AMERICAN CIVIL WAR WOODEN MODEL KIT

CSS SHENANDOAH 1864

SCALE 1:84







Modellers Shipyard

www.modellersshipyard.com

LENGTH: 1080mm WIDTH: 260mm HEIGHT: 570mm

ITEM CODE: KTMS1016



BUILDING INSTRUCTIONS

Version 1.2

1.0 Introduction
Modellers Shipyard is proud to present another wooden model ship to our range of kits that have signifance to Australian maritime history. Our model of the CSS Shenandoah is expertly designed and built by John Staib - master model ship designer and builder.

2.0 Historical Notes
CSS *Shenandoah*, formerly *Sea King,* was an iron-framed, teak-planked, full rigged ship, with auxiliary steam power, captained by Confederate States Navy Commander James Waddell, a North Carolinian with twenty years of prior service in the United States Navy.

During 12½ months of 1864 - 1865 the ship undertook commerce raiding resulting in the capture and sinking or bonding of thirty-eight Union merchant vessels, mostly New Bedford whaleships. The *Shenandoah* is notable for firing the last shot of the American Civil War, at a whaler in waters off the Aleutian Islands.

History and mission
Sea King was designed as a British commercial transport vessel for the East Asia tea trade and troop transport, and built on the River Clyde in Scotland. The *Sea King's* maiden voyage was 1862-63 to Auckland, New Zealand to transport British troops to quell a Maori War. The *Sea King* had been built to provide speedy shipment of tea from Shanghai to England. The elegant vessel - 230 feet (70m) long, with a 32 foot (9.8m) beam - could sail under wind, or convert to steam and screw propeller. Under favourable sailing conditions, the propeller, to reduce drag, could be lifted from the water, and the "tea clipper" could reach speeds of up to 9 knots. Under sail, it had once covered 330 miles in 24 hours. The ship seemed perfect for conversion to a commerce raider, an enterprise that demanded speed, stealth and a capacity for staying at sea for long periods. The Confederate Government purchased the *Sea King* in September 1864 for use as an armed cruiser to capture and destroy Union merchant ships.

On 8 October, *Sea King* she sailed from London ostensibly for Bombay, India, on a trading voyage. She rendezvoused at Funchal, Madeira, with the steamer *Laurel*, bearing officers and the nucleus of a crew for *Sea King*, together with naval guns, ammunition, and stores. Commanding officer Lieutenant James Waddell supervised *Sea King's* conversion to a ship-of-war in nearby waters. Waddell was barely able, however, to bring his crew to half strength even with additional volunteers from *Sea King* and *Laurel*.

The new cruiser was commissioned on 19 October and her name changed to *Shenandoah*. The ship, commanded by Captain Waddell, then sailed around the Cape of Good Hope of Africa to Australia. While at Melbourne, Victoria, in January 1865, Waddell obtained additional men and supplies.

In accord with operation concepts originated in the Confederate Navy Department and developed by its agents in Europe, *Shenandoah* was assigned to "seek out and utterly destroy" commerce in areas as yet undisturbed (i.e., attack Union ships), and thereafter her course lay in pursuit of merchantmen on the Cape of Good Hope–Australia route and of the Pacific whaling fleet. En route to the Cape she picked up six prizes. Five of these were put to the torch or scuttled, after Captain Waddell had safely rescued crew and passengers; the other was bonded and employed for transport of prisoners to Bahia, Brazil.

Australian Stopover
The CSS *Shenandoah* arrived in Australian waters on 17 January, 1865. Off the coast of South Australia at 39°32'14"S and 122°16'52" E, her crew spotted an American-made sailing ship named the *Nimrod* and boarded it. Having ascertained it was an English ship, the *Shenandoah* left it alone.

On 25 January, 1865 the *Shenandoah* made harbour at Williamstown, Victoria, near Melbourne, in order to repair the damaged propeller and to replenish coal and provisions. At seven o'clock in the evening, Waddell sent a Lieutenant Grimball to gain approval from local authorities to repair their ship, with Grimball returning three hours later saying they were granted permission. The United States consul, William Blanchard, insisted that the Victorian government arrest the Confederates as pirates, but his pleas were ignored by Victoria's governor, Sir Charles Henry Darling, who was satisfied with the *Shenandoah*'s pleading of neutrality when requesting to be allowed to undertake repairs. Aside from a few fist fights between Americans, there was no direct conflict between the two warring sides. However, there were eighteen desertions while ashore, and there were constant threats of Northern sympathizers joining the crew in order to capture the ship when it was at sea.

After leaving Australia, the *Shenandoah* sailed to the North Pacific whaling grounds . On 3-4 April, Waddell burned four whalers in the Caroline Islands. After a 3-week cruise to the ice and fog of the Sea of Okhotsk yielded only a single prize, due to a warning to the whaling fleet which had preceded him, Waddell headed north past the Aleutian Islands into the Bering Sea and the Arctic Ocean. *Shenandoah* then proceeded to capture 11 more prizes.


Undergoing repairs Williamstown, Jan-Feb,1865

Surrender of CSS *Shenandoah*
On 27 June, 1865, Waddell learned, from a prize *Susan & Abigail*, of General Robert E. Lee's surrender when her captain produced a San Francisco newspaper reporting the flight from Richmond, Virginia, of the Confederate Government 10 weeks previously. The same paper contained Confederate President Jefferson Davis's proclamation, after Lee's surrender, that the "war would be carried on with renewed vigour". Waddell then proceeded to capture 10 more whalers in the space of 7 hours in the waters just below the Arctic Circle. It was not until 2 August that *Shenandoah* learned of the final Confederate collapse when she encountered the British barque *Barracouta*. Among the devastating news was the surrender of General Joseph E. Johnston and his various armies (26 April), Kirby Smith's, (26 May) and Magruder's armies and, crucially, the capture of Mr. Davis and a part of his cabinet.

After this news Waddell and the crew realized that their worst depredations and the operational heart of their expedition - the destruction, in the Bering Strait, of 21 Union vessels, between 22 –28 June - had occurred 11 weeks after General Lee's army had stacked its weapons at Appomattox Courthouse. Suddenly, most of the raider's list of prizes, once a badge of honour, read like a bill of criminal indictments. In effect, the armistice had transformed the rebels into stateless purveyors of maritime piracy, a hanging offense in many climes.

After the news of the collapse and surrender of the Confederacy Captain Waddell disarmed the ship as a man-of-war; her battery was dismounted and struck below, and her hull repainted to resemble an ordinary merchant vessel.

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2.0 Historical Notes continued

Regardless of Davis's proclamation and knowing the unreliability of newspapers at the time, Captain Waddell and the crew knew returning to a US port would mean facing a Union court with a Northern perspective of the war. They correctly predicted the risk of being tried in a US court and hanged as pirates. This later showed to be accurate. Commerce raiders were not included in the reconciliation and amnesty that Confederate soldiers were given. Captain Raphael Semmes of *CSS Alabama* escaped charges of piracy by surrendering 1 May,1865 as a Ground General under Joseph E. Johnston. Semmes's former sailors surrendered as artillerymen.

The CSS *Shenandoah* was therefore surrendered by Captain Waddell to the Captain of HMS *Donegal* on 6 November, 1865, after travelling 9,000 miles (14,500 km) to Liverpool to do so. This marked the last surrender of the American Civil War. She was then turned over to the United States government. The United States Naval War Records published in 1894 as *The Official Records of the Union and Confederate Navies in the War of Rebellion* state: "5 November - Arrived in the Mersey, off Liverpool, and on Monday, the 6th, surrendered the Shenandoah to the British nation, by letter to Lord John Russell, premier of Great Britain. (signed) JAMES I WADDELL.

After the surrender of *Shenandoah* to the British, the British had to decide what to do with the Confederate crew, knowing the consequences of piracy charges. After a full investigation by law officers of the crown, it was decided that the officers and crew had done nothing against the rules of war or the laws of nations to justify being held as prisoners, so they were unconditionally released. But the authorities of the United States considered them pirates and would have treated them as such if they had fallen into their hands.

Conclusions

Shenandoah remained at sea for 12 months and 17 days, traversed 93,000 kms (58,000 miles) carrying the Confederate flag around the globe for the only time and sank or captured 38 ships, mostly whalers. Waddell took close to one thousand prisoners, without a single war casualty among his crew: two men died of disease. The reason the vessel did not have any war casualties was because it was never involved in a battle against any Union Naval vessel, as was the CSS *Alabama*, but instead took United States merchant vessels.

In 1866 the US, having taken possession of *Shenandoah*, sold her to the first Sultan of Zanzibar, who renamed her after himself (*El Majidi*). On 15 April, 1872 a hurricane hit Zanzibar. *Shenandoah* (*El Majidi*) was one of 6 ships owned by Seyed Burgash which were blown on shore and seriously damaged.

Battle Ensign

The battle ensign of CSS *Shenandoah* is unique amongst all of the flags of the Confederate States of America as it was the only Confederate flag to circumnavigate the world during the Confederacy, and it was the last Confederate flag to be lowered by a combatant unit in the Civil War (Liverpool, UK, on 6 November, 1865).

Shenandoah's battle ensign has been in the Museum of the Confederacy's collection since 1907 and is currently on display in the museum, Richmond, Virginia. Lieutenant Dabney Scales CSN, gave the flag to a cousin, Eliza Hull Maury, for safekeeping. Eliza was a daughter of Richard Launcelot Maury. He was the eldest son of Commodore Matthew Fontaine Maury. Eliza's brother, Colonel Richard Launcelot Maury CSA, brought the flag from England in 1873, and donated it to the Museum in 1907. The flag itself measures 224cm x 345cm (88in x 136in).

References

Baldwin, John, *Last Flag Down: The Epic Journey of the Last Confederate Warship*, Crown Publishers, 2007

Chaffin, Tom, *Sea of Gray: The Around-the-World Odyssey of the Confederate Raider Shenandoah*, Hill and Wang/Farrar, Straus and Giroux, 2006.

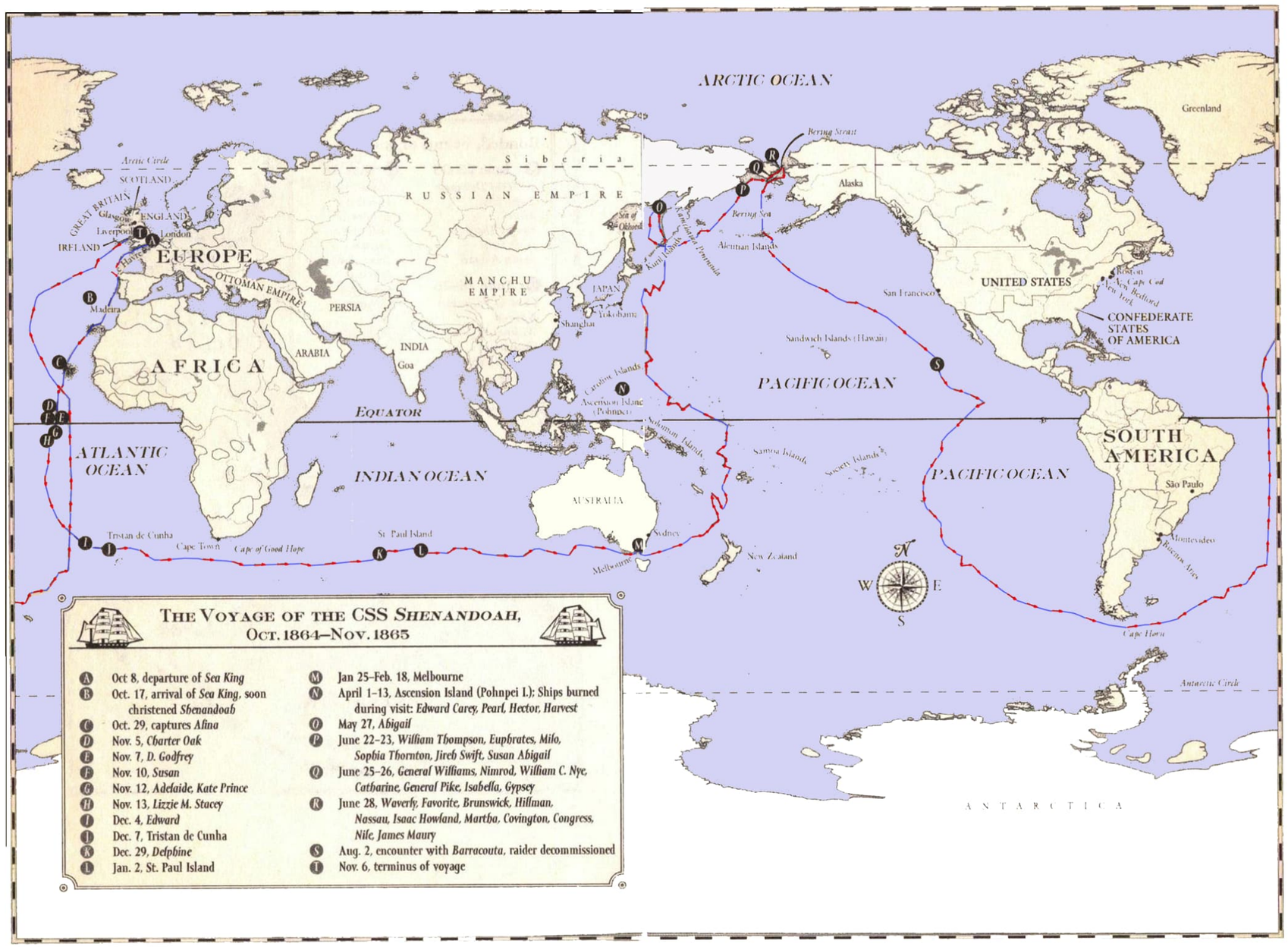
Schooler, Lynn, *The Last Shot: The Incredible Story of the CSS* Shenandoah *and the True Conclusion of the Civil War*, HarperCollins, 2005.

United States Government Printing Office, *Official Records of the Union and Confederate Navies in the War of the Rebellion*, United States Naval War Records Office, United States Office of Naval Records and Library, 1894

Raines. O.L *Model of Shenandoah* (scale model of ship). Museum of the Confederacy, Richmond, Virginia, 2004.

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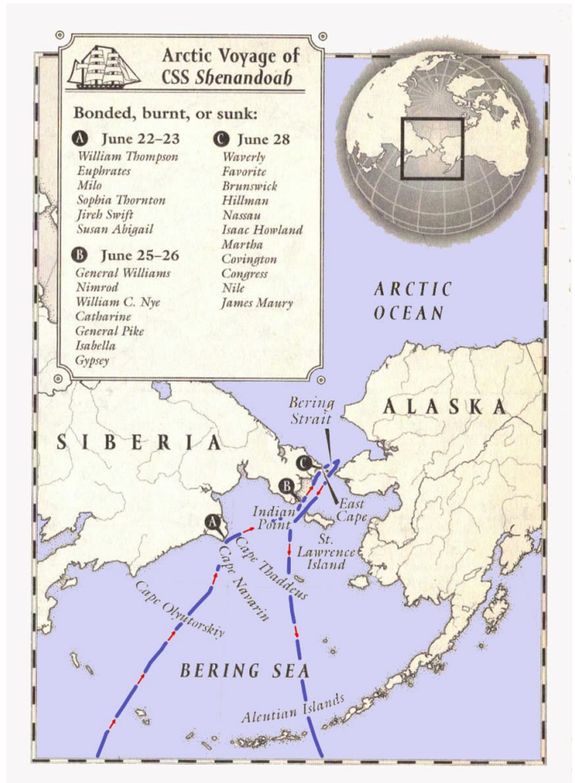
2.0 Historical Notes continued



THE VOYAGE OF THE CSS *SHENANDOAH*, OCT. 1864–NOV. 1865

- A Oct 8, departure of *Sea King*
- B Oct. 17, arrival of *Sea King*, soon christened *Shenandoah*
- C Oct. 29, captures *Afina*
- D Nov. 5, *Charter Oak*
- E Nov. 7, *D. Godfrey*
- F Nov. 10, *Susan*
- G Nov. 12, *Adelaide, Kate Prince*
- H Nov. 13, *Lizzie M. Stacey*
- I Dec. 4, *Edward*
- J Dec. 7, Tristan de Cunha
- K Dec. 29, *Delphine*
- L Jan. 2, St. Paul Island
- M Jan 25–Feb. 18, Melbourne
- N April 1–13, Ascension Island (Pohnpei I.); Ships burned during visit: *Edward Carey, Pearl, Hector, Harvest*
- O May 27, *Abigail*
- P June 22–23, *William Thompson, Euphrates, Milo, Sophia Thornton, Jireh Swift, Susan Abigail*
- Q June 25–26, *General Williams, Nimrod, William C. Nye, Catharine, General Pike, Isabella, Gypsey*
- R June 28, *Waverly, Favorite, Brunswick, Hillman, Nassau, Isaac Howland, Martha, Covington, Congress, Nile, James Maury*
- S Aug. 2, encounter with *Barracouta*, raider decommissioned
- T Nov. 6, terminus of voyage

Source: Chaffin, Tom , *Sea of Gray*



Source: Chaffin, Tom , *Sea of Gray*

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3.0 General Instructions

These instructions and kit are designed to make the construction of the model as trouble free as possible. Everyone who completes their model in accordance with these instructions and using the materials supplied will have good cause for pride and satisfaction in their achievement.

