

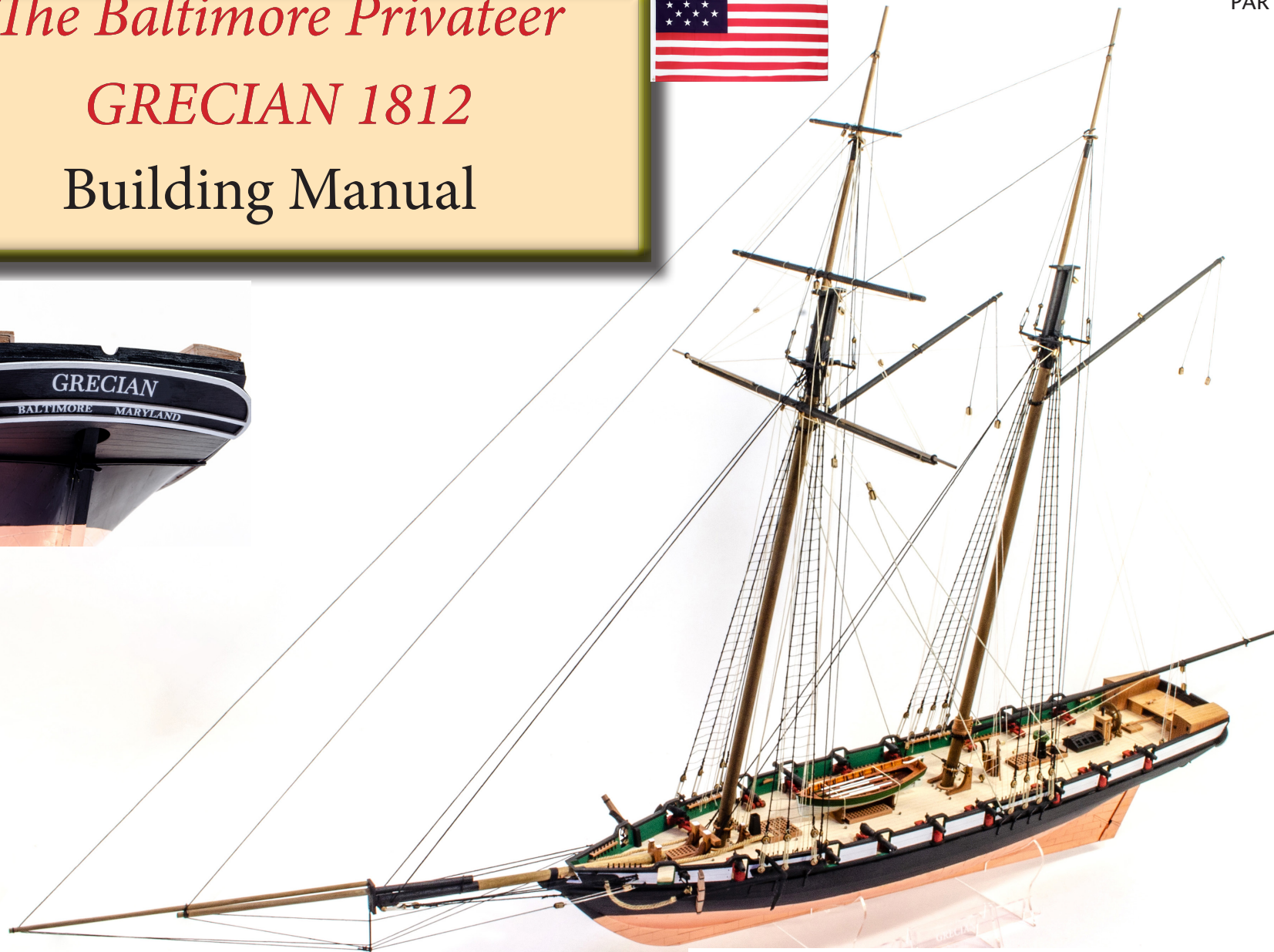
The Baltimore Privateer

GRECIAN 1812

Building Manual



PART NUMBER - VM-13



VANGUARD MODELS
BY CHRIS WATTON

THE BALTIMORE PRIVATEER SCHOONER

GRECIAN - 1812

HISTORY

Grecian was an American schooner launched in 1812. During the War of 1812 she received a letter of marque. The Royal Navy captured her on 5 February 1814 and took her into service as HMS Grecian. She was sold in 1822. In 1823 she became a merchantman. In 1824 the Chilean Navy captured her, but she escaped, and thereafter may have served for a time as a Spanish privateer. After the end of the Peruvian War of Independence she apparently returned to more conventional pursuits and was probably lost in 1829 though she was still listed in 1830 as sailing between London and Lima.

Tons burthen - 22432/94, or 226, or 229 bm

Length - 95 ft 11 in (29.2 m) (overall)

74 ft 3 in (22.6 m) (keel)

Beam - 23 ft (7.0 m)

Depth of hold - 10 ft 5 in (3.2 m)

Sail plan - schooner

Complement (As US Privateer): 24-27 (In Royal Navy Service): 50

Armament

(As US Privateer): 2 × 4-pounder + 2 × 6-pounder guns

(In Royal Navy Service): 8 × 18-pounder carronades + 2 × 6-pounder guns

As a privateer, she would have been so lightly armed because speed and manoeuvrability was favoured over gun power, with the guns there to simply warn/intimidate. When in service for the Royal Navy, Grecian would be known as a 10-Gun Schooner, with 8 x 18-Pounder carronades and a pair of 'Long' 6-Pounder chaser cannon.

American service

Thomas Kemp of Baltimore designed Grecian with several innovations. She was pierced for 16 guns, though she never carried that many, and her gunports were unique, designed perhaps to save weight. She had a long, curving stem, and a shallow, less convex bow.

Grecian's first captain was James Phillips, and under him she had made one voyage to France.

She received letter of marque No. 944 in December 1813, under Captain Knapp. She had not captured anything before the boats of HMS Jaseur cut her out under the guns of a battery field pieces on East River, in Chesapeake Bay on 2 May 1814. The British cutting out party under Lieutenant West, first lieutenant of Jaseur, rowed up silently in the night, drove Knapp and the seven members of the crew on watch below deck, fastened the hatches, cut her cables, and sailed off.

Royal Navy service

The British commissioned her as HMS Grecian under the command of Lieutenant Henry Jewry.

After the end of the Napoleonic Wars, Grecian was deployed on anti-smuggling duties in the Channel. On 14 March 1816 Grecian captured the smuggling vessel Betsey. Then a month later, on 18 April, Grecian was in company with the schooner HMS Rosario when they captured the smuggling vessel Nancy.

In May, Grecian captured three smuggling vessels. Then on 11 and 20 May she captured Active and Market Maid, of Hastings. The last day of May saw Grecian capture Po. On 30 July Grecian captured Ox, followed on 26 August with the capture of the Three Sisters. Lastly, on 6 December Grecian retrieved 84 kegs of contraband spirits from the sea.

On 3 May 1818 Grecian captured the smuggling lugger Fly.

On 18 August 1818 Lieutenant Nathaniel Martin was appointed captain of Grecian. Between 30 August 1819 and 20 January 1820, Grecian made several small captures. Grecian made further sundry small captures on 16 May 1820, 27 March 1821, 20 April, 6 May, and 2 August.

She was paid off in 1821. The Admiralty put Grecian up for sale in April 1822 at Portsmouth. She was sold to Joshua Crystall for £510 on 18 April 1822.

Merchantman

Grecian appeared in Lloyd's Register in 1823 with D. Holbrow, master and owner, and trade London-Lima. She then got caught up in the Peruvian War of Independence.

Grecian was one of the 16 vessels that HMS Fly got out from Callao and put under her protection on 26 February 1824.

A report dated 23 December 1824, reported that a Chilean Navy squadron captured Grecian as she attempted to return to Callao. Her crew recaptured Grecian and took her to Chiloe.

A report dated Lima 8 October 1825, reported that Grecian, having escaped from Admiral Martin Guise's squadron, had refitted in Chiloe. She then began cruising as a Spanish privateer between Lima and Guayaquil.

Fate

Grecian was lost on the Triangles Reef before 3 July 1829. She was on a voyage from British Honduras to Campeche, Mexico.

Grecian was last listed in Lloyd's Register for 1830 with master D, Holbrow, master, and trade London-Lima.

References

- Cranwell, John Philips; Crane, William Bowers (1940). *Men of marque; a history of private armed vessels out of Baltimore during the War of 1812*. New York: W.W. Norton & Co.
- Footner, Geoffrey M. (1998). *Tidewater Triumph: The Development and Worldwide Success of the Chesapeake Bay Pilot Schooner*. Naval Institute Press. ISBN 9780913372807.
- Marshall, John (1835). "Martin, Nathaniel". *Royal Naval Biography*. Vol. 4, part 2. London: Longman and company. p. 169.
- Winfield, Rif (2008). *British Warships in the Age of Sail 1793–1817: Design, Construction, Careers and Fates*. Seaforth. ISBN 978-1861762467.

THE KIT

Although the kit has many parts, this does not mean it is more complicated than standard kits you may be used to. It simply means that more parts are pre-made/cut than most other kits, meaning you do not have to manufacture the parts yourself from wood stock supplied in the kit.

This model kit is designed to be as accurate as possible for a commercial kit in both scale and detail. Although Grecian is as easy to build as we can make it, very basic woodworking skills (and patience) are still required. Estimated build time is between 150 to 200 hours, so a work space will have to be put aside for the job. Do not remove parts from the laser cut sheets until actually required for fitting, as they can be easily damaged or lost. We recommend all planks and laser cut parts that require bending, are 'pre-bent' before gluing.

PLEASE NOTE - This is very important.

Take plenty of time to study this manual until you are confident enough to tackle each stage of construction. Patience is the key word when building any scale model. Treat each stage as a separate project and the overall effect of the completed subject will be much enhanced.

Care should be taken when cutting parts from the laser and brass etched sheets. The sheet from which you are going to cut the parts should be laid on a hard, flat surface. Use a heavy-duty craft knife (a Stanley Knife is perfect and is and always has been my staple for all manner of cutting) with a good strong blade to cut through the tabs holding the parts in place.

It is easier to paint most of the photo-etched parts before removing them from their sheets. They can be touched up again once in place on the model. When painting parts in wood, use multiple coats with fine sanding in-between each coat to help minimise the grain visibility. Never settle on just a single coat, but instead take your time with every single sub assembly. Consider using a coat of flat varnish under your paint too.

We have included a building cradle on the 3mm MDF laser sheet that is for use when building the model, marking the waterline etc. Do not make up the clear acetate cradle until the model is complete.

Any heat discolouration due to laser cutting/engraving can usually be removed with a very light surface sanding with 320/400 grit, being careful not to damage engraved detail. Then to use a stiff brush to remove any dust from engraved details afterwards.

Finally, Grecian's skill level is 'Amateur'. This means that it should be well within the grasp of a modeller who has built a slightly simpler kit, such as a number of our fishing boats. However, the more advanced and seasoned modeller will still benefit from an intuitive build with the same levels of detail you would normally find in a more advanced kit.

Disclaimer

In our continuing effort to improve our product we reserve the right to change plans, features, specifications, prices and materials without notice or obligation.

Wood is a natural material and whilst we try hard to attain an even colour/shade in each batch, this cannot always be guaranteed, even with the highest quality materials Vanguard Models uses. Where there is colour variation, for example, planks, try to utilise these appropriately (darker/lighter planks below the waterline etc.)

Recommended tool list

(All items listed were used by the modeller to build the Grecian prototype model)

- 1: Craft knife (or standard Stanley Knife, which is robust enough for most jobs)
- 2: A selection of needle files
- 3: Razor saw
- 4: Pin vice or small electric drill.
- 5: Selection of drill bits from 0.5mm to 4mm
- 6: Selection of abrasive paper and sanding block (110, 180, 240, 320, 400)
- 7: Selection of good quality paint brushes
- 8: Pliers/wire cutters (Good quality side-cutters are excellent for trimming rigging ends)
- 9: Good quality set of tweezers (For small parts and rigging)
- 10: Steel ruler (300mm - for providing a straight edge for tapering the planking)
- 11: Small clamps (2 inch clamps with rubber tips, are very useful for projects like this)
- 12: Good quality pencil or drawing pen
- 13: Masking tape (Tamiya masking tape is perfect for masking areas around the main wale)
- 14: Waterline marking tool
- 15: A Pin Pusher (Or you can just use a pair of pliers to push pins into the planking and bulkhead edges)
- 16: Cutting mat

Recommended tools from Vanguard Models



Our waterline marking tool is supplied in a sheet of laser-cut, 4mm plywood that needs assembly. Assembly time is around 15 minutes and very easy. Metal fittings are supplied to aid the change in position of the pencil carriage. Vanguard Models pencil is supplied with each tool.

The Waterline Marker will mark a level from between 25mm to 150mm, and an engraved gauge will help you achieve the correct level.



Pin Pusher With Adjustable Depth Stop

This is a slightly larger version of our other pin pusher, and has the added advantage of an adjustable depth stop to ensure that all pins are pushed 'home' to the same depth. It is ideal for model boat/ship hull planking, and setting miniature n-gauge rail track on to board, or for nailing tasks on wooden boat models, dolls houses and picture frames.



Pocket sized Pin Pusher
Can push pins in to 9 mm of plywood or MDF
Ideal for pushing brass pins
Nailing, pin pushing or riveting can be frustrating if the wrong type or an oversized hammer is used. Not to mention the dangers involved. Small pins and nails should be driven in using a precision tool rather than a regular DIY hammer. Pin pushers will make inserting small panel pins and nails a breeze and virtually eliminate sore thumbs!



This plank bending tool is the ideal boat modeller's tool for the bending strips to the desired curvature. Used for perfect and precise bending of all wooden strips, such as planking on model boats up to 2mm thickness. For bending at an angle, change the cutting angle and the plank will 'spiral'. The more cuts produced the tighter the bend. Includes a plastic blade stopper.



Ideal for bending planking strips to the desired curvature
Modelcraft Plank Bending Tool Kit 220-240v, 30w

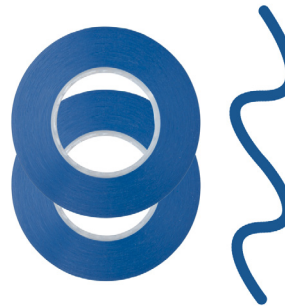
- The Plank Bending tool is ideal for bending planking strips to the desired curvature
- The rounded head on the tool should be warmed up and the wooden strip should be placed on the wooden template form. The strip is then heated by running the tool head over it a few times until the required curve is achieved.
- It works on dry strips with a maximum thickness of 1mm
- For thickness over 1mm, the strip must be dampened
- Set includes: Tool with a rounded head, tool stand & wooden template form.
- Use with caution as parts will be hot



Spring-Loaded Finger Sanders available in 4 sizes, 10mm, 20mm, 25mm, 40mm (Medium Grade)
Unique shape for flat and curved surfaces
Easy to fit band with spring mechanism

These sanders have a unique shape for working on both flat and curved surfaces and come with pre-fitted medium sander band. The sanders also have an ergonomic shape meaning that they're comfortable when in use.

Flexible Masking Tape x2



This is available in TWO sizes, and there are two rolls in each packet.

3mm wide x 18m long
6mm wide x 18m long

Absolutely ideal for masking hull waterlines! These masking tapes are also ideal for general modelling, airbrushing, arts, crafts, and even those smaller DIY tasks. The tape sticks, stays and removes cleanly. This flexible acid-free tape is designed to follow curved lines and contoured surfaces without creasing, tearing or paint bleed.



Pin Vice and Drill set

Pin Vice – Double Ended (0 – 2.9mm)
 Handy holder for drills, taps, pins etc. Including: 2 reversible collets, with capacities 0-1.2mm, & 1.3-2.4mm and 0.8-2.0mm, & 1.8-2.9mm. Incorporating an Anti-roll 6-sided body.



Drill bits
 Our Drill Bits are made of high quality tungsten steel, have high wear resistance, precision, and are beautifully sharp. This Set contains 10 different size drill bit diameters: 0.3mm, 0.4mm, 0.5mm, 0.6 mm, 0.7 mm, 0.8 mm, 0.9 mm, 1 mm, 1.1mm, 1.2mm.

Recommended Paints, stains and adhesives

- 1: White PVA wood glue or suitable Titebond adhesive.
- 2: Cyanoacrylate (superglue) thick and medium viscosity
- 3: Natural colour wood filler (Water based wood filler is recommended as this can be diluted and made thinner)
- 4: Matt polyurethane varnish (Not satin or gloss)

5: Grecian paint set from our web store:

- BLACK
- OFF-WHITE
- GREEN
- MATT RED
- VARNISH MATT



HULL CONSTRUCTION

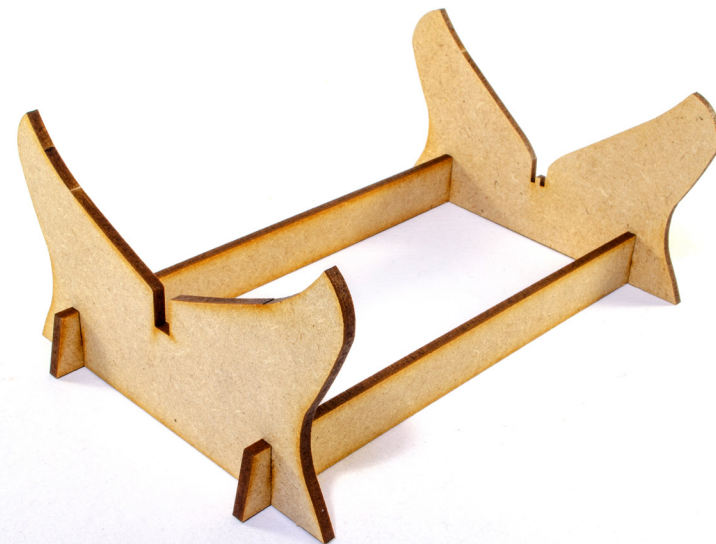
1. To remove all parts from sheets, use a fresh, sharp blade. We suggest either a scalpel or a heavy-duty knife such as a Stanley.



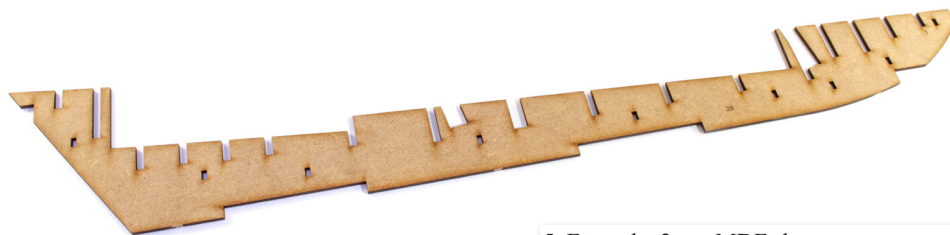
2. When you remove parts from the sheets, use either a knife or a light grade of sandpaper to remove any of the remaining tabs.



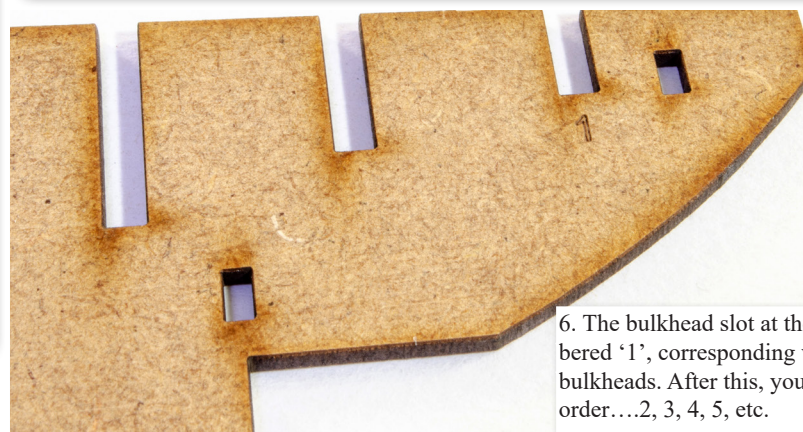
3. We will now build the temporary building cradle. From the 3mm MDF sheet, remove parts #25, #26, and both parts #27.



4. Assemble the stand like this. You can brush glue into the joints to make it stronger. The cradle side with the small 'pip' in the keel slot is the rear side. That little pip will eventually slot into a hole in the keel.



5. From the 2mm MDF sheet, remove part #28.



6. The bulkhead slot at the very front is numbered '1', corresponding with the numbered bulkheads. After this, you simply slot them in order...2, 3, 4, 5, etc.

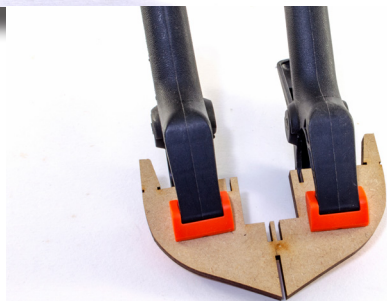
7. From the 3mm MDF sheet, remove bulk-heads, #1 thru #8.



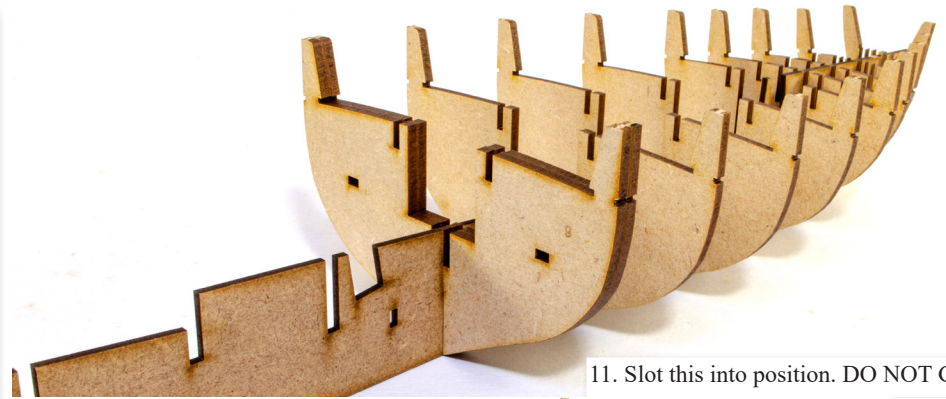
8. Slot (NO GLUE) these into position in their corresponding slots in the keel.



9. From the 3mm MDF sheet, remove both parts #9. These are identical.



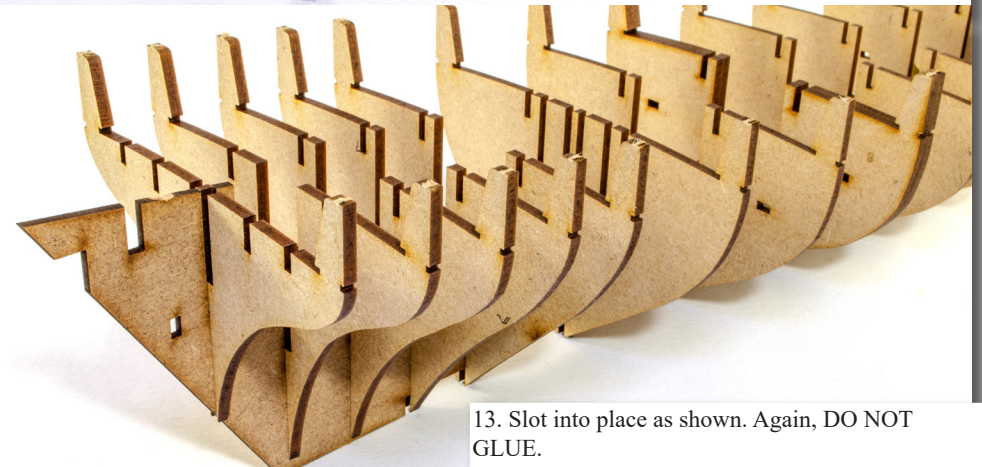
10. Glue these together and make sure they are properly aligned. Clamp until dry.



11. Slot this into position. DO NOT GLUE!

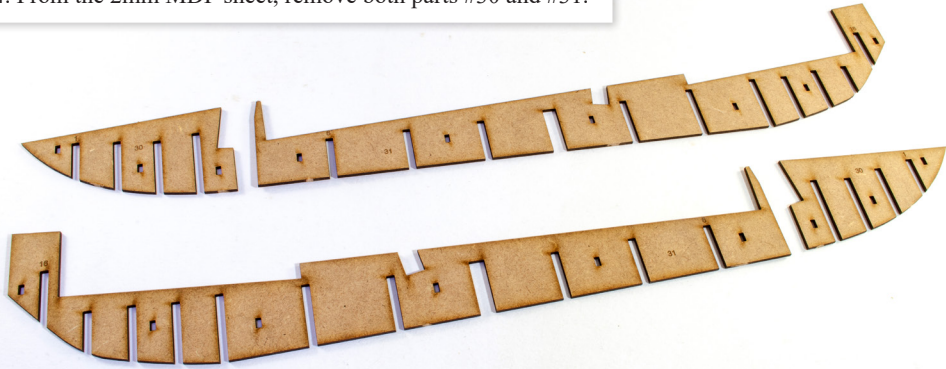


12. From the 3mm MDF sheet, remove parts #10 thru #16.

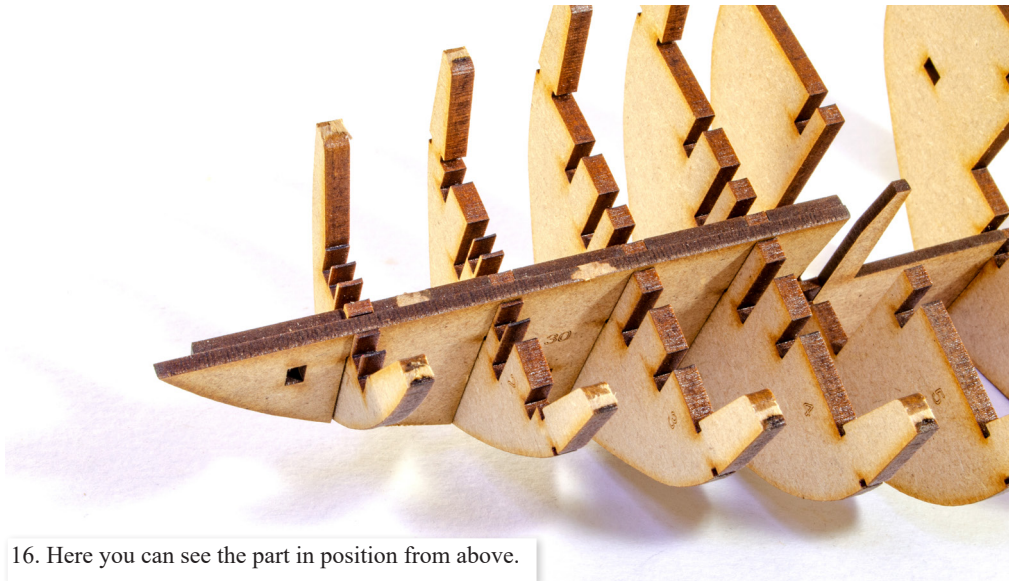


13. Slot into place as shown. Again, DO NOT GLUE.

14. From the 2mm MDF sheet, remove both parts #30 and #31.



15. Slot part #30 over bulkheads #1, #2, #3, and #4, which will sit up against the keel. Do NOT glue.

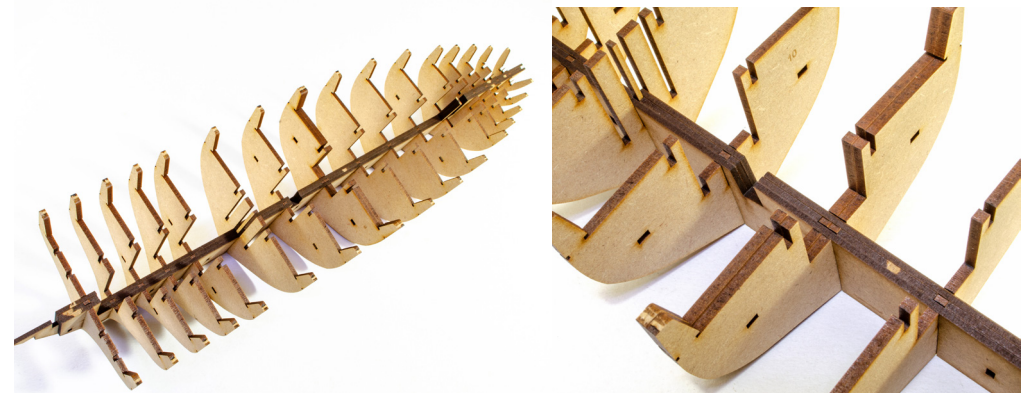
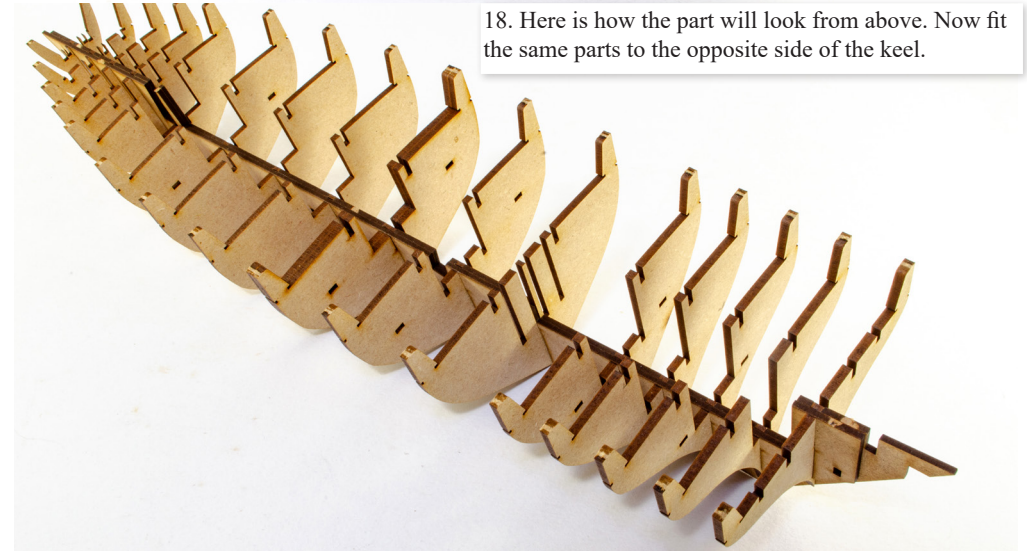


16. Here you can see the part in position from above.

17. Do the same with part #31 over the top of most of the remaining bulkheads. Please do NOT glue.



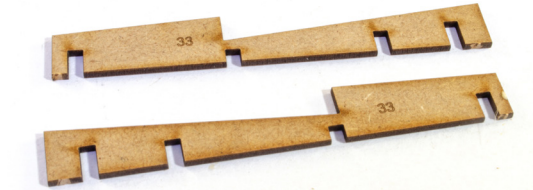
18. Here is how the part will look from above. Now fit the same parts to the opposite side of the keel.



19. From the 2mm MDF sheet, remove all parts #37.



20. GLUE these pegs into the holes in the parts you just installed. This will ensure that they are all aligned properly and so they can't move. Make sure the pegs are pushed all the way through to the other side.



