Treenails were added to the cant frames just like the square frames using the black monofilament.

The Bow Timbers...

These aren't very difficult to make and build. But yes...you do have to take your time and go through all of the steps with each bow frame. They are laser cut with all kinds of reference lines on both sides of each



frame. There are also laser cut spacers that go between each bow timber. They are 3/64" thick. In fact the first piece we will add is right next to the upper apron. It is 3/64" thick and the easiest part to add. This is being used for

one purpose only. It is being added to make the upper apron wider before we add the actual bow timbers and spacers. They are labelled P1 and S1....respectively for the port and starboard sides. You do have to bevel the heel to fit tight against the cant frame. But that's pretty simple to do with a sanding stick. To position this piece properly on the side of the apron, Just make the forward edge flush with the shape of the upper apron. See the arrow in the photo.

Below is the first actual bow timber (bollard timber) on the port side....P2



Let's start shaping it.

Note all the reference lines. There are more on the other side.

This shouldnt be scary at all for folks who havent done this. Just carefully go through the steps one at a time. This would be so easy if you had a disc sander etc. But as I mentioned, I will be doing all shaping and sanding by hand. I am just using a #11 blade and some sanding sticks and sandpaper. Thats it. I know that many of you dont have a disc sander.

Step 1...Concentrate on establishing the angle on the heel of the bow frame. This angle is the same for every bow timber. There is a laser etched line on one side for this purpose. But to help see the correct bevel, I lightly sanded both sides to remove some char. Then I drew a pencil line to better see the actual angle and what needs to be removed. This is done on every Bow timber as step one.



There are countless ways to create this angle....sanding....cutting...disc sander...you name it. But his was how I did it.



I first used my #11 blade to slice most of the meat away. I did this carefully only taking off a thin slice with each pass. The blade actually slices through the cedar like butter. Just get the heavy stuff off close to the reference line for now.

Then use a wide flat sanding stick to take it to the finish line. Above right. Keep the stick flat and always touching the surface. Sand slow and you wont round off the face as is typical if you quickly stroke back and forth. Go slow and deliberate.



If by chance you actually do round off that beveled face its OK...

You can take some medium grit sandpaper and bend it loosely. Then once again sand slowly and deliberately. But this time keep the folded sandpaper only in the center of the face as if you were trying to make it concave. But in actuality you are just removing any rounded areas to get it back to a perfectly flat face. This shouldnt be needed if you are careful with the sanding stick. But yes a disc sander would take care of this in about 30 seconds.

But you can get a really tight joint doing it by hand...the old fashioned way.



Test the bow timber on the model....

How does that beveled angle sit against the cant frame? Nice and tight?



Note the bevel line and how it lines up with the edge of the cant frame. All of the bow timbers should all line up this way or at least be very close.



How do you know how high against the upper apron this should be placed?

There is a laser etched reference line on the back side that lines up with the top of the apron. See below. After this all of the remaining bow timbers and spacers will all be at the same height basically. We will trim them all down to the nice shear line later after they are all placed on the model.



Ok that was step one. Not so bad although I am trying to give you a ton of detail.

Now step two....

Adding the bevels (basically pre-fairing each bow timber inboard and out). Once again my preference is to just use a sharp #11 blade. Replace your blade the moment it gets dull. I am just shaving from the edge to the etched reference line. Go slow. Only shave a little at a time. Dont go all the way to the line yet. Use a sanding stick for that. But this goes pretty quickly. What is most important is to shave with the grain. Not against it....just like your 5 o'clock shadow.

If you shave the wrong way it just wont work. You will make a mess and break chunks off ruining the bow timber. But if you are going in the right direction...it cuts like butter...really.

In fact here is a little tip. You will have to reverse directions on each half of the bow timbers. They are curved and the grain is different on each end. You will know what I mean when you try this. You will have a nice little pile of shavings.



Then clean it up with a sanding stick.