These written building instructions are to be followed to build your model.

1. It is essential the modeller study these instructions and associated photos and drawings thoroughly before commencing construction. While reading these instructions, familiarise yourself with the contents of the kit.

2. Parts are numbered in the approximate order of assembly - note there are some minor variations in this numerical order. Parts are identified as, for example P25 - means Part No 25.

3. Few, if any, parts can be simply glued in place without some preparation. Always dry fit parts and if necessary reshape the parts before final gluing.

4. Don't hurry. Take your time. If you are uncertain of anything take the time to study the instructions, the diagrams and photos and your kit parts. Most problems will be overcome with a little time spent pondering the issue at hand.

5. Check the contents of the kit against the Parts List. Note that some parts need to be made by the modeller from the stock of timber supplied in the kit.

THERE ARE A FEW POINTS TO NOTE WITH BUILDING THIS MODEL

1. There are many small parts - only remove parts from the laser cut boards as they are required - make sure to identify them and store carefully.

2. When sanding parts take particular care as some parts are small and fragile.

3. Use a range of sandpaper grades, sanding board and a grinding tool to remove laser burn marks where required.

4. Dry fit all parts before gluing in place with white wood glue.

5. Use glue sparingly - be sure to quickly remove any excess glue with a damp cotton bud.

6. Some frames, bulkheads and parts are marked with a laser score line - these are pre-fairing lines. On these parts you will need to chamfer the parts from the score line to the opposite face edge of the frame. Use a grinding tool, sanding board and sandpaper to shape the chamfer.

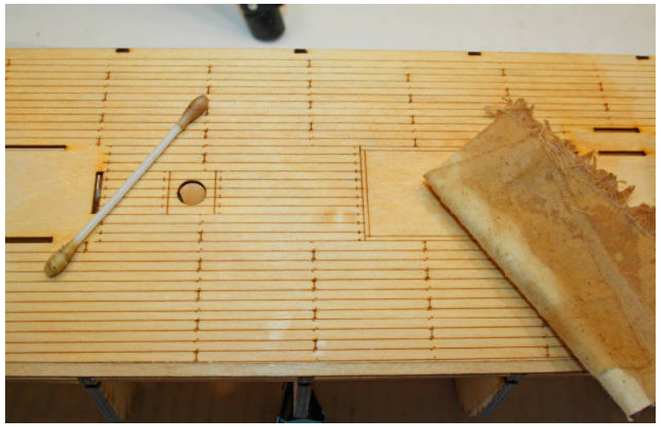
7. Many parts have a laser score mark to identifying and locate the part - these are noted in the instructions.

8. When removing parts from the boards use a chisel knife blade and a pointed blade knife to cut the tabs holding the parts in place on the laser cut boards.

9. Matt black and antique brown acrylic paints along with matt charcoal black acrylic spray paint are used - the modeller may choose to use other finishes as desired. To create the appearance of copper plating on the hull copper paint is used and copper patina is used if desired.

10. Coloured pencils are used to colour fine detail parts - these are noted in the instructions.

11. To create a weathered appearance on the decks use a cotton bud to apply Tung Oil and a cloth to then work the oil into the deck - apply additional coats to achieve the desired finish. The modeller may wish to use Shellac (French Polish) applied with a cloth to work into the deck. To protect the deck apply a few coats of a matt polyurethane spay - apply sparingly and allow to fully dry between coats.













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4.0 **Parts List** (Modeller's Shipyard reserves the right to make changes to the instructions, components &/or kit contents at any time without notice)

Part No	Description	Quantity	Location
1-15	Bulkheads	15	Boards 1 & 2
16A&B	False Keel	2	Board 1
17	Keel Joint Blocks	2	Board 2
18	Main Deck Supports BH 12	2	Board 2
19	Main Deck Supports BH 3	2	Board 1
20	Main Deck	1	Board 3
21	Forecastle Deck	1	Board 3
22	Quarter Deck	1	Board 3
23a-i	Main Deck Supports	18	Board 3
24	Stern Cabin Wall Supports	4	Board 4
25A	Plywood strips 0.8x2mm	13	Board 5
25B	Plywood strips 0.8x2mm	2	Board 5
26	Wardroom Cabin Doors	1	Board 5
27	Forecastle Cabin Doors/Windows	1	Board 4
28	Stern Top Q	1	Board 4
29	Stern Bottom R	1	Board 4
30	Stern BH16	1	Board 2
31A-C	Stern BH Blocks 16a,16b,16c	3	Board 2
32A-H	Stern Filler Blocks S to Z	8	Board 2
33	Stern Filler Block Za	2	Board 1
34a-c	Quarter Deck Supports	6	Board 3
35A/B	Bow Filler Blocks	4	Board 1
36a-b	Forecastle Deck Supports	4	Board 3
37	BH3 Extensions	4	Board 1
38	BH12 Extensions	4	Board 2
39	Quarter Deck Rail Base	1	Board 2
40	Forecastle Deck Rail Base	1	Board 2
41	Main Deck Edge Capping	2	Board 5
42	Wardroom Cabin windows	2	Board 5
43	Wardroom Cabin windows - trims	2	Board 5
44	Bulwarks	2	Board 3
45	Gunport Doors	8	Board 3
46	Plywood 2x3x200mm	1	Board 7
47A-C	Transom Windows	3	Board 6
48	Basswood 2x5x700mm	60	Timber Bundle
49	Basswood 2x5x500mm	30	Timber Bundle
50	Stem Post	1	Board 1
51	Stern Post	1	Board 1
52A/B	Keel	2	Board 1
53	Transom detail	1	Board 6
54	D/E Straps - main & fore masts	8	Board 6

Part No	Description	Quantity	Location
55A-C	Head trusses	3	Board 4
56	Head floor	1	Board 5
57	Head board	2	Board 5
58	Head board trim	2	Board 5
59	Trail board	2	Board 5
60	Trail board trim	2	Board 5
61	Sea King figurehead	1	Parts Card 3
62	Mizzen D/E straps template	1	Sheet 128
63	D/E Straps - mizzen masts	2	Board 6
64	Rudder post	1	Board 1
65	Rudder	1	Board 1
66	Propeller assembly	1	Parts Card 3
67	Rudder hinges	3	Parts Card 2
68	Nails - brass	Pkt	Parts Card 3
69	Display base	1	Board 9
70A-F	Model supports	12	Board 9
71	Name plate supports	2	Board 9
72	Decoration - Angel	2	Board 6
73	Decoration - Scrolls	2	Board 6
74	Fairleads	2	Board 4
75	Wire - brass - 0.5mm x 1m	4	Parts Card 2
76	Chain - black - 1.5mm x 330mm	1	Parts Card 3
77	Eye pins - brass 2x10mm	Pkt	Parts Card 3
78	Inner bulwark planking	6	Board 5
79	Foremast channels	2	Board 3
80	Foremast channels base	2	Board 3
81	Main mast channels	2	Board 3
82	Main mast channels base	2	Board 3
83	Inner bulwark framing	3	Board 5
84	WR skylight frame - ends	2	Board 4
85	WR skylight frame - frame	1	Board 4
86	WR skylight central	1	Board 4
87	WR side windows	2	Board 4
88	WR entrance back frame	1	Board 4
89	WR entrance frame	1	Board 4
90	WR entrance windows	2	Board 4
91	WR entrance roof	1	Board 6
92	WR skylights	2	Board 6
93	WR skylight central capping	1	Board 6
94	CW side walls	2	Board 4
95	CW rear wall	1	Board 4

Part No	Description	Quantity	Location
96	CW entrance wall	1	Board 4
97	CW roof	1	Board 5
98	CW hatch runners	2	Board 5
99	CW hatch	1	Board 5
100A-C	ERS frames	3	Board 4
100D	ERS frame	1	Board 2
100E	ERS frame	1	Board 4
101	ERS block	1	Board 2
102	ERS side walls	2	Board 4
103	ERS stern wall	1	Board 4
104	ERS fore wall	1	Board 4
105	ERS roof	1	Board 5
106	ERS side skylights	2	Board 5
107	ERS fore skylight	1	Board 5
108	Deadeye 5mm	136	Parts Card 2
109	Deadeye 3mm	36	Parts Card 2
110	Stack rings - large	12	Board 2
111	Stack rings - small	2	Board 5
112	Stack base walls - sides	2	Board 4
113	Stack base wall - rear	1	Board 4
114	Lower platform support	1	Board 4
115	Stack base wall - front	1	Board 4
116	Stack base wall - lower	1	Board 4
117	Stack upper side walls	2	Board 4
118	Stack Floor angle	2	Board 4
119A-B	Stack upper front & rear walls	2	Board 4
120	Stack floor	1	Board 4
121	Stack roof	1	Board 5
122	Lower platform	1	Board 5
123	Stack cover	1	Board 5
124	Tube - copper - 2mm dia x 50mm	1	Parts Card 2
125	DH structure - rear	2	Board 4
126	DH structure - front	2	Board 4
127	Deck House side walls	2	Board 4
128	Deck House front wall	1	Board 4
129	Deck House rear wall	1	Board 4
130	Deck House roof	1	Board 4

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4.0 **Parts List** (Modeller's Shipyard reserves the right to make changes to the instructions, components &/or kit contents at any time without notice)

Part No	Description	Quantity	Location
131	Wall supports	6	Board 2
132A-D	Roof edging	4	Board 7
133	Rod supports	4	Board 4
134	Rod - brass 1mm x 250mm	3	Timber Bundle
135	Port Holes 3mm	20	Parts Card 2
136	Port Holes 2mm	16	Parts Card 2
137A	Main hatch	1	Board 3
137B	Main hatch coaming	1	Board 3
138A	Fore hatch	1	Board 3
138B	Fore hatch coaming	1	Board 3
139A	PH side wall - frames	2	Board 6
139B	PH side wall - grills	2	Board 6
140A	PH end wall - frames	2	Board 6
140B	PH end wall - grills	2	Board 6
141	PH floor	1	Board 4
142	PH roof	1	Board 5
143A	WH base frame sides	2	Board 4
143B	WH base frame - cross supports	3	Board 4
144A-B	WH base blocks	3	Board 2
145A	WH starboard side wall	1	Board 4
145B	WH port side wall	1	Board 4
146A	WH rear wall	1	Board 4
146B	WH front wall	1	Board 4
147	WH corner walls	4	Board 6
148	WH roof	1	Board 6
149	Forecastle skylight - sides	2	Board 4
150	Forecastle skylight - ends	2	Board 4
151	Forecastle skylight roof	1	Board 4
152	CH Blocks	2	Board 7
153	CH Frames	4	Board 5
154	CH Floor	1	Board 5
155	CH Roof	1	Board 5
156	CH top	1	Board 5
157	Parrals	Pkt	Parts Card 2
158	Capstan base	1	Board 4
159	Capstan head	1	Board 4
160	Capstan whelps	8	Board 5
161	Capstan cap	1	Board 5
162	WL Frame block	1	Board 7
163	WL Frame spacer	2	Board 3
164	Barrel A	1	Board 2

Part No	Description	Quantity	Location
165	Barrel B	2	Board 7
166	Barrel face	1	Board 3
167	WL spacer covers	2	Board 5
168	WL barrel spacer	1	Board 3
169	WL handle grips	2	Board 7
170	WL Key	1	Board 7
171	Winch cheeks	4	Board 4
172	Gear - A	2	Board 4
173	Gear - B	2	Board 4
174A	Drum A	2	Board 7
174B	Drum A flange B	4	Board 5
174C	Drum A flange C	2	Board 5
174D	Drum A flange D	2	Board 5
175A	Drum B	6	Board 7
175B	Drum B flange B	6	Board 5
175C	Drum B flange C	6	Board 5
176	Carriage sides	8	Board 8
177	Carriage waist - front	4	Board 8
178	Carriage waist - rear	4	Board 8
179	Carriage base	4	Board 8
180	Carriage wheels	16	Board 8
181	Cannon barrels	4	Parts Card 3
182	Cat Heads	2	Board 1
183	Cat Head template	1	Board 1
185	Fore step strings	4	Board 5
186	Step treads	28	Board 5
187	Aft step strings	4	Board 5
188	Forecastle stanchion base	1	Board 5
189	Quarter deck stanchion base	1	Board 5
190	FC Balustrade base	1	Board 5
191	FC Balustrade tops	2	Board 5
192	FC Balustrade cap	2	Board 5
193A	FC Balusters	4	Board 7
193B	FC Balustrade posts - hand rail	2	Board 7
194	Not Used		
195A	Belfry	1	Board 7
195B	Belfry extensions	2	Board 5
196	Bell	1	Parts Card 3
197	QD Balustrade base	1	Board 5
198	QD Balustrade top	1	Board 5
199	QD Balustrade cap	1	Board 5

Part No	Description	Quantity	Location
200A	QD Balusters	9	Board 7
200B	QD Balustrade posts - hand rail	2	Board 7
201	Hand rail jig	1	Board 4
202	Hand rail post feet	4	Board 5
203	Hand rail posts	4	Board 7
204	Mast plate - main	1	Board 5
205	Mast plate - fore	1	Board 5
206	Mast plate - mizzen	1	Board 5
207	Boat racks	2	Board 7
208	Rack caps	2	Board 5
209	Rack bases	4	Board 7
210	Ventilators - 15mm	2	Parts Card 3
211	Ventilators - 20mm	3	Parts Card 3
212	Binnacles	2	Parts Card 3
213	Bollard 4mm	4	Parts Card 3
214A-B	Pump	1	Parts Card 3
215	Pin rail posts	15	Board 7
216	Pin rail - mizzen mast	1	Board 4
217A	Pin rail - main mast	1	Board 4
217B	Pin rail - main mast	2	Board 4
217C	Pin rail - main mast	1	Board 4
218	Pin rail - foremast	2	Board 4
219	Forecastle fife rail posts	2	Board 7
220	Forecastle fife rail	1	Board 5
221	Stanchions - brass	65	Parts Card 3
222A	Bridge rail top - long	1	Board 5
222B	Bridge rail top - short	2	Board 5
222C	Bridge rail cap - long	1	Board 5
222D	Bridge rail cap - short	2	Board 5
223	Forecastle rail top	1	Board 5
224	Quarter deck rail top	1	Board 5
225	Anchors	2	Parts Card 3
226	Chain 4mm x 200mm	1	Parts Card 3
227	Not Used		
228	Bollard 6mm	4	Parts Card 3
229	Boat A layer 1	2	Board 7
230	Boat A layer 2	2	Board 7

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SHEET 6

4.0 **Parts List** (Modeller's Shipyard reserves the right to make changes to the instructions, components &/or kit contents at any time without notice)

Part No	Description	Quantity	Location
231	Boat A layer 3	2	Board 7
232	Boat A keel	2	Board 4
233	Boat A seat capping	2	Board 4
234	Boat B layer 1	4	Board 7
235	Boat B layer 2	4	Board 7
236	Boat B layer 3	4	Board 7
237	Boat B keel	4	Board 4
238	Boat B seat capping	4	Board 4
239	Calico 80 x 150 mm	1	Parts Card 3
240	Cleats - 7mm	12	Parts Card 2
241	Bulwark Cap Rails	2	Board 3
242	Wire - brass - 1mm x 330mm	1	Parts Card 2
243	Not Used		
244	Dowel 3mm dia x 330mm	4	Timber Bundle
245	Dowel 5mm dia x 250mm	5	Timber Bundle
246	Dowel 8mm dia x 330mm	3	Timber Bundle
247A	FM mast top - plate A	1	Board 5
247B	FM mast top - plate B	1	Board 5
247C	FM mast top capping	1	Board 5
248	FM cheeks	2	Board 4
249	FM trestle trees	2	Board 4
250A	FM cross tree	1	Board 4
250B	FM cross tree	1	Board 4
250C	FM cross tree	1	Board 4
251A	MM mast top - plate A	1	Board 5
251B	MM mast top - plate B	1	Board 5
251C	MM mast top capping	1	Board 5
252	MM cheeks	2	Board 4
253	MM trestle trees	2	Board 4
254A	MM cross trees	1	Board 4
254B	MM cross tree	1	Board 4
254C	MM cross tree	1	Board 4
255A	MZ mast top - plate A	1	Board 5
255B	MZ mast top - plate B	1	Board 5
255C	MZ mast top capping	1	Board 5
256	MZ cheeks	2	Board 4
257	MZ trestle trees	2	Board 4
258A	MZ cross trees	1	Board 4
258B	MZ cross tree	1	Board 4
258C	MZ cross tree	1	Board 4
259	FTM trestle trees	2	Board 4