21. From the 2mm MDF sheet, remove both parts #33.



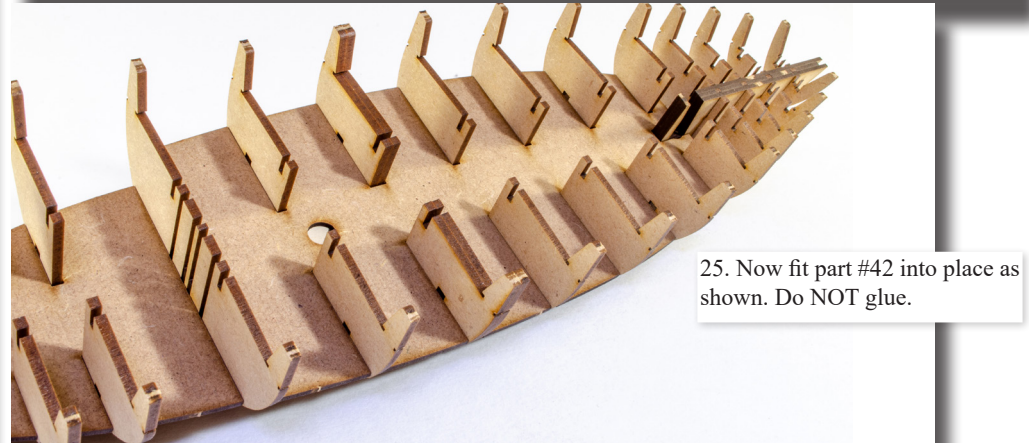
22. Slot them over bulkheads #10 thru #13, as shown. Do NOT glue. Here you see them installed from the side and above.



23. From the 3mm MDF sheet, remove parts #42 and #43.



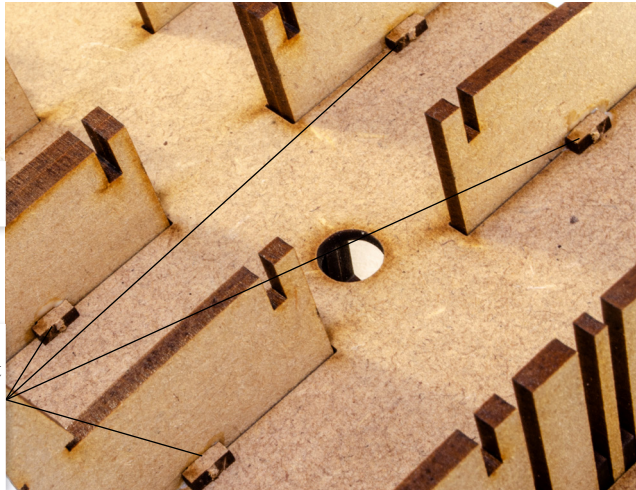
24. Carefully install part #43 as shown. This sits into the recesses in bulkheads #12 thru #15. Do NOT glue.



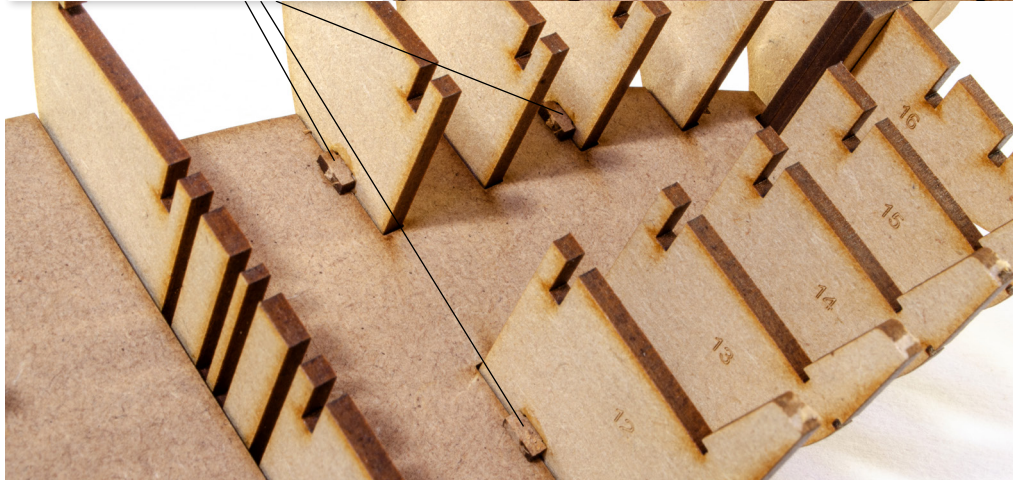
25. Now fit part #42 into place as shown. Do NOT glue.



26. From the 2mm MDF sheet, remove parts #38 and #38a.



27. Glue the pegs into the bulkhead slots above the two sub decks you just fitted. This will hold them in place. The longer pegs #38a slot through the double bulkhead #9.



29. Glue these into place as shown here.



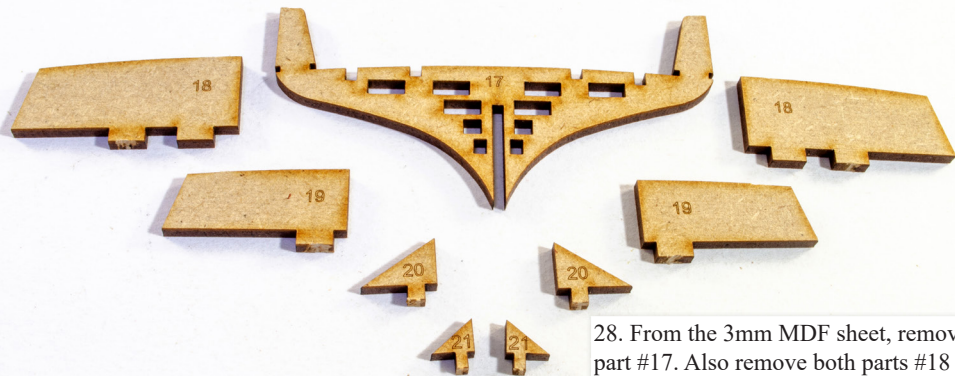
30. You now need to sand the assembly as shown here. This will make final sanding of the hull a little easier. This assembly can be finally sanded when installed to the hull.



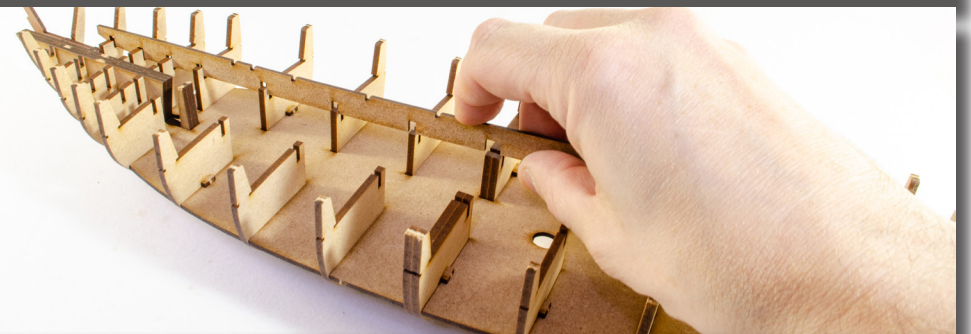
31. Glue the assembly into place as shown.



32. From the 2mm MDF sheet, remove both parts #29.

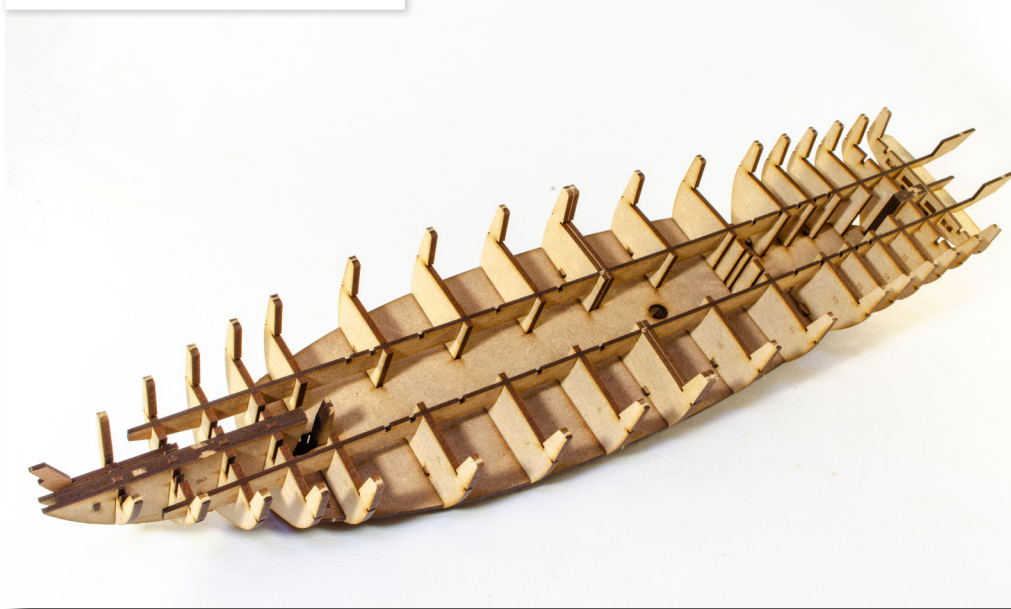


28. From the 3mm MDF sheet, remove part #17. Also remove both parts #18 thru #21.

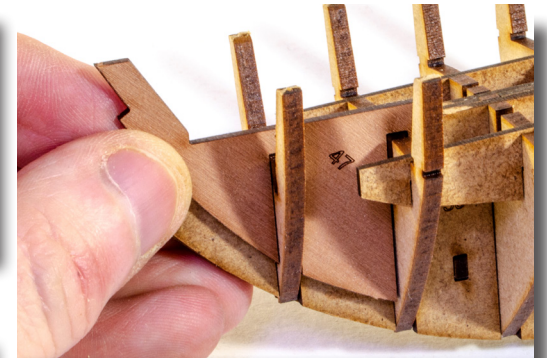


33. Slot these parts (NO GLUE!) into the slots shown on this photo. The parts will extend from bulkhead #2 and sit on the bulkhead #17 assembly you just added.

34. Here you can see the parts installed.



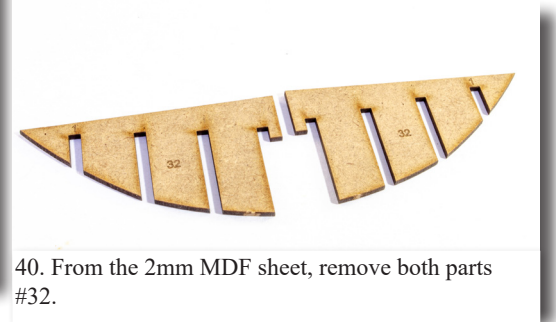
37. From the 2mm wood sheet, remove both parts #47.



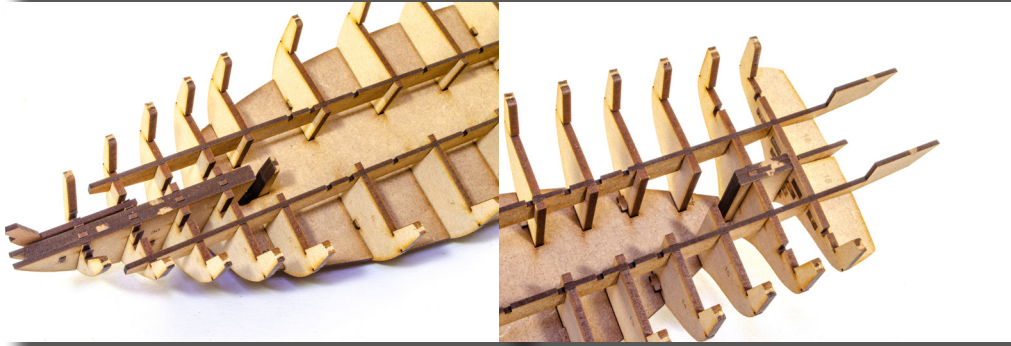
38. Slot these into position as shown. NO GLUE!



39. Here you see them installed.



40. From the 2mm MDF sheet, remove both parts #32.



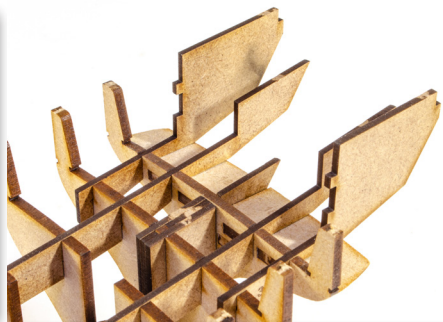
41. Dry fit these parts into the remaining slots on the forward bulkheads.



42. Here you see them fitted.



35. From the 2mm MDF sheet, remove both parts #34.



36. Sit into the slots as shown. DO NOT glue.



43. From the 2mm MDF sheet, remove five parts #41.



44. Glue across the specific slots in the top of the two longitudinal parts #29.



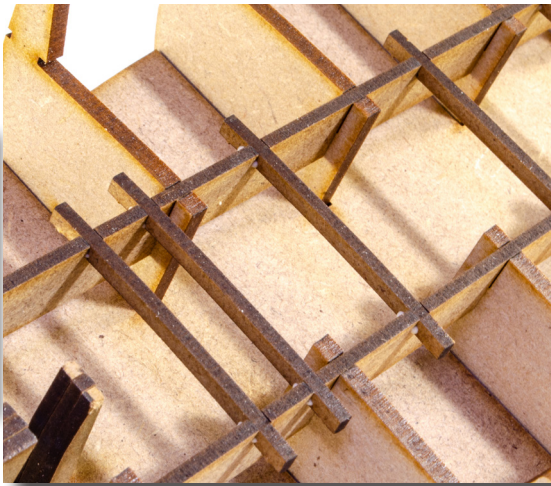
45. From the 2mm MDF sheet, remove two parts #40.



46. Glue across the specific slots in the top of the two longitudinal parts #29.



47. From the 2mm MDF sheet, remove three parts #39.

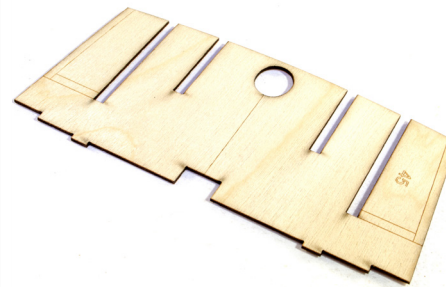


48. Glue across the specific slots in the top of the two longitudinal parts #29.

49. From the 0.8mm ply sheet, remove the deck part #44.



50. Install this so that the engraved centre line faces upwards. Flex the deck and slot it into notches in the bases of each bulkhead and ensure it is properly fitted. When this is done, the deck will fit perfectly over the tops of every bulkhead and lie evenly from bow to stern. You'll probably hear a satisfying click as the deck final snaps into place.

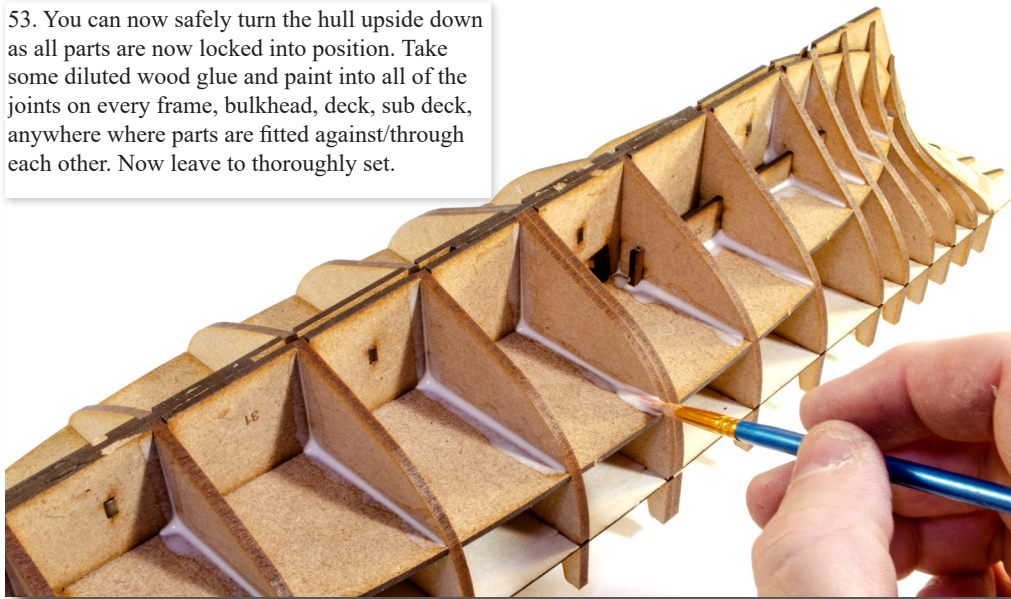


51. From the same 0.8mm ply sheet, remove part #45.

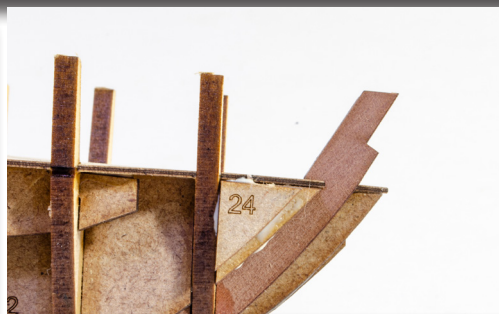


52. Slot the part into place as shown. The front edge will also clip into the bulkhead ears as per the previous deck section.

53. You can now safely turn the hull upside down as all parts are now locked into position. Take some diluted wood glue and paint into all of the joints on every frame, bulkhead, deck, sub deck, anywhere where parts are fitted against/through each other. Now leave to thoroughly set.



54. From the 3mm MDF sheet, remove both parts #23. Glue into place as shown.



55. Now take parts #24 from the same sheet, and glue into place over the previous parts.



56. From the 3mm MDF sheet, remove all parts #22.



57. Glue those parts into place underneath the deck as shown here, and between the stern assembly.



58. From the 2mm MDF sheet, remove both parts #35 and #36. From the 2mm wood sheet, remove both parts #50.



59. Glue parts #35 into place as shown. There are engravings on the deck to help with placement.



60. Now glue parts #36 into place as shown.



61. Finally, complete that assembly by gluing parts #50 into place at the rear.





62. From the 2mm wood sheet, remove part #51. Bevel the edge as shown here. Engravings are provided to help with this.



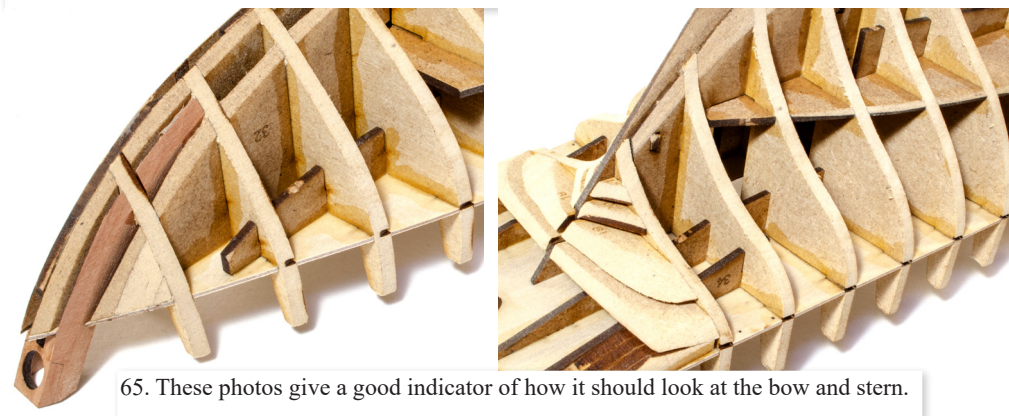
63. Glue into place. The bevelled edge will sit against the deck.



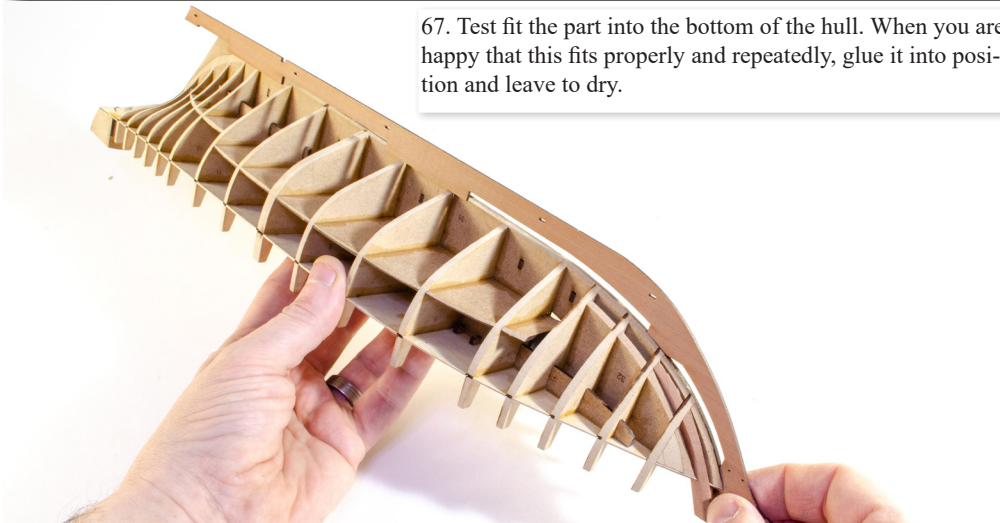
66. From the 2mm wood sheet, remove part #48.



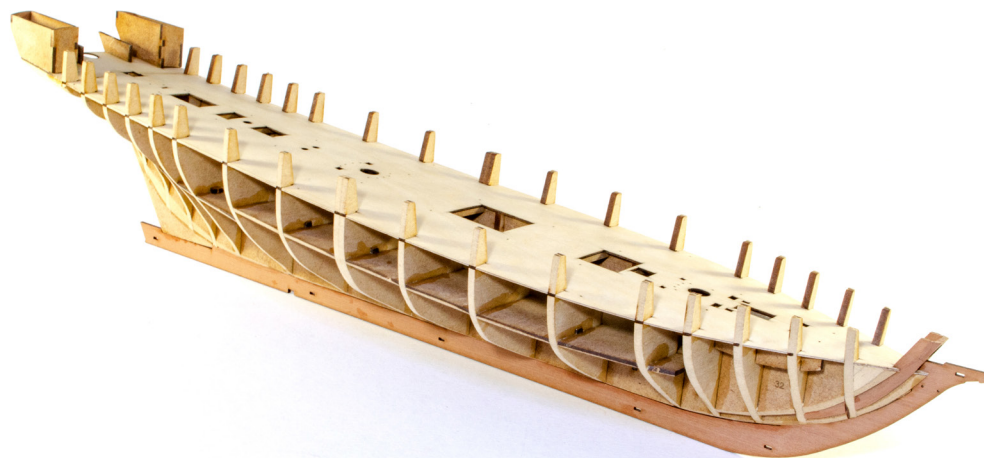
64. Before you can plank the hull, it needs to be prepared. This process of sanding the frames is called 'fairing'. Sand the bulkheads so that the shape of the frames 'flows' and sitting a plank along its length will show a maximum contact area between plank and bulkhead. A good indicator that you are fairing correctly is when most/all of the bulkhead char is gone. Use a sanding stick or similar to fair the hull.



65. These photos give a good indicator of how it should look at the bow and stern.



67. Test fit the part into the bottom of the hull. When you are happy that this fits properly and repeatedly, glue it into position and leave to dry.

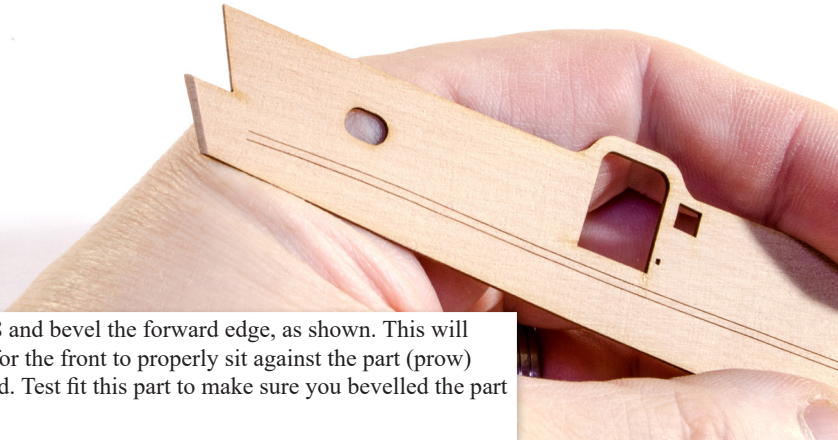


68. This is how Grecian will look with that part in place.

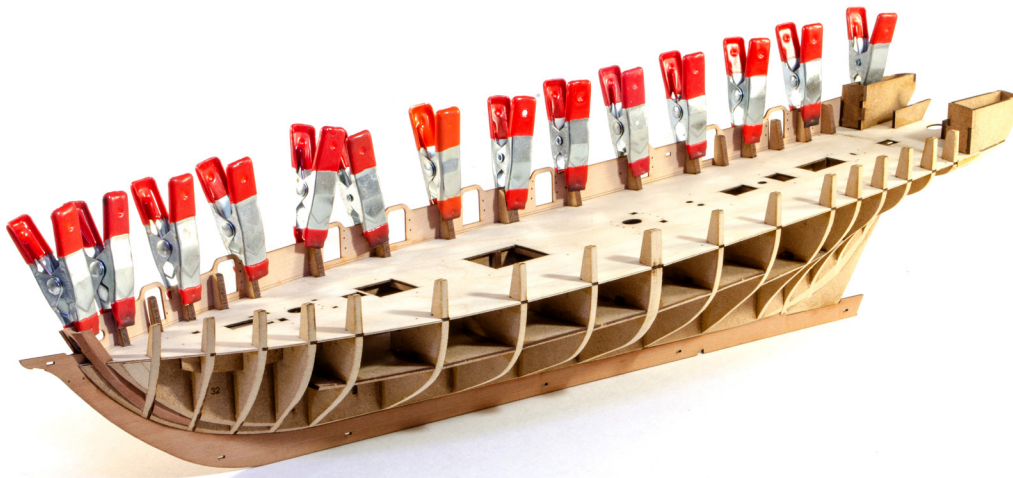
69. From the 1mm wood sheet, remove parts #57 and #58.



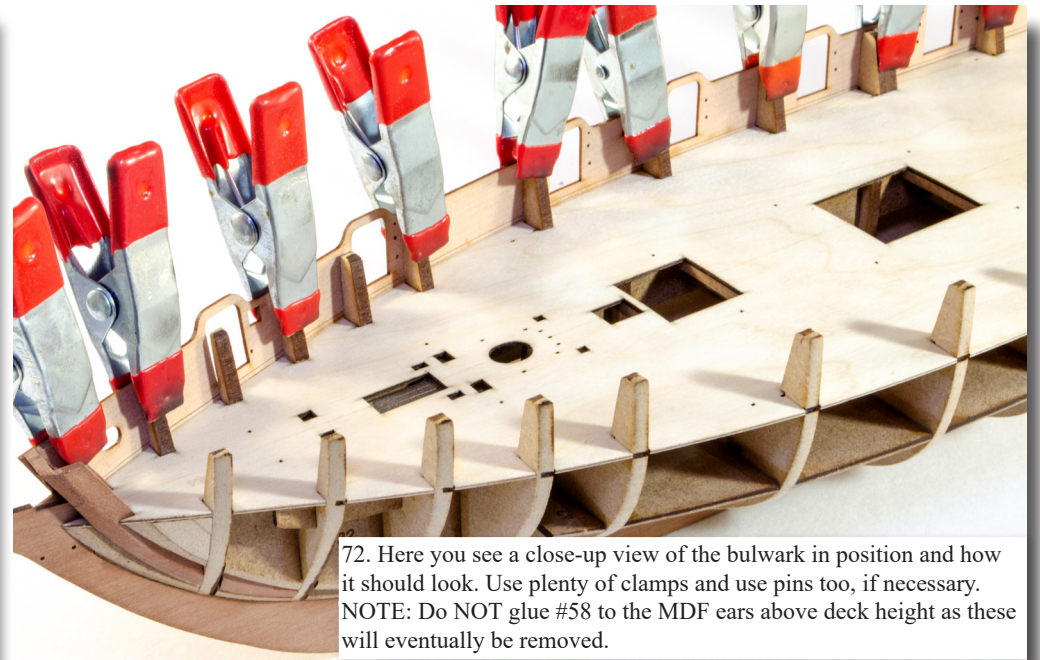
70. Take part #58 and bevel the forward edge, as shown. This will create a surface for the front to properly sit against the part (prow) that you just fitted. Test fit this part to make sure you bevelled the part enough.



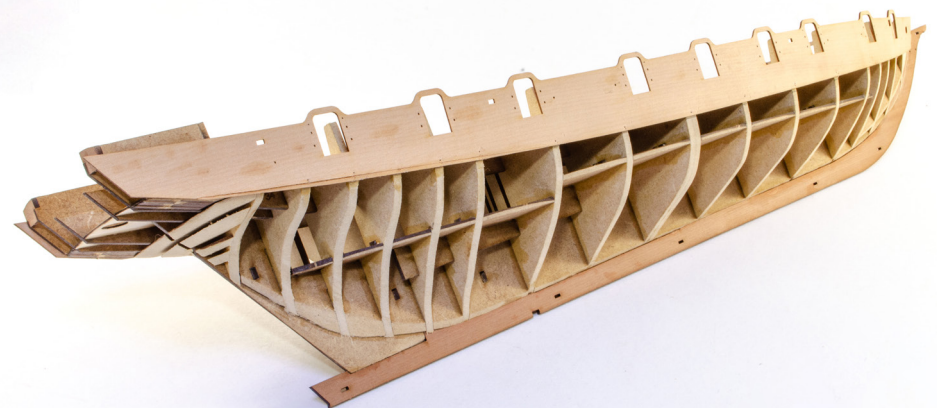
71. Glue part #58 into place as shown, ensuring the lowest longitudinal engraved line is level with the top of the ply deck.