The outboard side looks like this. Note the spacer ready to be glued onto the bow timber. Do this before you glue it on the model. See the laser etched line to help line up the spacer?



And the inboard side. All sliced with a #11 blade close to the bevel line...then cleaned up with a sanding stick.



Step 3.....actually thats about it. I guess step 3 is just gluing the spacer onto the side of the bow timber. A laser etched line is there which

shows exactly where it should go. Line up the outboard edges flush.

Then step 4....glue it on the model. Dont forget to place this first bow timber at the proper height. Use that reference line on the back side I mentioned earlier.



It is really not too bad at all...

Then just repeat this with the other bow timbers...but dont forget to use another loose spacer when you glue it in position. See the pic below that shows the third bow timber just after gluing it. You want the air spaces to be



nice and even between these timbers. So use another scrap piece of 3/64" thick wood along the lower end to help you with that. Make sure you dont glue it in place. You want to remove the spacer when you are done.

To finish up the bow timbers I had two more to go. The first of those was done exactly like the previous three. But the last one is a bit different. The filler that closes the gap is just a little bit different.

Step one is the same. Shape the angle that will fit against the cant frame. No biggie there. There is a laser reference line for that just like the others. But that is the only reference line laser etched.

Once shaped to fit against the cant frame, test it on the model. It should fir pretty good. Then you need to take a sharp pencil and draw the next reference line yourself. Just trace the shape of the cant frame edge onto to the filler as shown. This will be your outboard hull reference. Use that line and bevel just as you did in step two for the previous bow timbers.



It will look like this when you bevel and clean it up with a sanding stick.



You dont have to bevel the inboard edge. We will need to trace that in pencil against the cant frame too. But that is kind of tricky at this stage. Once you take a look inside there you will understand. There really isnt much to bevel inboard actually. It is best to just leave the inboard side as is until after we remove all of the jigs and fair the inboard side later. That will be done after planking.

But now you can go ahead and fair the outside bow timbers. Fair them into the cant frames nicely. Use a long batten to check how true and smooth the run of planks will be. You dont want any dips. Dont be afraid to really sand it good with coarse sandpaper first and then switch to a finer grit on your last pass.

You will notice that the bow timbers are too high and the tops should be trimmed down to match the sheer. That can be done after fairing outboard. Almost done fairing outboard below. The tops of the bow timbers have been trimmed down as well.



How do you know where to trim down the head timbers? Well you could measure up from your build board using the plans. But I decided to take some considerable time to create a template. Its quite an extensive template actually. Basically its an expansion drawing to scale that shows every last detail of the outboard hull fittings.

This includes the run of the planks at the bow and all ports....swivel stocks...scuppers and fixed blocks and channels with deadeyes....etc.

The bottom of this helpful template represents the top edge of the upper wales. This is in fact how we will transfer the correct lines for the wales later. But you can also use it to check the positions of all ports and also trim down the bow timbers to the sheer. Just make sure you put it on both sides of the hull and have them even.

This template lines up at the bow based on the cheeks. You can see on the plans how the upper cheek sits right on top of the upper wales and then transitions onto the stem. You want to line up the cheek on the template where it will transition onto the stem. This is important because you want to have everything line up when we work on the hawse holes and bolsters and headrails. It will make locating everything quite easy I think. I dont believe any other kit or even monograph has such a template and expansion drawing like this. I thought I would try something new. You can use this to double check your work as you progress with your cant frames.



Starting on the aft cant frames...

The first thing that needed to be done was to add the aft cant frame jig. This is added the exact same way as the fore cant frame jig. Glue the small laser cut square under the last cross beam. Then add the jig. The jig like all the cross bars are not glued. They are just taped together. That works very well.

Make sure to line up the jig with your center line thread. You have the etched reference lines on the cross jigs to do so. But you will notice I also added the small cant frame strip for our first cant frame. That is aft cant frame 24. It is the last slot in the jig. You will need to line up the forward edge with the same mark on your base board plan. Lining up this jig so your cant frames are even on both sides is very important. As is making sure all your square frames were perpendicular to the keel and the same height etc, and all follow the center line.