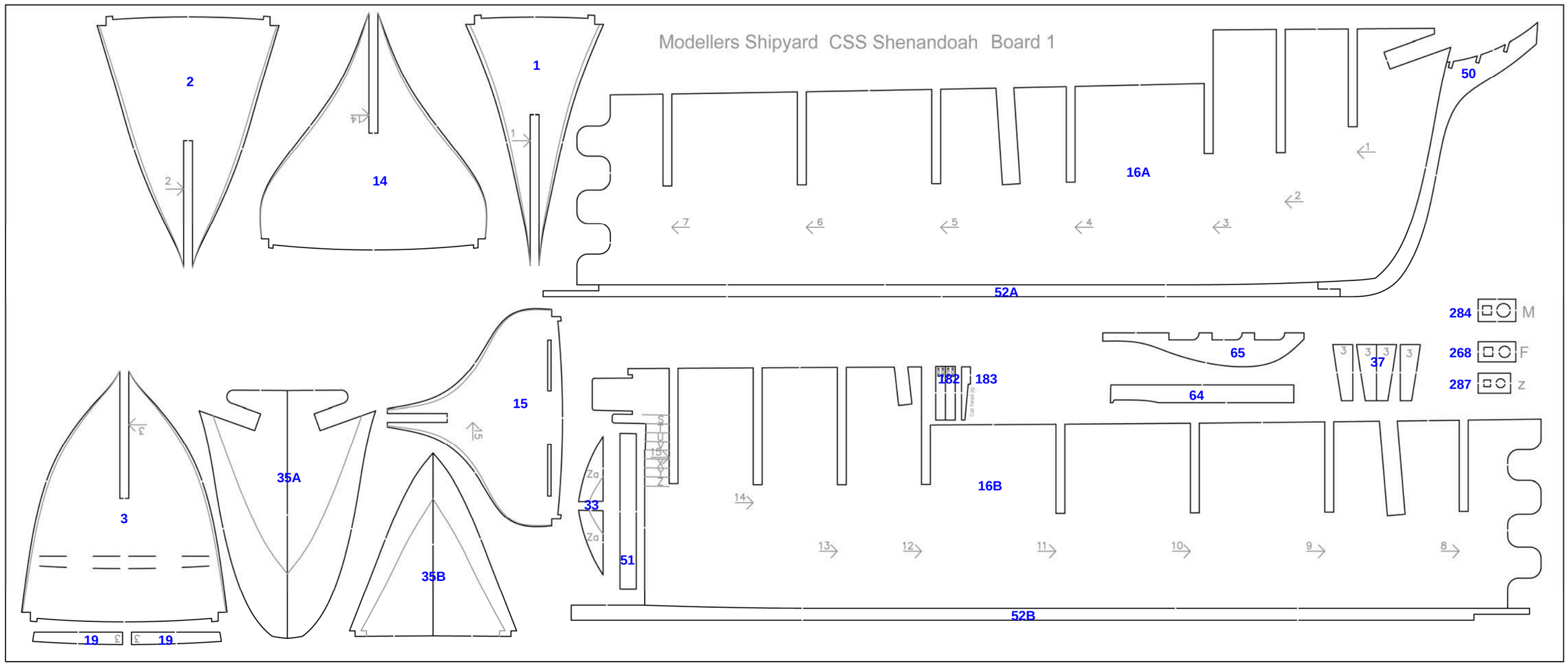
Part No	Description	Quantity	Location
260	FTM cross trees	3	Board 4
261	FTM cheeks	2	Board 4
262	MTM trestle trees	2	Board 4
263	MTM cross trees	3	Board 4
264	Not Used		
265	MZTM trestle trees	2	Board 4
266	MZTM cross trees	3	Board 4
267	Not Used		
268	FM mast cap	1	Board 1
269	FM topmast cap	1	Board 7
270	Stay pulley wheel	2	Board 4
271	Stay bracket	2	Board 4
272	Block B1 4mm 1 hole	110	Parts Card 2
273	Block B2 5mm 1 hole	34	Parts Card 2
274	Block B3 5mm 2 hole	10	Parts Card 2
275	Block B4 7mm 3 hole	5	Parts Card 2
276	Not Used		
277	Cord C2 0.5mm black	1	Parts Card 1
278	Cord C3 0.75mm black	1	Parts Card 1
279	Cord C4 1.0mm black	1	Parts Card 1
280	Cord C5 0.25mm grey	1	Parts Card 1
281	Cord C6 0.5mm grey	3	Parts Card 1
282	Dowel 4mm dia x 330mm	3	Timber Bundle
283	Dowel 6mm dia x 330mm	4	Timber Bundle
284	MM mast cap	1	Board 1
285	MM topmast cap	1	Board 7
286	MTM cheeks	2	Board 4
287	MZ mast cap	1	Board 1
288	MZ topmast cap	1	Board 7
289	MZ topmast cheeks	2	Board 4
290	Boom rest	1	Board 4
291	Boom rest supports	3	Board 4
292	Bowsprit cap A	1	Board 2
293	Bowsprit cap B	1	Board 2
294	Mizzen boom yoke	1	Board 4
295	Mizzen gaff yoke	1	Board 4
296	Yard truss A	3	Board 4
297	Yard truss B	3	Board 4
298	Yard truss C	3	Board 4
299	Eye pins 3.5 x 20mm	42	Parts Card 3
300	Slip blocks	2	Board 3

Part No	Description	Quantity	Location
301	Shroud batten	1	Board 5
302	Main gaff yoke	1	Board 4
303	Rings - brass 3mm	Pkt	Parts Card 3
304	Belaying Pins - wood - 8mm	44	Parts Card 2
305	Chain - black 3mm x 200mm	1	Parts Card 3
306	Davits	4 pairs	Parts Card 2
307	Davit bases	16	Board 7
308	Dowel 2mm dia x 400mm	1	Timber Bundle
309	CSS Shenandoah battle ensign	1	Sheet 128
310	Name Plate - Shenandoah	1	Board 3
311	Name Plate - Sea King	1	Board 3

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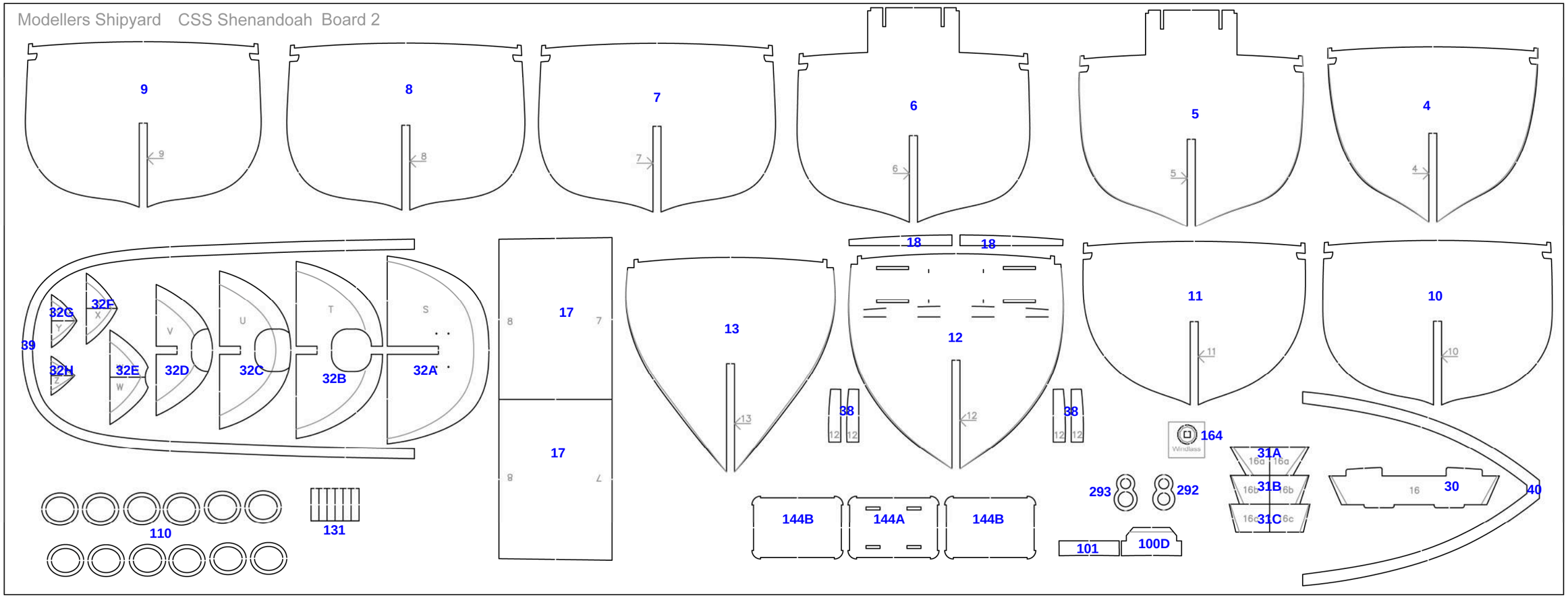
5.0 Laser Cut Boards



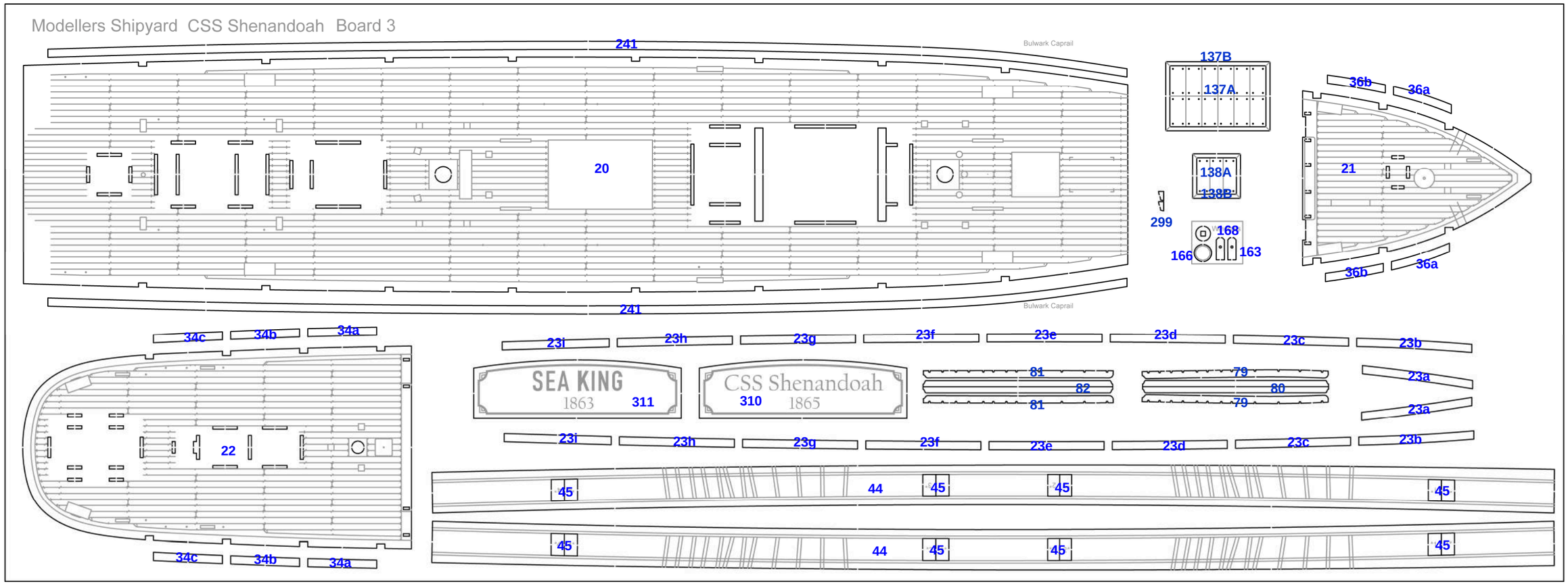
CSS SHENANDOAH
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SHEET 8

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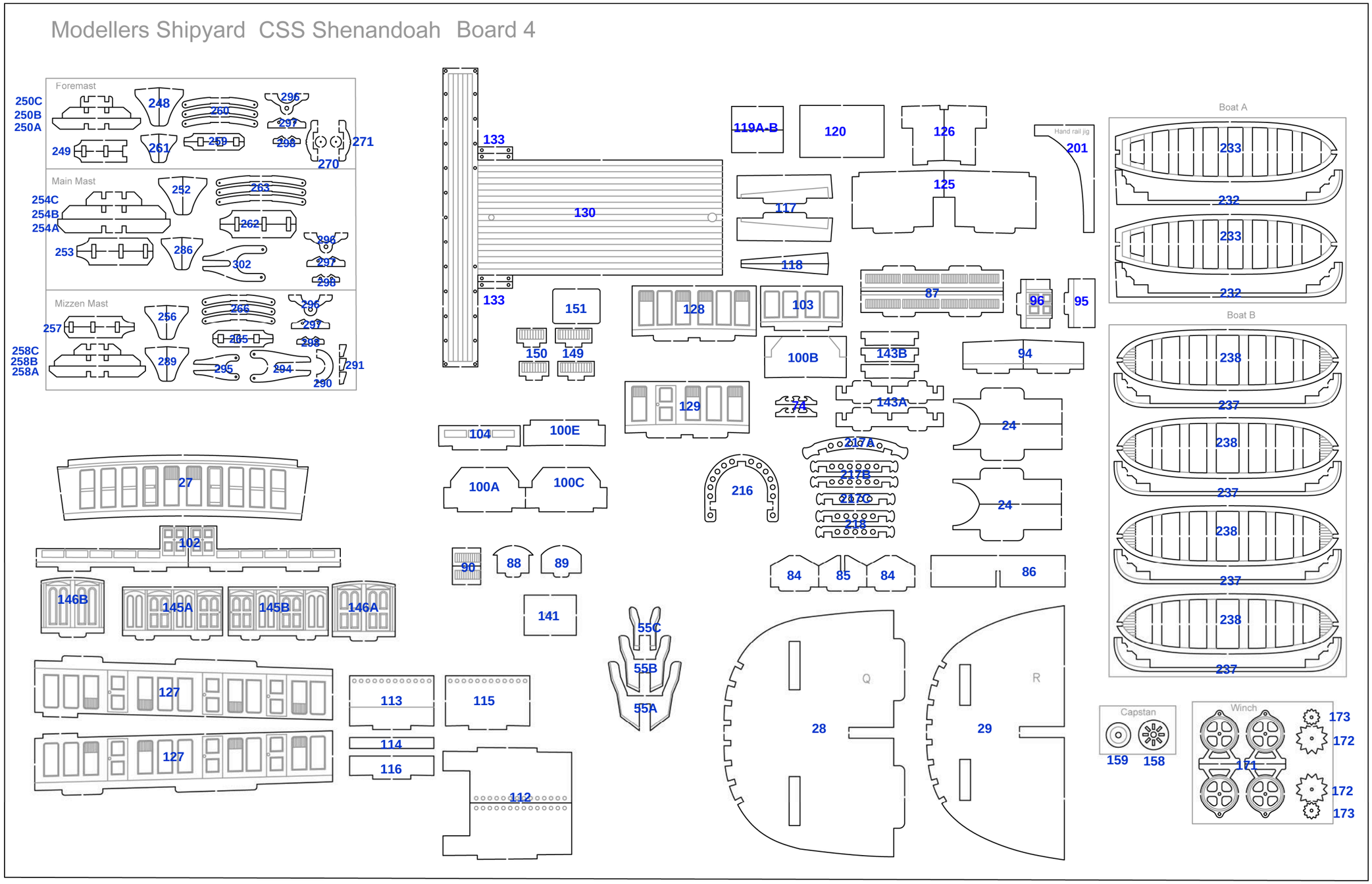
5.0 Laser Cut Boards continued



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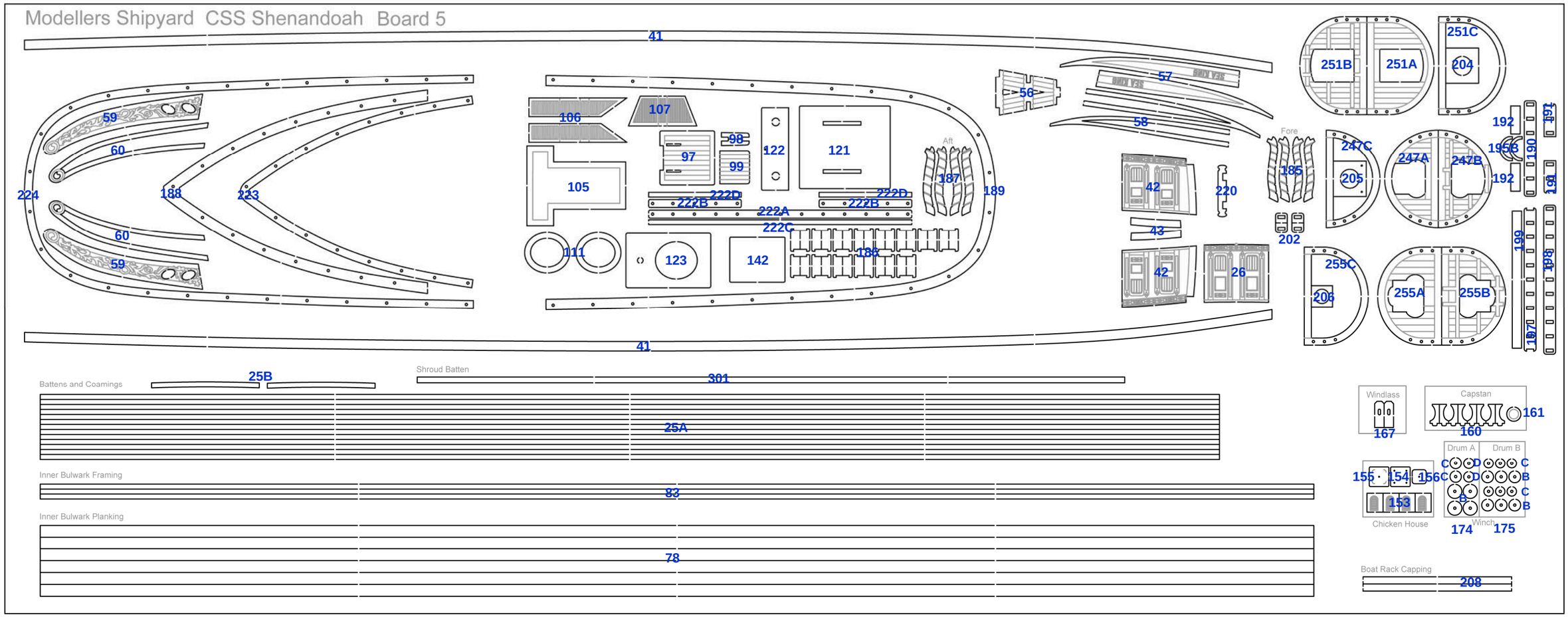
CSS SHENANDOAH
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SHEET 10