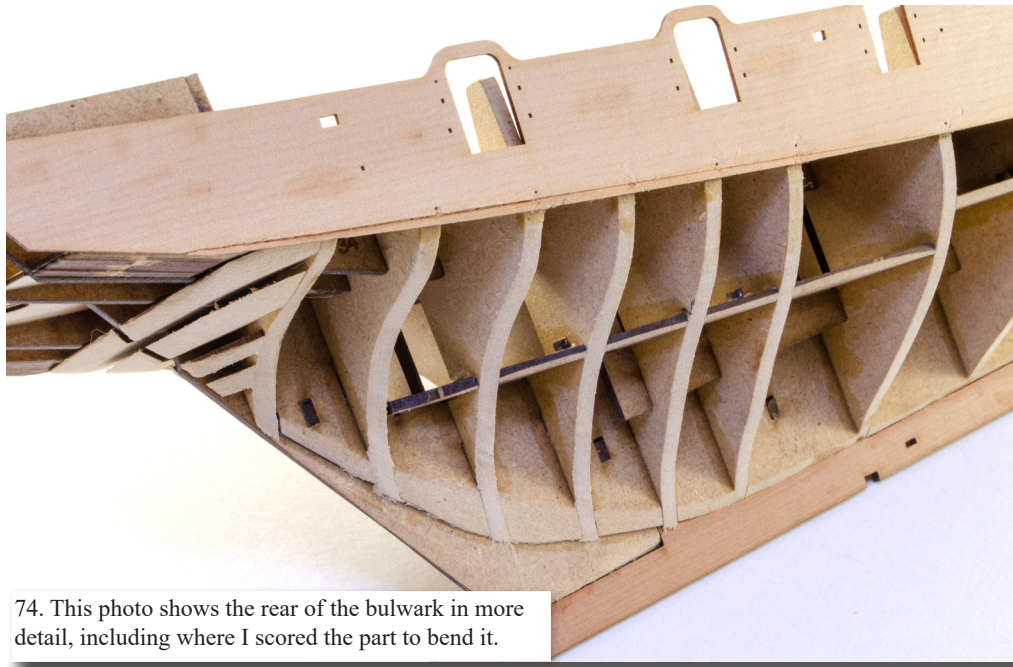


72. Here you see a close-up view of the bulwark in position and how it should look. Use plenty of clamps and use pins too, if necessary. NOTE: Do NOT glue #58 to the MDF ears above deck height as these will eventually be removed.

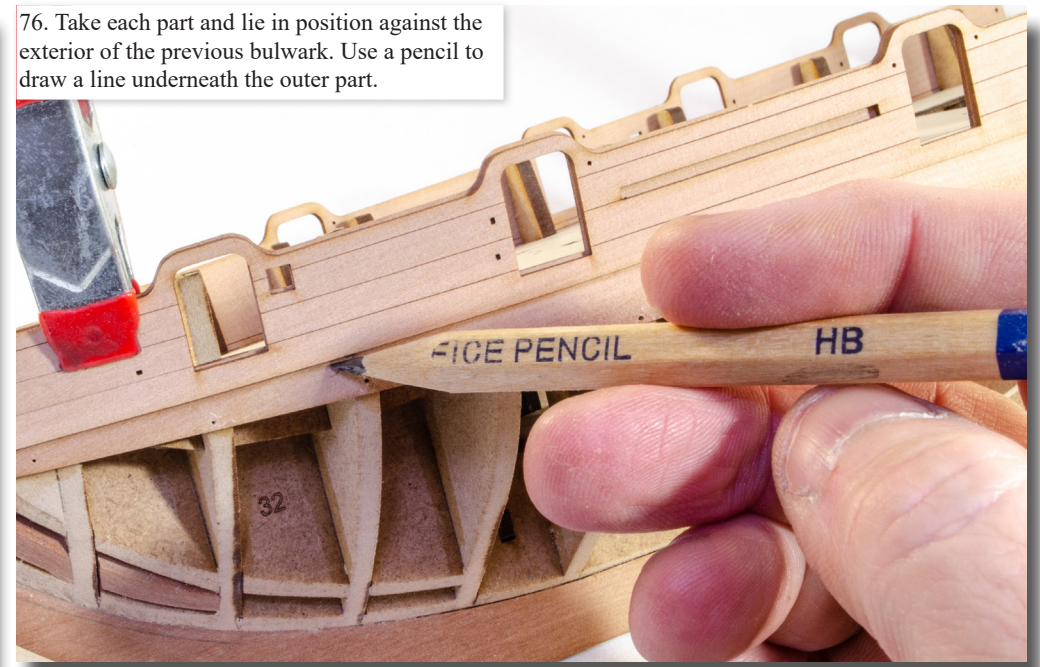


73. Here you see the part in place at the stern. If you find that you can't bend the part around the bulkheads towards the stern, you can either soak the part first and temporarily pin in place for 24hrs until dry, or score the part as shown there and gently crack it so it forms around the bulkhead. NOTE: If you decide to soak, then you must leave the part to thoroughly dry out as pear expands a lot when wet.

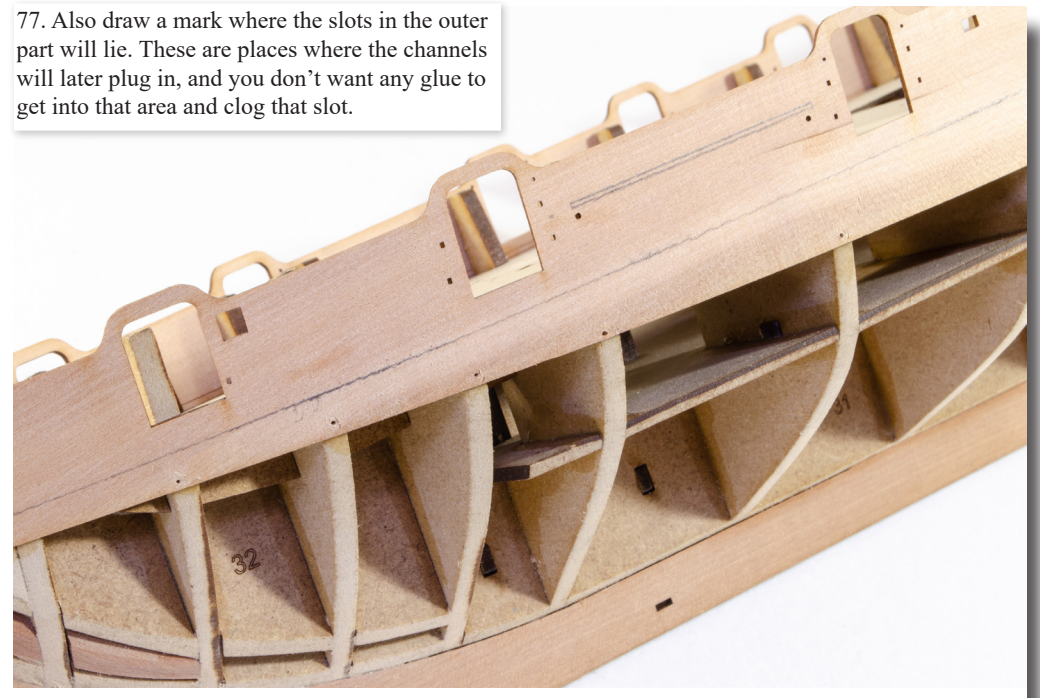




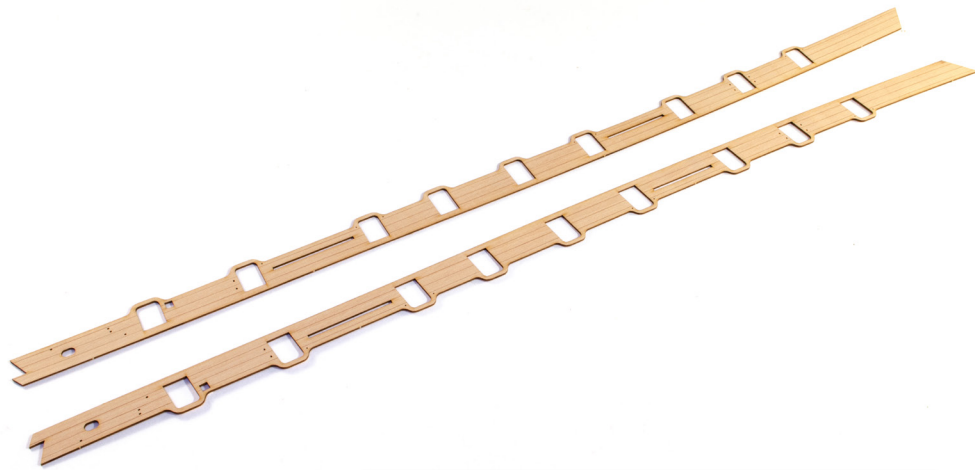
74. This photo shows the rear of the bulwark in more detail, including where I scored the part to bend it.



76. Take each part and lie in position against the exterior of the previous bulwark. Use a pencil to draw a line underneath the outer part.



77. Also draw a mark where the slots in the outer part will lie. These are places where the channels will later plug in, and you don't want any glue to get into that area and clog that slot.



75. From the 1mm wood sheet, remove parts #64 and #65.

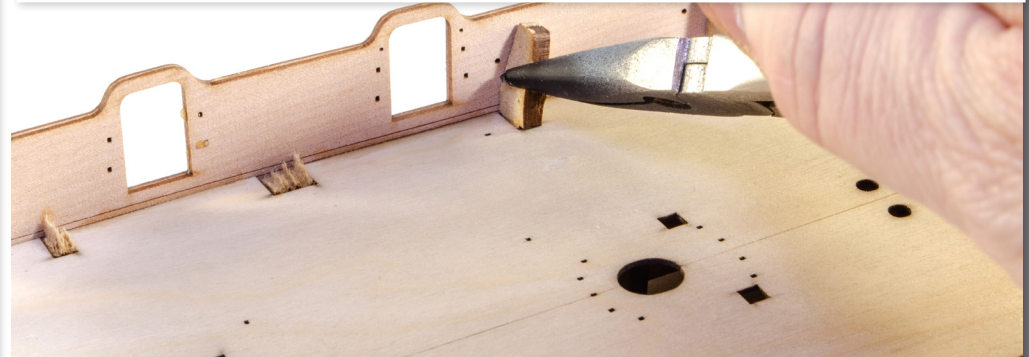


78. Add glue to the area above the long pencil line that you just made, but away from those slot areas. Make sure you add glue to the top of each gun port arch too, to provide strength. Fit each outer part into place and clamp as shown. The reason why we suggest adding glue to the hull and not the new part is that we don't want that glue to cause the part to curl as you apply it to the hull.

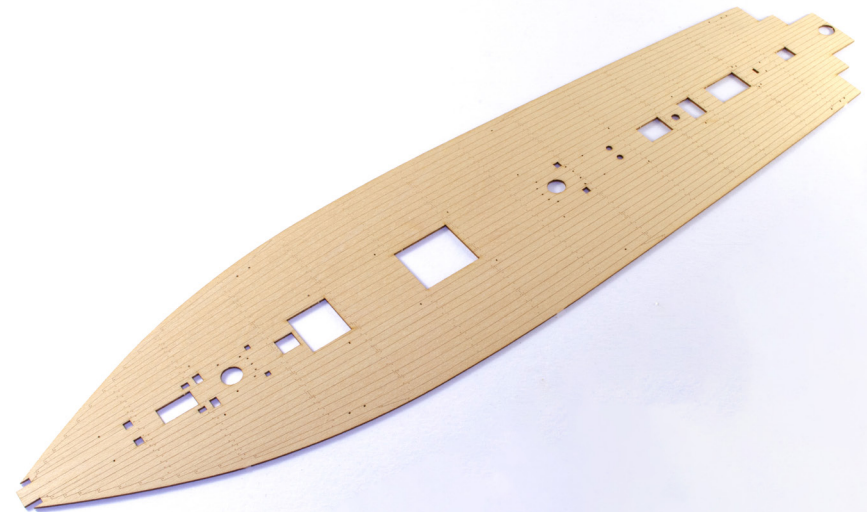
79. Your hull will now look like this.



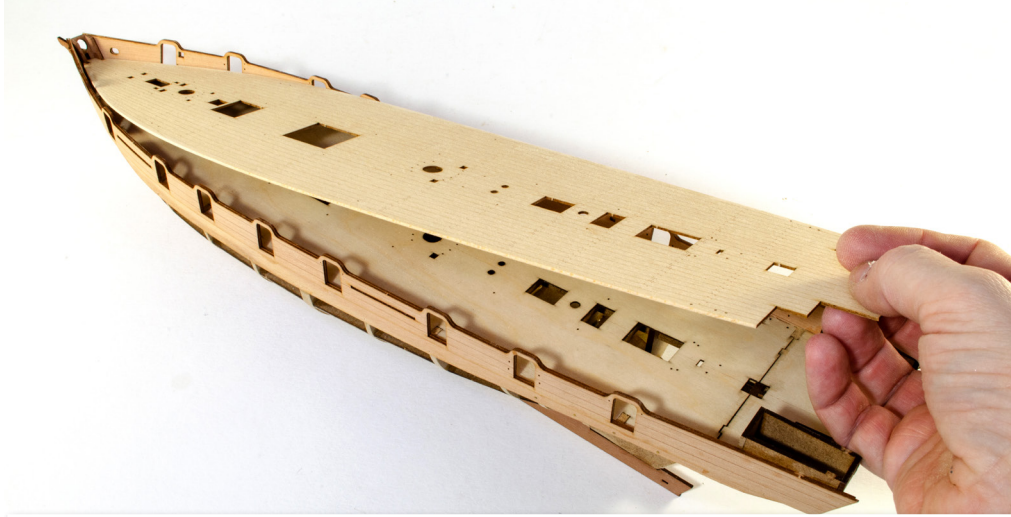
80. Grecian is a little different to our other kits in that we don't usually do this process until the hull is planked. However, it's vital we bolster the strength of the gun port arches at this stage. Use pliers to twist away all MDF bulkhead ears above deck height.



81. You can now trim/sand those down to ply deck height.



82. Take the laser-engraved lime deck and remove any of the waste material that may be in the cut-out areas.



83. Test fit the deck into the hull, making sure it properly sits down. If necessary, gently sand the edges of the engraved deck so it will lie down when gently pushed down around the edges. Once you are happy with this, simply glue the deck down, along the centre line of the ply deck. It doesn't need to be comprehensively glued down as the inner bulwarks will pin the deck down into place.



84. From the 1mm wood sheet, remove parts #66 and #67.



85. Dry fit these parts to test their fit. If necessary, bevel the front edge where it fits against the prow.



86. Glue these to both inner bulwark faces, using the parts to pin down the lime deck around the edges. Again, pay attention to making sure the tops of the gun port arches are all glued together. Clamp until dry.



87. Grecian will now look like this. While still having to be careful with the gun port arches, they should now be quite strong.

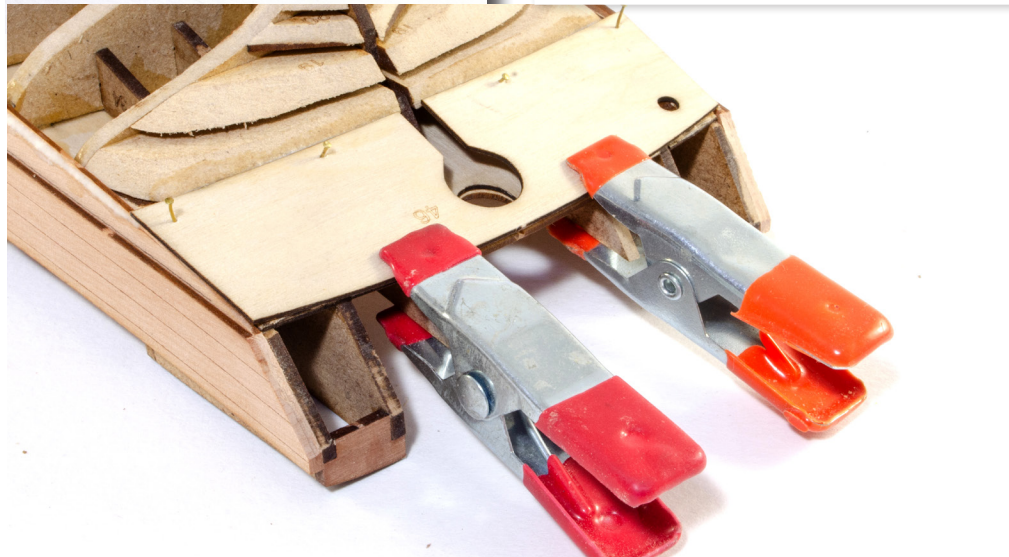


88. Sand the bulwarks flush with the stern of the hull.



89. From the 0.8mm ply sheet, remove part #46.

90. Glue into place as shown here, temporarily pinning where needed. Note which side the small hole is placed. That is important. Make sure the part is central in relation to the MDF keel.

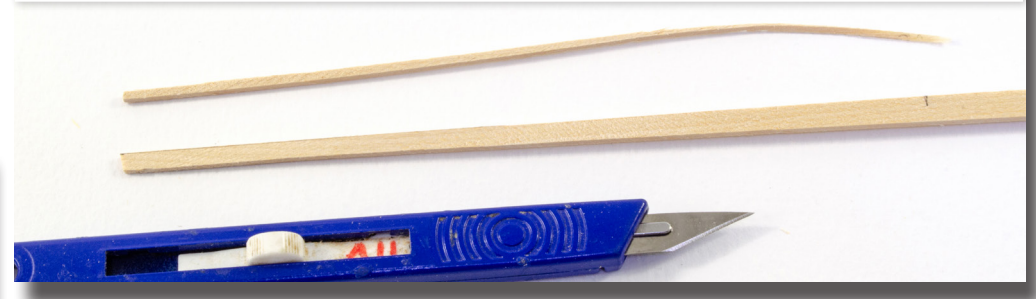


91. We can now begin to add the first layer of planks. You will need to start tapering these from laying the very first one due to how shallow the bow is in relation to the stern. Lie your plank under the bulwark as shown and make a pencil mark where the plank tries to cross over the bulwark.

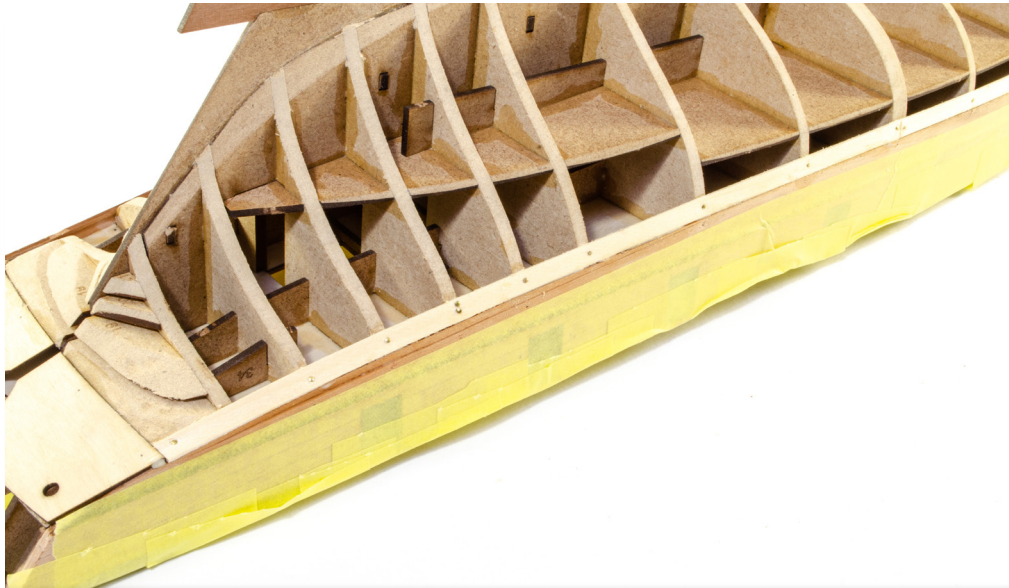


92. Draw the line from that point to the front of the plank.

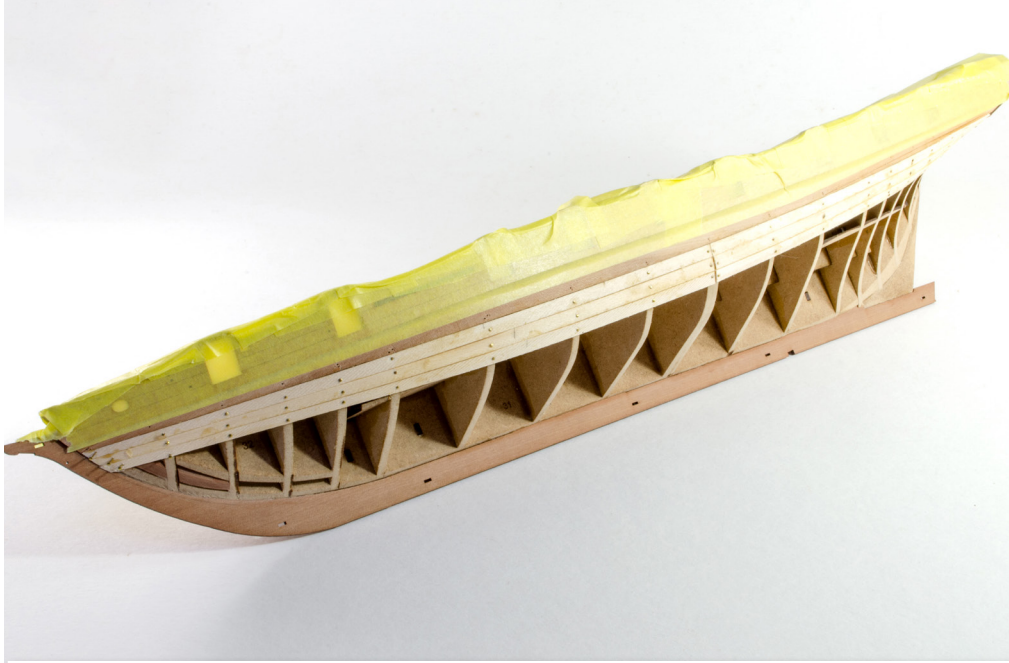
93. Now cut along that line as shown. You will also need to angle the front of the plank to match the curve of the prow, and angle its inner face so it will meet the prow properly.



94. Here you can see the plank glued, fitted, and pinned. It's important to also edge glue these planks to each other as well as to the bulkheads. You'll also see that I've only added the plank up to the set of double bulkheads. This is fine as you can fit this first layer in halves, if you wish.



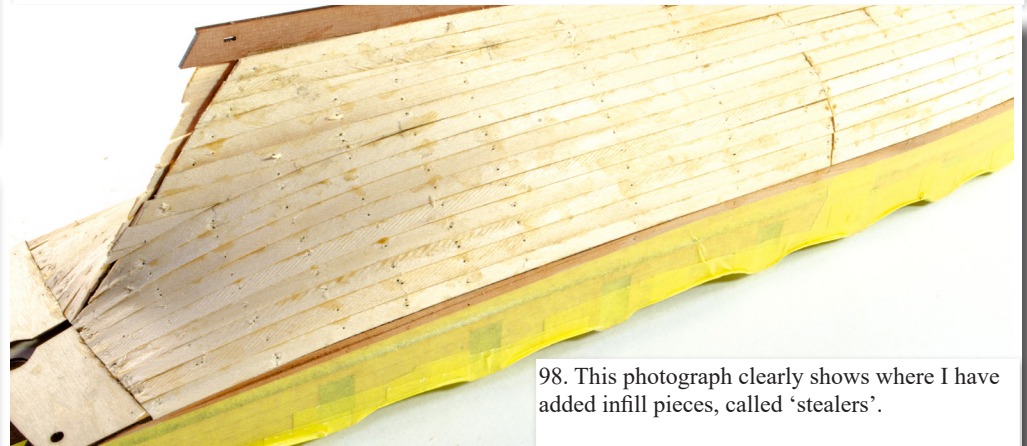
95. Here is the rear half of this plank run, glued and pinned. Also notice that I have taped up the external bulwark to prevent any glue getting on it.



96. Continue to plank the hull, tapering as you go. You will find it beneficial to start tapering the planks from around the double bulkhead point as you progress. No tapering needs to be done at the stern.



97. The hull is now fully planked. Use scrap planks to fill in any gaps you may have at the stern (or anywhere!).



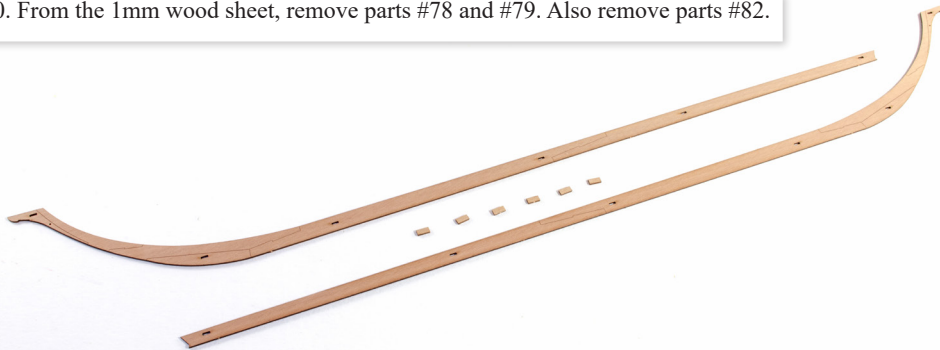
98. This photograph clearly shows where I have added infill pieces, called 'stealers'.



99. Now sand the hull smooth, so it blends in with the first pear bulwarks you fitted.

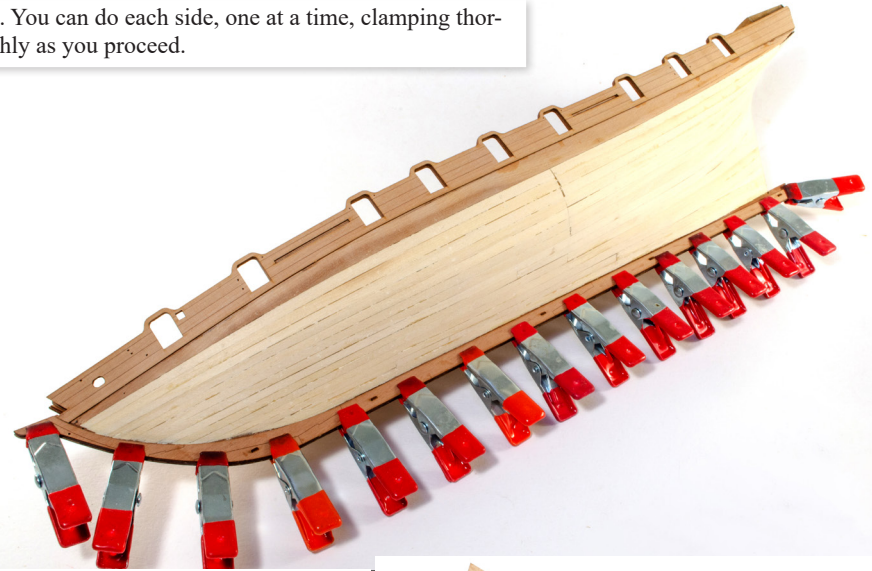


100. From the 1mm wood sheet, remove parts #78 and #79. Also remove parts #82.



101. Glue parts #78 and #79 into place on the keel, aligning and gluing with the small pegs. You now have a rebate into which the second layer of planks can neatly fit.

102. You can do each side, one at a time, clamping thoroughly as you proceed.



103. From the 2mm wood sheet, remove part #49. From the 1mm wood sheet, remove parts #80 and #81. You will also need some of the small pegs you removed recently.



104. Sandwich, glue and peg the 2mm part between the outer engraved faces. Clamp until dry.



105. This assembly can now be glued into place at the stern, creating the rudder post.



106. From the 1mm wood sheet, remove part #59.

107. This can now be glued into place as shown. Pin if you must, otherwise just try to clamp into place.



108. Here you see the part in place, unobstructed by clamps.



109. Sand flush any overhang there is at either side of the hull.



110. Now plank the hull again, using the pear wood strips, in the same manner as before. This photo shows you how the planks terminate at the part you just added, and also how they will look when they transition from the sides to the underside.



111. If you add any planks as halves, just do this if the need requires it. I have done this with a small number on either side. Here is the hull, completely planked.

112. Carefully sand the hull smooth and use filler where necessary.



113. From the 1mm wood sheet, remove parts #MW-S and #MW-P. These are the main wales, supplied in single, engraved parts.



114. Fit the wales to the hull, with the top edge of each wale running along the bottom edge of the external bulwark part, exactly. The wale will curve in along the bottom edge, and you may need to first soak and pin these parts until dry if you feel you'll struggle to make the part curve. If you do soak, you must leave the parts 24hrs to thoroughly dry and shrink back to normal size. You will also need to bevel the front edge of each wale where they meet the prow.



115. You will probably find that the bulwarks will lie slightly forward of the bowsprit entry hole. At this point you can now sand those flush with the entry hole position. Also, sand flush any of the locating pegs on the keel.



116. Grecian will now look like this.

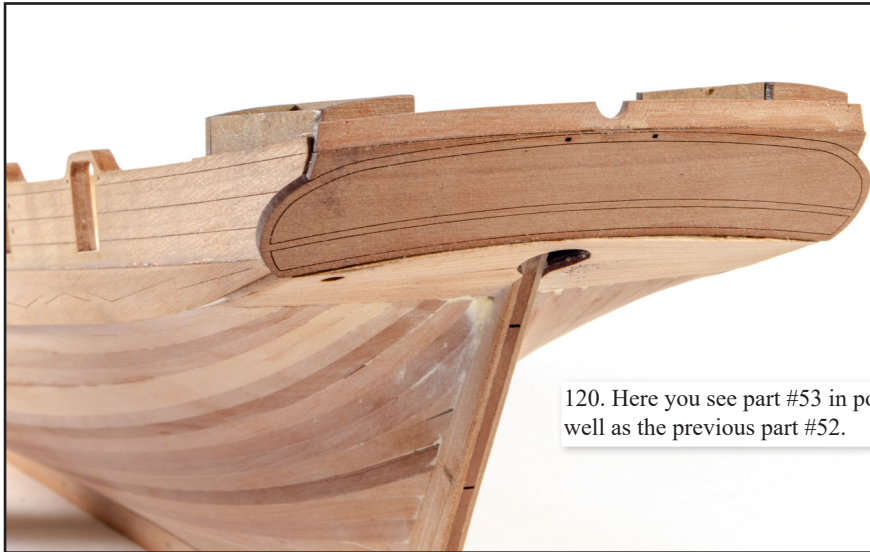


117. We now need to look at fitting the stern, but before that can be done, you will need to take some sandpaper or a sanding stick and gently sand the stern frames, taking into account the gentle curve of the parts.

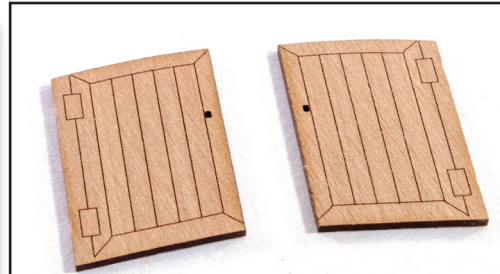
118. From the 2mm wood sheet, remove parts #52 and #53.



119. Glue part #52 into position as shown on plan. When the glue is dry, take a sanding stick and sand the upper edge of this part until it's at 90 degrees to the vertical part of the bulwark. This means that part #53 will sit on top of this with as much contact area as possible.