If for any reason you need to tweak this jig or any of the others, I have left some wiggle room. Do that before taping. In fact, if I didnt mention this little tip before, you can just add a toothpick as a shim on one side to adjust the aft jig until I you are back on the center line and your cant frames all line up with the base board plan. This is a neat trick you can use with any of the cross bar spacers for the square frames as well. It works really well to keep you on that center line. I exaggerated in this photo so you can see how to adjust any of them.



Lining up the strip with the baseboard plan below...



Then just like the fore cant frames are started working my forward after assembling each cant frame. They are made in two pieces. I have added six working my way forward. But now I will switch directions and start working from the other end of the jig for the next six. More pictures will follow when I get that done. Note how two laser etched lines on that last cant frame 24 face aft. Shown in red. That is important because we will need those to line up some pieces later. NOTE: No need for the red lines and these were removed on the kit. Disregard the photo showing them.

Also not how the first aft cant frame on the jig I added, that same number 24...you have to make sure you place it in the correct deadwood slot.



This is what the hull looks like at the moment.



At this stage I reversed my direction and started working my aft with the cant frames. I started with the first full cant frame on the forward side of the remaining opening.

Completing this cant frame will allow me to add the shorter half cant frame so the last gun port can be framed out. This is not difficult to do. Use your templates to align the last gunport in the correct position.



The picture above shows that cant frame glued into position and the gun port all completed.

That leaves just 5 more cant frames to close up the remaining space in the opening.

Those have been added now and this is the result.



There are still a few cant frames left but that will be done in the next step...

That will require a new jig along the top of the model for alignment and I must make the wing transom as well.

Next up is the Wing Transom....

This is pretty straight forward. Especially after completing all of those cant frames. This is laser cut but still requires some shaping because of the many angles.

I removed the char from the top and bottom first before adding the provided templates. You can see the untouched wing transom in the photo as well.

The top template is glued on with rubber cement. The top has the notches in it for the stern frames and quarter piece.



Then the bottom template.. pretty easy so far.



Then use a sanding stick to sand the bevels on each side using the templates for a guide. This will create the desired parallelogram shape.



Then the wing transom is glued into position. Make sure your hull is vertical on the build board. Especially the stern post. Then use your squares to line it up with the build board plan. Make sure the height is the same port and starboard. Use tite-bond here so you have more open time to level this and get it all squared up.



Then it is time to add the last "top jig".

But before doing so, I must mention that the forked bracket will be removed that holds the stern post vertical. I know...its important. But seriously we wont be needing it any more. We will add the last top jig first and then remove the bracket immediately after. This way you can still use that string to check that this last jig is aligned and centered.

The last jig is added just like the previous two others. Make sure its aligned down the center. Make sure its the same height port and starboard. You can use a string like before and a square. Once satisfied and taped in position along the puzzle piece connection, you can remove that forked bracket as shown in the photo below.

This last top jig actually comes with two rectangular holes on top. There are two keys

that slide into them which will now hold the stern post perfectly vertical. They are "T" shaped. Dont glue the keys in position. They are snug tight fit. Just push them into the holes. See how they holds the stern post vertical? You will want to remove the keys if you decide to turn the hull upside down to fair the hull later. It wont sit flat with the keys in position. But we only need to use them for a short time.



Then the quarter pieces are added. Here is the one on the starboard side completed. I will detail how its shaped when I do the other side. I know this may look a bit odd to some folks but its all going to work out in the end.

There are some laser etched bevel lines etc on these pieces and I will explain how they need to be handled and in what order.

But basically, this quarter piece sits on the end of the wing transom (a notch is there so no guess-work) and the top is angled inboard to match the sloping sides of the hull. It sits against the edge of the "top jig" The forward end is glued to the aft face of the last cant frame.