CSS SHENANDOAH
1864
SHEET 11

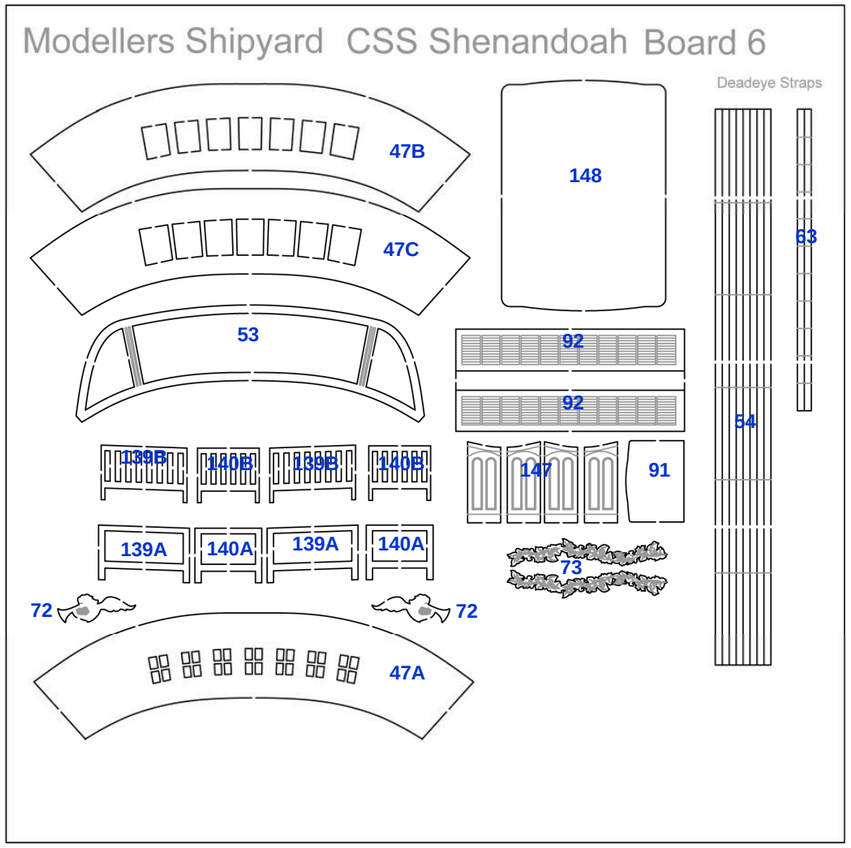
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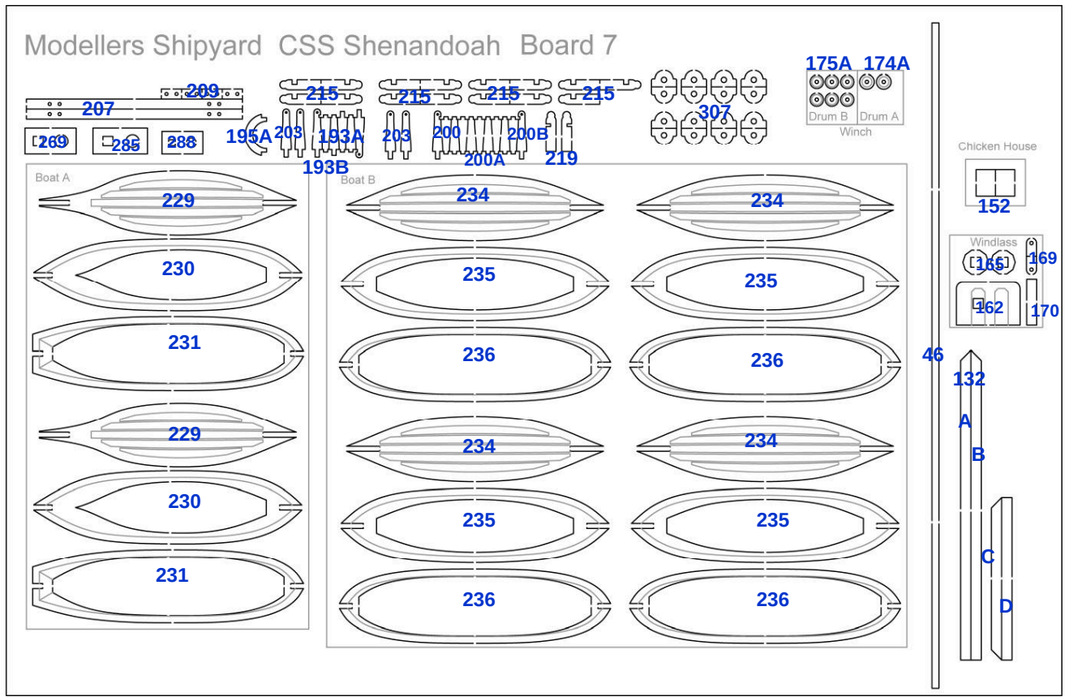
5.0 Laser Cut Boards continued

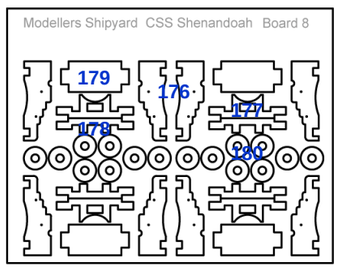


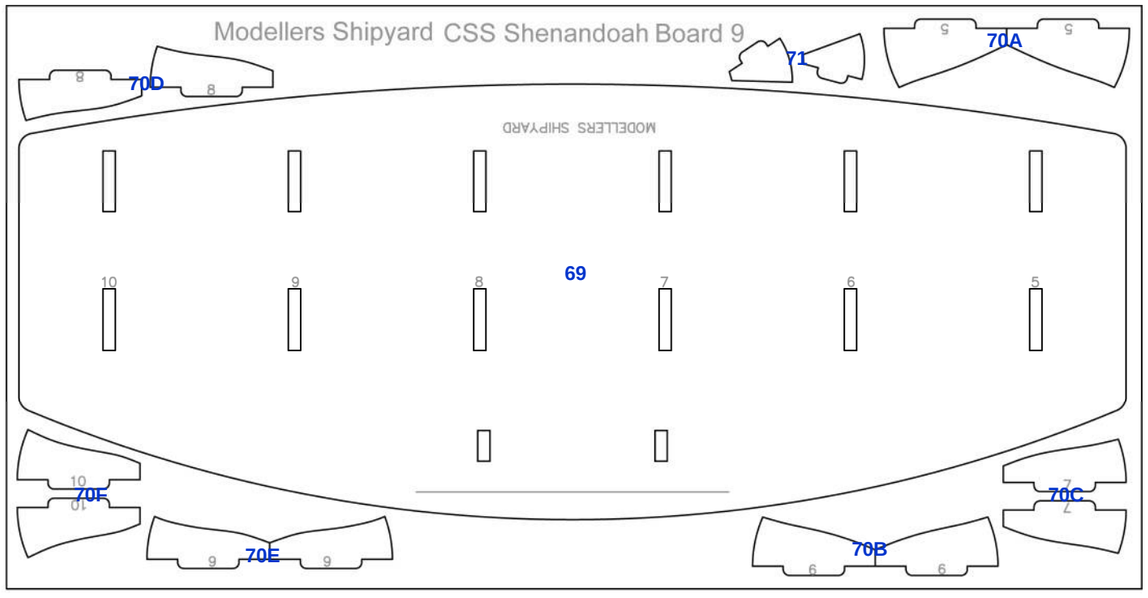
CSS SHENANDOAH
1864
SHEET 12

5.0 Laser Cut Boards continued









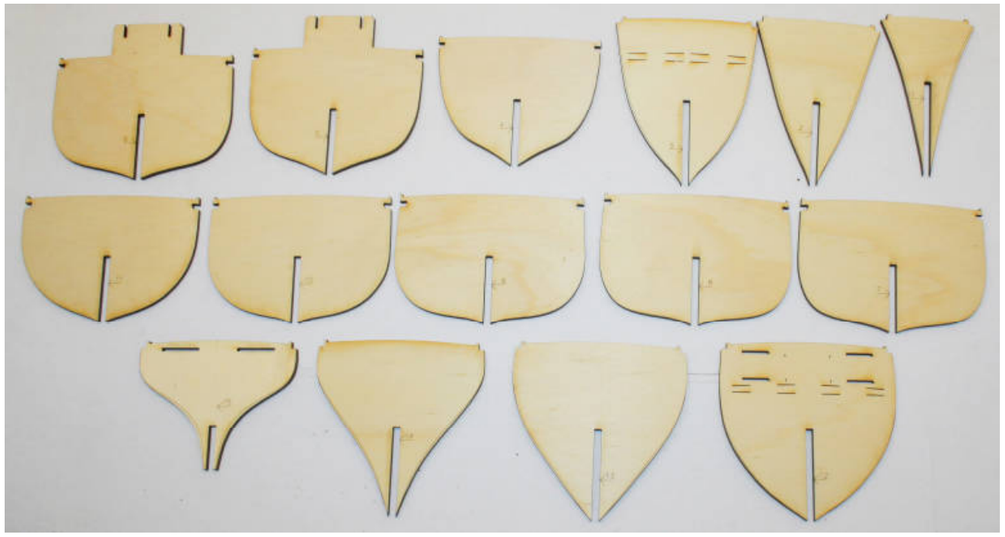
CSS SHENANDOAH
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SHEET 13

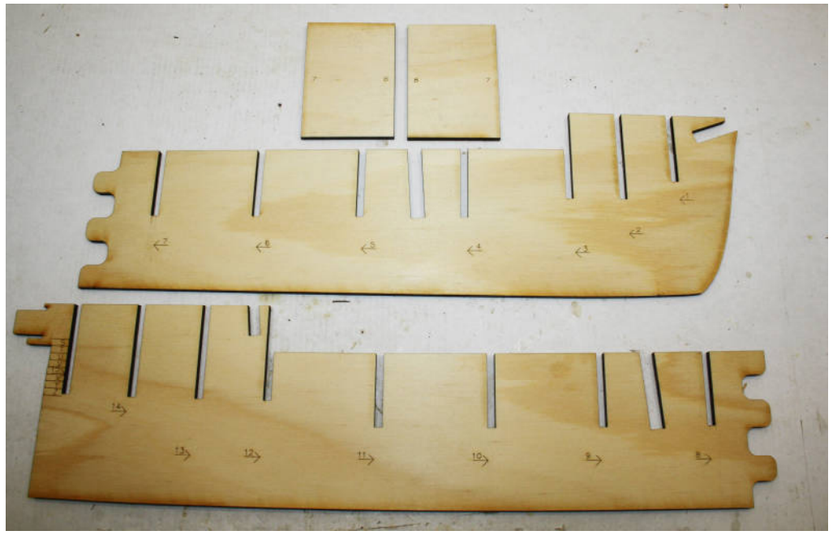
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6.0 Hull Assembly

6.1 Keel & Bulkheads

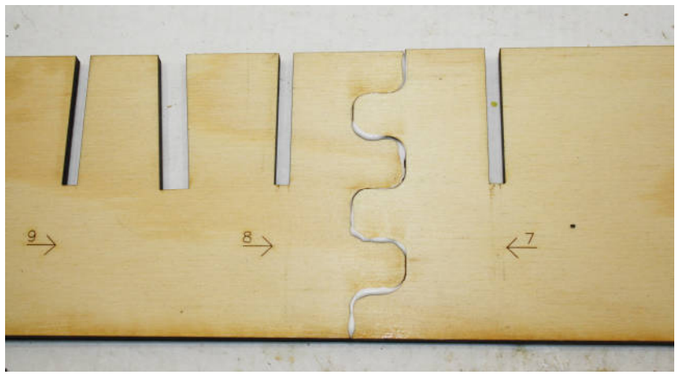
Identify the bulkheads P1 - P15. Note each bulkhead is identified by laser score mark 1 to 15 and has an arrow mark. Identify the false keel P16A & 16B and the joint blocks P17 - note the joint blocks are laser score marked with 7 & 8. Note the keel slots are laser score marked with numbers 1 to 15 - these correspond with the associated bulkhead.

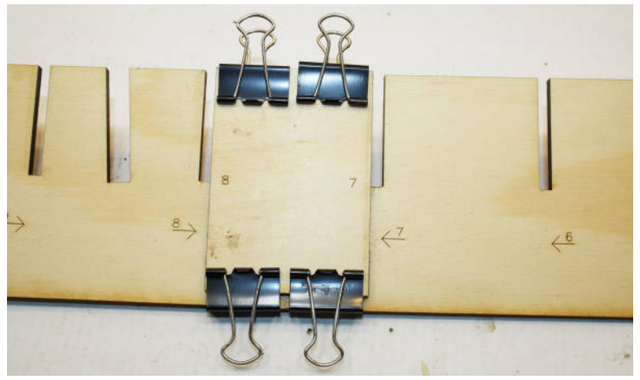




6.2 Hull Assembly

Lay the keels on a flat surface - apply white wood glue to the joint as shown. Apply glue to one side of a joint block and clamp in place between keel slots 7 & 8 as shown. Make sure to align the top on the block with the top of the keel. **Make sure to remove any excess glue from keel slots 7 & 8.** Once glue has set repeat for the joint block on the other side of the keel. Set aside to allow glue to fully set.



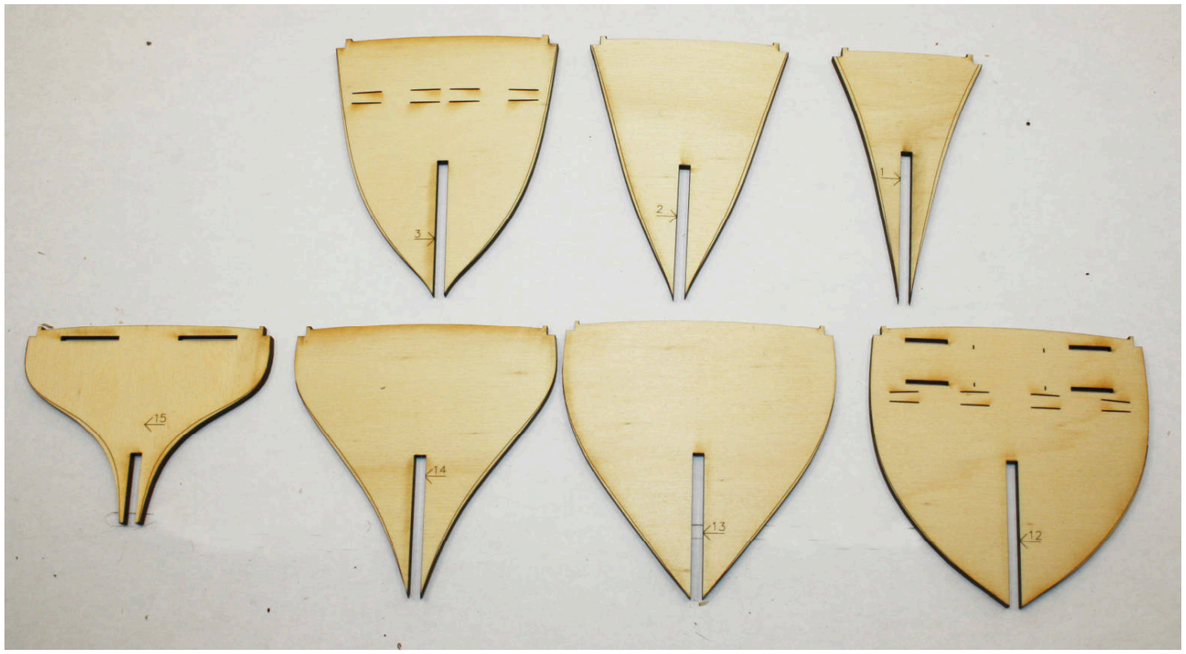


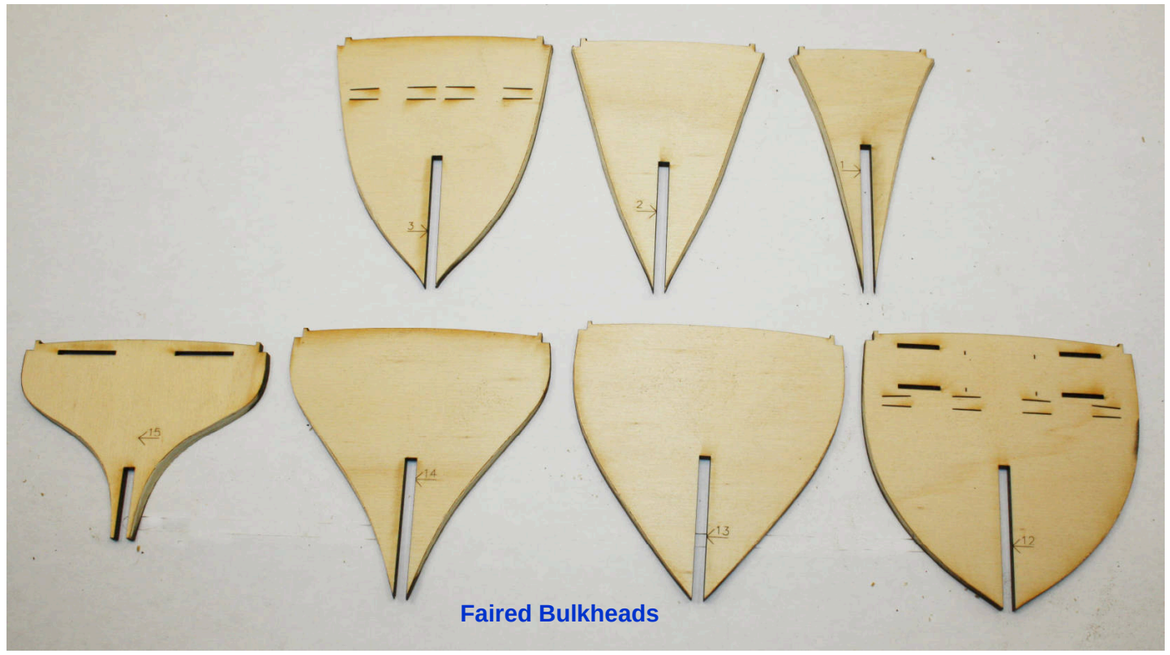
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6.3 Bulkhead Fairing