120. Here you see part #53 in position, as well as the previous part #52.

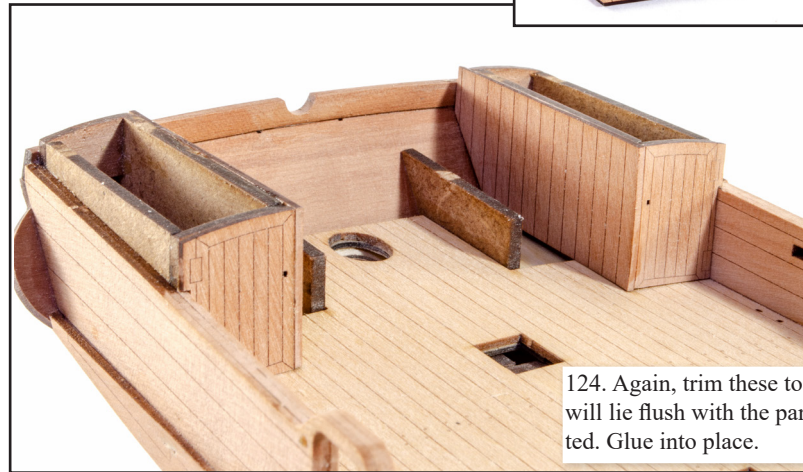


121. From the 1mm wood sheet, remove parts #97 and #98.

122. These parts are supplied slightly oversized so that you can tailor them exactly to your model. Test fit each part in turn and trim/notch as appropriate so that it's flush with either side of the MDF structure. When you're happy, then glue into place.



123. From the 1mm wood sheet, remove parts #93 and #94.



124. Again, trim these to fit. The forward end will lie flush with the parts you previously fitted. Glue into place.



125. From the 1mm wood sheet, remove parts #95 and #96.

126. These fit on the outside edge of the MDF structure and will lay flush at the front and back. You will need to trim these to suit your own model.



127. From the 1mm wood sheet, remove parts #99 and #100. These will form the roof parts of this area.



128. Glue into position and trim/sand away any excess so the roof is flush with the structure sides. NOTE: A good idea here is to either soak these parts to induce a gentle curve, and then let the parts thoroughly dry, or you can glue one long edge first and leave to dry before gluing the opposite edge down.



129. From the 1mm wood sheet, remove parts #68 and #69.



130. Glue part #69 to the back face (non-engraved) of part #68, making sure the hole aligns exactly. Clamp until dry.



131. Your assembly will look like this. Gently sand the lowest concave edge, slightly bevelling it from the front, towards the back. This will allow for the angle of the deck.



132. Glue the assembly into position as shown.



133. From the 1mm wood sheet, remove parts #59-P and #59-S (P – Port, and S – Starboard).



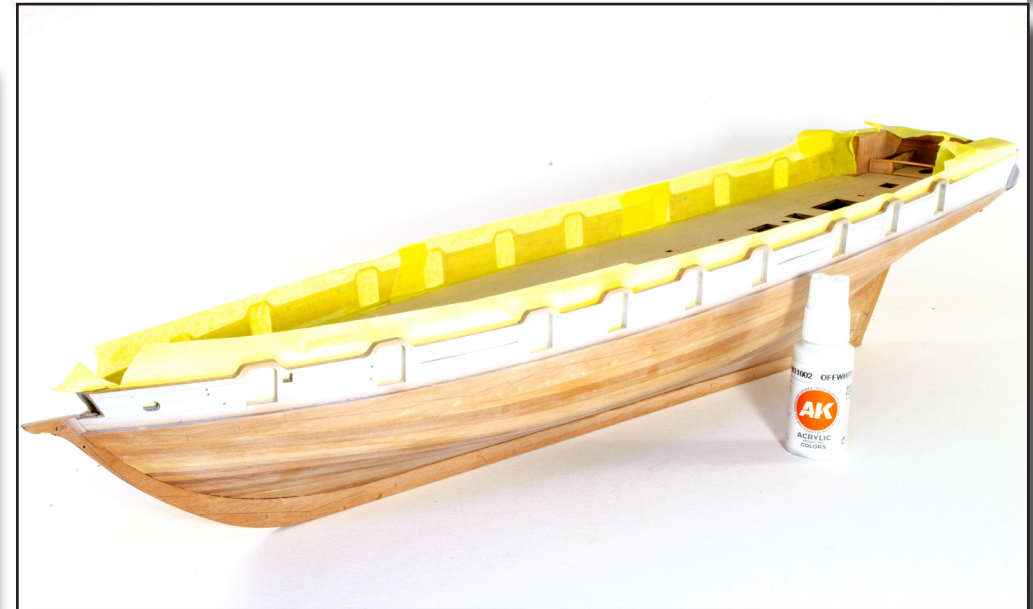
134. Glue these as shown. These fit along the edge of the second planks, just up to the line where the counter is glued. The hole on each of these will sit on the outside edge.



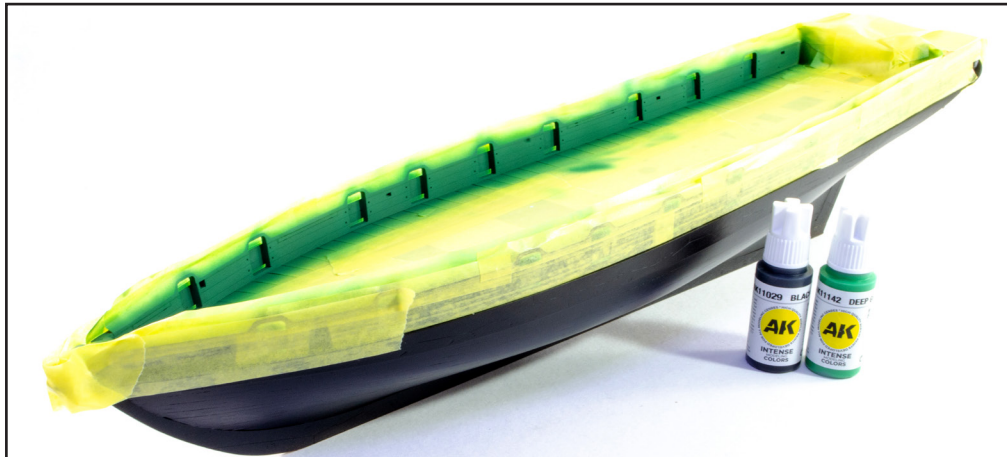
136. Whilst you can of course paint Grecian in your own choice of paint, we have carefully selected this specific set of high-quality acrylic paints which are easy to apply and durable.



135. Grecian will now look like this.

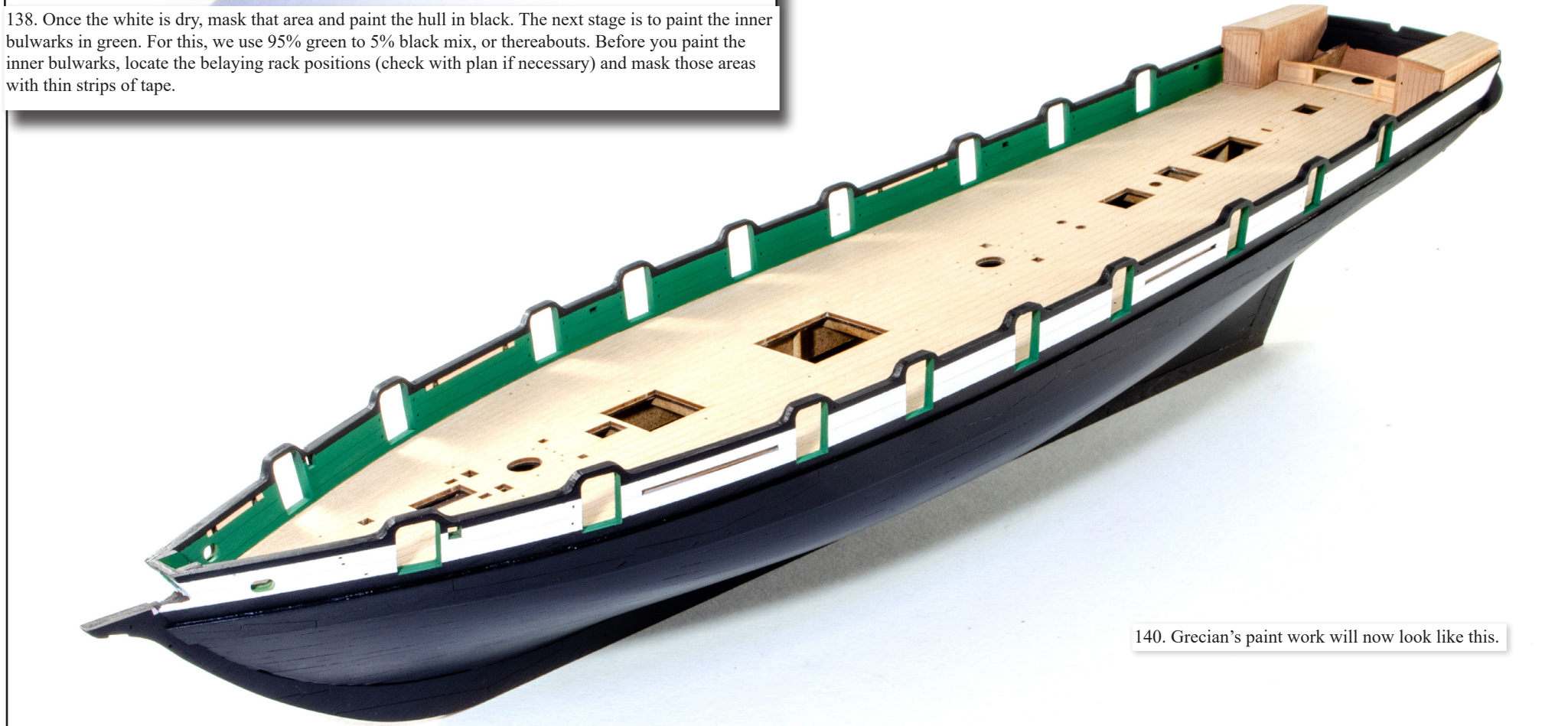
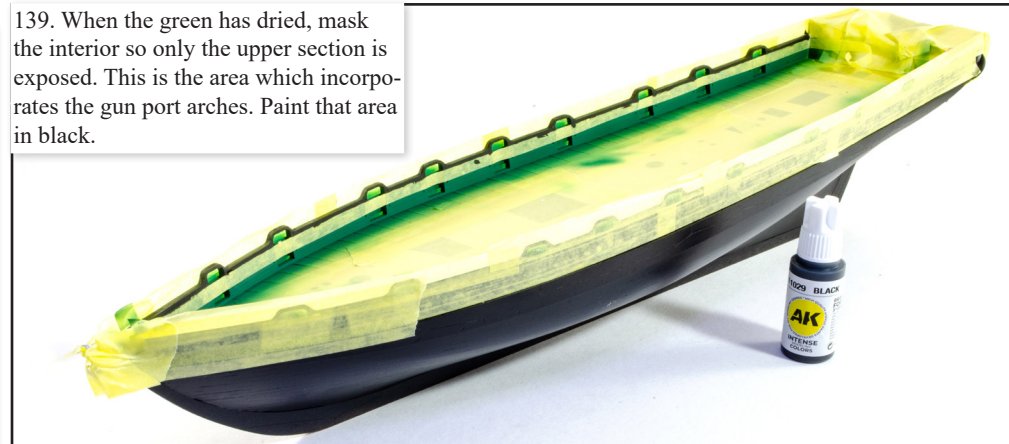


137. Painting starts by applying white to the upper bulwarks, and specifically the area shown on the plan. This can be applied with brush or airbrush. Remember to mask the deck area if you spray your paint.



138. Once the white is dry, mask that area and paint the hull in black. The next stage is to paint the inner bulwarks in green. For this, we use 95% green to 5% black mix, or thereabouts. Before you paint the inner bulwarks, locate the belaying rack positions (check with plan if necessary) and mask those areas with thin strips of tape.

139. When the green has dried, mask the interior so only the upper section is exposed. This is the area which incorporates the gun port arches. Paint that area in black.



140. Grecian's paint work will now look like this.



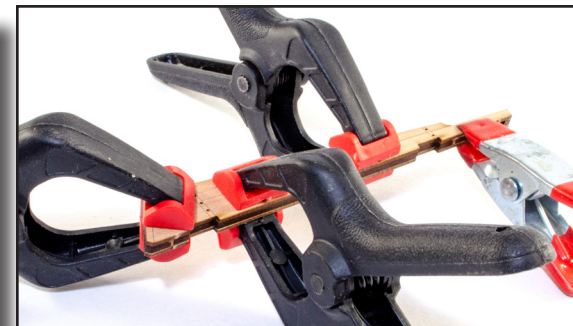
141. From the 1mm wood sheet, remove parts #60 and #61, and both parts #62.



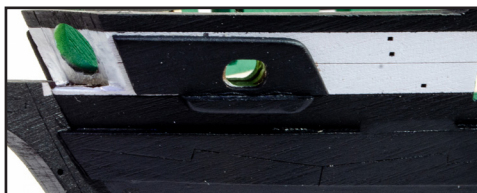
142. Assemble the parts as shown here.



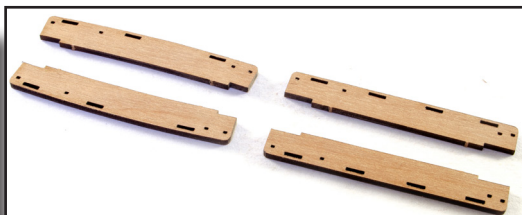
147. From the 2mm wood sheet, remove part #54. From the 1mm wood sheet, remove parts #83 and #84.



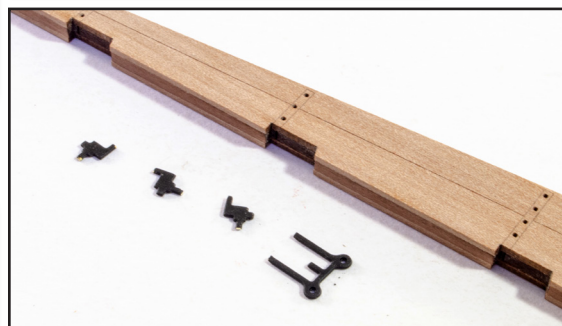
148. Glue the 1mm parts to either side of the 2mm part, ensuring the engraved sides are on the outside.



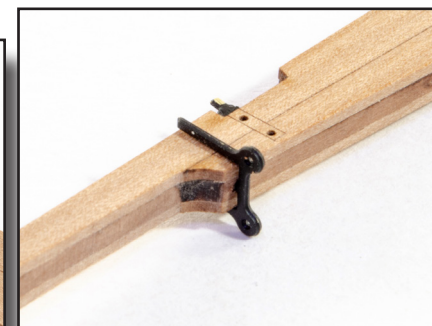
143. Round the edges, especially on the underside of parts #62. Paint these black and glue into place as shown.



144. From the 1.5mm wood sheet, remove parts #148 and #149.



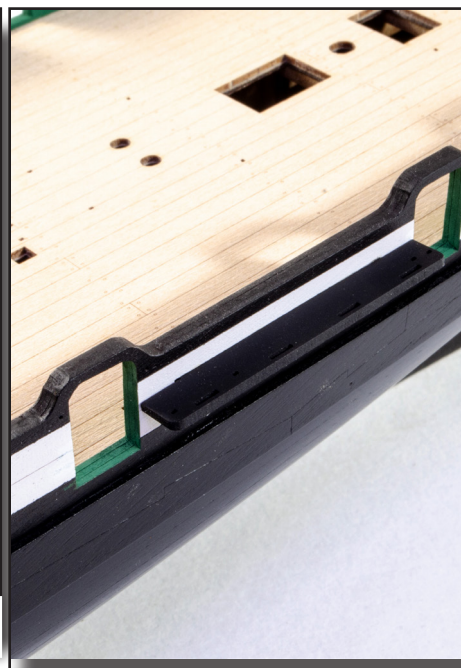
149. From the 0.6mm PE sheet, remove parts PE-4 and PE-6.



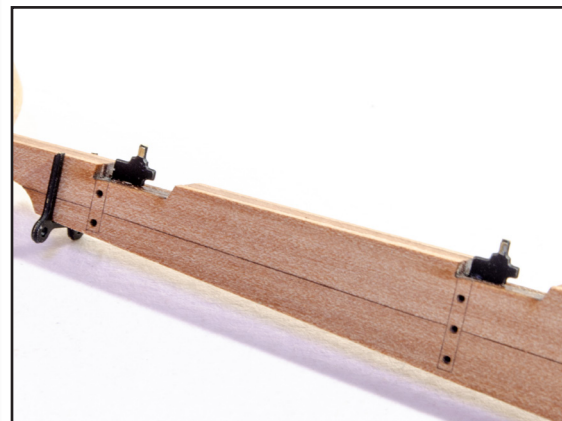
150. Drill a 1mm hole in the rear of the rudder and fit PE-6 as shown here, using CA.



145. Paint these parts in black and glue parts #149 in place towards the bow, as shown.



146. Do the same for parts #148, noting the orientation of these parts on your plan.



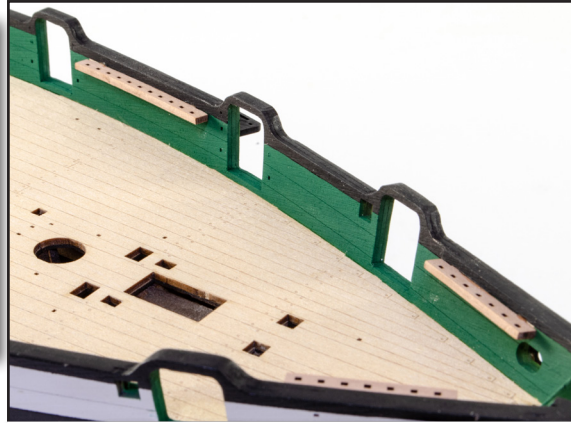
151. The inner side of the rudder has some laser-cut lines. Drill a 1mm hole in the centre of those lines and install the three rudder hinges PE-4 as shown here and on plan.



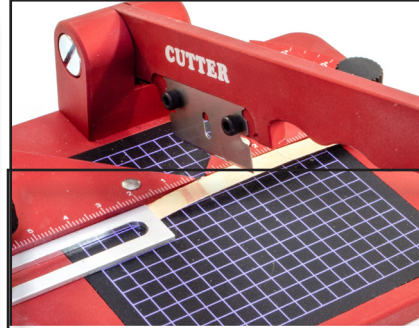
152. Temporarily install the rudder to the hull as shown.



153. In the meantime, remove both parts #131 from the 1.5mm wood sheet and glue into position in the rearmost positions within the hull sides. You should already have masked these positions earlier so you will get a good glue joint.



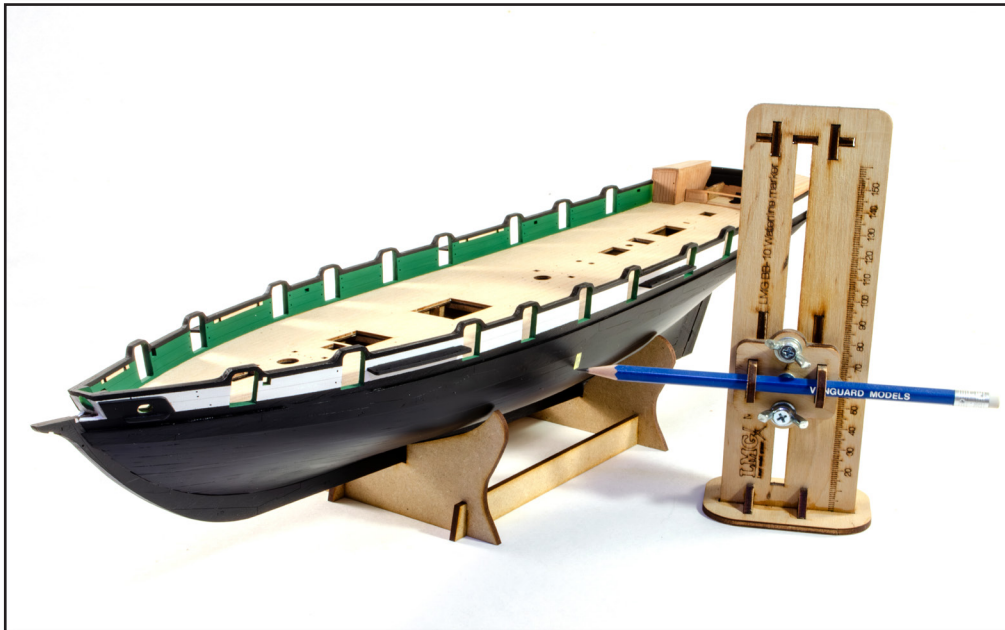
154. Now, from the 1.5mm wood sheet, remove both parts #131 and #132. Fit them as shown here.



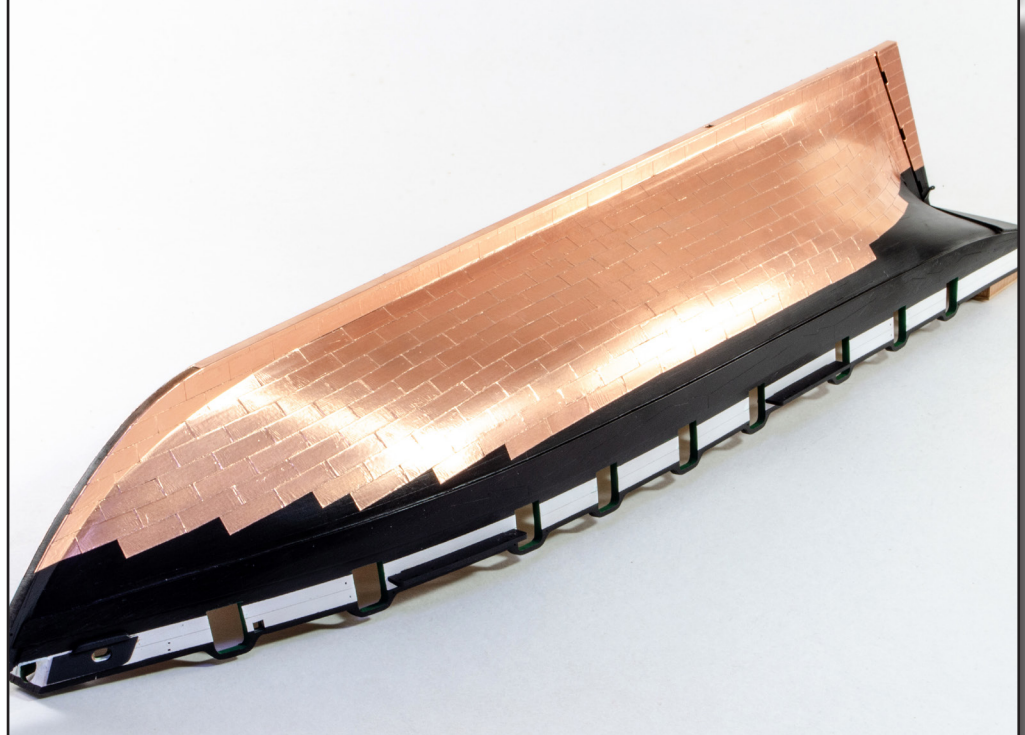
156. You will now need to use a suitable tool for making the copper plates needed for sheathing the hull below that waterline. We recommend something to the one in this picture, so you can get each plate exactly 18mm long, each time.



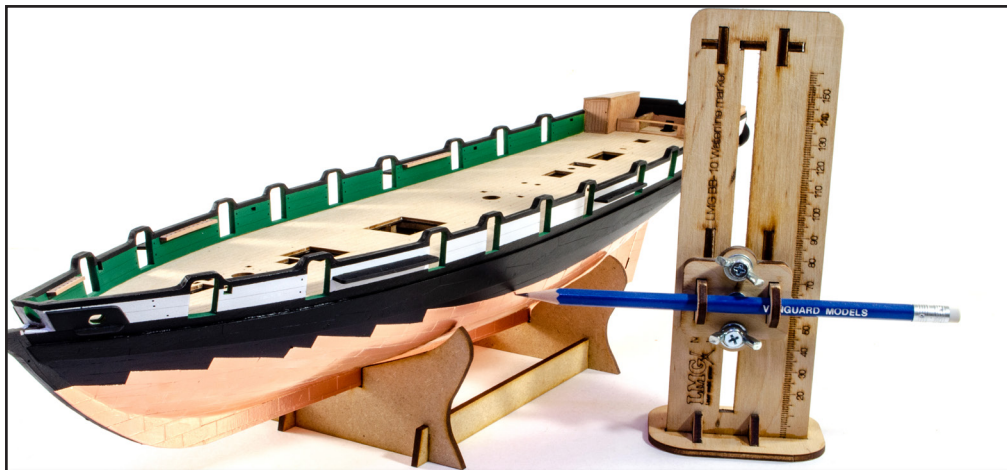
157. Cut plenty of plates to do the job. You can count the rows on your plan and multiply by the number of plates in a row.



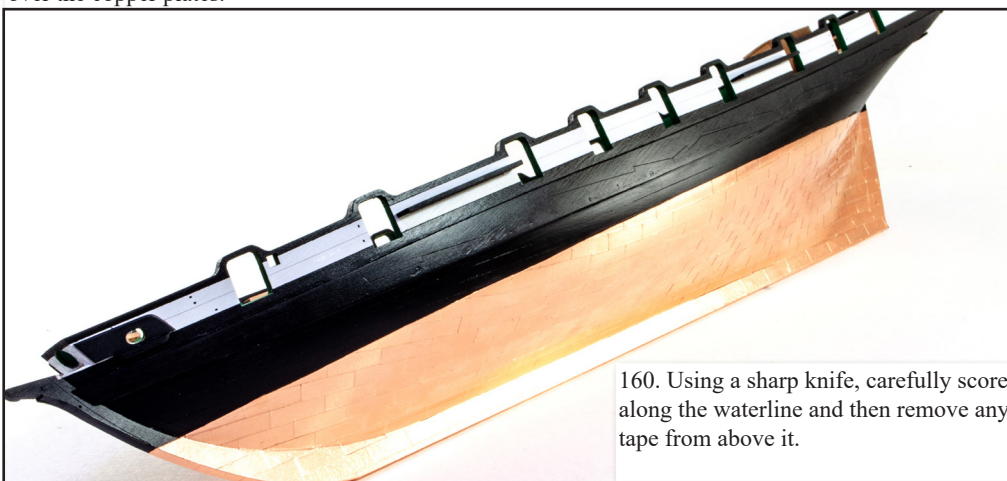
155. A waterline now needs to be added to the outside hull. This is very easy to get right as your hull cradle has the small pip in the keel slot. Make sure this is located into the hole in the underside of the keel and place the model on a flat surface. At around the 5th gun port from the front, measure (on plan) the distance between the lower side of the wale and the waterline. You will find this is around 9mm. At that point on your model, add a piece of tape of that length into the position you measured on plan. You can see it in this photo. That's a perfect reference for correctly marking the height on the waterline. Use a waterline tool, or similar to make the mark from front to the very rear of the model. If you don't have a waterline tool, we have one in our web store.



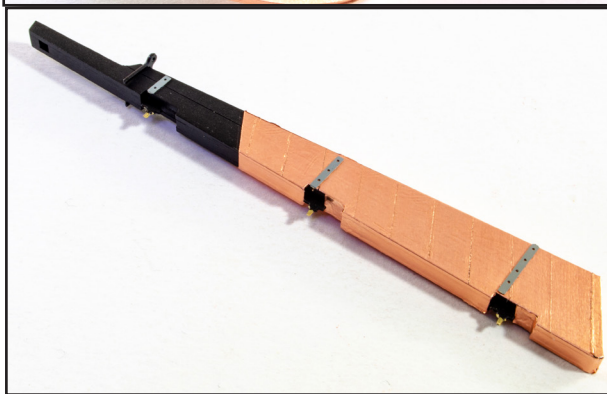
158. Start coppering at the top of the keel, where it meets the hull, and work towards the waterline, using a brick-laying fashion. Go just over the waterline with copper. You will of course need to peel the backing from the plates, keeping the plate as straight as possible so the thin film doesn't crease. The rudder can be coppered as per the plans, in consecutive strips.



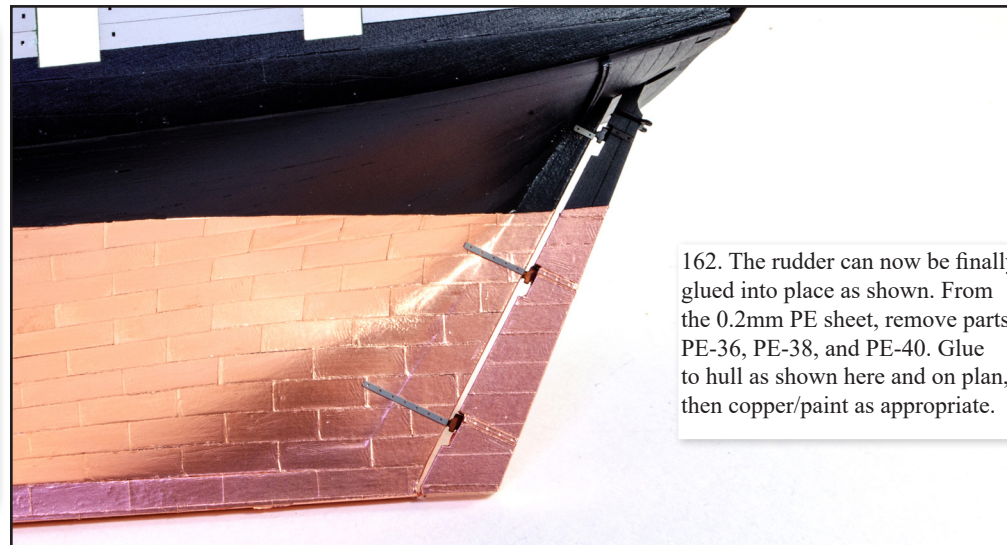
159. Using your waterline tool which should still be set as it previously was, gently draw the waterline over the copper plates.



160. Using a sharp knife, carefully score along the waterline and then remove any tape from above it.



161. Take your coppered rudder which should also be trimmed to the waterline. We will now add the rudder hinges. From the 0.2mm copper sheet, remove both sets of PE-35, PE-37, and PE-39. Using CA, glue them into place as shown here and plan. If you want, you can also pin them and use the pins to represent bolt heads, but we don't feel it's vital. You can now stick copper tape over the lower two hinges and trim to size, and then paint the upper hinge in black.



162. The rudder can now be finally glued into place as shown. From the 0.2mm PE sheet, remove parts PE-36, PE-38, and PE-40. Glue to hull as shown here and on plan, then copper/paint as appropriate.



163. From the 1mm wood sheet, remove part #63.



165. From the 1mm wood sheet, remove part #92. From the 1.5mm wood sheet, remove part #145.



164. This can now be painted white and fitted to the stern as shown. Use the decal sheet to add the details as shown. We have supplied options for you in terms of colour and home port decal. We suggest the decals are added to the surface once it has been glossed. This will provide better adhesion.



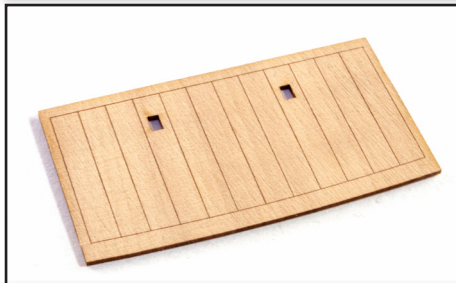
166. Glue these together as shown here.



167. Glue the assembly into position as shown.



168. From the 1.5mm wood sheet, remove part #147 and sand so it's more rounded. Glue into position in the hole rudder hole, as shown.