Note how it extends over the wing transom a bit further aft by about 5/64". That is correct on done on purpose. It will be important later when we do the square tuck.

Having this all done and laser cut in one piece makes it a lot easier. The framing as you can see in the photo would have been tricky. Just read through the Seawatch book and see how Greg's model was tricky create. I was initially going to just leave this part solid but then I decided to have a little fun. I made it look like the framing was actually there even though we are planking from the wales up which will cover this anyway.



We will add the remaining cant frames (really only half frames) soon. They fill in the bottom below this quarter piece.

Basically there are two really not so hard things you must do to this piece before you glue it on the model.

First....sand a bevel onto the inboard side. Not the outboard side with the laser etched reference lines.....the inboard side. If you bevel the outboard side side the piece will be ruined.



Then step 2.....on the outboard side you have to bevel a few parts. The two tabs that sit against the last aft cant frame. And then the aft side of the piece. As shown below.



Also note the reference marks for your fixed block and where the other aft cant frames will fall along the bottom edge.

Then glue it on...thats it. The two tabs are flush with the outboard face of the cant frames. This means you will need to fair the outboard side of the hull before you add these. It wont work if you dont. At least not as well.

Here are photos of both quarter pieces on the model. They have been faired on the outboard side as well although not completely. I will wait for those last few aft cant frames.



We are about to get into the stern framing now. But first we need to add 3 more aft cant frames under the quarter piece.

The cant frames are self-explanatory and the same as the others. Just sand off the char and add them. But before I added them under the quarter piece I had to glue a small block on the inside of the quarter piece on both sides. The block is laser cut and matches the shape of the bottom of the quarter piece. This makes the area thicker which we will need when we fair the inboard side. This will all be covered up on the inboard side so it wont show. It will be planked over on the inboard side.



The small blocks will be faired along with the inboard frames when we do that much later. But it is probably a good idea to start that now and do a little preliminary removal of material. Its just easier to do at this point. I did it after gluing them in but they could just as easily be shaped before you glue them in.



Now the stern framing starts. First up are the fashion pieces. These are very, very complex. This hull has a square tuck much like the Cheerful. So to simplify things it will be made in two layers. Only the first layer will be added at this time. They are laser cut for you and 5/32" thick. There are laser etched lines on both sides. You can see how I faired the shape into it following the etched reference line. The two ends also need to be tapered slightly. I am talking very slight tapering to sit against the deadwood and under the wing transom. The other side of the piece has those etched reference lines. Just sand in

the bevel to match on both ends. Then give it a test fit.



I found it easier to test fit these while the hull was upside down. They will need to be 1/8" away from the stern post as mentioned. This was easy enough to do. I just drew a reference line in pencil. I used a 1/8" wide strip and held it against the stern post and just drew the line on the deadwood.



Draw a reference line 1/8" from stern post for the fashion piece



When test fitting these the bottom will sit along the curved edge on the



deadwood. Right along the bearding line. Try and get a nice clean and tight fit there. The top end will fit under the bottom of the wing transom. The aft edge is flush with the same on the wing transom. Then I faired them along with those last three cant frames I added. Its all coming together now. Just a bit more framing to go.

The last two cant frames number 28 and 29 were added. These looked very challenging after reading Greg's account of building them. But they were surprising easily to bevel and add.

Here is a look at the two aft cant frames after shaping.



They are laser cut of course. With etched reference lines for the bevels required. The first ...number 28...was easy enough. Just a bevel along the top. This illustration should explain it better than I can describe in writing.



Then it was glued into place using the last remaining slot in the deadwood.

Aft cant frame 29 or as Greg and David describe it...a filler frame, was done just the same. But there are more bevels that were sanded into them with a sanding stick. I disc sander would do the trick in about 30 seconds. But as I mentioned, I am building this entirely by hand without power tools as I know many folks dont have those.