Fairing the bulkheads is a process to shape the edge of the fore and aft bulkheads so that when planks are placed along the hull the planks will rest on the full face of all the bulkheads. On this model BHs 1, 2, 3, 12, 13, 14 & 15 will need to be faired. **A unique feature of the design of this model is that the bulkheads are faired before being glued in place in the keel slots.**

You will notice these bulkheads have a score line along the outer edge. To fair the bulkhead use a grinding tool to create a chamfer from the score line to the rear edge of the bulkhead - take your time - notice the angle of the chamfer will change as you move along the bulkhead edge. Use a sanding block to finish the process to create a smooth edge on each bulkhead.

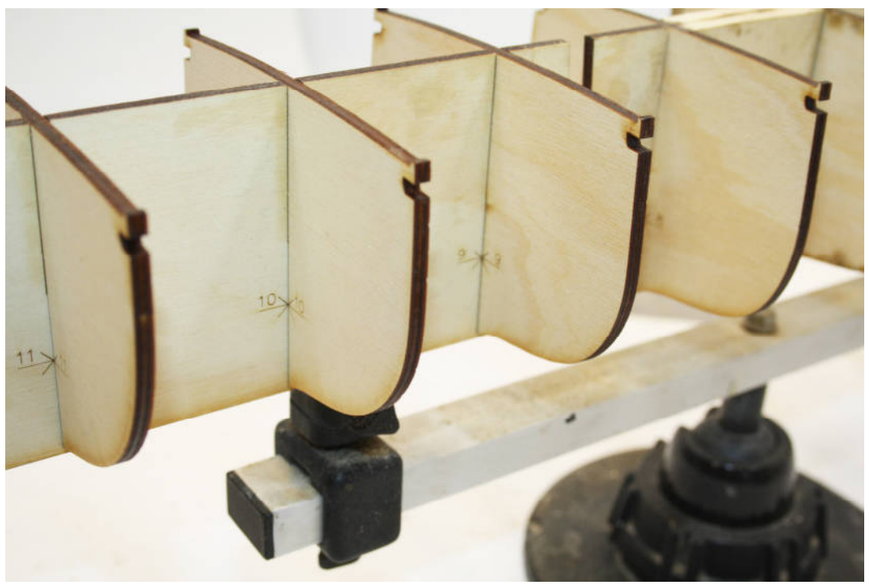


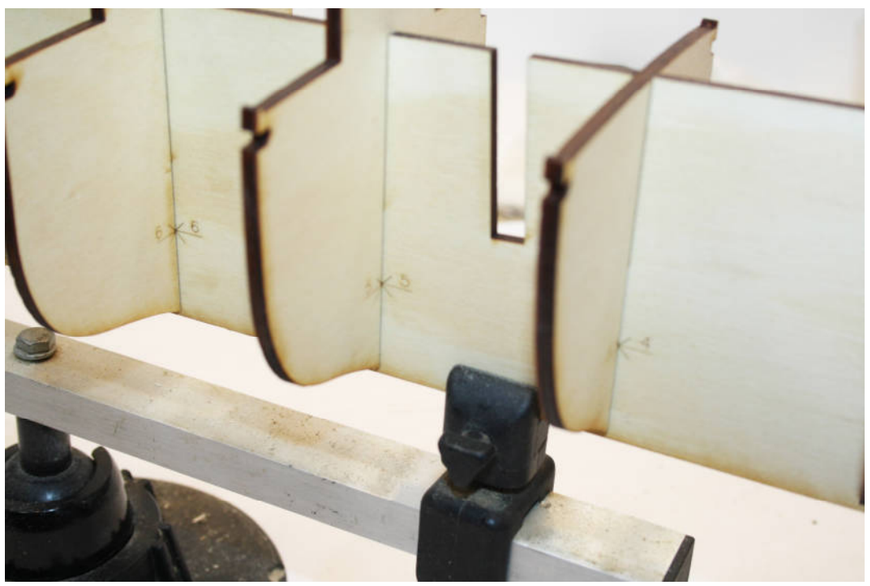


Faired Bulkheads

6.4 Fitting the Bulkheads

Trial fit the numbered bulkhead into the corresponding numbered keel slot - **do not glue them in place** - the bulkheads will fit firmly into their respective slot - **do not force the bulkhead into the slot** - if needed use a small flat file to marginally adjust the keel slot width - check regularly for a firm fit. Note when the bulkhead arrow aligns with the keel arrow the bulkhead is correctly placed and fitted. Note also the front face of bulkheads 1 to 7 face the bow while bulkheads 8 to 15 face the stern.





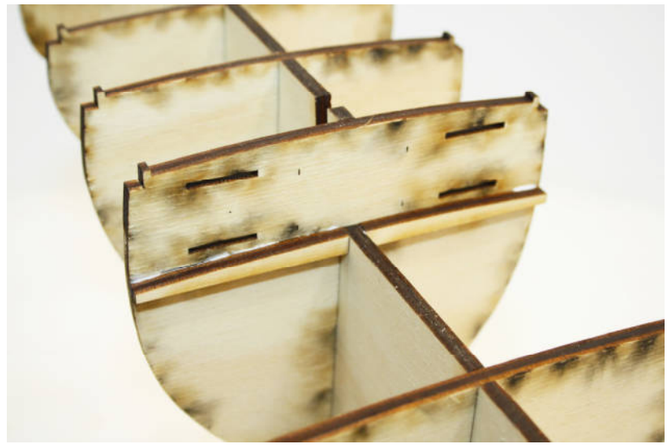
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6.5 Main Deck Supports

Indentify the main deck supports P18 and P19. Glue the deck supports in place within the cut lines on the rear face of the bulkheads as shown. Remove excess glue.

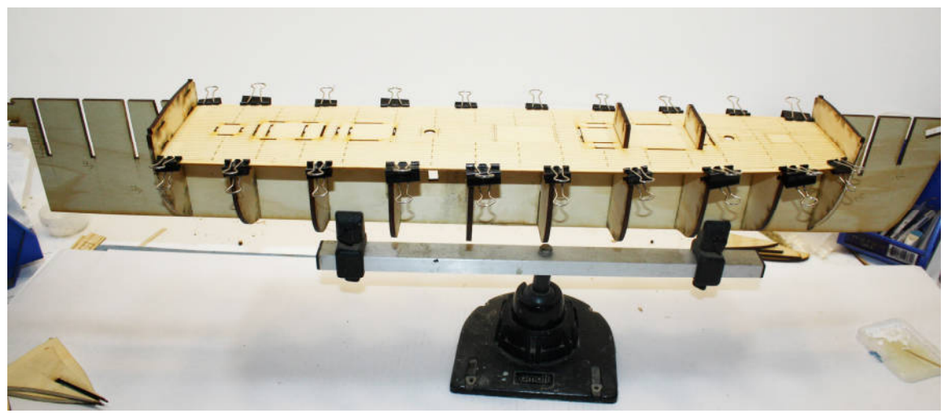


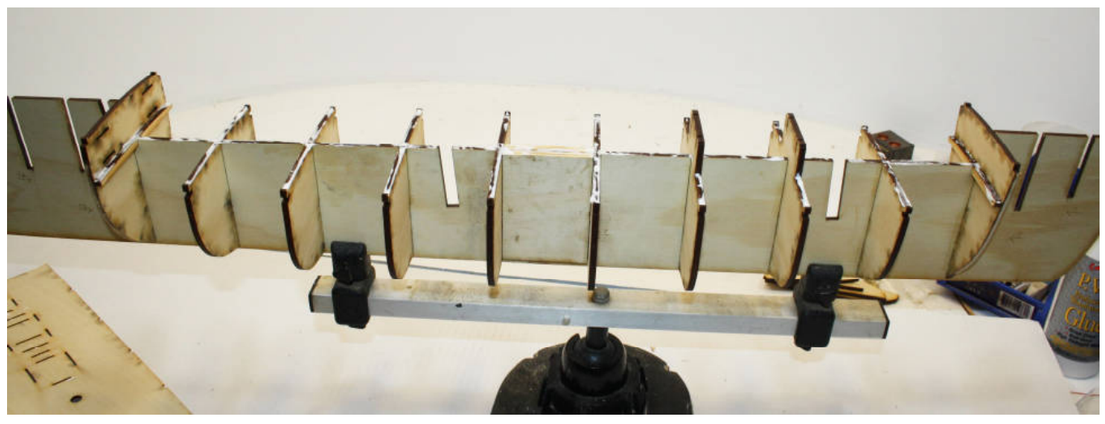


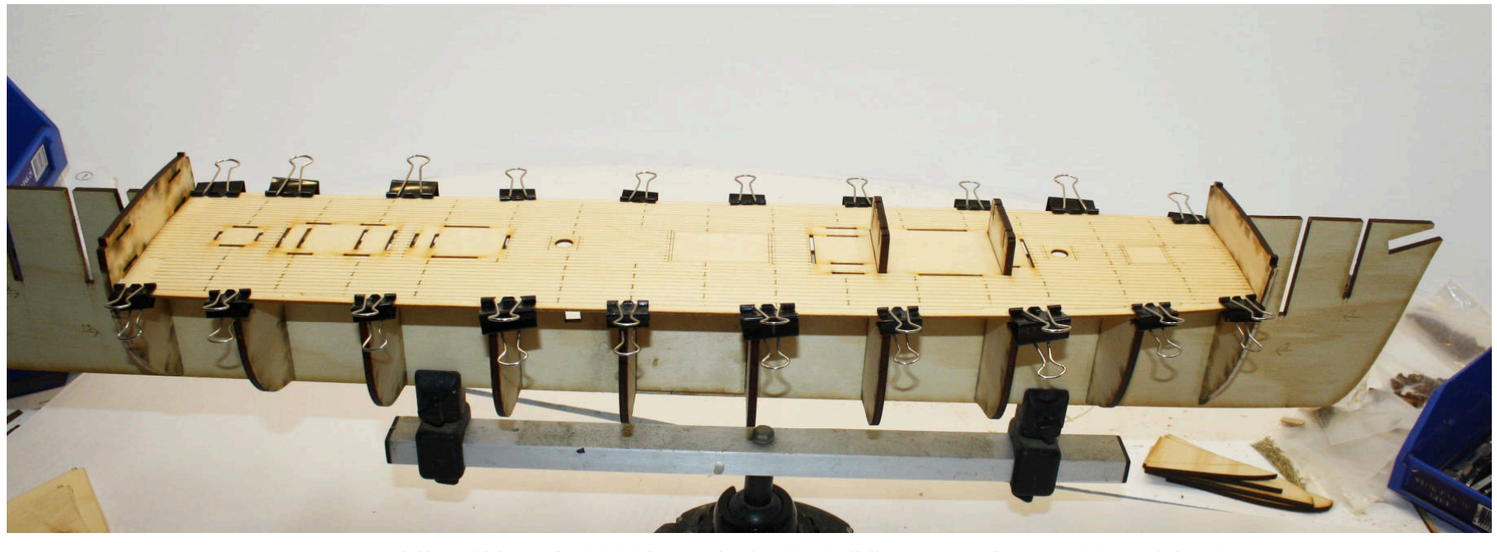


6.6 Main Deck

Identify the main deck P20. Remove bulkheads 1, 2, 13, 14 & 15. Trial fit the deck in place - clamp as shown - **do not glue.** If necessary marginally adjust the deck slots for a snug fit. Once satisfied remove deck and bulkheads 3 to 12. Glue the bulkheads 3 to 12 in place - apply glue to the contact points. Remove any excess glue. Apply glue to the top of the bulkheads and keel as shown. Refit the deck and clamp as shown. Set aside for glue to set.



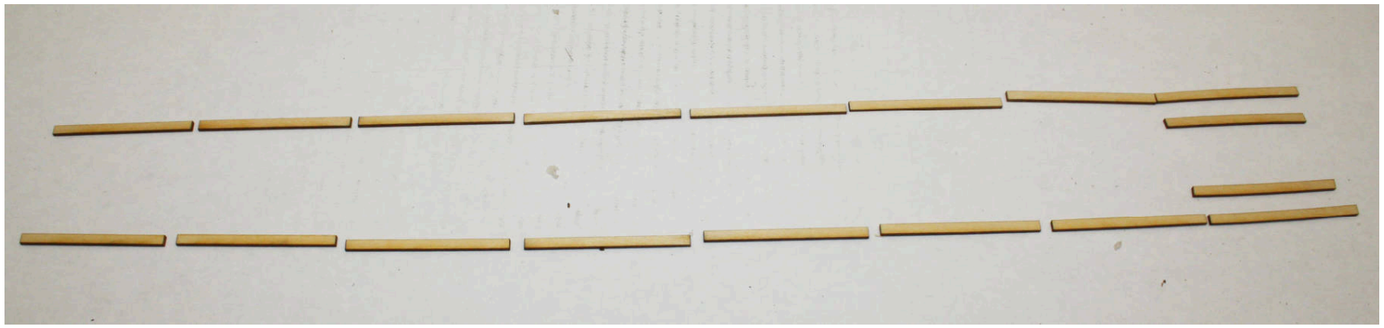


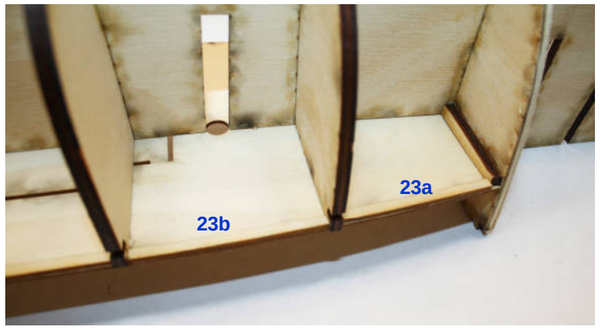


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6.7 Under Deck Supports - Main Deck

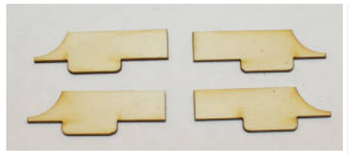
Identify the deck supports P23a-i - number each support before removing from the board. Turn the assembled hull over and glue the parts in place starting with 23a glued between BHs 3 and 4 as shown. Make sure the support is flush with the underside edge of the deck as shown. Repeat the process along the underside on the deck towards the stern. Repeat for the other side of the deck.