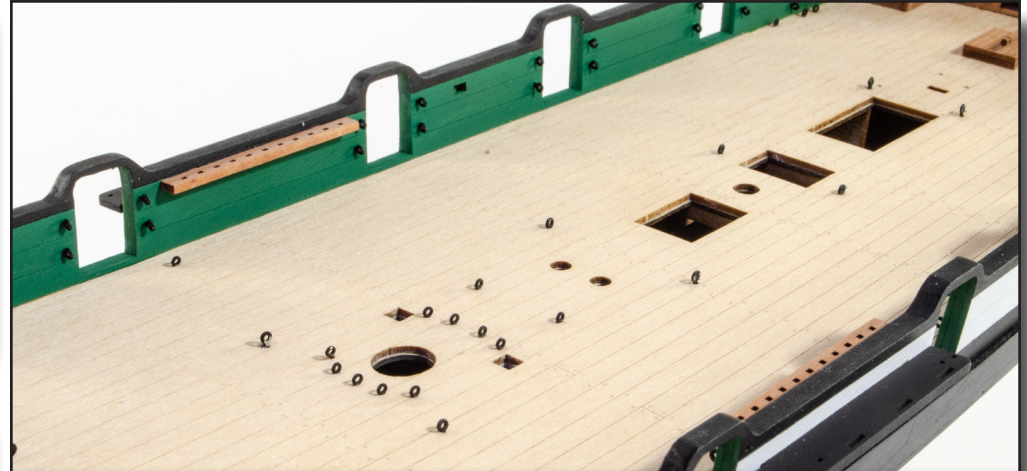
169. From the 1mm wood sheet, remove part #70.



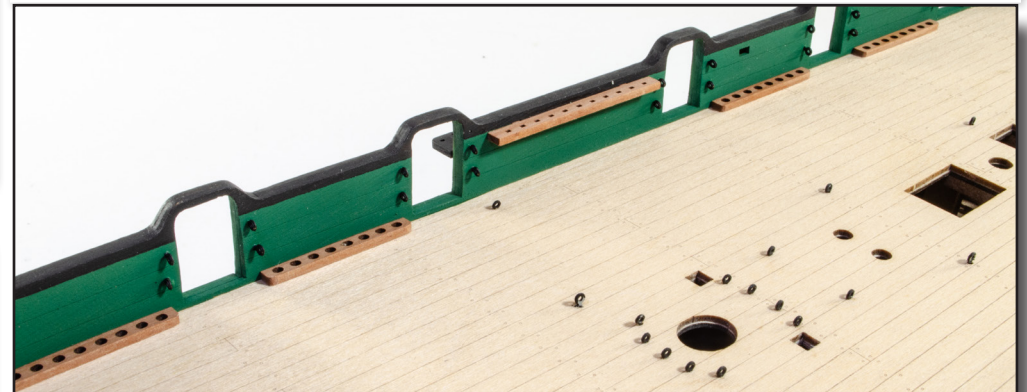
170. Glue into position as shown. You can now also glue part PE-23 into place, from the 0.4mm PE sheet, in the holes located in the inner stern. As it's painted black, it's not clear here. Check plan if in doubt.



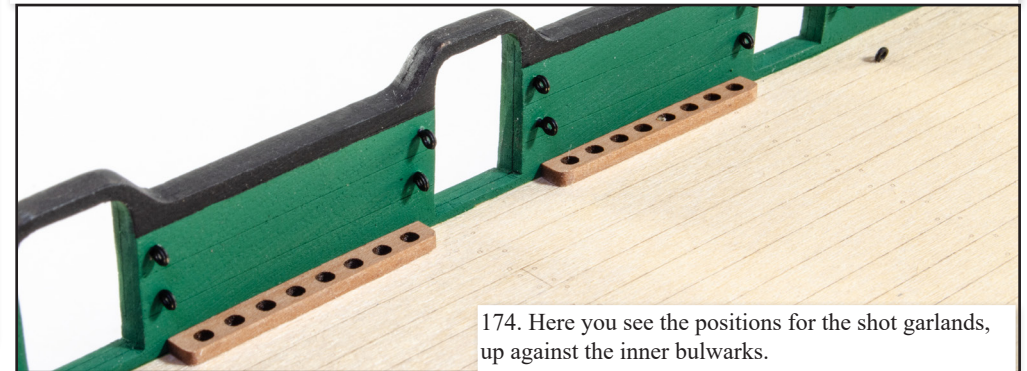
171. Add the 0.2mm hinge parts PE-32 to the cabin doors, as shown. Also add a door handle to each, using two PE-8 parts.



172. You will now need a lot of PE-8 eyelets as you populate all of the holes in the bulwark and deck areas. Use CA for this.



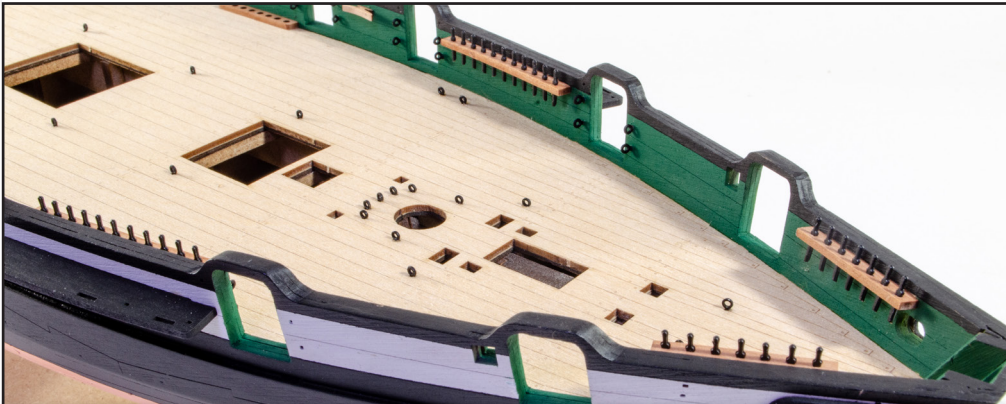
173. From the 1.5mm wood sheet, remove parts #134. Add eight of them to the positions shown here and on plan. These are the cannon ball shot garlands.



174. Here you see the positions for the shot garlands, up against the inner bulwarks.



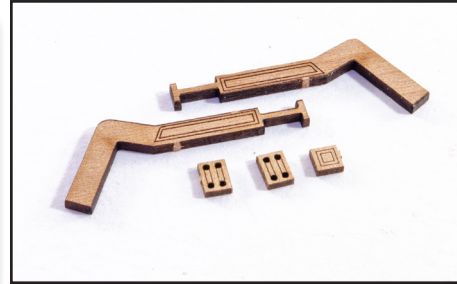
175. From the 1.5mm wood sheet, remove the cleats, part #150, and glue into position as shown here and on plan, not forgetting the two on the small rudder tiller roof at the stern.



176. From the 0.6mm PE sheet, remove all parts PE-1. These are belaying pins. Push these into position in the racks on the inner bulwarks. You can glue the joints by brushing a little varnish over them.



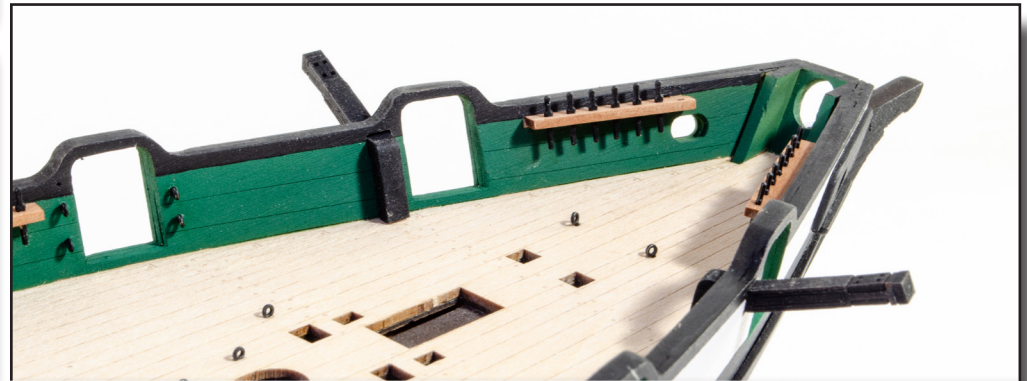
177. We have supplied a small bag with some 1.5mm black balls. These are the cannon shot, and you can drop these into the shot garland holes as shown. Again, carefully brush a little varnish over them to glue them down.



178. From the 1.5mm wood sheet, remove parts #140 and #141. From the 1mm wood sheet, remove parts #110 and #111.



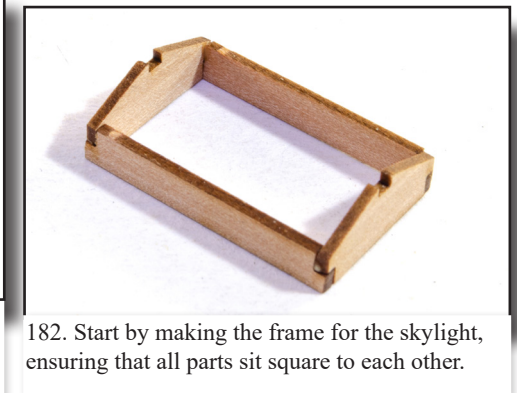
179. Assemble as shown.



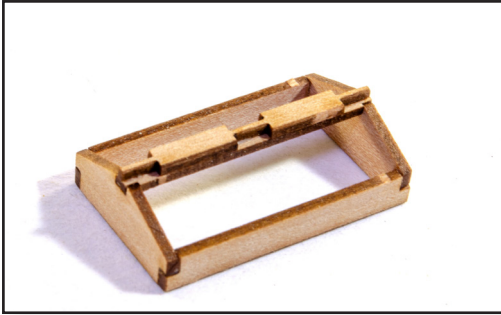
180. Paint these (catheads) in black and glue into place as shown. You may need to slightly trim the bulwark holes for them to carefully pass through. You will also need to bevel the underside too, to match the deck camber.



181. It's now time to build the skylight. From the 1mm wood sheet, remove parts #86, #87, #88, #89, #90, and #91.



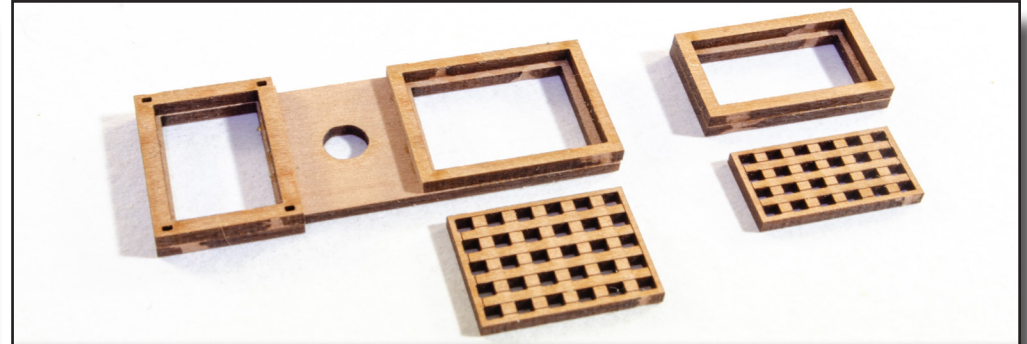
182. Start by making the frame for the skylight, ensuring that all parts sit square to each other.



183. Now glue part #88 across the top, followed by part #89.



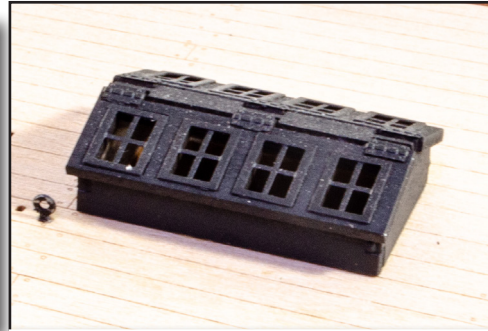
184. Parts #90 and #91 can now be added.



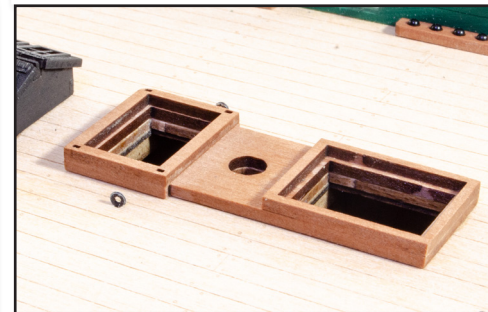
189. The assemblies will now look like this. These are their respective grates (#144c and #146b). DO NOT glue these into position yet.



185. Glue 0.2mm PE parts #PE-31 and PE-32 into place.



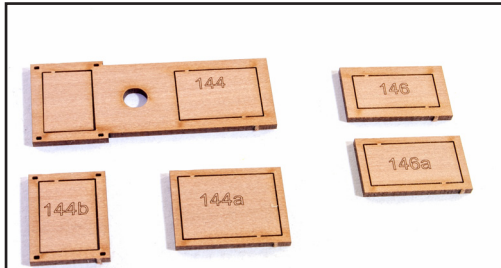
186. We have painted the assembly in black before gluing into position as shown. You could leave yours in natural timber if desired, or even paint in white or green.



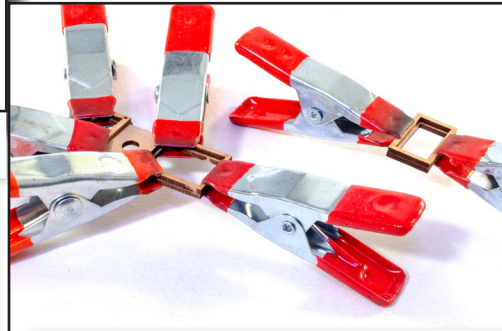
190. Glue the larger assembly into position as shown.



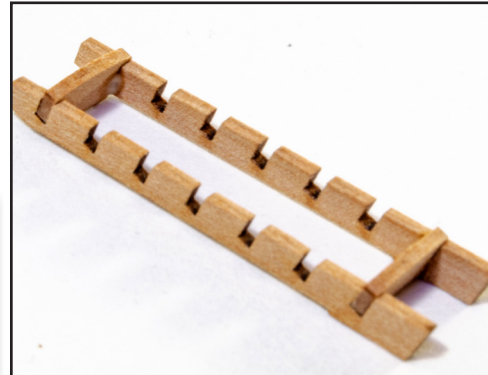
191. One of those openings has a ladder. We will not build that. From the 1mm wood sheet, remove parts #101 and #102.



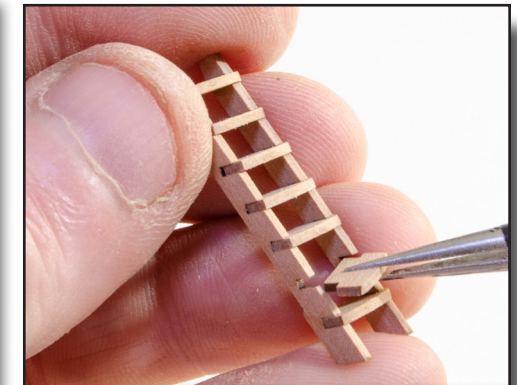
187. From the 1.5mm wood sheet, remove parts #144, #144a, #144b, #146, and #146a.



188. Assemble as shown and clamp until thoroughly dry.



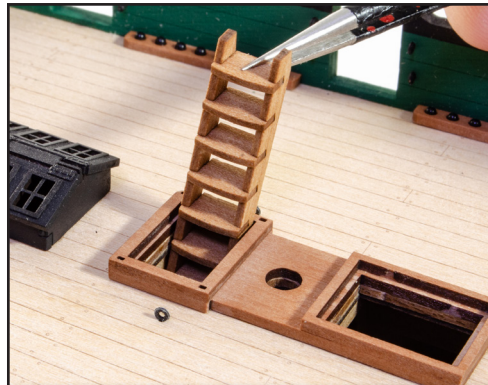
192. Glue two steps into the ladder side and leave until dry, ensuring they are square to each other. When dry, add the second side and leave again until dry.



193. Carefully glue the remaining steps into place.



194. Your finished ladder will look like this.



195. Glue the ladder into position as shown.



200. Temporarily adding the dowel for alignment, now glue part #135 into position...



201. ... followed by part #106. Now glue the dowel into place so that the top of it sits about 1mm under the surface of the previous part. When dry, glue part #136 on top of the dowel. This should protrude about 0.5mm above the top of the capstan.



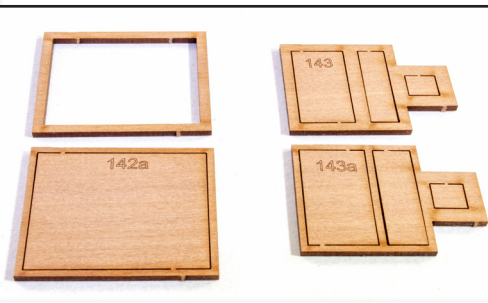
196. Now glue the grate #144c into place.



197. From the 1.5mm wood sheet, remove parts #135, #136, and #137. From the 1mm wood sheet, remove parts #103, #104, #105, and #106.



202. This can now be painted and then glued into place as seen here.



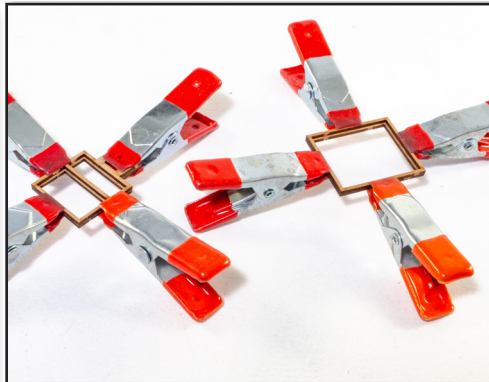
203. From the 1.5mm wood sheet, remove parts #142, #142a, #143, and #143a.



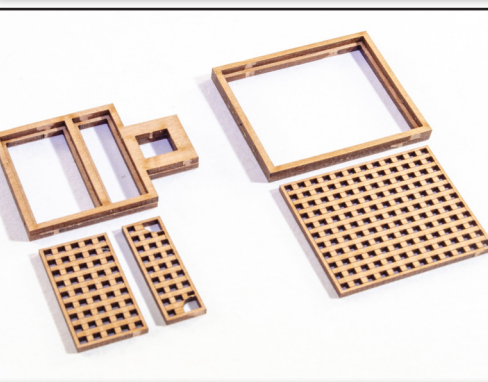
198. Cut a 22mm length of the 4mm diameter dowel. You can assemble the 1.5mm whelp parts and parts #103 and #104 around the dowel if you find it helps you with alignment. Don't glue the dowel into place yet though.



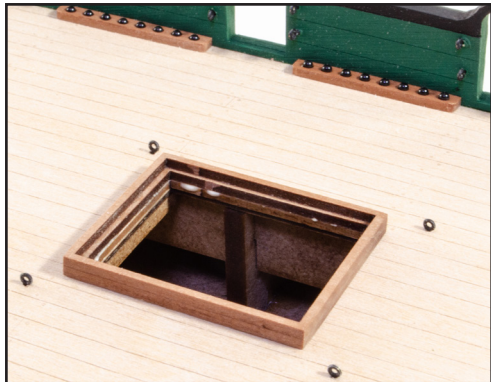
199. Glue part #105 atop the capstan body as shown.



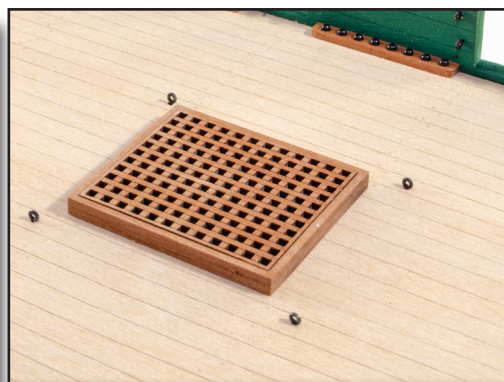
204. Assemble as shown and properly clamp until set.



205. The assemblies will look like this. Here they are with their respective grates, parts #142, #143b, and #143c. DO NOT glue these into place yet.



206. Glue the larger frame into place as shown.



207. Now glue the grating #142b into place.



208. Glue the other frame into place as shown.

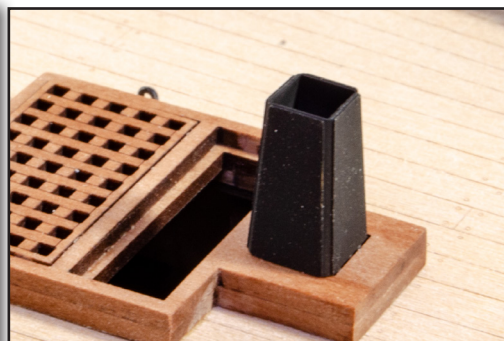


209. Now glue grating #143b into place. DO NOT glue #143c at this point.

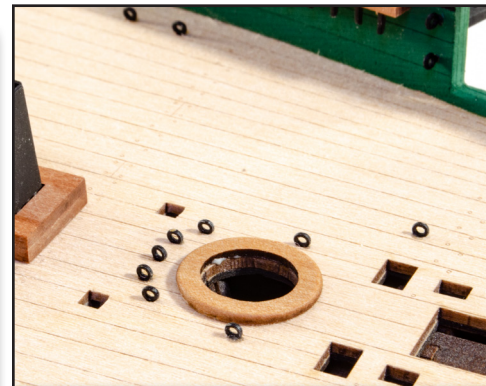


210. From the 0.4mm PE sheet, remove part PE-24. Fold into position as shown here.

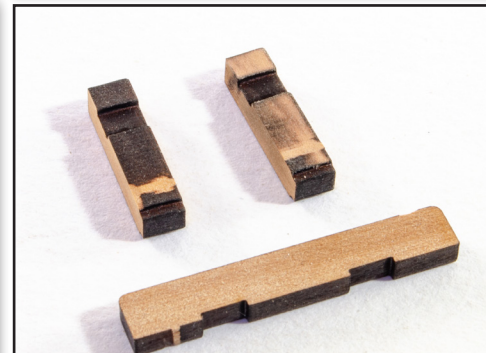
PLEASE NOTE - The bend lines should be on the inside, and not on the outside as shown in the picture above.



211. Now paint black and glue into place on the frame.



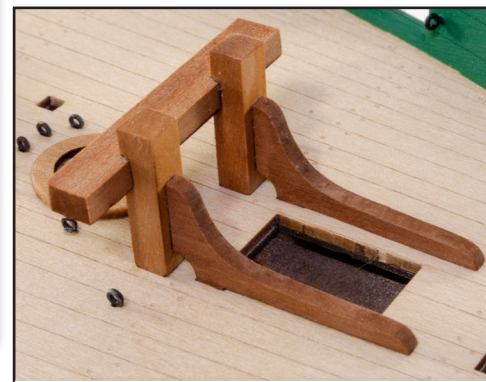
212. From the 1mm wood sheet, remove both parts #85. Glue into place over the mast holes, taking into account the elliptical nature of these parts.



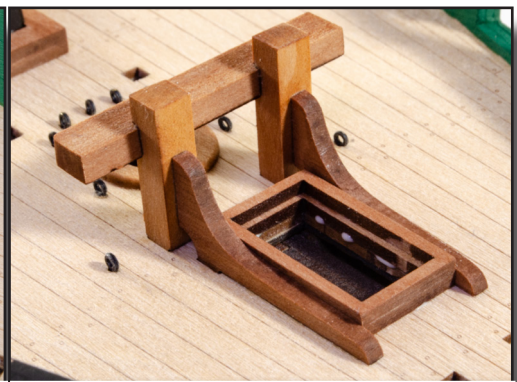
213. From the 4mm wood sheet, remove both parts #155. From the 3mm wood sheet, remove part #154.



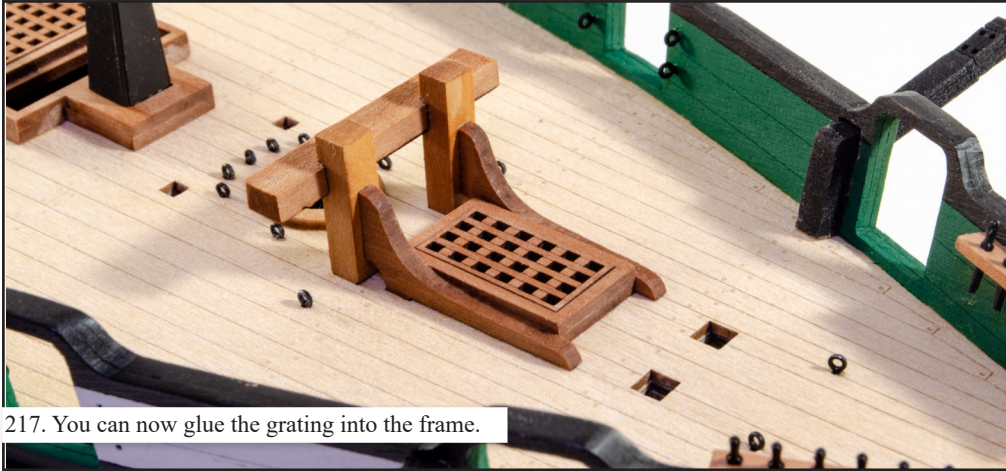
214. Glue together as shown. From the 2mm wood sheet, remove both parts #56.



215. Glue the first assembly into place as shown, and parts #56 against it.



216. Take the earlier hatch assembly you made earlier and glue into place between the bitts, as shown.



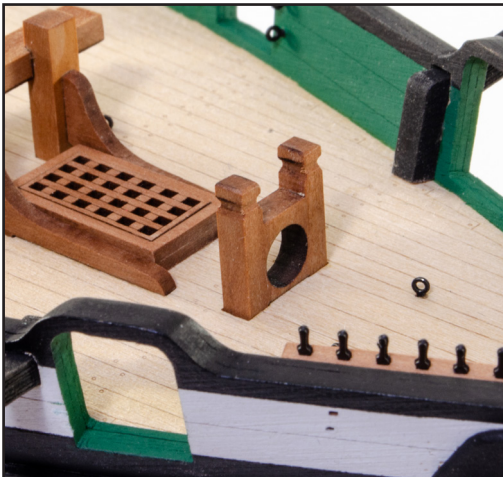
217. You can now glue the grating into the frame.



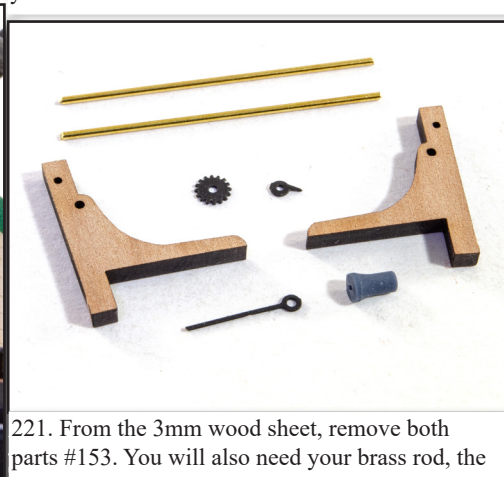
218. From the 2mm pear sheet, remove part #57 and both parts #55.



219. Assemble as shown and glue into position on the deck. When dry, add the same belaying pins as you did to the bulwark racks.



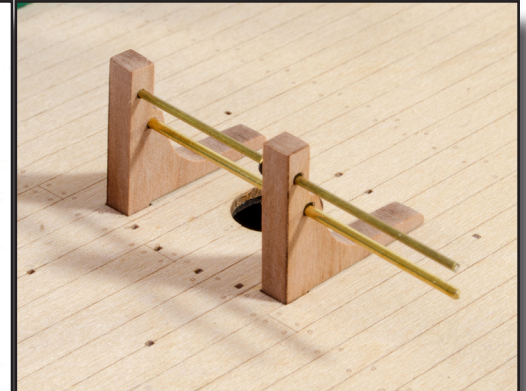
220. From the 3mm wood sheet, remove part #152. Shape the top as shown and glue into position.



221. From the 3mm wood sheet, remove both parts #153. You will also need your brass rod, the 3D-printed Winch Drum F-5, and one part of each PE-20 and PE-21 from the 0.4mm PE sheet. Lastly, you will need one part PE-22.



222. Use a length of 1mm brass rod, slide it through PE-20 gear and slot into the lowest hole as shown. Take a length of 0.8mm brass rod, slide it through the pawl PE-21 and insert into the upper hole. Don't glue.



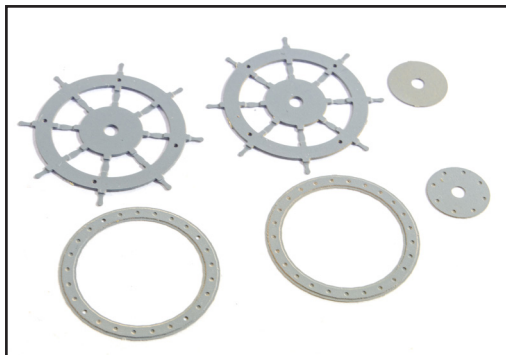
223. Sit that wooden part on the deck as shown and add the opposite wooden part. The PE parts aren't easy to see here as they are behind the wooden part closest to the camera. Push the brass rod so it's flush with the outside of the wooden part furthest from camera. You can now add a spot of superglue to the rods as they push through the wooden parts.



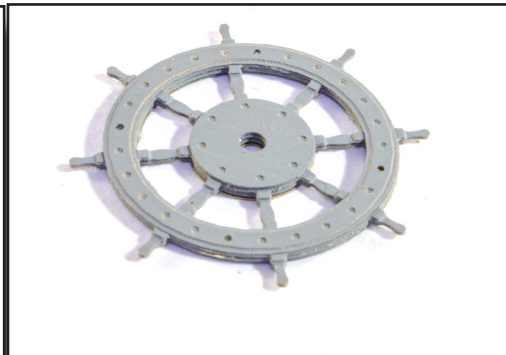
224. Cut the upper brass rod flush with the outside of the assembly. Slide/glue the winch drum to the lower rod and then the handle PE-22 as shown here and on plan. Cut the rod flush with the outside of the handle. Paint all metal/3D parts in black and then glue the winch to the deck.



225. Take the boat cradles CT-14 and CT-15 from the 2mm wood sheet and drill/glue eyelets PE-8 into them as shown on the plan. Now glue into place as shown here, using your plan for spacing information.



226. From the 0.4mm PE sheet, remove both parts PE-19. From the 0.2mm PE sheet, remove both parts PE-30 and both parts PE-29.



227. Glue the large wheel parts back-to-back, and the other parts to the outside face of the wheel assembly.



228. From the 1.5mm wood sheet, remove parts #138 and #139. From the 1mm wood sheet, remove both parts #107. From the 4mm wood sheet, remove part #156. You will also need a 13mm length of 2mm diameter dowel.



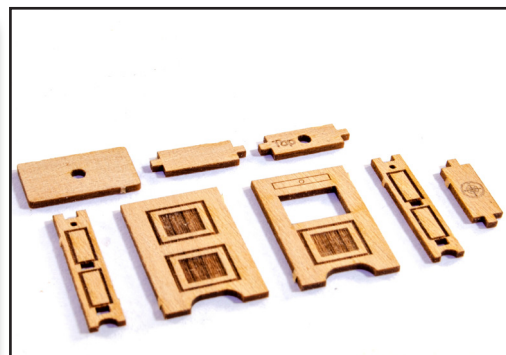
229. Slide the 4mm part onto the dowel, glued and sandwiched in between parts #107. The dowel has been left oversized at this point, to help with assembly.