Its beveled to sit against the wing transom. But it is also beveled to sit against the deadwood. There is no slot created by those wedges for this one. The heel must be beveled in the traditional way. Laser etched lines show you exactly were to start the bevels. It doesnt take very long to do.

Lastly a bottom of the heel was sanded on a curve to match the bearding line. Then it was tested in position. Tweak it if you need to but mine fit rather well on the first go. I got lucky. Glue them in and fair the hull frames for one final last time. Here is a picture of those last two aft cant frames which you can see. This was taken after fairing. I also added the treenails for all of the frames to finish it up.



This completed all of the hull framing except for the upper port sills. So that was next. These are also laser cut and rather simple to glue into position. I also laser cut a spacer that is the correct height. You can make your own that stretches all the way from port to starboard but this small length worked just as well. The spacer is laser cut in two layers. Just glue the layers together so you have a nice wide spacer. Rest it on the lower sill and position the upper. It's really very easy.



Do this for the six upper sills on each side. They were laser cut slightly longer than needed. Just sand it to fit nice and tight and glue them in. Then fair it into the hull.

This actually finishes up all the hull frames. All done and it took me 5 1/2 months from design to completion at this point.

I only have the stern framing left to finish up chapter two. Then it's on to planking. Here are some pictures. I am actually quite pleased since I had never built a POF model before. It was like diving right in the deep end. But surprisingly it all worked out according to plan. Without any major challenges or redesigns.





Stern Framing...

To begin...take the two center stern frames. Sand the laser char from the forward side and the the sides. No reason to do the aft side.

There are slots on the top of the wing transom where the bottom of these frames will be positioned. The forward edge of the stern frames should be flush with the forward edge of the wing transom. You will notice how the aft edge of the stern frames hang over the aft edge of the wing transom. This is by design.

The top of each stern frame will rest in the notches laser cut into the jig on the top of the hull. Just rest them in the notches but dont glue them here. The stern frames are only glued onto the wing transom. A rubber band holds the top of the two center stern frames together and in the notches of the jig. Put one or even both of the keys back into the jig (the keys for centering the stern post earlier) to help pull the stern frames forward so they sit firmly in the notches of the jig.



Then slide the laser cut spacer (3/64" thick) between the two center stern frames. This may cause the stern frames to spread apart a little. That is fine. The filler are a perfect fit. Dont sand anything off the filler. Have it sit flush with the aft edge of the stern frames. The bottom edge should also sit flush to the bottom of the stern frames as shown. Note the laser etched reference line for the stern window sill along the bottom. This will be important really soon.



Then add the two remaining fillers on either side. You may have to tape these in position. If you didnt fair the inboard side of your quarter pieces enough they may be too tight. Dont sand the filler pieces to fit. Sand the inboard side of those quarter pieces on the hull so they fit. Use a pencil to precisely mark where the stern light (window) sills will be placed. Just draw a reference line on the stern frames and quarter pieces.



We will now add the stern window sills between the stern frames. These are laser cut for you. Clean the laser char from the top and bottom of these pieces. They have been laser cut slightly longer than need.

There are paper templates on the plans for these three pieces. They are used to shape the gentle curve of the transom. Glue these to the top of each piece. Sand them to shape. The one on the left has been sanded already....remove the template and get ready to install them.



Leave the center filler between the two stern frames for now. We will add the outer sills first with these in position. Install these using your pencil reference lines for their proper placement. Sand the sides to get them to fit snug as they are laser cut slightly longer. Make sure you dont spread the open space apart because your sills are too long. That would be bad. Make sure they fit snug but with no movement in the frames or quarter pieces. See below.



Then remove the center filler and do the same with the center windowsill. Note how I removed the aft jig on the top of the hull at this point and set it aside. This will be important in the next step. I also sanded the outboard edge of the sills to fair them into the general shape needed. You want the transom to sit flush against the stern frames in the next step.