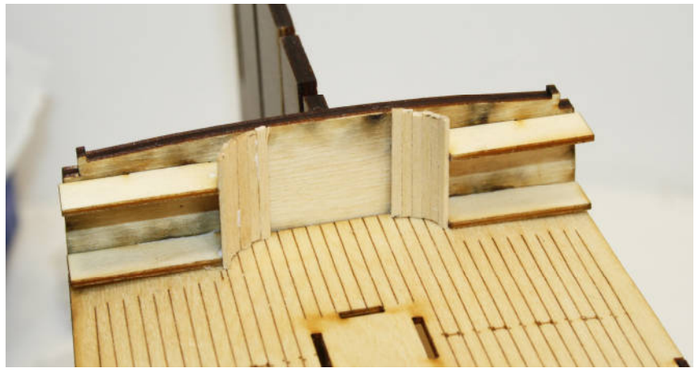
6.8 Wardroom Cabin Walls

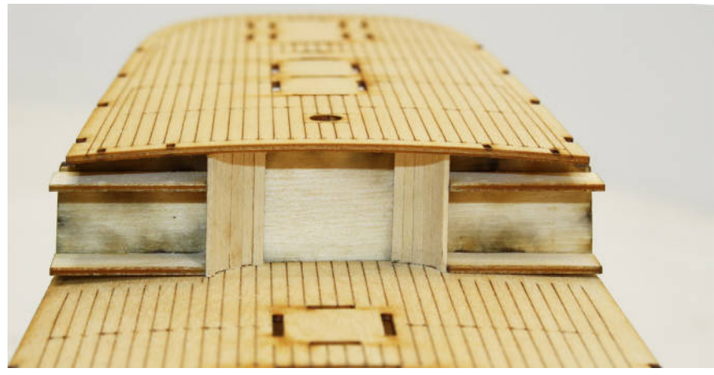
Identify the wardroom cabin wall supports P24 - trial fit into the slots in BH12. Once satisfied glue in place as shown. Identify the batten strips P25A - cut 12 lengths at 25mm and glue in place as shown. Make sure that each strip is vertical. Identify the quarter deck P22 - fit the deck in place. Use a grinding tool to fractionally adjust the plywood lengths to allow the deck to fit flat across curvature of BH 12. Identify the stern cabin doors P26. Lightly sand the face - use a blue pencil to colour the windows. Glue in place as shown.













6.9 Forecastle Cabin Doors and Windows

Identify the fore castle cabin doors and windows P27. Lightly sand the face - use a blue pencil to colour the windows. Glue in place on BH3 as shown.



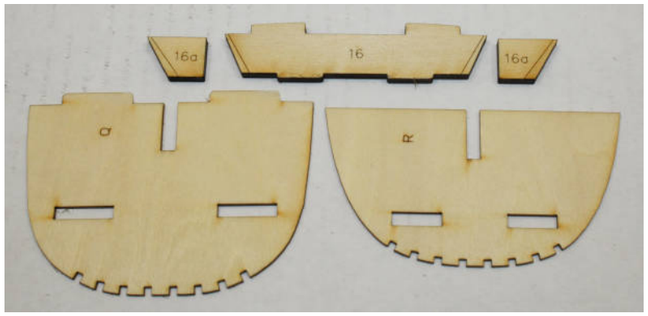


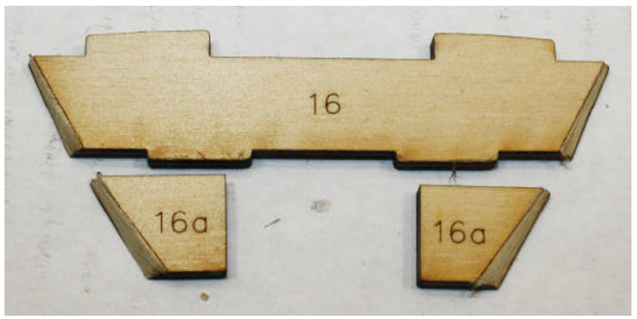
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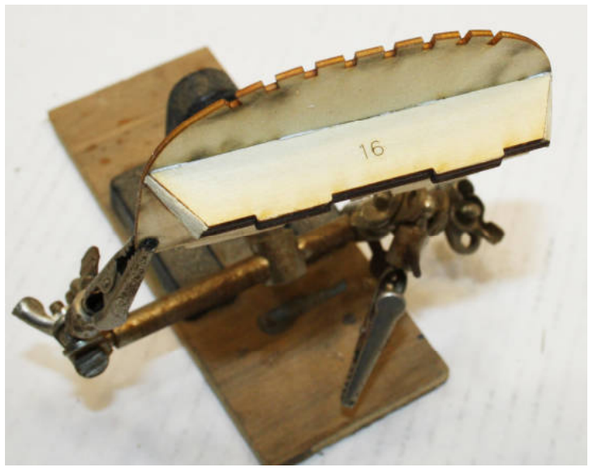
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6.10 Stern Assembly

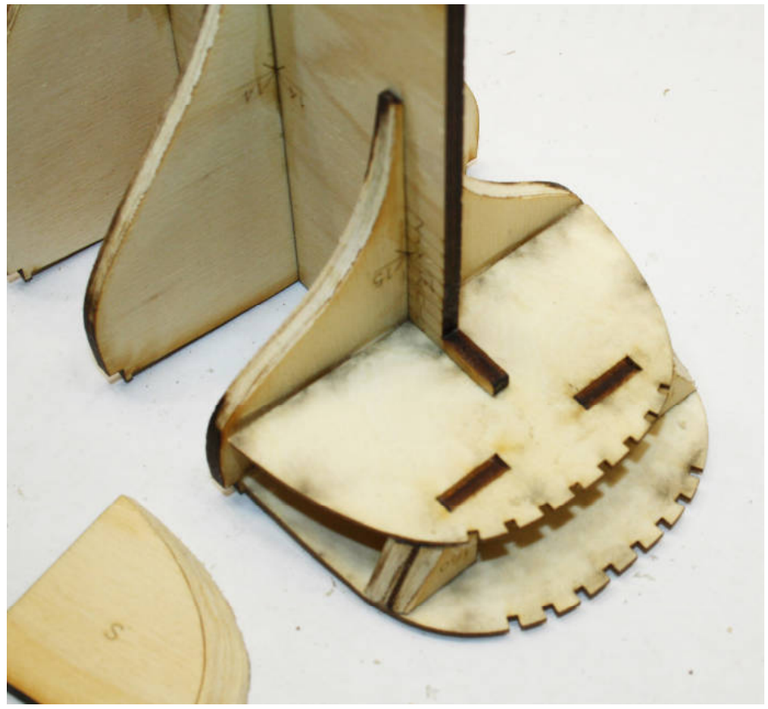
Identify the stern bulkhead P30, stern BH blocks P31A, stern top P28 and stern bottom P29. Shape the BH blocks as shown. Glue the stern BH in place between the top and bottom stern parts as shown. Glue the BH blocks in place behind the stern BH as shown. Fit the assembled stern parts into the slot in BH15. Clamp and allow glue to dry.









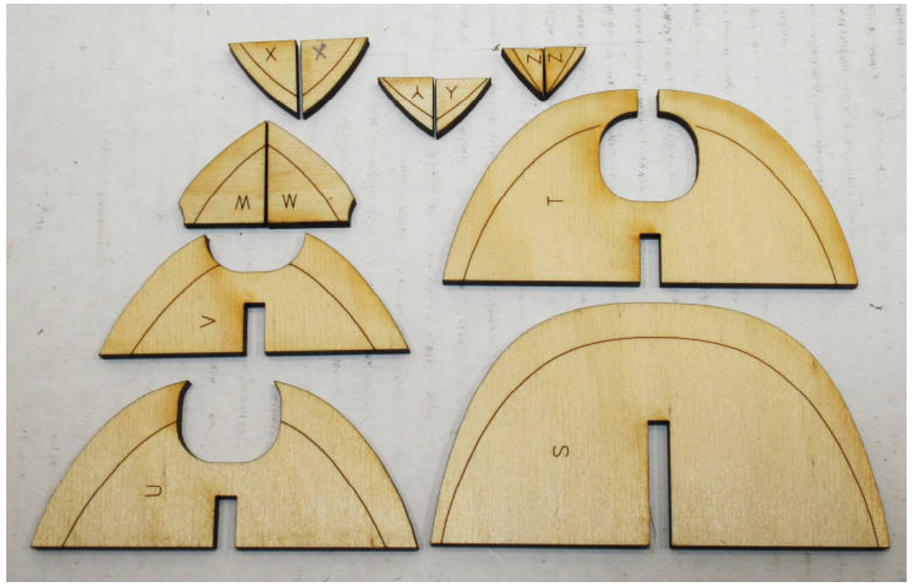


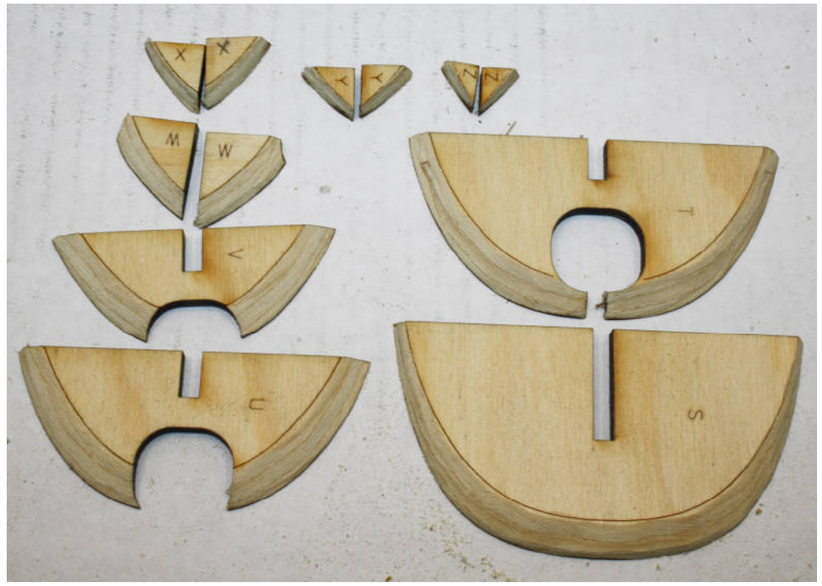


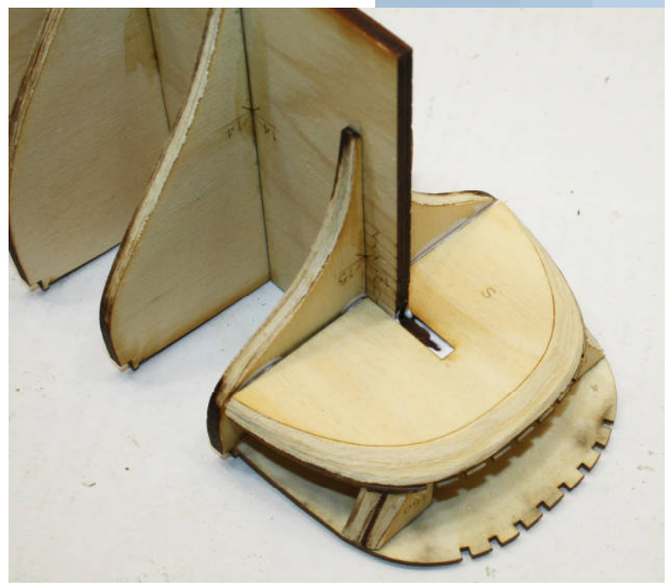
CSS SHENANDOAH
1864
SHEET 18

6.11 Stern Filler Blocks

Identify the stern filler blocks P32A-H. Shape each part as shown. Glue each part in place as shown. Identify the last stern filler block P33 - shape as shown and glue in place as shown. Once glue has set use a sanding board to ensure a smooth transition across the filler blocks and from BH15 to the stern filler blocks.















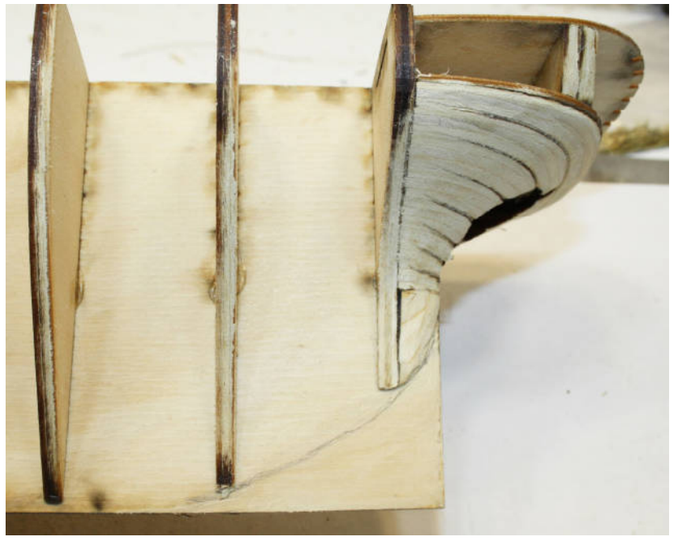


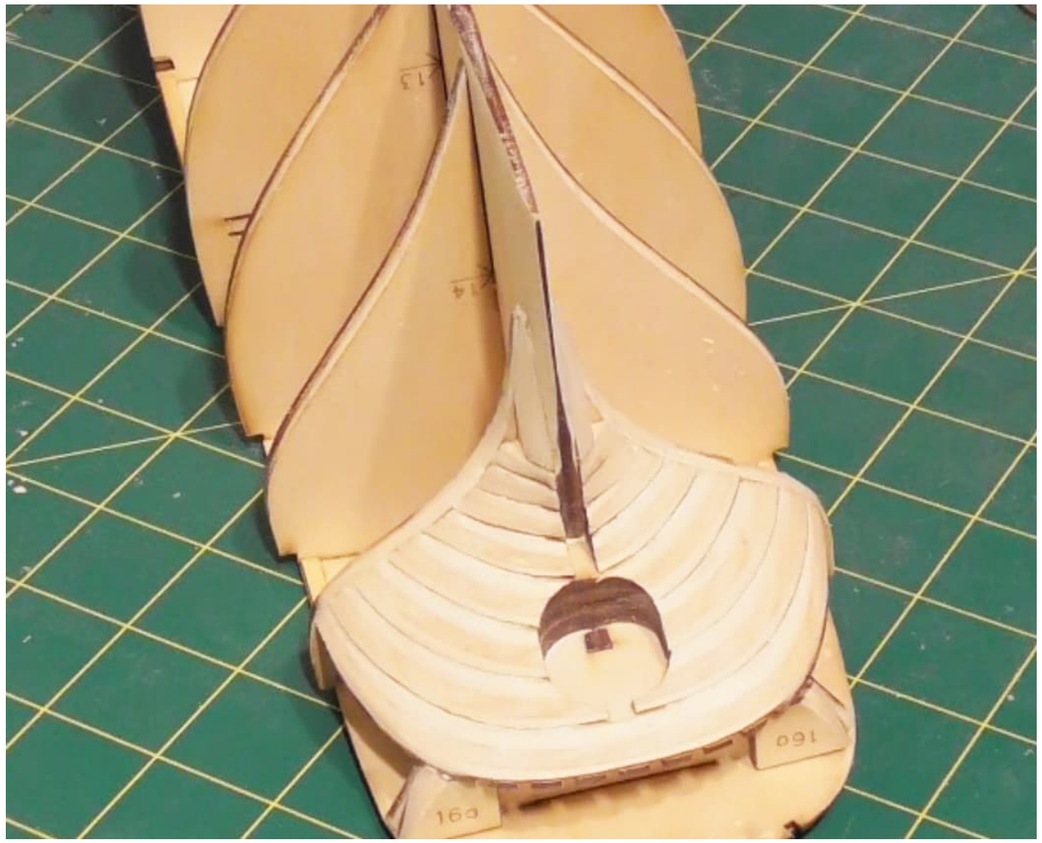
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6.12 Deadwood Area

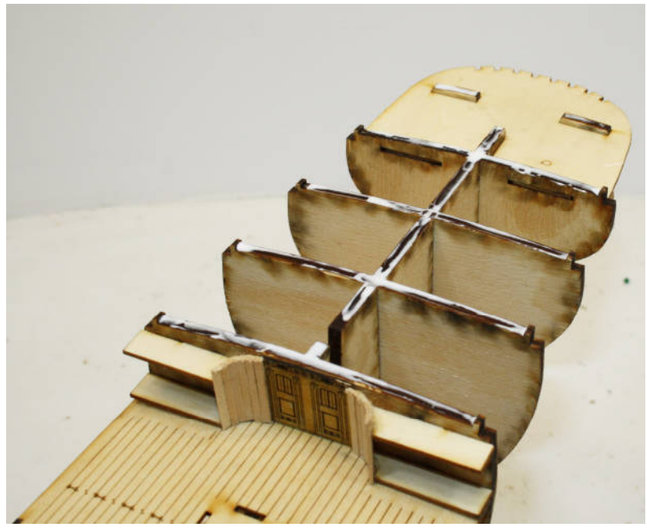
Sketch a line on the keel as shown. The area below this line and the bottom of the keel is known as the deadwood area. The hull will be planked with 2mm thick planking on each side of the hull. The total thickness of the keel at the stern (4mm) and the two layers of planking (4mm) will give a total of 8mm thickness at the end of the keel. The stem post and rudder are each 4mm thick and are not planked. To eliminate this overall 4mm mismatch the deadwood area is reduced in thickness - down to approximately 1mm. Use a grinding tool and a sanding block to shape the deadwood area as shown. Once fully planked the planking will be fractionally reduced in thickness to match the stern post and rudder.