230. Dry fit (NO GLUE) part #139 to one side of the assembly. This fits up against the drum. On the other side, first slide on the wheel, followed by part #138. You can now cut the dowel to length so it's flush with either side of the assembly.



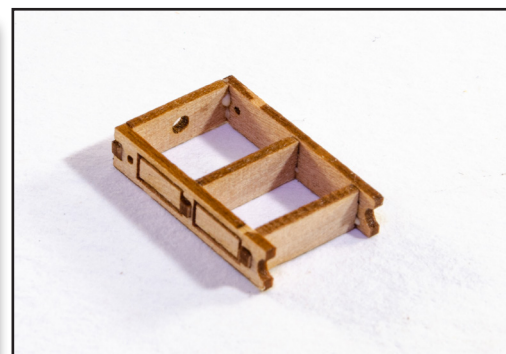
231. Glue the assembly to the deck as shown.



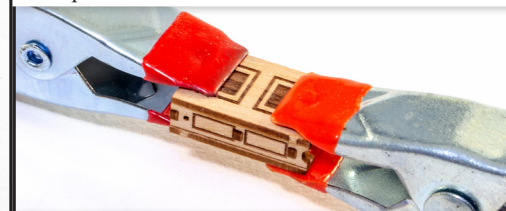
232. From the 1mm wood sheet, remove parts #71 thru #77.



233. Glue part #74 to the lower side of one of the binnacle parts and part #75 to the middle hole, with the engraved compass place facing upwards. From the 0.2mm PE sheet, remove one part PE-33 and glue into place on the compass engraving. NOTE: the scalloped edge of the side parts is the bottom of those parts.



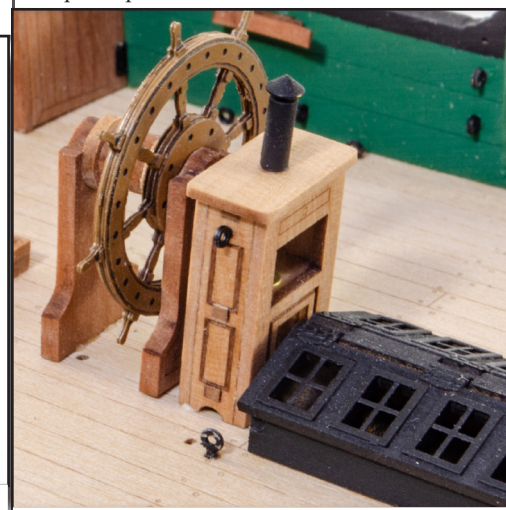
234. Complete the binnacle carcass as shown here.



235. Take each front/rear face in turn and glue/clamp into place as shown.



236. Glue part #77 to the top of the binnacle and then insert the binnacle chimney F-6 into the top, also painting it black.



237. Add eyelets PE-8 to the binnacle and glue the binnacle into place between the wheel and skylight.



238. We now need to make two hand pumps. From the 4mm wood sheet, remove parts #157. Glue three of these together using a length of 3mm dowel as a guide.



239. Sand off the char and then take part #108 from the 1mm wood sheet and glue as shown with the slot in the 4mm parts lining up with the notch in the new part.



244. Slot the handle assembly into the pump body as shown, with the rod running down the centre of the drum and the handle secured to the metalwork using a brass pin, which can be glued and cut short.



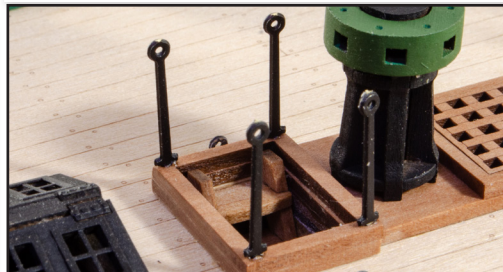
245. Use short lengths of 3mm dowel to mount the pumps to the deck as shown.



240. From the 0.4mm PE sheet, remove two parts PE-26 and PE-27. You will also need some brass pins. Slide three brass pins through the holes in PE-27.



241. Now slide/glue both parts PE-26 over the brass pins. Now slot/glue the final part PE-27 into place over the pins.



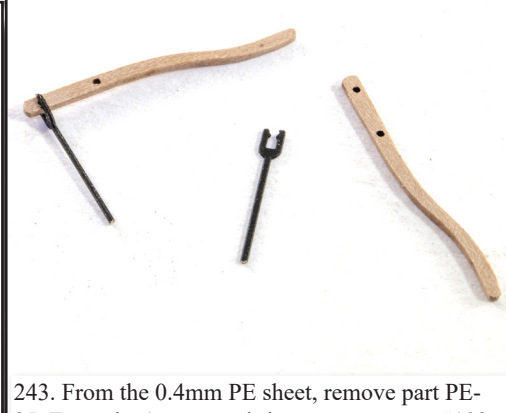
246. From the 0.6mm PE sheet, remove four parts PE-2. Paint them black and insert around the ladderway as shown.



247. Carronades. You will find all parts for these on the 1.5mm wood sheet. Here you can see the parts you need. IMPORTANT: It is a good idea to select the armament you want at this stage as using building all of the guns and using the eyelets will mean you will not have enough eyelets for to complete the model.



242. Cut the brass pins short and glue the assemblies into place on the wooden drums. You will see the metal part is shaped so it partially sits atop the wooden drums.



243. From the 0.4mm PE sheet, remove part PE-25. From the 1mm wood sheet, remove part #109. Fit the PE to the wooden part as shown. You can slightly prise the PE apart to fit the handle, then squeeze the PE back together.



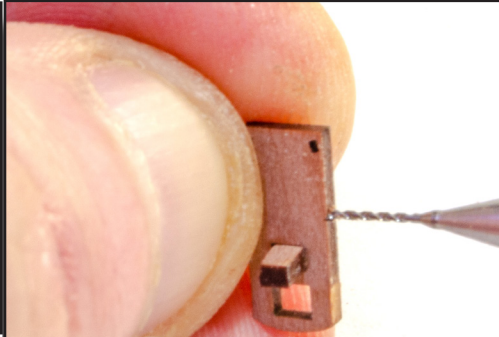
248. Take one complete set of parts as shown here.



249. Glue part #129 into part #127 as seen on the left-hand side. Glue parts #128 together and then onto the engraved underside of #126. Now glue part #130 across the remaining engraved position.



250. Take a set of 3D printed carronade wheels F-4 and glue into place. Sand flush the upper side where the part protrudes through.



251. Use a 0.8mm drill bit and drill a hole into the sides of this assembly, where you see the engraved line positions.



252. Glue the two carronade assemblies together as shown here.



253. Paint the carriages in red. We suggest the colour in our Grecian paint set.



254. Use eyelets PE-8 and fit to the carriages as shown.



255. Take parts PE-15 and PE-16 from the 0.4mm PE sheet. Add the rings onto the brackets by springing the rings apart slightly and closing them up once in position. These can now be fitted to the carriages. Paint the carronade barrel F-1 in black and then glue to the carriage.



256. Your complete suite of carronades will look like this.



257. From the 1.5mm wood sheet, remove parts #151. You will also need brass pins.

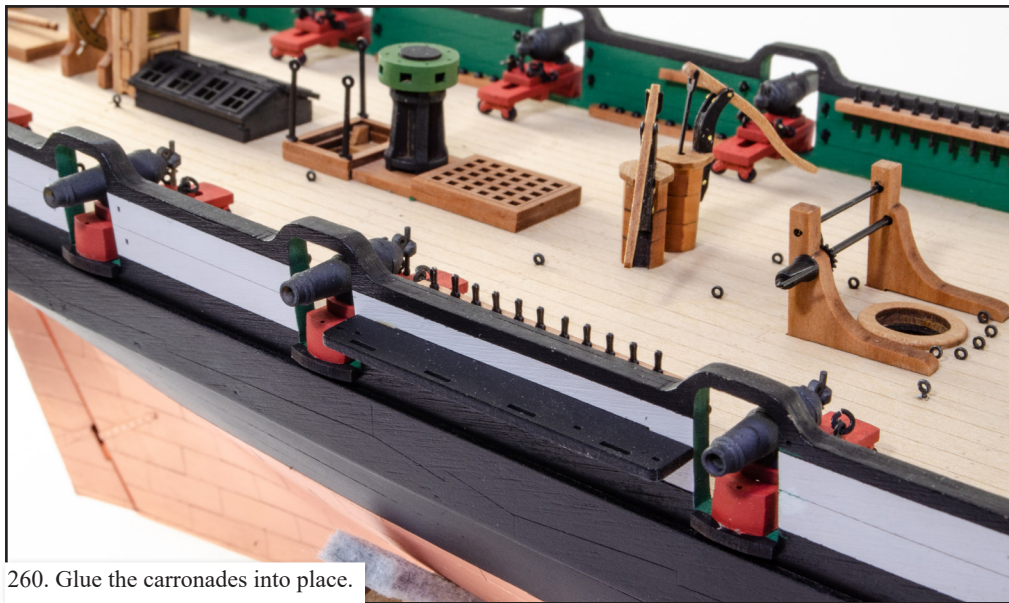


258. Paint the parts #151 in black and then pin/glue to the underside of the carronade assemblies.

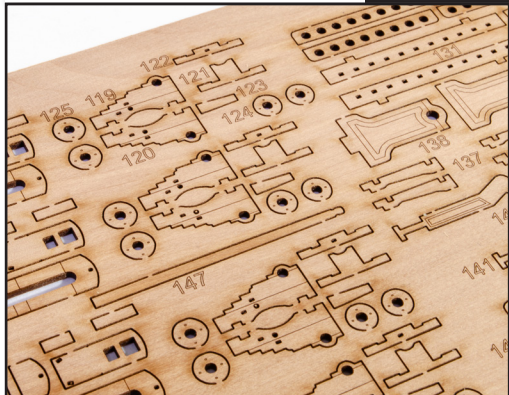


259. Select which gun ports you will install the carronades and remove a little paint from underneath each port and also from the centre lining of each gun port. We have chosen to replicate the gun layout on the plans, but you can choose whatever you wish. However, don't use the very forward port as that wasn't used on the actual ship.

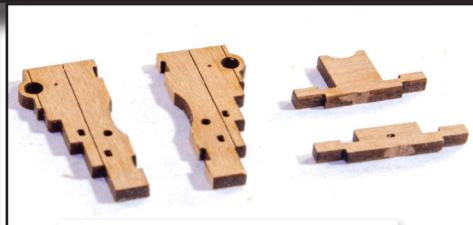
As a US Privateer, Grecian was fitted with only 2 x 6 Pounder and 2 x 4 Pounder carriage guns. In Royal Navy service Grecian was fitted with 8 x 18 Pounder carronades and 2 x 6 Pounders



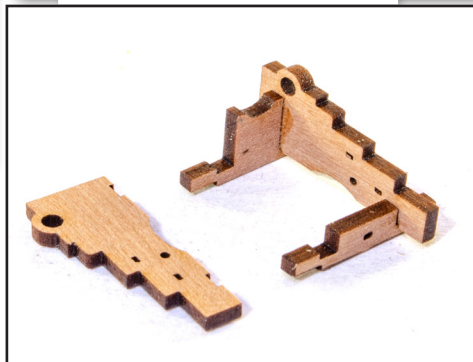
260. Glue the carronades into place.



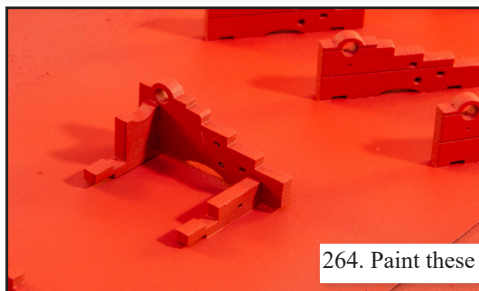
261. Now the carronades are built, we will now build two 4-pounder guns. Locate the parts shown here, on the 1.5mm wood sheet.



262. Take the parts shown here...

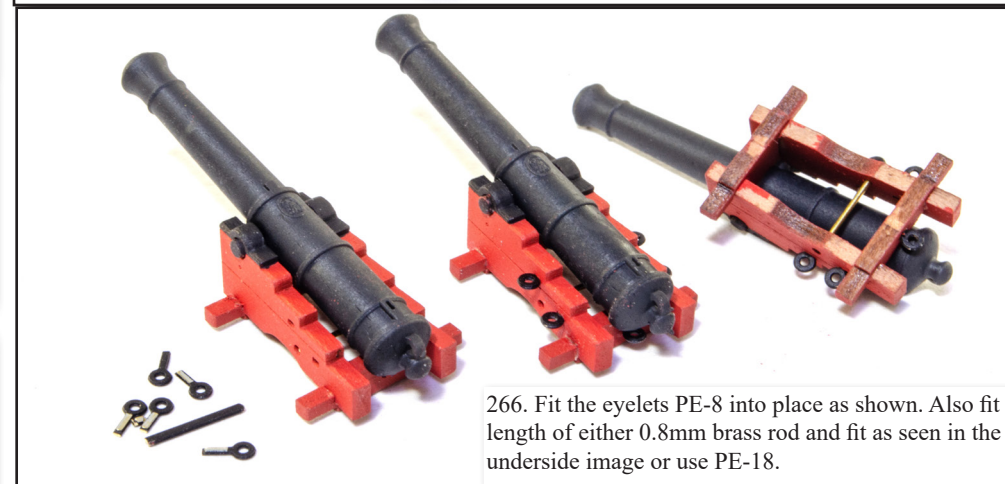
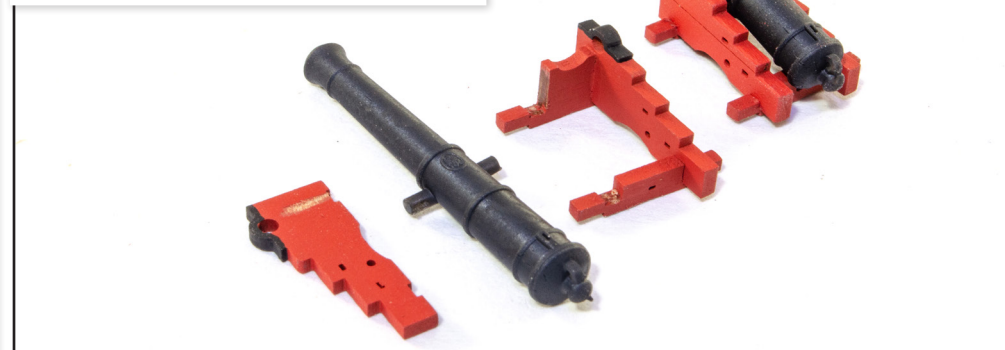


263. And glue together, whilst keeping one side totally UN-GLUED!

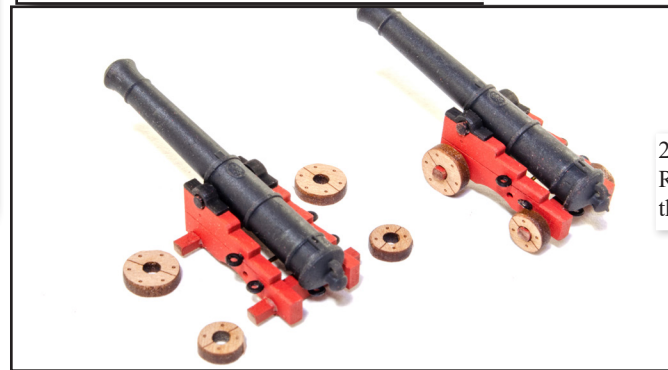


264. Paint these parts/assemblies in red.

265. Paint the carriage details in black and also the cannon barrels. Slide the cannon barrel into place in the carriage, making sure the barrel emblem is facing upwards. Scrape off any paint from joint surfaces and glue the remaining carriage side into place.

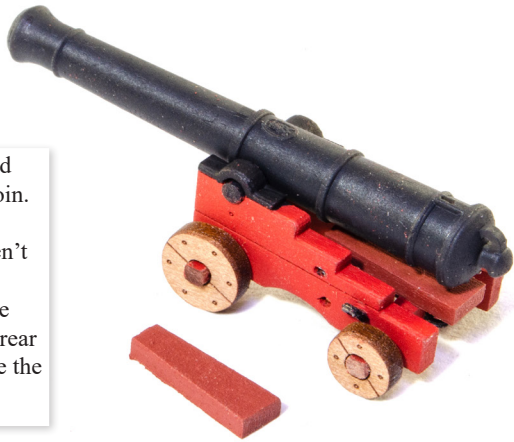


266. Fit the eyelets PE-8 into place as shown. Also fit a length of either 0.8mm brass rod and fit as seen in the underside image or use PE-18.

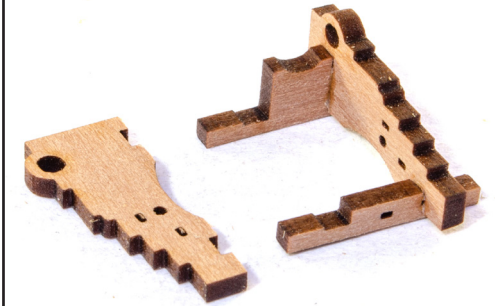


267. The wheels can now be fitted. Remember that the large wheels go at the front of the cart.

268. Here is the finished gun, along with the quoin. We found that on our model, the quoins weren't needed. If you do need to use them, they can be pushed underneath the rear of the cannon to change the angle of the gun.



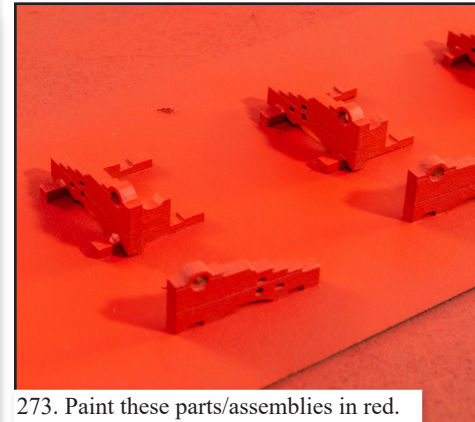
271. Take the parts shown here...



272. And glue together, whilst keeping one side totally UN-GLUED!



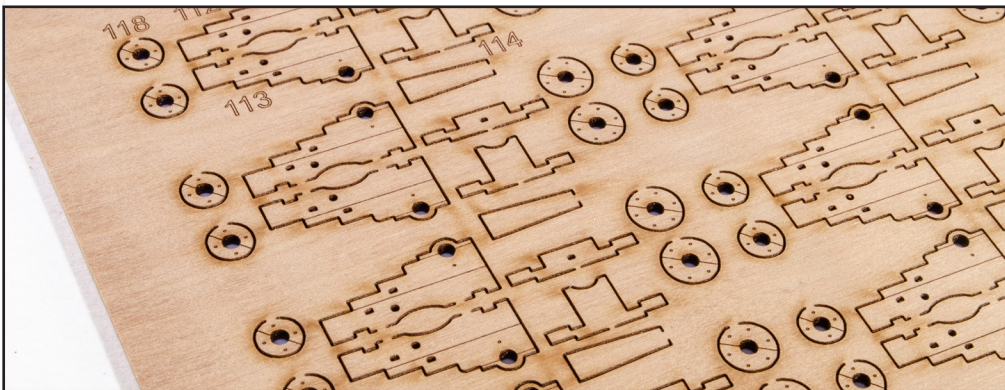
269. Here are the finished guns. This shows a full set, but only two are needed for your model, and only if you model Grecian as a US privateer



273. Paint these parts/assemblies in red.



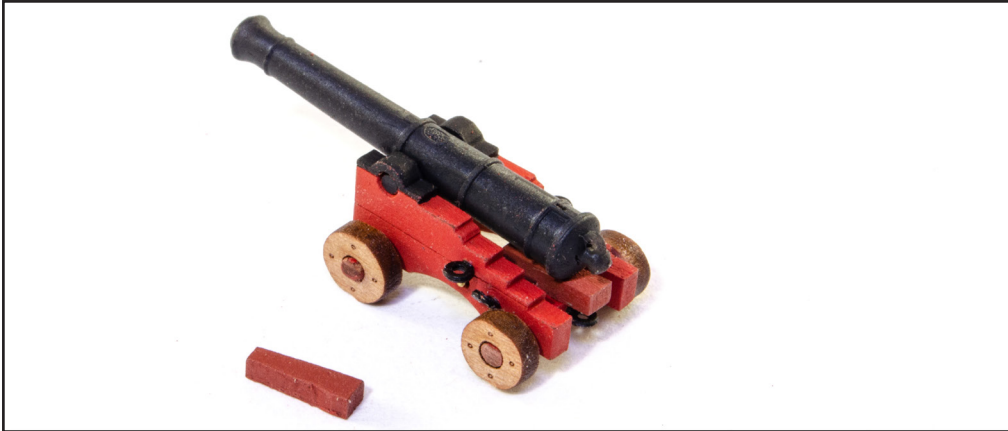
274. Paint the carriage details in black and also the cannon barrels. Slide the cannon barrel into place in the carriage, making sure the barrel emblem is facing upwards. Scrape off any paint from joint surfaces and glue the remaining carriage side into place. Fit the eyelets PE-8 into place as shown. Also fit a length of either 0.8mm brass rod and fit as seen in the underside image or use PE-17.



270. We will now build four 6-pounder guns. Locate the parts shown here, on the 1.5mm wood sheet.



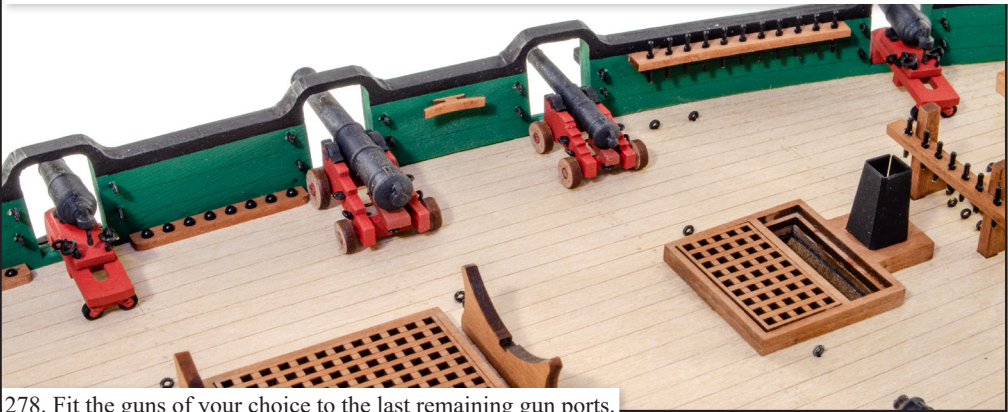
275. The wheels can now be fitted. Remember that the large wheels go at the front of the cart.



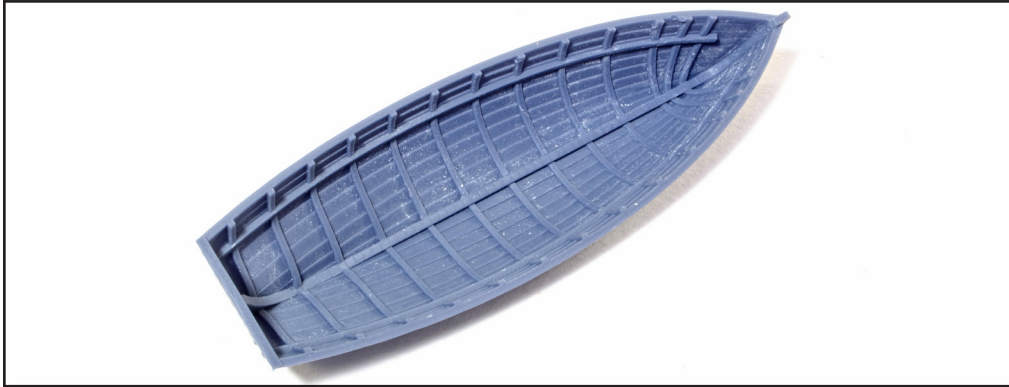
276. Here is the finished gun, along with the quoin. We found that on our model, the quoins weren't needed. If you do need to use them, they can be pushed underneath the rear of the cannon to change the angle of the gun.



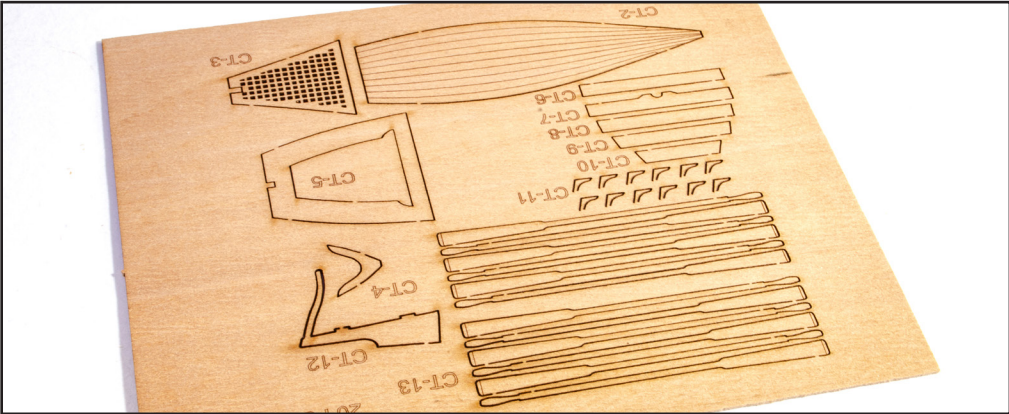
277. Here are the finished guns. Again, historically, as a US privateer, Grecian was fitted with two of these guns, and also two for the Royal Navy version.



278. Fit the guns of your choice to the last remaining gun ports.



279. With Grecian, you don't need to try and plank a small boat as we provide this 3D printed hull. You will also need to locate this small sheet of parts for your boat.



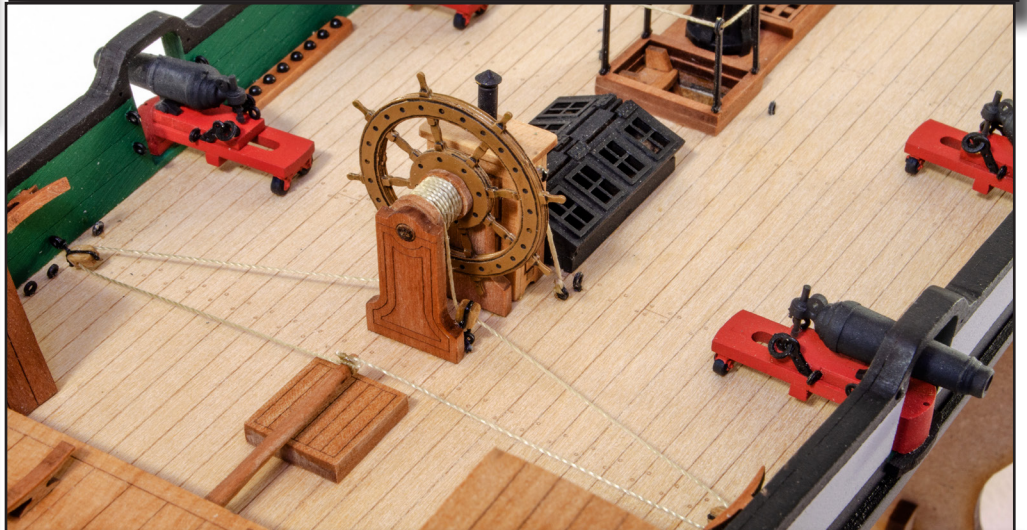
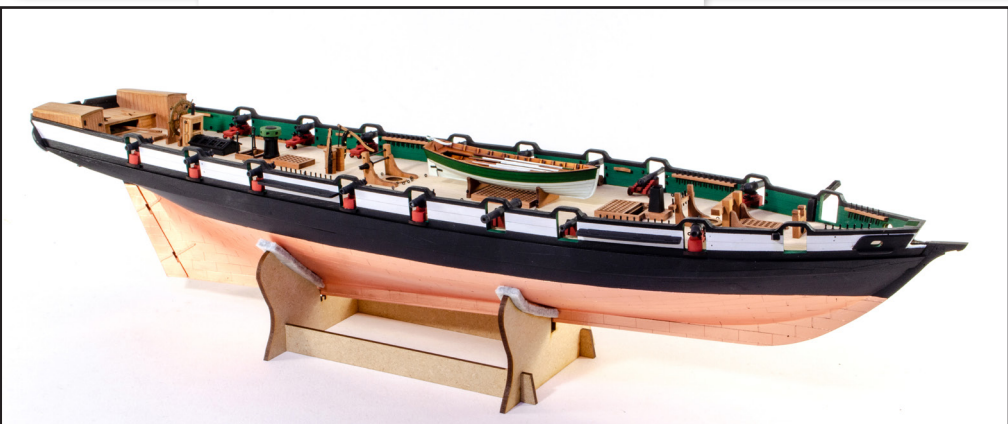
280. Before you assemble the parts as per plan, you will need to paint the hull. You can use whatever method you want for the interior. We chose to use acrylic and oils to replicate wood, but you can paint white. We suggest white and green for the exterior.



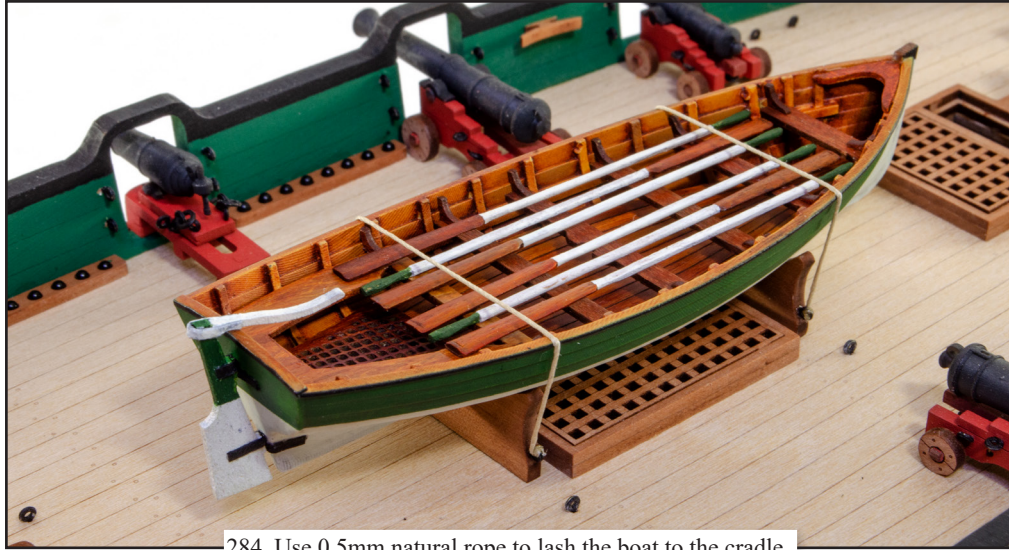
281. The boat will sit atop the cradles. You can glue if you wish but the ropes will hold this in place.