OK were going to add the laser cut transom next. You may want to do a test run with just tape initially. It is 3/64" thick. One side of the transom has laser etched reference lines on it. This is the INBOARD side. Those lines are to help you position it correctly. In fact, it is more important that look at the inboard side while you test fit this piece. Maybe with some tape first.

This is how it looks outboard..



But inboard is where the magic happens. It's how you will position it properly. If you look really closely...at the back edge of the sills you will see the laser etched reference line on the transom. That line is used to establish the height. If you placed your sills properly then you can align the transom so this reference line follows the top edge of the sills. This will leave a nice lip above it for inserting the stern windows later. I hope that makes sense as I explained it.



There are also etched lines for the two center stern frames. They may be harder to see above but they are there. This will help you position the transom port to starboard.

So after this test fit you know what you need to do to get this positioned correctly. Its time to glue it on. BUT

Don't just add some glue to the aft side of every stern frame and quarter piece and the sills and go for it. That would certainly be a huge mistake. There is no way you can get this positioned correctly in one shot before the glue sets.

So...do it in stages.

Step one....Only apply glue to the aft side of the transom below the reference line for the sills. You should only glue the bottom of the transom in place first. Make sure the etched line is flush with the top of the sills. Make sure the center stern frames are "centered" between the reference for them. There is no glue on

these so just use it to center to the transom port and starboard. At least down low where the sills are. Maybe your alignment is perfect for these toward the top of the transom and that is just fine right now. The cedar is soft and the frames are flexible as you are probably aware by now. Let that glue set firmly.

Step 2....Glue the sides of the transom to the quarter pieces. NOT the center frames yet. You can easily get a toothpick with some glue on it between the transom and the quarter pieces. Glue one side at a time. You only need glue on about 1/4" down the aft side of the quarter pieces.

With the sides of the transom secured...

Step 3...glue the center stern frames. Apply some glue on the aft edge of the stern frames....between the frames and transom. No need to apply glue all the way down to the sills. Just about a quarter inch down the stern frames is fine. Flex the stern frames so they fall right between the laser etched lines on the transom for them. Hold or clamp until the glue sets. Repeat for the remaining center stern frame.

This is how I managed to position it so perfectly. Don't be impatient and try to glue it on in one shot...it won't end well.

Now as long as your sills were positioned properly your transom will be as well.

One last thing in this chapter....two small "triangular pieces" laser cut need to be added. You can see it below. They sit on top of the quarter piece and against the transom to complete the run of the qdeck bulwarks. You do have to bevel the aft edge so they sit flush against the transom. They also sit flush with the outboard side of the hull. You can sand them flush with the outboard side when you are done. Also sand the top edge smooth so you get a nice run into the quarter piece.

Note....you may have noticed that I didnt sand the laser char of the transom edges. I am specifically talking about the inside edges of the window openings. I did this on purpose because I don't want to alter their shape. I will leave the char or paint it later. Better to have a good shaped window opening. That is more important. I also slipped that top jig back into position. You don't have to but it couldn't hurt to have more support at this stage. Just remember that if you turn the hull upside down from here on out, you will need to prop up the hull first. You don't want to damage the stern transom and stern framing.





Ketch Rigged Sloop Speedwell Laser Cut Parts for Chapter Two

- A Cant Jigs 3/32"
- B Cant Jigs 1/4" Ply
- C Fore Cant Jig strips 1/16"
- D1 Fore Cant Frames 1/4"
- D2 Fore Cant Frames 1/4"
- E Bow Timbers 3/64"
- F Bow Timbers 9/32"
- G Bow Timbers 9/32"
- H Bow Timbers 9/32"
- I Bow Timbers 9/32"
- J Bow Timbers 3/8"
- K1 Aft Cant Frames 1/4"
- K2 Aft Cant Frames 1/4"
- L Aft Cant Frames 3/16"
- M Wing Transom 5/16"
- N Quarter Frame Piece 7/32"
- O Fashion Piece 5/32"
- P Stern Transom 3/64"
- Q Stern frame Sills 9/32"