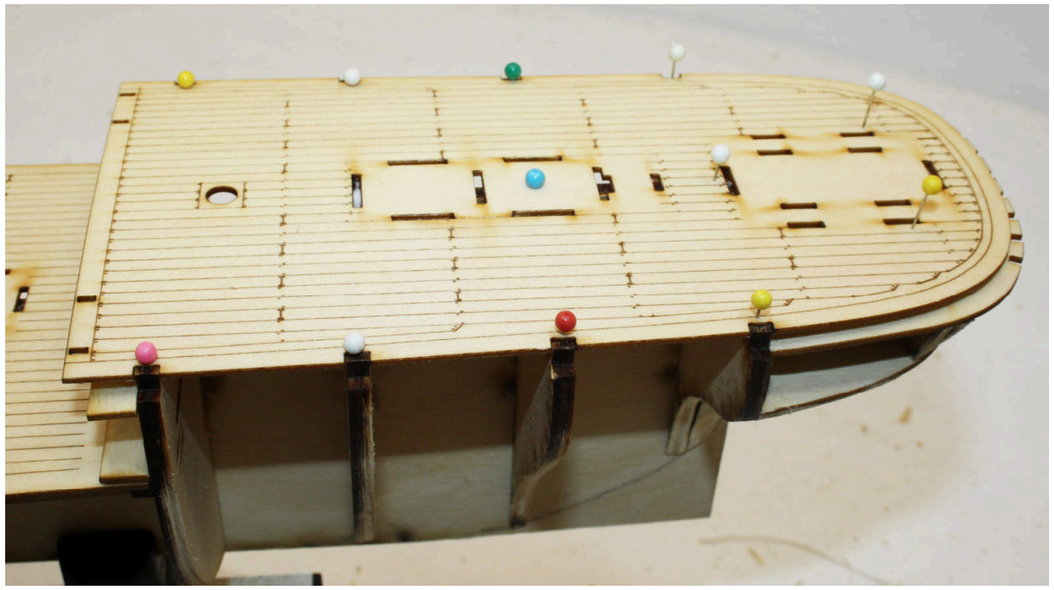


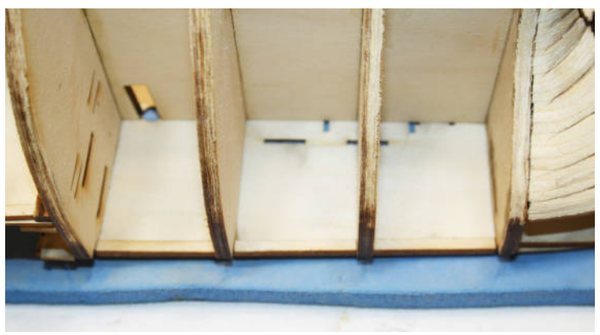


6.13 Quarter Deck

Identify the quarter deck P22. Trial fit the deck in place. To fix the quarter deck in place apply glue to all the contact points between deck and BHs and stern. Fit and pin the deck in place as shown. Identify the quarter deck supports P34a-c. Trial fit then glue the parts in place as shown.





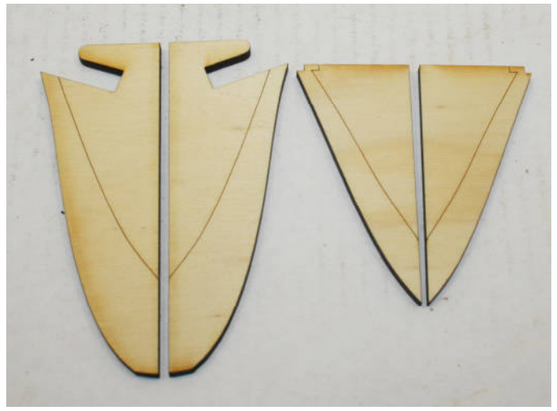
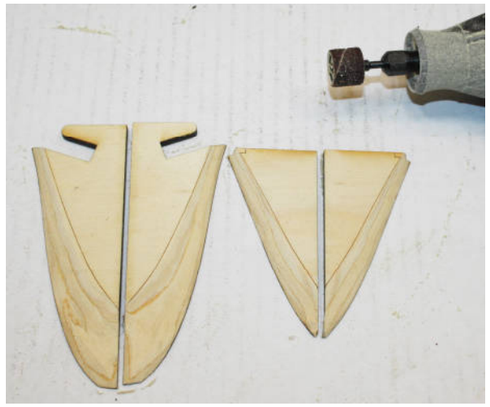
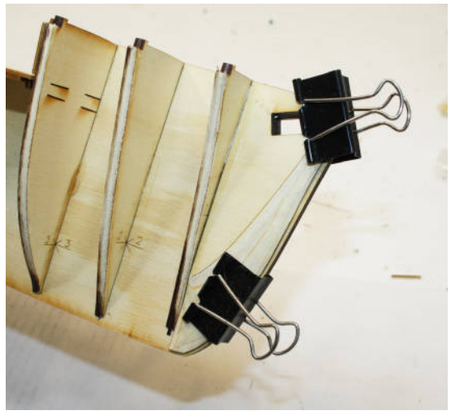
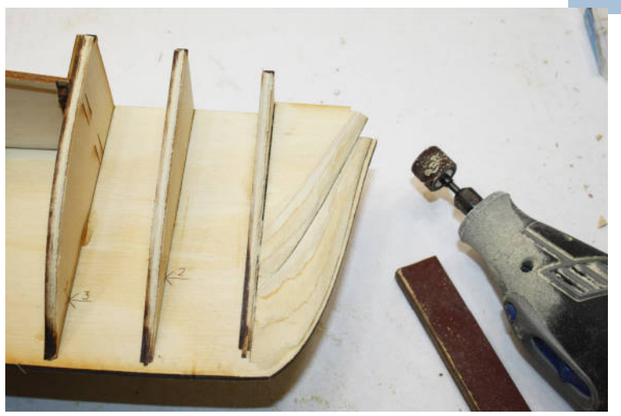




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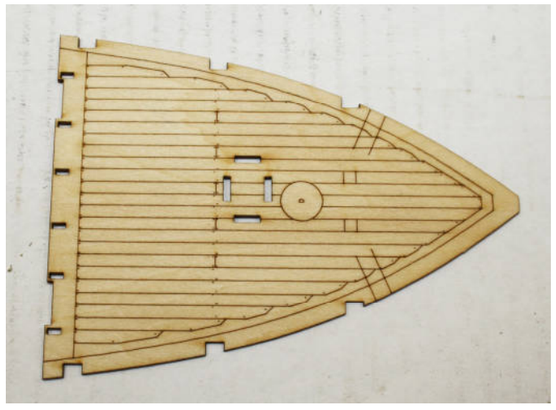
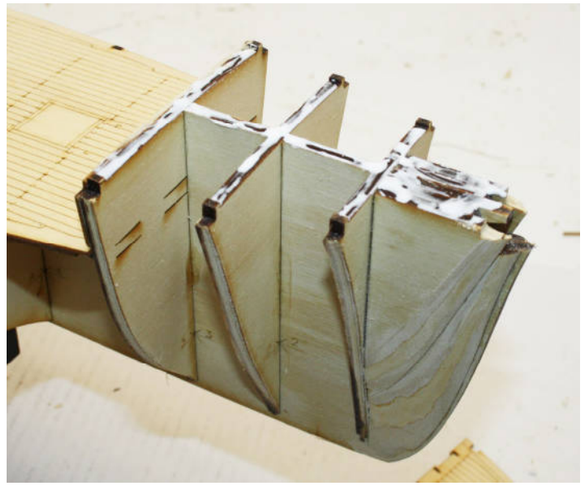
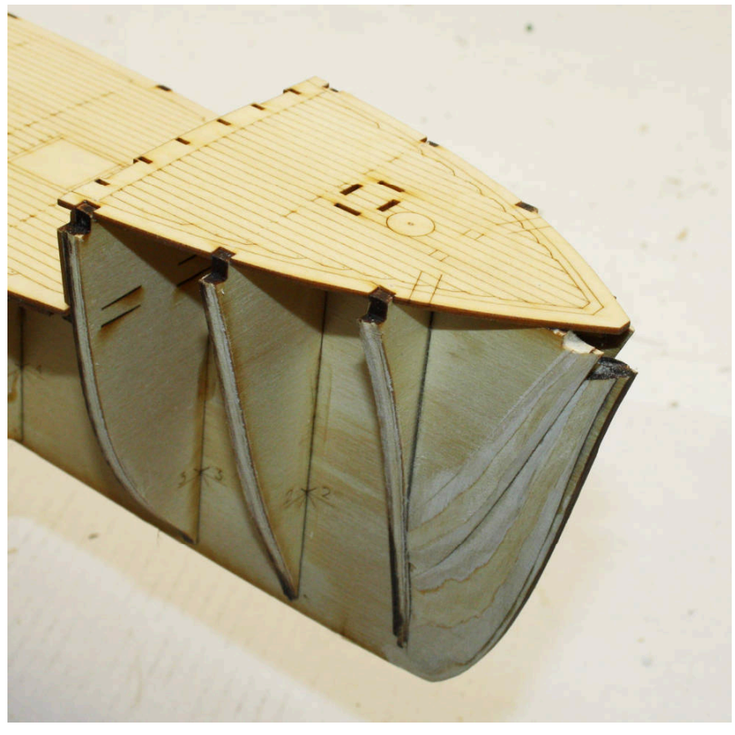
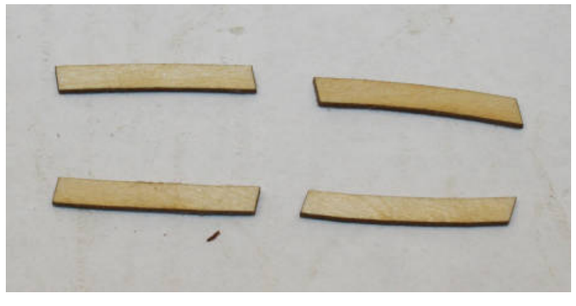
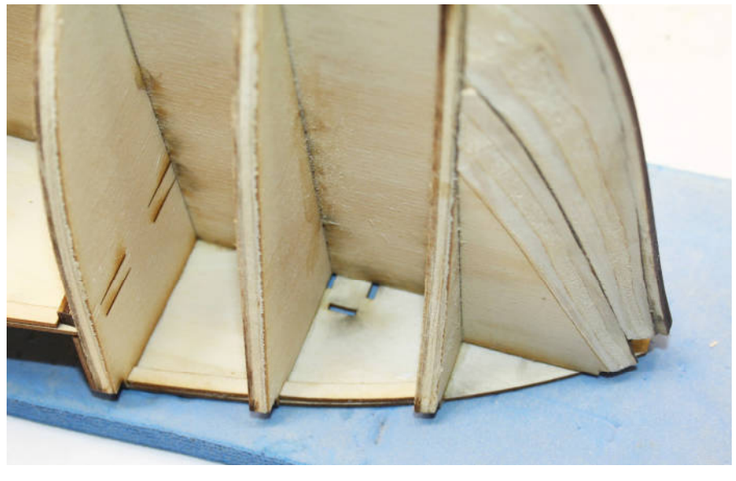
6.14 Bow Filler Blocks

Identify the bow filler blocks P35A-B. Use a grinding tool and a sanding block to shape each filler block as shown. Glue filler block A in place on each side of the hull and clamp in place making sure the block is flush with the top of the keel. Repeat for filler block B. Once glue has set use a sanding board to ensure a smooth transition from BH1 to the bow blocks.

6.15 Forecastle Deck

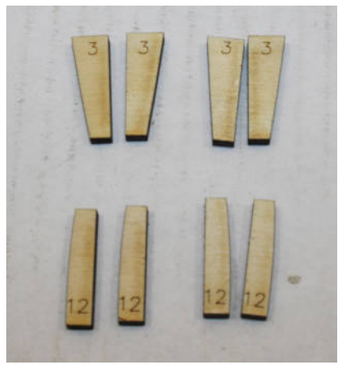
Identify the forecastle deck P21. Trial fit in place - once satisfied remove and apply glue to the contact points as shown - fit and pin the deck in place. Identify forecastle deck supports P36a-b. Trial fit and glue in place as shown.

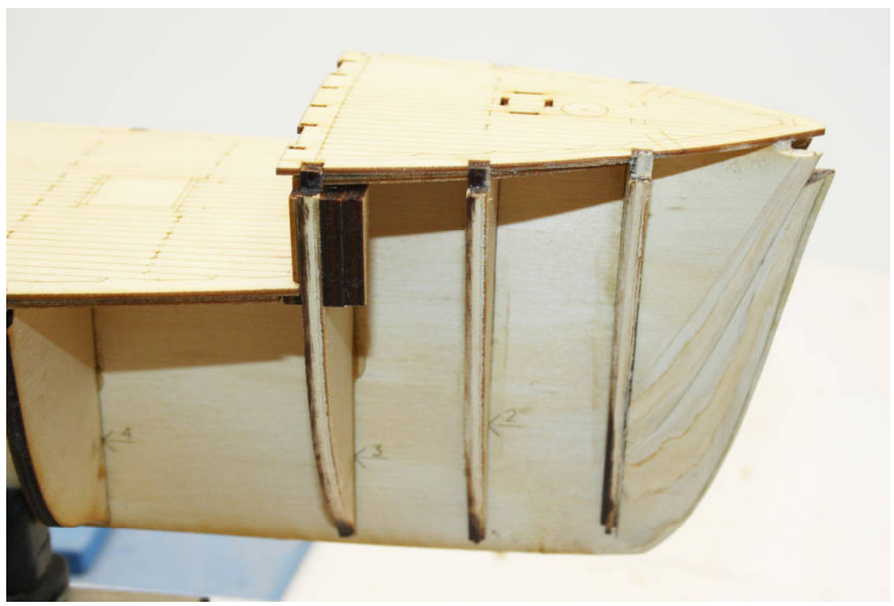






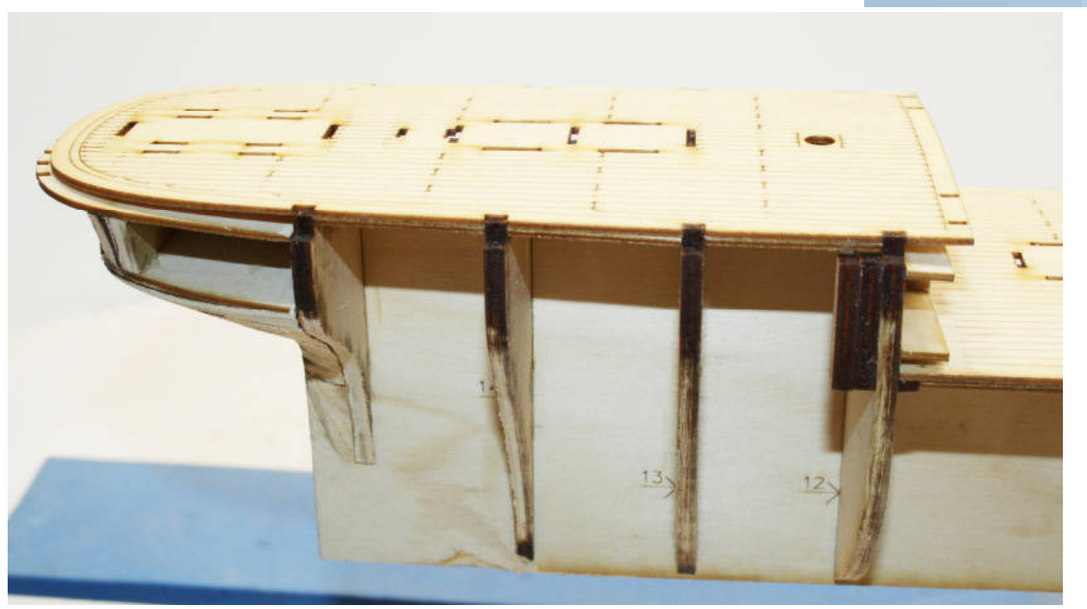
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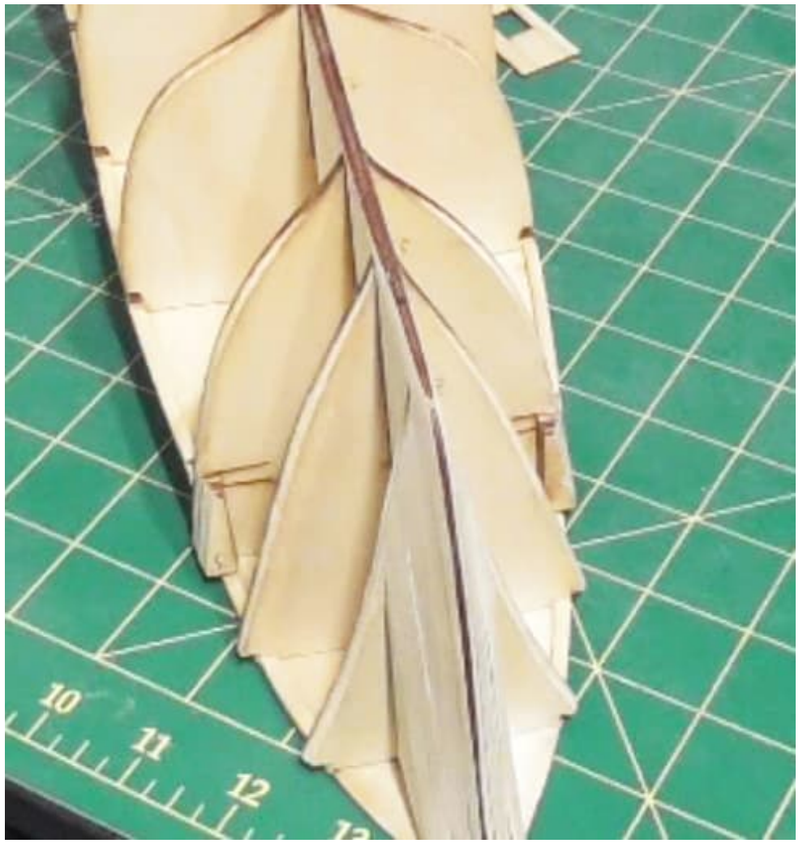
6.16 Bulkhead Extensions