282. Here are some photos of the hull at this stage.



283. Rig the rudder tiller as per plan, using 0.25mm natural rope. Also rig the stanchions around the ladder way.



284. Use 0.5mm natural rope to lash the boat to the cradle.



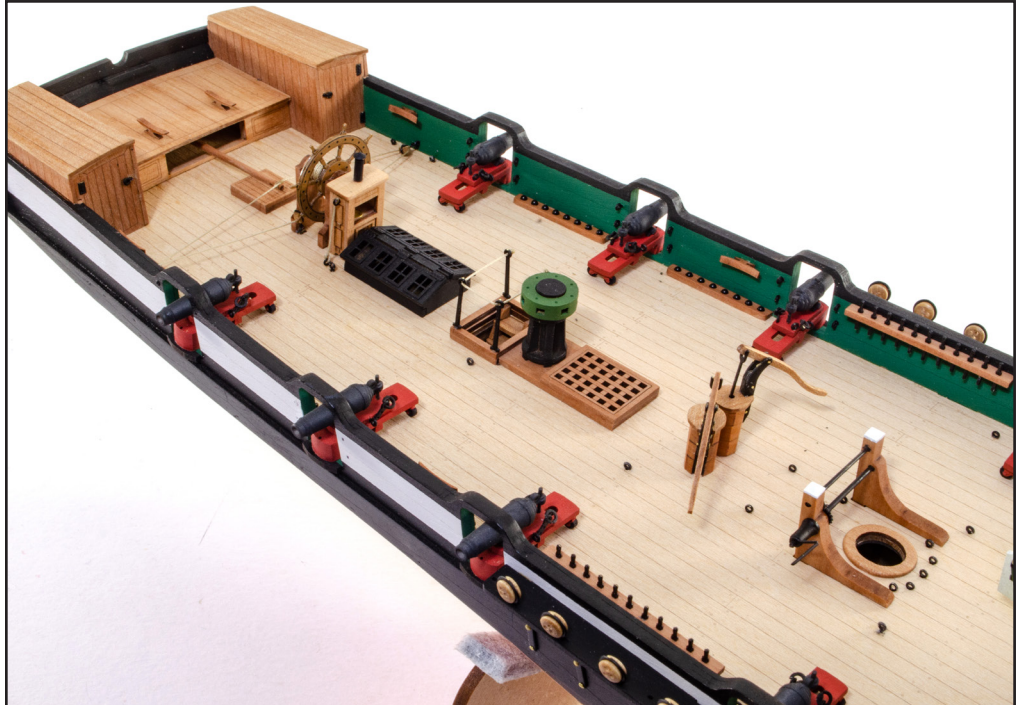
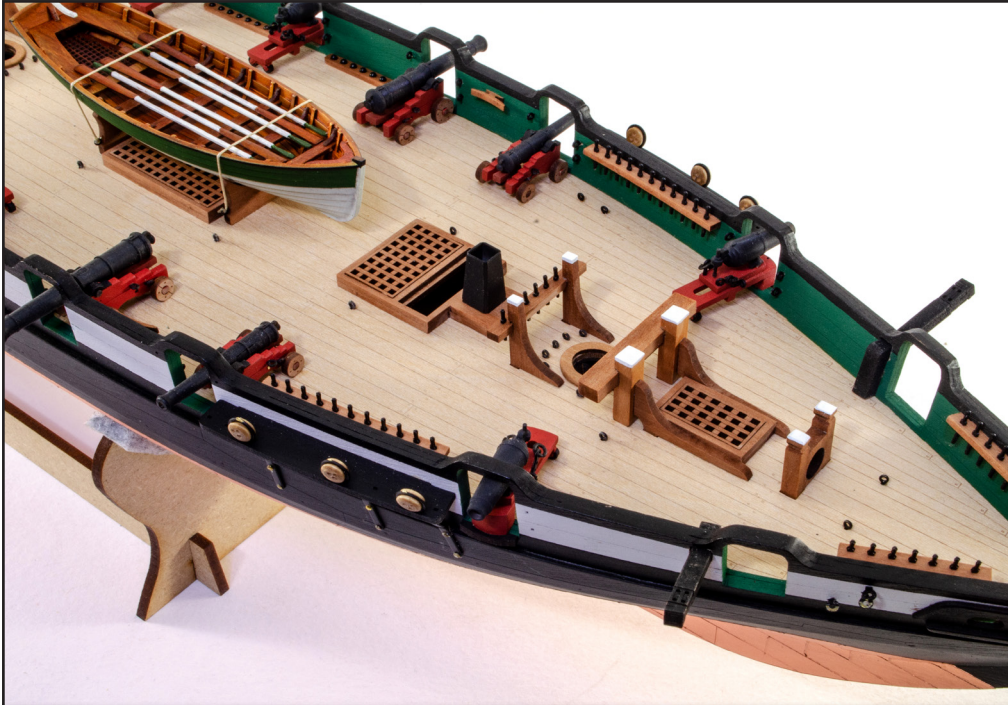
286. Using your plan as a guide to the angle/rake of the chainplates, fit the assemblies through the slots in the channels and glue/pin the chainplates to the side of the hull. Paint the brass pins in black. Here is the main mast channel...



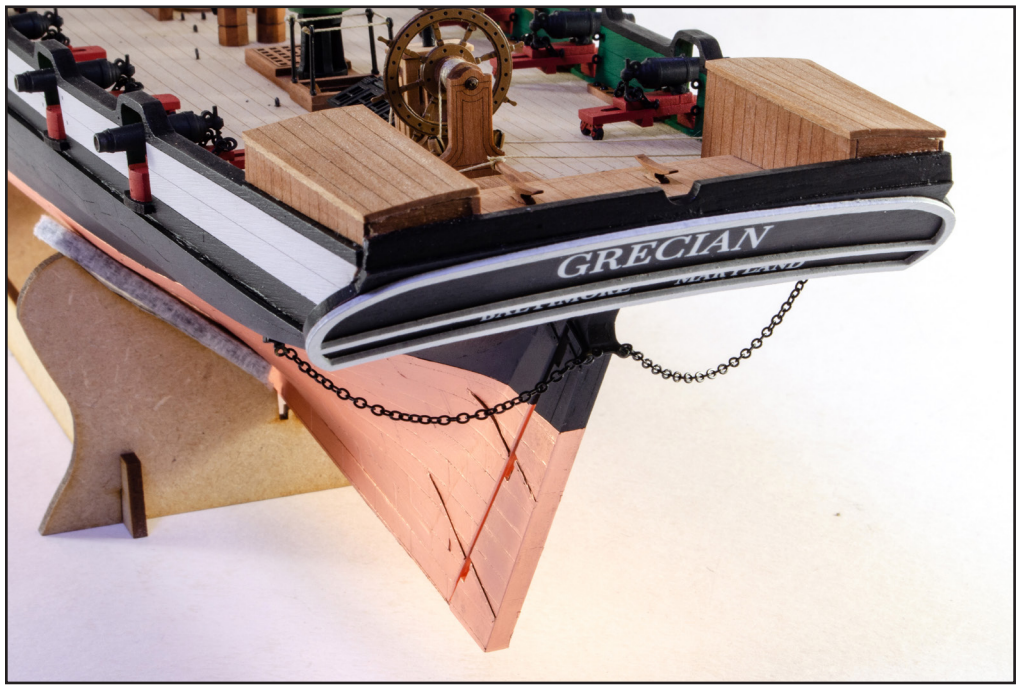
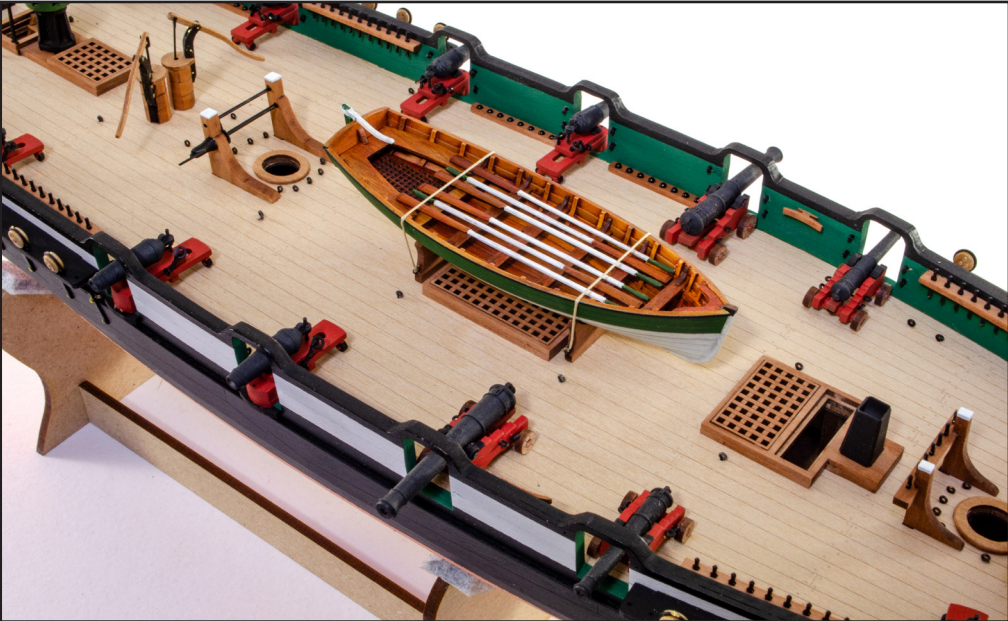
285. From the 0.4mm PE sheet, remove parts PE-28. Slightly prise open the loop, sit a 4mm deadeye within the loop, and then close the loop again.



287...and here is the foremast channel.



288. The completed deck/hull will look like this. You will also need fit the rudder chains using PE-8 eyelets.







289. We can now build the bowsprit. Check your plans and cut the required dowel sections to length. From the 2mm wood sheet, remove part M-2b. From the 1.5mm wood sheet, remove parts M-13 and M-14.



290. Start to fit out the larger dowel as shown. Use your plans to gauge the work needed to fit part M-2b as you can see here. This is angled. Fit the cleats as shown.



291. Here you can see M-2b fitted.



292. Shape the next largest section as shown. Notice I have inserted a small length of 1mm brass wire near the thicker end. This will be used to secure the part to the previous dowel.



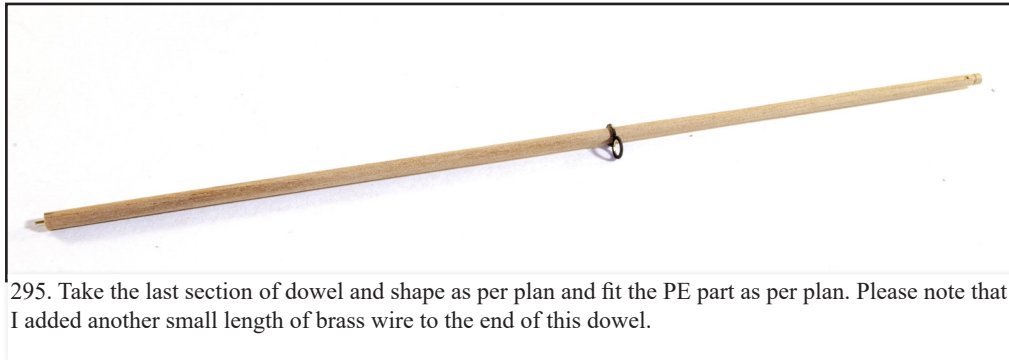
293. Here you can see this section about to be fitted. Note the hole drilled into the larger dowel, to accept the brass wire fitted in previous stage. Make sure all parts are properly glued too.



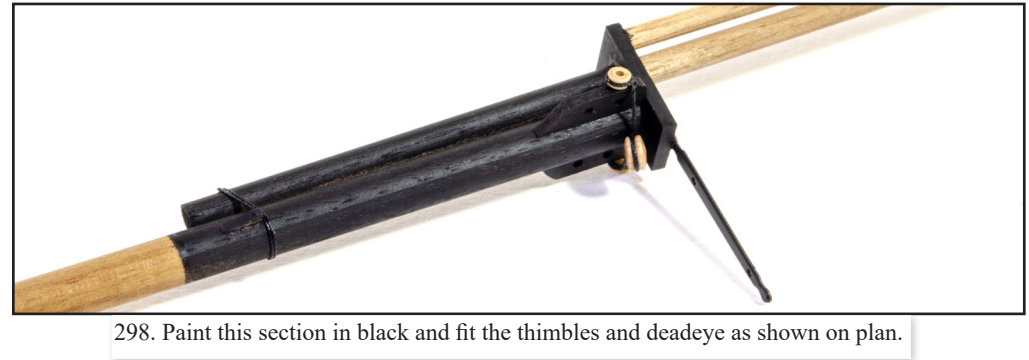
294. Here are the dowels glued into place.



297. Fit the dolphin striker as shown here and plan.



295. Take the last section of dowel and shape as per plan and fit the PE part as per plan. Please note that I added another small length of brass wire to the end of this dowel.



298. Paint this section in black and fit the thimbles and deadeye as shown on plan.



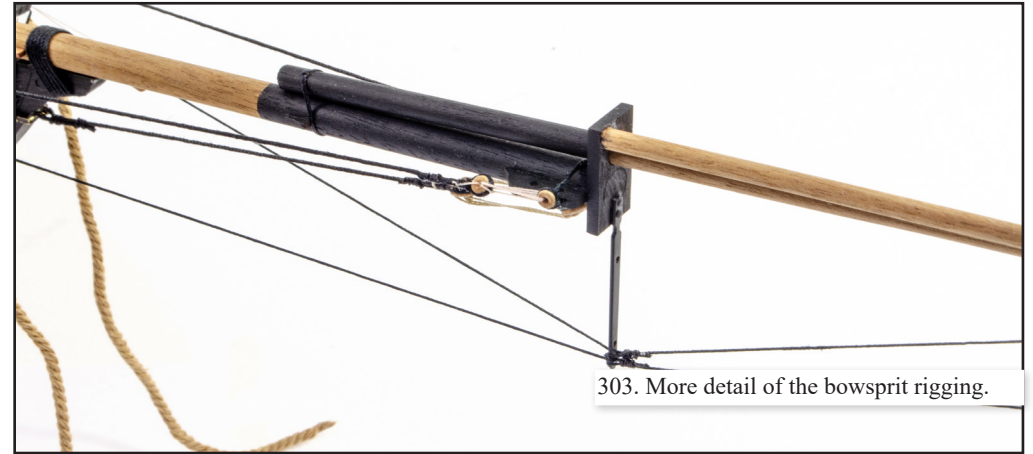
296. Drill a hole in the bowsprit cap that will accept the place where the small dowel will plug. Fit the assemblies as shown.



299. The bowsprit can now be fitted to the hull. Add the gammoning to lash the part to the hull, as shown here and plan.



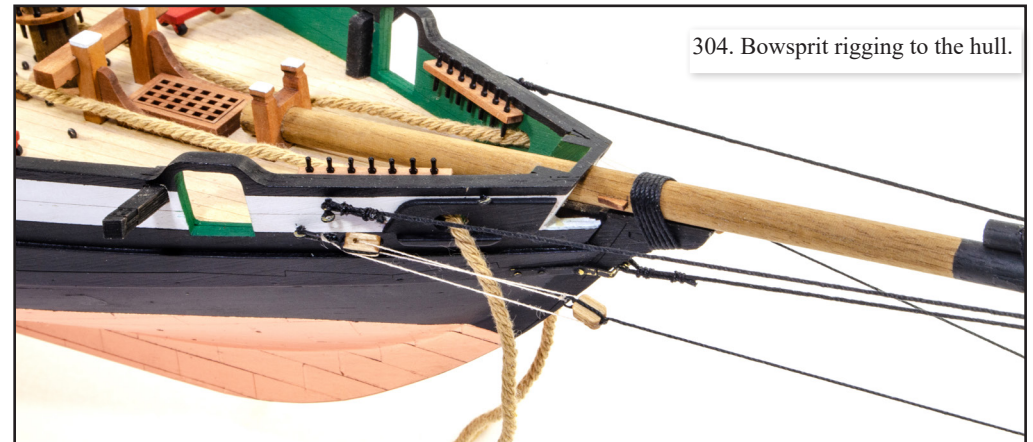
300. The fitted bowsprit will look like this.



303. More detail of the bowsprit rigging.



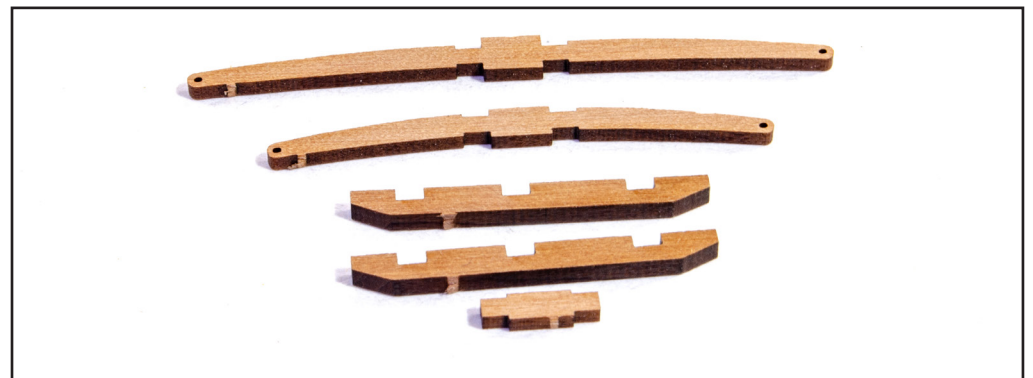
301. The last grate can now be fitted to the model. Use the thick hawse cable and either cut in half and thread from underside as shown or run it continuously from hole to hole. Glue the grate into place in the last frame on the deck.



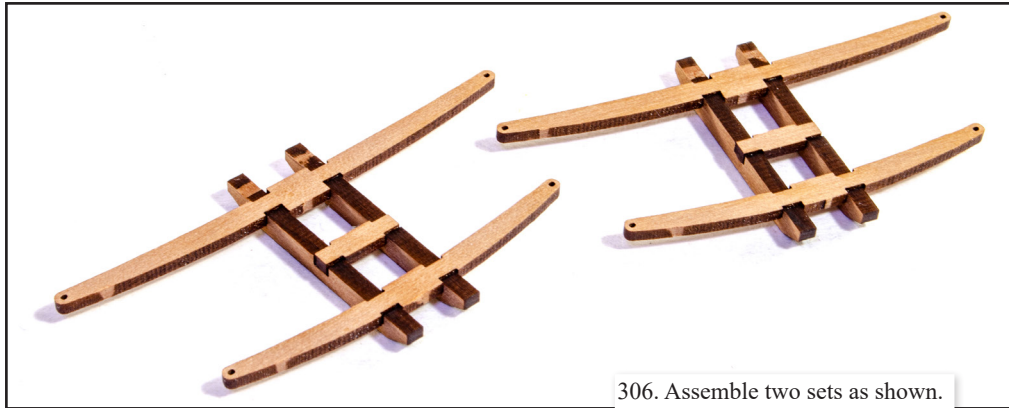
304. Bowsprit rigging to the hull.



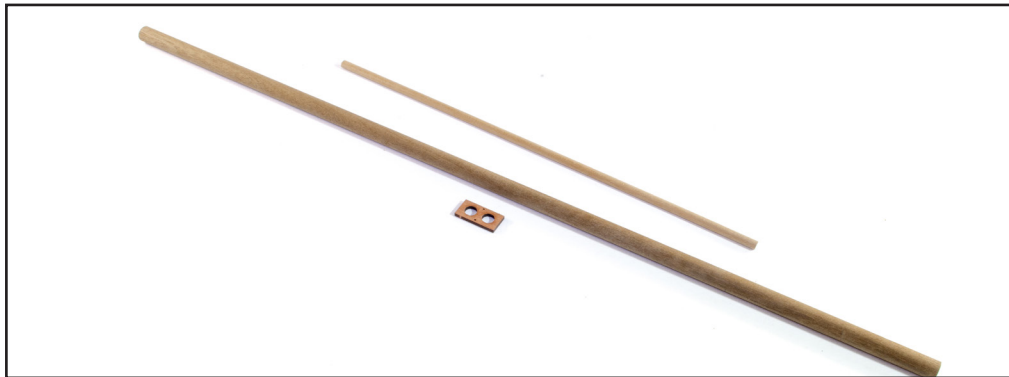
302. Rig the bowsprit as per plan. This is very straightforward and should present no problems.



305. From the 1.5mm wood sheet, remove parts M-10, M-11, and M-12. From the 2mm wood sheet, remove parts M-1.



306. Assemble two sets as shown.



307. The foremast and main mast vary slightly in some dimensions. Cut the respective parts for each mast...



308. Shape the lower mast sections as shown and on plan. This will take some time to take your time here.



309. The top of this can now be shaped to fit the cap. Go carefully and slowly here so the fit is good. Remember that the cap is angled as per plan.



310. Here you can see the cap in situ before the top of the mast is sanded flush to the correct angle.



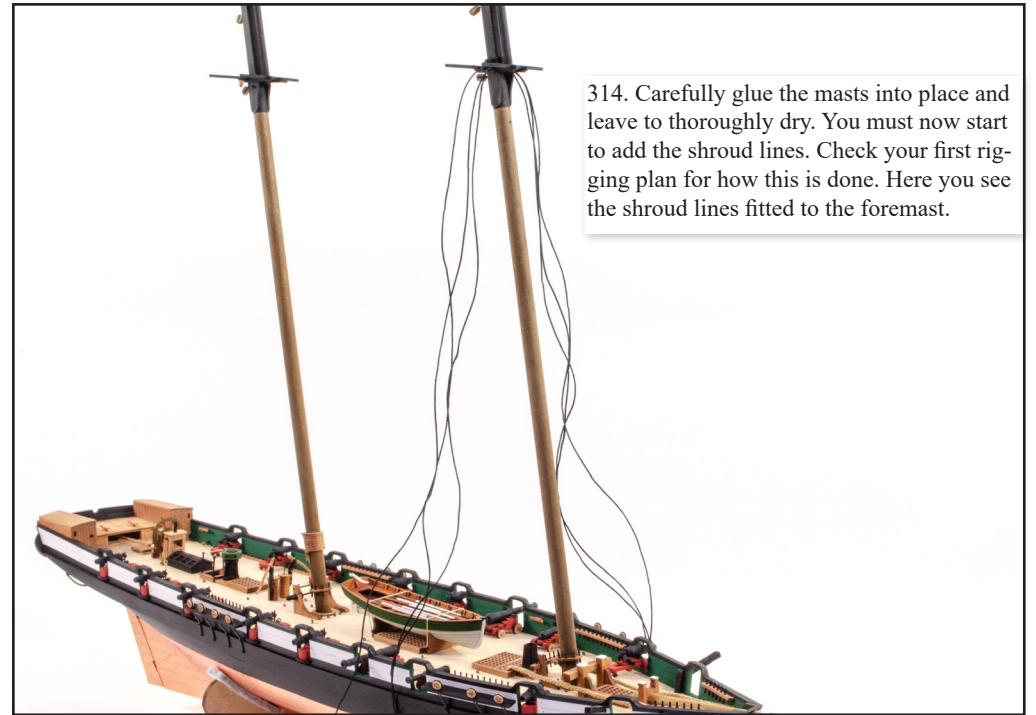
311. Now glue the cross tree into place, taking into account the angle to the mast. ALWAYS check your plans when shaping or fitting anything to do with the masts.



312. You can now fit the parts as shown here to the main mast. NOTE: We supply optional Mast Sail Rings (M-16) that you will need to slide onto the main mast before these are fitted. If you do opt to fit them, then use TEN of them. We supply far more as you could accidentally break them while removing laser char.



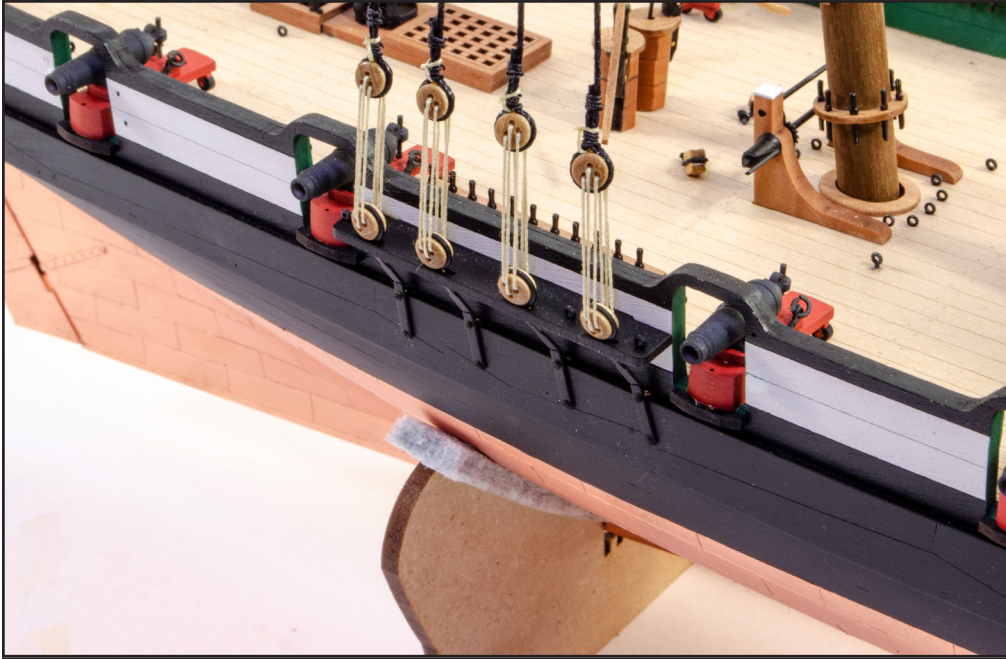
313. Paint this area black (or white) on each mast and add the various blocks as per plan. NOTE: Don't glue the upper two sets of blocks into place yet as you will need to fit a number of rigging lines to the mast before you secure those blocks.



314. Carefully glue the masts into place and leave to thoroughly dry. You must now start to add the shroud lines. Check your first rigging plan for how this is done. Here you see the shroud lines fitted to the foremast.



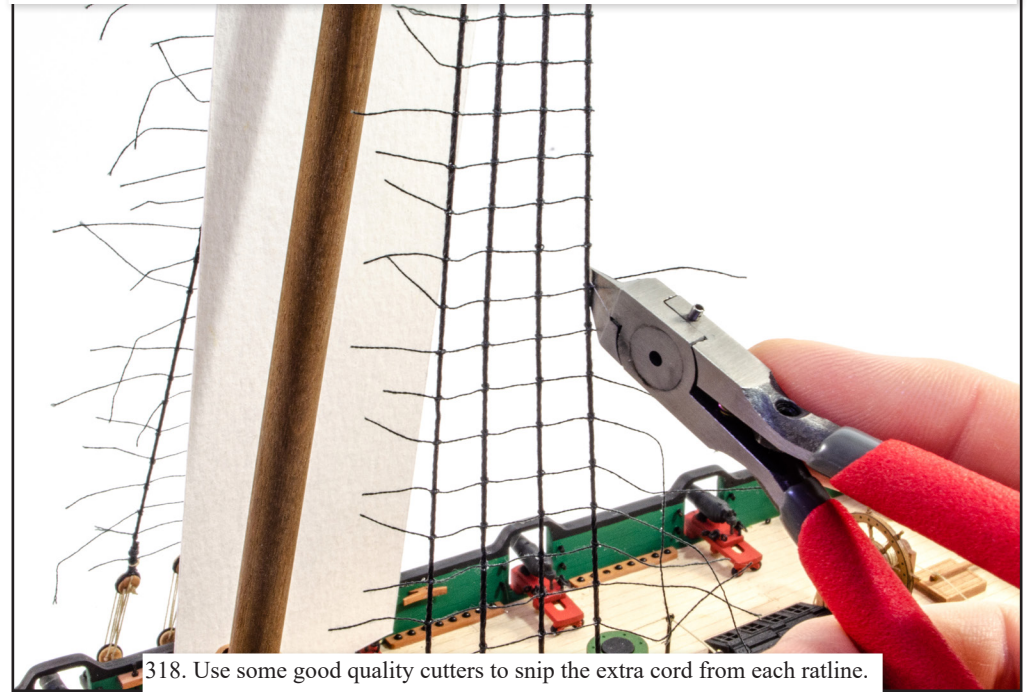
315. 4mm deadeyes now need to be fitted to each line, again, as per plan, and then lashed down to the deadeyes you previously fitted to the channels.



316. Add the catharpins as shown here and plan. These can be awkward, so please take your time.



317. To test your patience, it's now time to add ratlines. Grecian doesn't have too many compared with many ships. You can use a card template to help with spacing. These ratlines will run parallel to the waterline. As a guide, the lines are approx. 6mm apart. When the lines are installed, brush some dilute PVA over the knot and allow to dry properly. NOTE: Please try NOT to add any tension to the vertical lines as that will pull them out of shape and distort them.



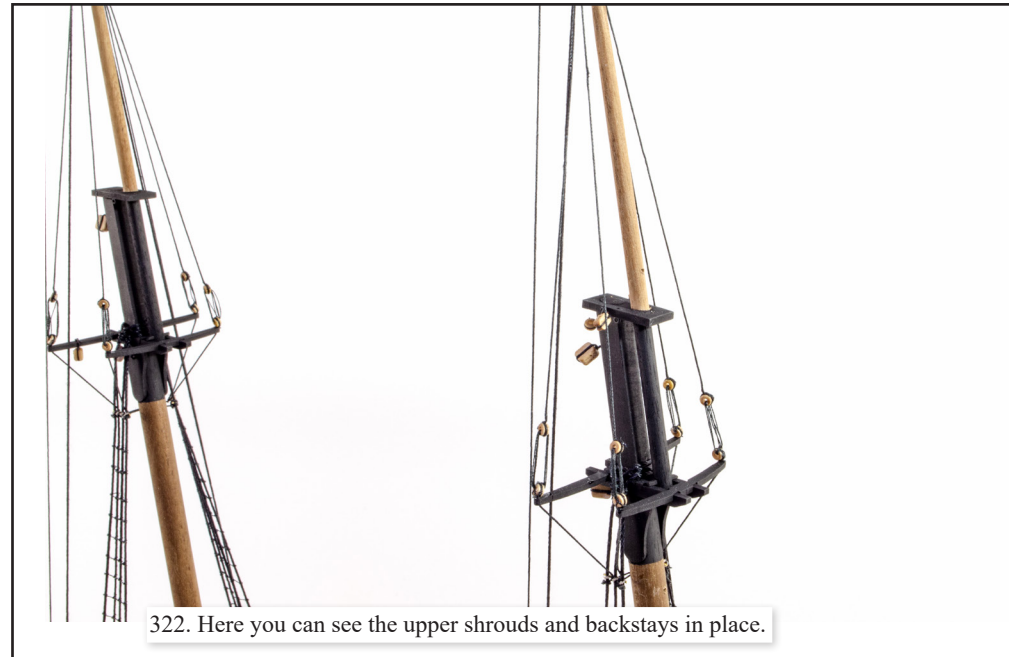
318. Use some good quality cutters to snip the extra cord from each ratline.

319. Your completed shrouds will now look like this.





320. From the same rigging plan, add the upper shrouds.



322. Here you can see the upper shrouds and backstays in place.



321. Now add the backstays from the same plan.



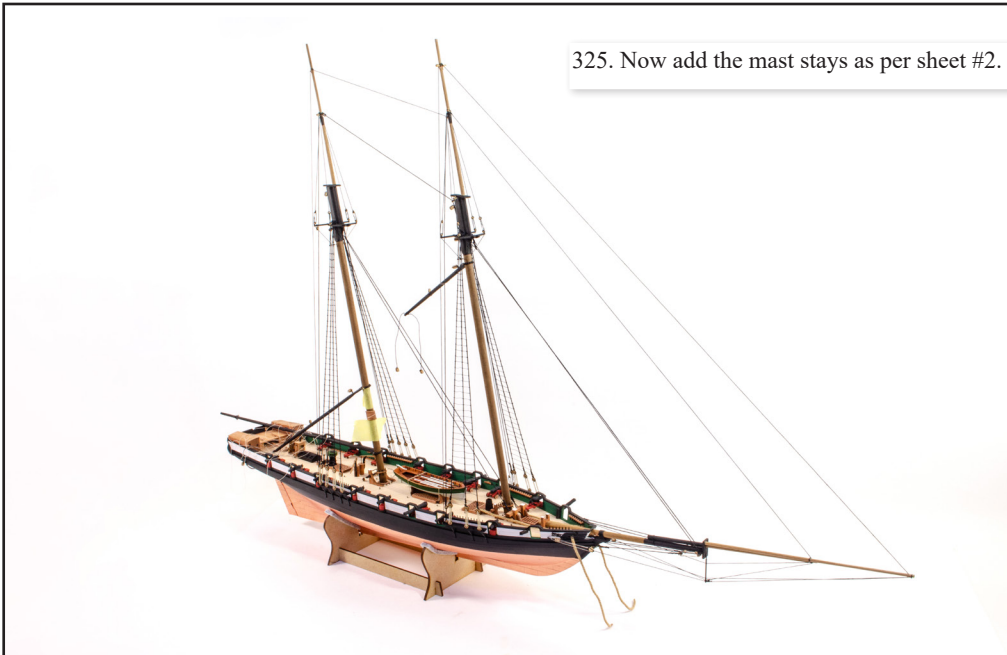
323. You must now take build all of the remaining timber parts from the mast/rig plans. All of these can be painted black either before or after fitting out with blocks etc.



324. At this point, you should look at fitting the gaff/boom assemblies to the masts, simple because the access is easier at this point. The tape you can see is to hold the assemblies in rough place while adding the parrel beads etc.



326. The gaff/boom assemblies can now be rigged. Ensure that all elevation and alignment of these parts is as close to the plans as you can get it before you seal any rope with glue. Here you see the main boom in situ.



325. Now add the mast stays as per sheet #2.



327. And here you see the fore gaff in place. This is rigged exactly the same as the main gaff.



328. Grecian should now look like this. Time to add the anchors to finish this model.



329. From the 2mm wood sheet, remove all parts AS-1. You will also need both 3D-printed anchors.



331. Cut thin strips of black cartridge paper and glue into place as shown.



330. Before gluing the halves of the anchor stocks together, test fit the anchor shaft between them and if necessary, deepen the engraved area a little when the anchor sits comfortably within, remove the anchor and glue the stock halves together.



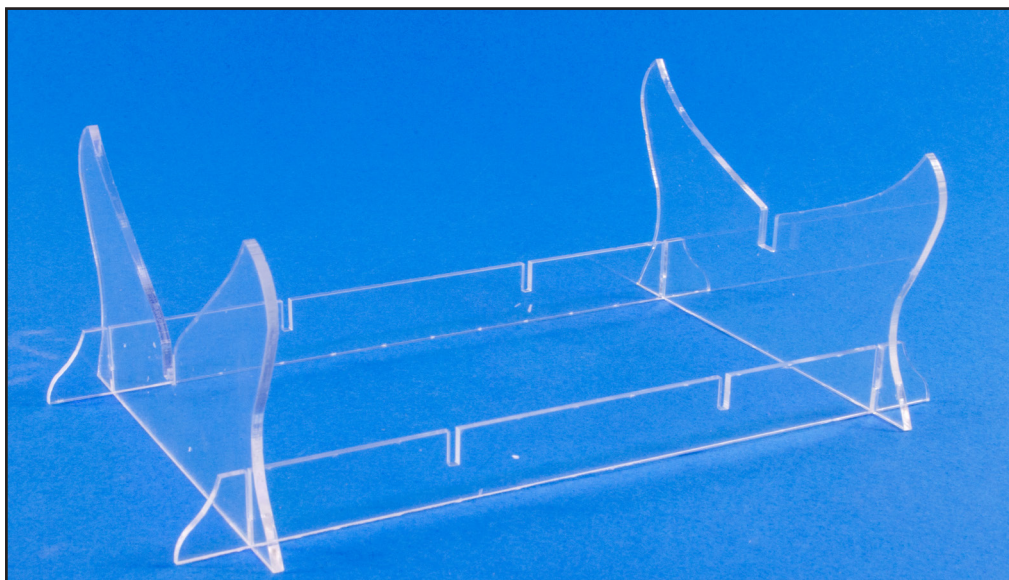
332. Paint the anchor black and then glue it into the stock. Finally, remove the anchor rings PE-7 from the 0.6mm PE sheet. Twist these slightly to open then, then slide into the hole in the anchor before twisting the part closed again.



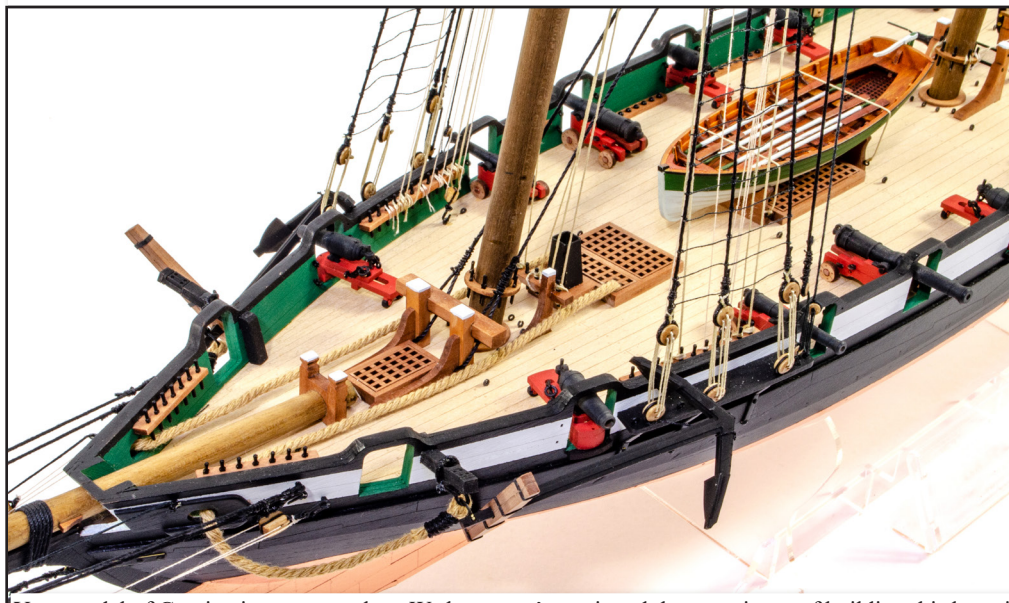
333. Hang the anchors as shown here and on plan. Greician is now complete!



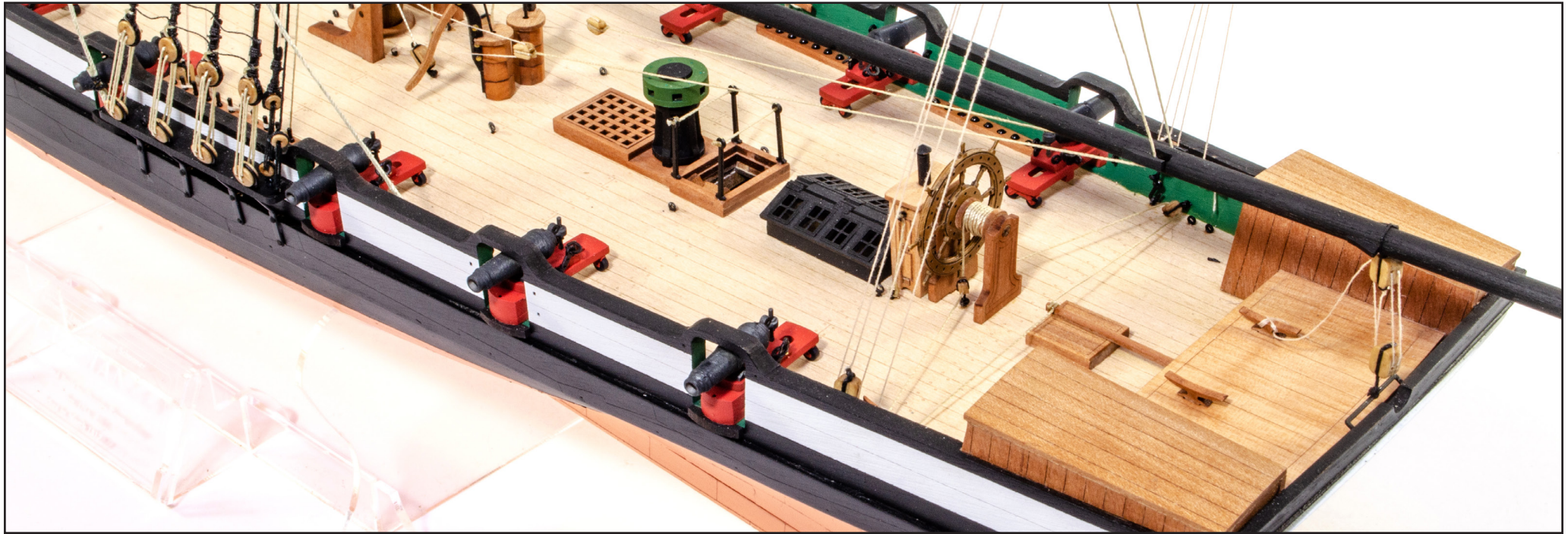
335. Now finish the stand as shown. Your completed model will sit into the cradle with the small pip sitting into the hole in the underside of the keel. That will make sure that Greician won't move about, and she will also be displayed at the correct angle to the waterline.



334. Lastly, remove all parts from the acrylic sheet and remove the protective backing film. Take the pieces shown here and assemble. You can use a little glue here if you wish, but if you use CA, make sure you use the type which doesn't cause fumes.



Your model of Greician is now complete. We hope you've enjoyed the experience of building this beautiful vessel, with her varied and interesting history, and hopefully learned a few extra skills along the way. Thank you to James Hatch for the manual text and prototype model, and Mark Housley for his superb work on the 20-foot cutter.











PARTS LIST

3mm MDF

1	Bulkhead	3mm MDF	1
2	Bulkhead	3mm MDF	1
3	Bulkhead	3mm MDF	1
4	Bulkhead	3mm MDF	1
5	Bulkhead	3mm MDF	1
6	Bulkhead	3mm MDF	1
7	Bulkhead	3mm MDF	1
8	Bulkhead	3mm MDF	1
9	Bulkhead	3mm MDF	2
10	Bulkhead	3mm MDF	1
11	Bulkhead	3mm MDF	1
12	Bulkhead	3mm MDF	1
13	Bulkhead	3mm MDF	1
14	Bulkhead	3mm MDF	1
15	Bulkhead	3mm MDF	1
16	Bulkhead	3mm MDF	1
17	Bulkhead	3mm MDF	1
18	Stern Transom Pattern	3mm MDF	2
19	Stern Transom Pattern	3mm MDF	2
20	Stern Transom Pattern	3mm MDF	2
21	Stern Transom Pattern	3mm MDF	2
22	Stern Quarter Filling Pattern	3 m m MDF	10
23	Bow Filler Pattern (Inner)	3mm MDF	2
24	Bow Filler Pattern (Outer)	3mm MDF	2
25	Cradle (Bow)	3mm MDF	1
26	Cradle (Stern)	3mm MDF	1
27	Cradle Support Beam	3mm MDF	2

2mm MDF

28	Inner Keel	2mm MDF	1
29	Longitudinal Support	2mm MDF	2
30	Keel Inner Pattern (Front)	2mm MDF	2
31	Keel Inner Pattern (Rear)	2mm MDF	2
32	Bow Middle Pattern	2mm MDF	2
33	Stepped Deck Support Pattern	2mm MDF	2
34	Stern Cabin Inner Pattern	2mm MDF	2

35	Stern Cabin Front Pattern	2mm MDF	2
36	Stern Cabin Outer Pattern	2mm MDF	2
37	Keel Locking Key	2mm MDF	13
38	Bulkhead/Lower Deck Locking Key	2mm MDF	10
38a	Bulkhead/Lower Deck Locking Key (B/H 9)	2mm MDF	2
39	Forecastle Deck Beam	2mm MDF	3
40	Mid Deck Beam	2mm MDF	2
41	Aft Deck Beam	2mm MDF	8
42	Lower Deck (Fore)	2mm MDF	1
43	Lower Deck (Aft)	2mm MDF	1

0.8mm Plywood

44	Sub Deck	0.8mm Ply	1
45	Stern Sub Deck	0.8mm Ply	1
46	Stern Counter (Inner)	0.8mm Ply	1

2mm Wood

47	Bow Pattern with Bow Timberhead	2mm Wood	2
48	Inner keel and Stempost	2mm Wood	1
49	Inner Rudder Post	2mm Wood	1
50	Stern Cabin Rear Panel	2mm Wood	2
51	Bowsprit Timber	2mm Wood	1
52	Stern Board (Main)	2mm Wood	1
53	Stern Board (Top)	2mm Wood	1
54	Rudder Pattern (Inner)	2mm Wood	1
55	Fore Bitts (Aft of Foremast)	2mm Wood	2
56	Fore Bitt Knee (Fore of Foremast)	2mm Wood	2
57	Fore Bitts Crossbeam (Fore of Foremast)	2mm Wood	1
AS-1	Anchor Stock	2mm Wood	4
CT-14	20 Foot Cutter Cradle (Fore)	2mm Wood	1
CT-15	20 Foot Cutter Cradle (Aft)	2mm Wood	1
M-1	Fore and Main Trestle Tree	2mm Wood	2
M-2	Fore and Main Mast Cap	2mm Wood	2
M-2b	Bowsprit Cap	2mm Wood	1
M-18	Main Driver Boom Jaws	2mm Wood	1
M-19	Main and Fore Gaff Boom Jaws	2mm Wood	2

1mm Wood

58-P	Bulwark Pattern (Middle - Left)	1mm Wood	1
58-S	Bulwark Pattern (Middle - Right)	1mm Wood	1
59	Lower Counter Pattern (Outer)	1mm Wood	1
59-P	Lower Counter Pattern Rail (Left)	1mm Wood	1
59-S	Lower Counter Pattern Rail (Right)	1mm Wood	1
60	Hawse Pattern (Left)	1mm Wood	1
61	Hawse Pattern (Right)	1mm Wood	1
62	Hawse Bolster	1mm Wood	2
63	Stern Board Framing Pattern	1mm Wood	1
64	Outer Bulwark Pattern (Left)	1mm Wood	1
65	Outer Bulwark Pattern (Right)	1mm Wood	1
66	Inner Bulwark Pattern (Left)	1mm Wood	1
67	Inner Bulwark Pattern (Right)	1mm Wood	1
68	Tiller Housing End Panel	1mm Wood	1
69	Tiller Housing End Panel (Inner)	1mm Wood	1
70	Tiller Housing Canopy	1mm Wood	1
71	Binnacle Front Panel	1mm Wood	1
72	Binnacle Rear Panel	1mm Wood	1
73	Binnacle Side Panel	1mm Wood	2
74	Binnacle Lower Shelf	1mm Wood	1
75	Binnacle Middle Shelf	1mm Wood	1
76	Binnacle Upper Shelf	1mm Wood	1
77	Binnacle Canopy	1mm Wood	1
78	Outer Keel and Stempost (Right)	1mm Wood	1
79	Outer Keel and Stempost (Left)	1mm Wood	1
80	Outer Sternpost (Right)	1mm Wood	1
81	Outer Sternpost (Left)	1mm Wood	1
82	Locking Key for Keel Parts	1mm Wood	12
83	Outer Rudder (Right)	1mm Wood	1
84	Outer Rudder (Left)	1mm Wood	1
85	Mast Base	1mm Wood	2
86	Skylight End Panel	1mm Wood	2
87	Skylight Side Panel	1mm Wood	2
88	Skylight Top Beam (Lower)	1mm Wood	1
89	Skylight Top Beam (Upper)	1mm Wood	1
90	Skylight Window Frame (Left)	1mm Wood	1
91	Skylight Window Frame (Right)	1mm Wood	1
92	Bread Hatch	1mm Wood	1

93	Stern Cabin Inner Side Panel (Left)	1mm Wood	1
94	Stern Cabin Inner Side Panel (Right)	1mm Wood	1
95	Stern Cabin Outer Side Panel (Right)	1mm Wood	1
96	Stern Cabin Outer Side Panel (Left)	1mm Wood	1
97	Stern Cabin Door Panel (Right)	1mm Wood	1
98	Stern Cabin Door Panel (Left)	1mm Wood	1
99	Stern Cabin Canopy (Right)	1mm Wood	1
100	Stern Cabin Canopy (Left)	1mm Wood	1
101	Ladder Side	1mm Wood	2
102	Ladder Step	1mm Wood	8
103	Capstan Lower Chock	1mm Wood	1
104	Capstan Upper Chock	1mm Wood	1
105	Capstan Lower Drumhead	1mm Wood	1
106	Capstan Upper Drumhead	1mm Wood	1
107	Ships Wheel Drum End Cap	1mm Wood	2
108	Hand Pump Top Cap	1mm Wood	2
109	Hand Pump Handle	1mm Wood	2
110	Cathead Sheave Pattern	1mm Wood	4
111	Cathead Sheave End Cap	1mm Wood	4
MW-P	Main Wale (Left)	1mm Wood	1
MW-S	Main Wale (Right)	1mm Wood	1
M-3	Foremast Cheek	1mm Wood	2
M-4	Main Mast Cheek	1mm Wood	2
M-5	Fore and Main Mast Belaying Ring	1mm Wood	2
M-6	Main Boom Support	1mm Wood	1
M-7	Main Boom Support Chock	1mm Wood	2
M-8	Yard Cleat (Small)	1mm Wood	56
M-9	Yard Cleat (Large)	1mm Wood	16
M-16	Mast Sail Ring	1mm Wood	24
M-17	Topmast Fid	1mm Wood	3

1.5mm Wood

112	6-Pounder Cannon Carriage Side (Right)	1.5mm Wood	8
113	6-Pounder Cannon Carriage Side (Left)	1.5mm Wood	8
114	6-Pounder Cannon Carriage Front Axle	1.5mm Wood	8
115	6-Pounder Cannon Carriage Rear Axle	1.5mm Wood	8
116	6-Pounder Cannon Carriage Quoin	1.5mm Wood	8
117	6-Pounder Cannon Carriage Front Wheel	1.5mm Wood	16
118	6-Pounder Cannon Carriage Rear Wheel	1.5mm Wood	16

119	4-Pounder Cannon Carriage Side (Right)	1.5mm Wood	4	148	Main Channel	1.5mm Wood	2
120	4-Pounder Cannon Carriage Side (Left)	1.5mm Wood	4	149	Fore Channel	1.5mm Wood	2
121	4-Pounder Cannon Carriage Front Axle	1.5mm Wood	4	150	Cleat	1.5mm Wood	10
122	4-Pounder Cannon Carriage Rear Axle	1.5mm Wood	4	151	Carronade Pivot Ledge	1.5mm Wood	24
123	4-Pounder Cannon Carriage Quoin	1.5mm Wood	4	M-10	Fore/Main Cross Tree (Rear)	1.5mm Wood	2
124	4-Pounder Cannon Carriage Rear Wheel	1.5mm Wood	8	M-11	Fore/Main Cross Tree (Fore)	1.5mm Wood	2
125	4-Pounder Cannon Carriage Front Wheel	1.5mm Wood	8	M-12	Fore/Main Cross Tree Spacer	1.5mm Wood	2
126	18-Pounder Carronade Slide Bed	1.5mm Wood	12	M-13	Bowsprit Bee (Left)	1.5mm Wood	1
127	18-Pounder Carronade Carriage	1.5mm Wood	12	M-14	Bowsprit Bee (Right)	1.5mm Wood	1
128	18-Pounder Carronade Front Chock	1.5mm Wood	24	M-15	Main Boom Cleat	1.5mm Wood	2
129	18-Pounder Carronade Slide Pin	1.5mm Wood	12				
130	18-Pounder Carronade Slide Bed Cross Beam	1.5mm Wood	12			3mm Wood	
131	Inner Bulwark Belaying Rack (Aft)	1.5mm Wood	2	152	Bowsprit Bitts	3mm Wood	1
132	Inner Bulwark Belaying Rack (Fore)	1.5mm Wood	2	153	Main Mast Bitts	3mm Wood	2
133	Inner Bulwark Belaying Rack (Bow)	1.5mm Wood	2	154	Fore Bitt Cross Beam	3mm Wood	1
134	Shot Garland	1.5mm Wood	12				
135	Capstan Drumhead Centre	1.5mm Wood	1			4mm Wood	
136	Capstan Drumhead Top Capping	1.5mm Wood	1	155	Fore Bitt Post (Fore of Foremast)	4mm Wood	2
137	Capstan Whelp	1.5mm Wood	6	156	Ships Wheel Centre Drum	4mm Wood	1
138	Ships Wheel Standard (Front)	1.5mm Wood	1	157	Hand Pump Main Body Pattern	4mm Wood	6
139	Ships Wheel Standard (Rear)	1.5mm Wood	1				
140	Cathead Side	1.5mm Wood	2			1mm Laser Engraved Limewood	
141	Cathead Side	1.5mm Wood	2				
142	Main Hatch Lower Coaming	1.5mm Wood	1	158	Laser Engraved Main Deck	1mm Wood	1
142a	Main Hatch Upper Coaming	1.5mm Wood	1				
142b	Main Hatch Grating	1.5mm Wood	1			0.8mm Wood (20 Foot Cutter)	
143	Fore Hatch Lower Coaming	1.5mm Wood	1	CT-2	20 Foot Cutter Floor	1mm Wood	1
143a	Main Hatch Upper Coaming	1.5mm Wood	1	CT-3	20 Foot Cutter Rear Floor	1mm Wood	1
143b	Main Hatch Grating (Aft)	1.5mm Wood	1	CT-4	20 Foot Cutter Bow Knee	1mm Wood	1
143c	Main Hatch Grating (Fore)	1.5mm Wood	1	CT-5	20 Foot Cutter Stern Sheet (Rear Seat)	1mm Wood	1
144	Rear Hatch Lower Coaming	1.5mm Wood	1	CT-6	20 Foot Cutter Thwart/Seat	1mm Wood	1
144a	Rear Hatch Upper Coaming (Fore)	1.5mm Wood	1	CT-7	20 Foot Cutter Thwart/Seat	1mm Wood	1
144b	Rear Hatch Upper Coaming (Aft)	1.5mm Wood	1	CT-8	20 Foot Cutter Thwart/Seat	1mm Wood	1
144c	Rear Hatch Grating	1.5mm Wood	1	CT-9	20 Foot Cutter Thwart/Seat	1mm Wood	1
145	Rear Hatch/Bread Scuttle Coaming	1.5mm Wood	1	CT-10	20 Foot Cutter Thwart/Seat	1mm Wood	1
146	Fore Scuttle Lower Coaming	1.5mm Wood	1	CT-11	20 Foot Cutter Thwart/Seat Knee	1mm Wood	12
146a	Fore Scuttle Upper Coaming	1.5mm Wood	1	CT-12	20 Foot Cutter Rudder	1mm Wood	1
146b	Fore Scuttle Grating	1.5mm Wood	1				
147	Tiller Arm	1.5mm Wood	1				

CT-13	20 Foot Cutter Oar	1mm Wood	12
<u>2mm Clear Acetate</u>			
DS-1	Display Stand Rear Cradle	2mm Acetate	1
DS-2	Display Stand Fore Cradle	2mm Acetate	1
DS-3	Display Stand Cross Support	2mm Acetate	2
DS-4	Display Stand Nameplate Cross Support	2mm Acetate	2
DS-5	Display Stand Nameplate	2mm Acetate	2
<u>0.6mm Photo-Etched Brass</u>			
PE-1	Belaying Pin	0.6mm PE	81
PE-2	Stanchion	0.6mm PE	8
PE-3	Stunsail Boom Iron	0.6mm PE	4
PE-4	Rudder Pintle and Gudgeon	0.6mm PE	4
PE-5	Dolphin Striker	0.6mm PE	1
PE-6	Rudder Ring Plate	0.6mm PE	1
PE-7	Anchor Ring	0.6mm PE	2
<u>0.4mm Photo-Etched Brass</u>			
PE-8	Main Eyebolt	0.4mm PE	196
PE-9	Outer Hull Eyebolt	0.4mm PE	20
PE-10	Yard Footrope Stirrup (Not Used)	0.4mm PE	12
PE-11	Rigging Hook	0.4mm PE	32
PE-12	Main Boom Iron Ring	0.4mm PE	1
PE-13	Jibboom Iron Ring	0.4mm PE	1
PE-14	Bow Iron Strap for Bobstay	0.4mm PE	1
PE-15	18 Pounder Carronade Ringbolt Strap	0.4mm PE	32
PE-16	18 Pounder Carronade Breeching Ringbolt	0.4mm PE	32
PE-17	6-Pounder Carriage Cross Iron	0.4mm PE	16
PE-18	4-Pounder Carriage Cross Iron	0.4mm PE	16
PE-19	Ships Wheel Main Body	0.4mm PE	2
PE-20	Main Bitts Winch Drum Gear	0.4mm PE	2
PE-21	Main Bitts Winch Drum Gear Pawl	0.4mm PE	2
PE-22	Main Bitts Winch Drum Handle	0.4mm PE	2
PE-23	Main Sheet Bar	0.4mm PE	1
PE-24	Chimney	0.4mm PE	1

PE-25	Hand Pump Operating Rod	0.4mm PE	2
PE-26	Hand Pump Forked Stanchion Inner Pattern	0.4mm PE	5
PE-27	Hand Pump Forked Stanchion Outer Pattern	0.4mm PE	5
PE-28	5mm Deadeye Chainplate	0.4mm PE	18
<u>0.2mm Photo-Etched Brass</u>			
PE-29	Ships Wheel Centre Plate	0.2mm PE	2
PE-30	Ships Wheel Outer Plate	0.2mm PE	2
PE-31	Skylight Window Frame	0.2mm PE	10
PE-32	Door Hinge	0.2mm PE	20
PE-33	Compass Dial	0.2mm PE	2
PE-34	Stunsail Boom Strap	0.2mm PE	4
PE-35	Rudder Strap (Rudder)	0.2mm PE	2
PE-36	Rudder Strap (Rudder Post)	0.2mm PE	2
PE-37	Rudder Strap (Rudder)	0.2mm PE	2
PE-38	Rudder Strap (Rudder Post)	0.2mm PE	2
PE-39	Rudder Strap (Rudder)	0.2mm PE	2
PE-40	Rudder Strap (Rudder Post)	0.2mm PE	2
<u>0.1mm Photo-Etched Brass</u>			
PE-41	Bow Plating Pattern (Paint Copper)	0.1mm PE	1
PE-42	Left Rudder Plating Pattern (Paint Copper)	0.1mm PE	1
PE-43	Right Rudder Plating Pattern (Paint Copper)	0.1mm PE	1
PE-44	Rear Rudder Plating Pattern (Paint Copper)	0.1mm PE	1
PE-35	Rudder Strap (Rudder)	0.2mm PE	2
PE-36	Rudder Strap (Rudder Post)	0.2mm PE	2
PE-37	Rudder Strap (Rudder)	0.2mm PE	2
PE-38	Rudder Strap (Rudder Post)	0.2mm PE	2
PE-39	Rudder Strap (Rudder)	0.2mm PE	2
PE-40	Rudder Strap (Rudder Post)	0.2mm PE	2
<u>Fittings</u>			
F-1	18 Pounder Carronade Barrel	3-D Print	12
F-2	6-Pounder Cannon (Long)	3-D Print	8
F-3	4-Pounder Cannon	3-D Print	4
F-4	18 Pounder Carronade Wheels	3-D Print	12

F-5	Winch Drum	3-D Print	1
CT-1	20 Foot Cutter Hull	3-D Print	1
A-1	Anchor	3-D Print	2
F-6	Binnacle Chimney	Brass	1
F-7	1.5mm Diameter Black Cannon Ball	Acrylic	100
F-8	Small pin	Brass	300
F-9	Rudder Chain – 150mm Approx.	Metal	1
F-10	2.5mm Thimble Block	Wood	40
F-11	4mm Deadeye	Wood	38
F-12	2mm Single block	Wood	20
F-13	3mm Single block	Wood	50
F-14	4mm Single Block	Wood	20
F-15	5mm Single block	Wood	10
F-16	4mm Double block	Wood	20
F-17	Parrel bead	Plastic	30
F-18	0.1mm Diameter natural thread		100m
F-19	0.25mm Diameter natural thread		20m
F-20	0.5mm Diameter natural thread		20m
F-21	0.75mm Diameter natural thread		10m
F-22	0.25mm Diameter black thread		20m
F-23	0.5mm Diameter black thread		20m
F-24	0.75mm Diameter black thread		20m
F-25	1mm Diameter black thread		20m
F-26	2mm Diameter natural thread (Anchor hawse)		0.5m
F-27	8mm Dowel x 500mm long	Wood	2
F-28	6mm Dowel x 500mm long	Wood	1
F-29	5mm Dowel x 500mm long	Wood	1
F-30	4mm Dowel x 500mm long	Wood	4
F-31	3mm Dowel x 500mm long	Wood	4
F-32	2mm Dowel x 500mm Long	Wood	1
F-33	1mm x 5mm x 500mm strip - Limewood	Wood	30
F-34	0.8mm x 4mm x 500mm strip - Second planking	Wood	40
F-35	1mm Diameter brass rod x160mm long	Metal	1
F-36	0.8mm Diameter brass rod x 160mm long	Metal	1
F-37	Copper Tape Roll for Coppering Bottom	Copper	1
F-38	Black Card for Anchor Stock	Card	1

Grecian Laser and PE Sheet Quantities

3mm MDF Laser Cut	2
2mm MDF Laser cut	3
2mm Clear Acetate	1
0.8mm Pear Wood (20 Foot Cutter)	1
1mm Pear Wood x 500mm long	2
1mm Pear Wood x 600mm long	2
1.5mm Pear Wood x 500mm long	1
2mm Pear Wood x 500mm long	1
3mm Pear Wood (Small)	1
4mm Pear Wood (Small)	1
0.8mm Plywood	1
1mm Wood laser etched deck	1
0.2mm Photo Etched Brass Sheet	1
0.4mm Photo Etched Brass Sheet	1
0.6mm Photo Etched Brass Sheet	1

VANGUARD MODELS

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GRECIAN was designed and developed in the UK by Chris Watton

Finished prototype model made and photographed (including construction manual text) by James Hatch

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