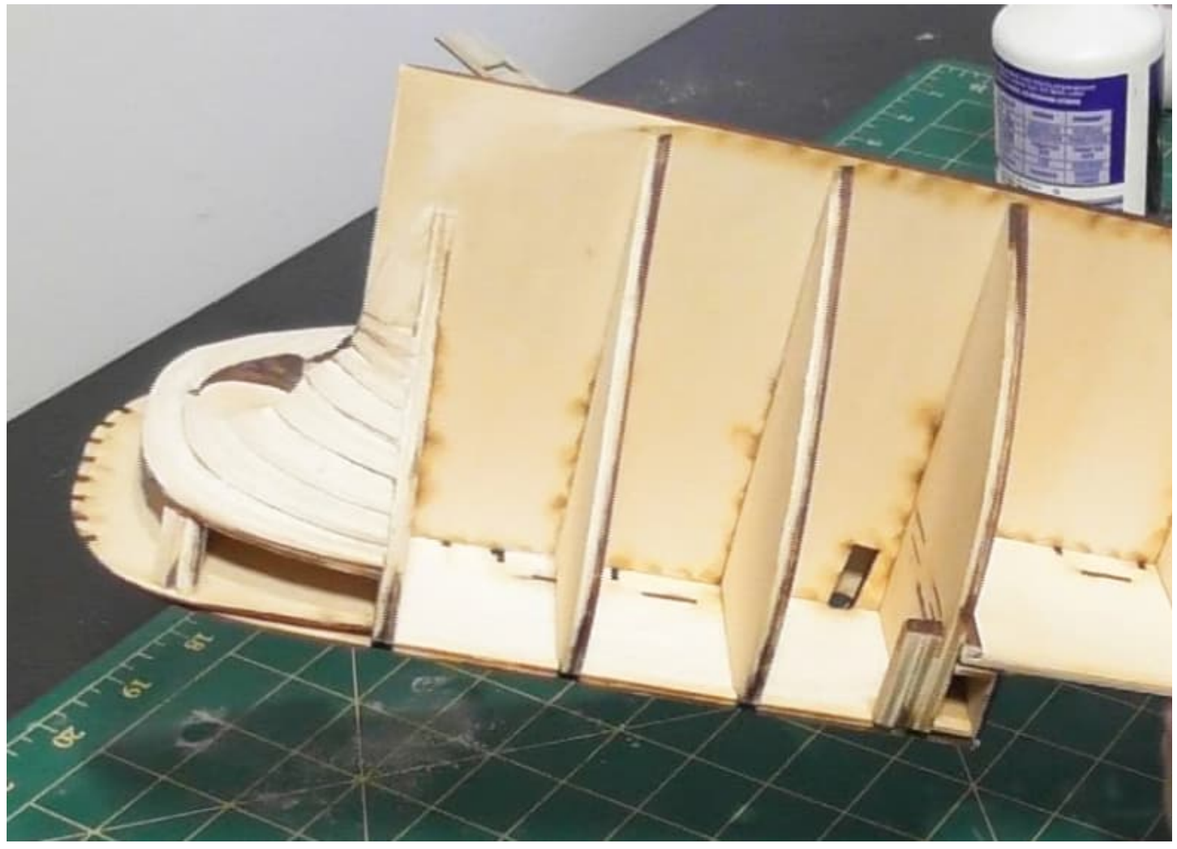
Identify the BH 3 extensions P37 and BH12 extensions P38. Glue the extensions in place as shown - make sure each is flush with the top of their respective BH. Fair the extensions as shown.









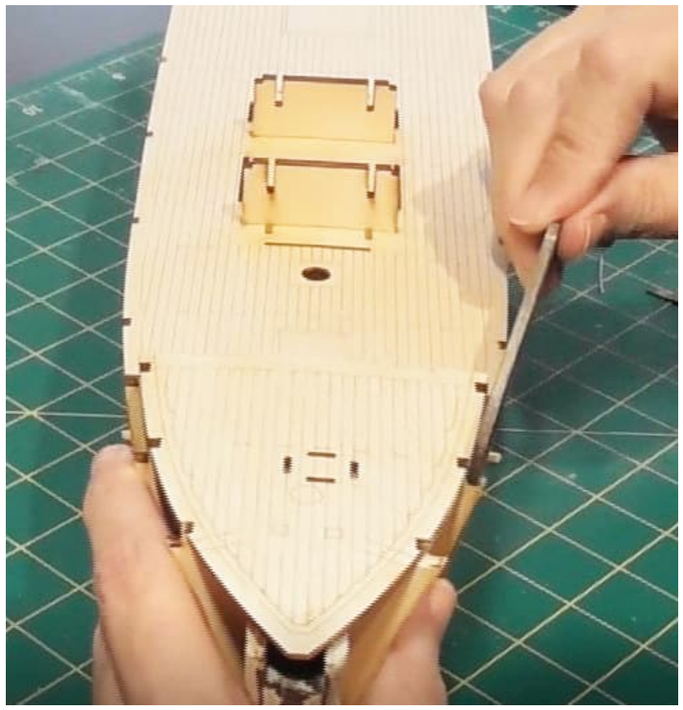


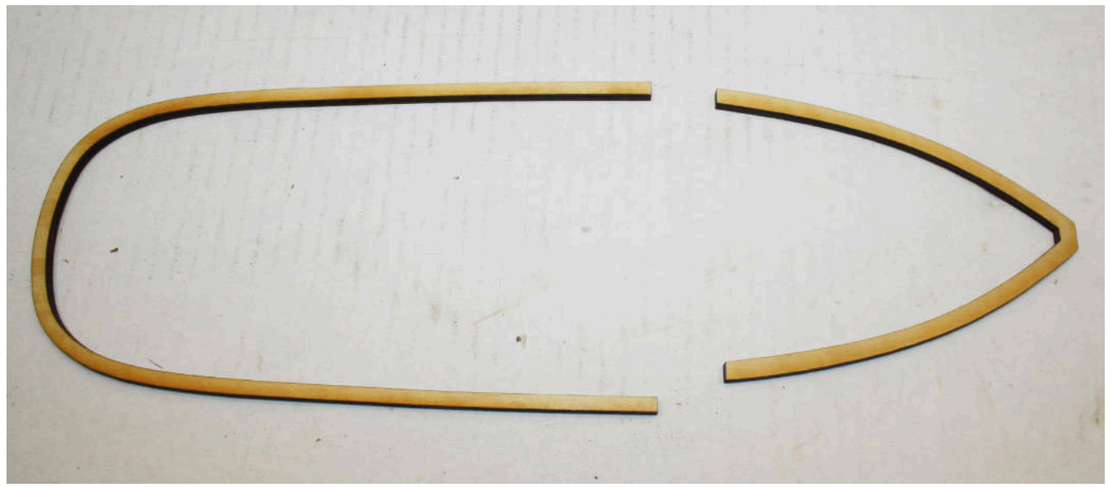
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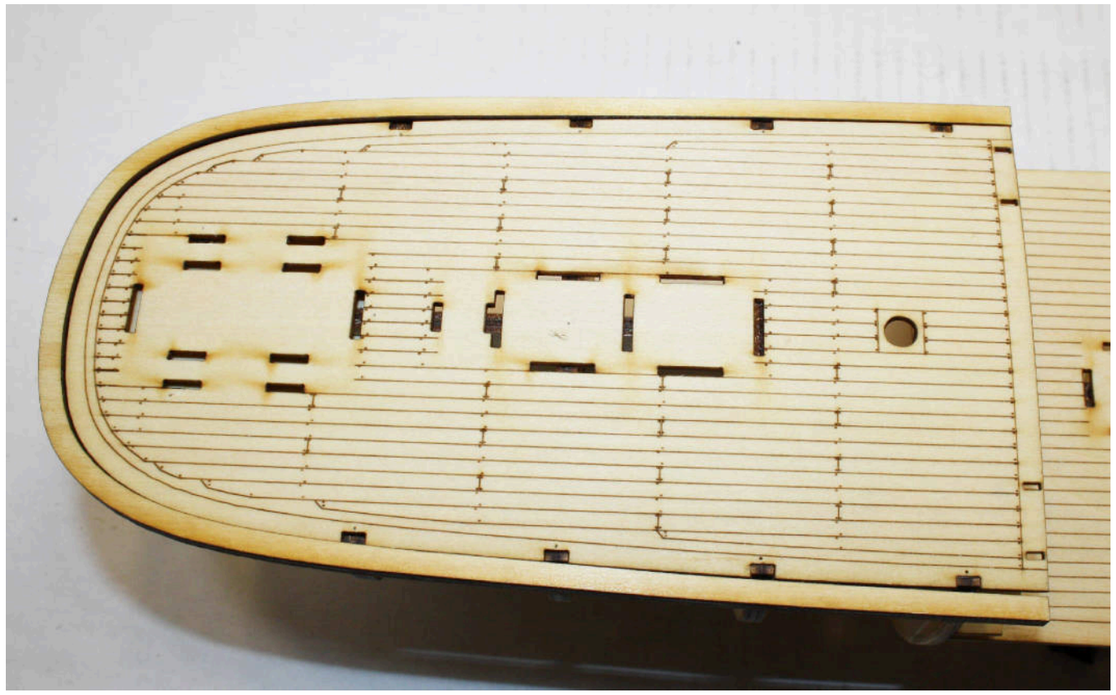
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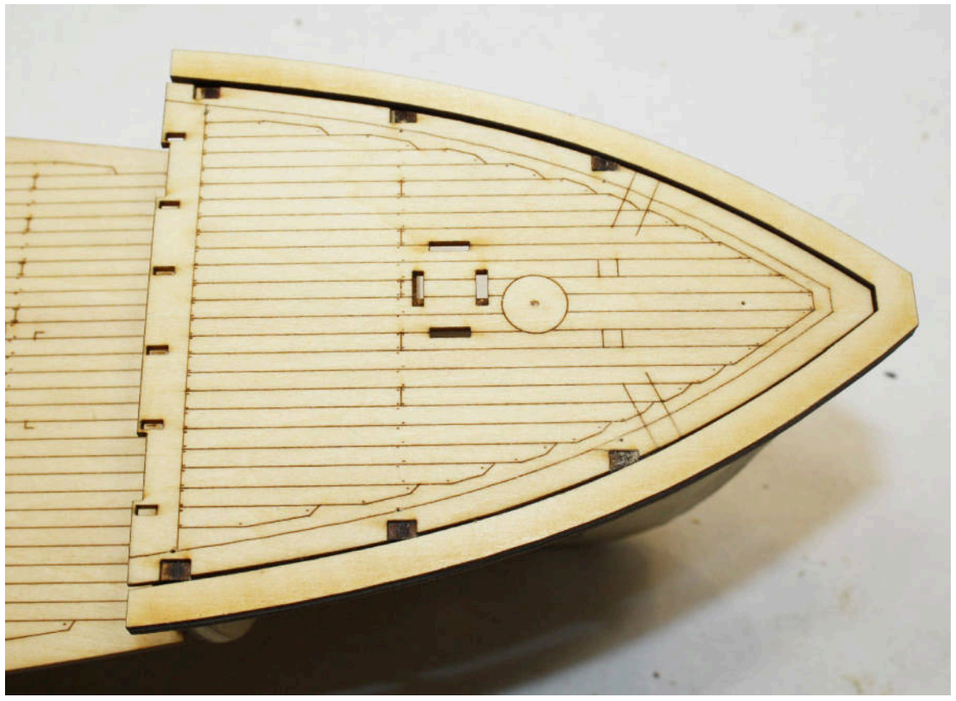
6.17 Rail Bases

Use a flat file or sanding block to shape the edges of the main, quarter and forecastle decks to ensure the deck edge is flush with the bulkheads. Identify the quarter deck rail base P39 and the fore-castle deck rail base P40. Trial fit each rail base in place - fractionally adjust if required to achieve a close fit round the deck edge.





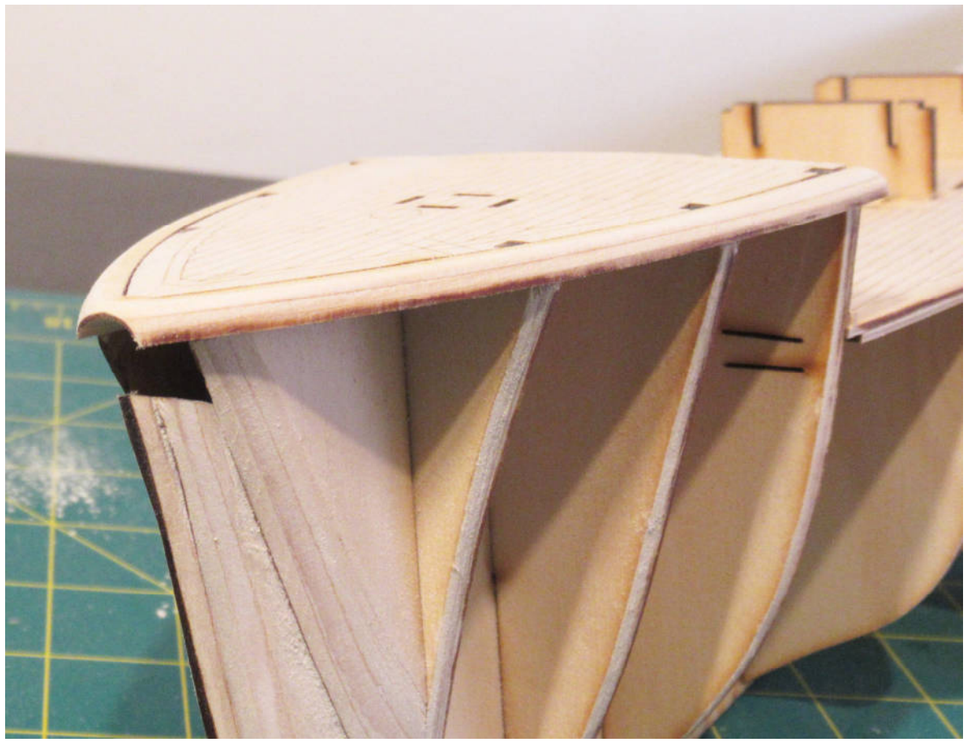


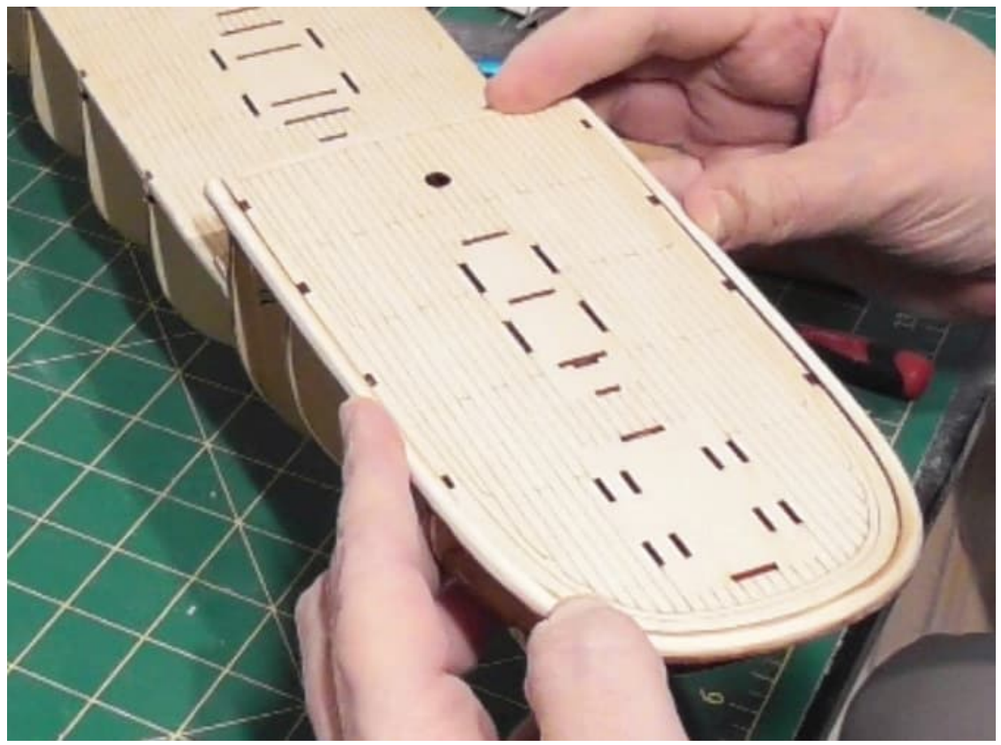


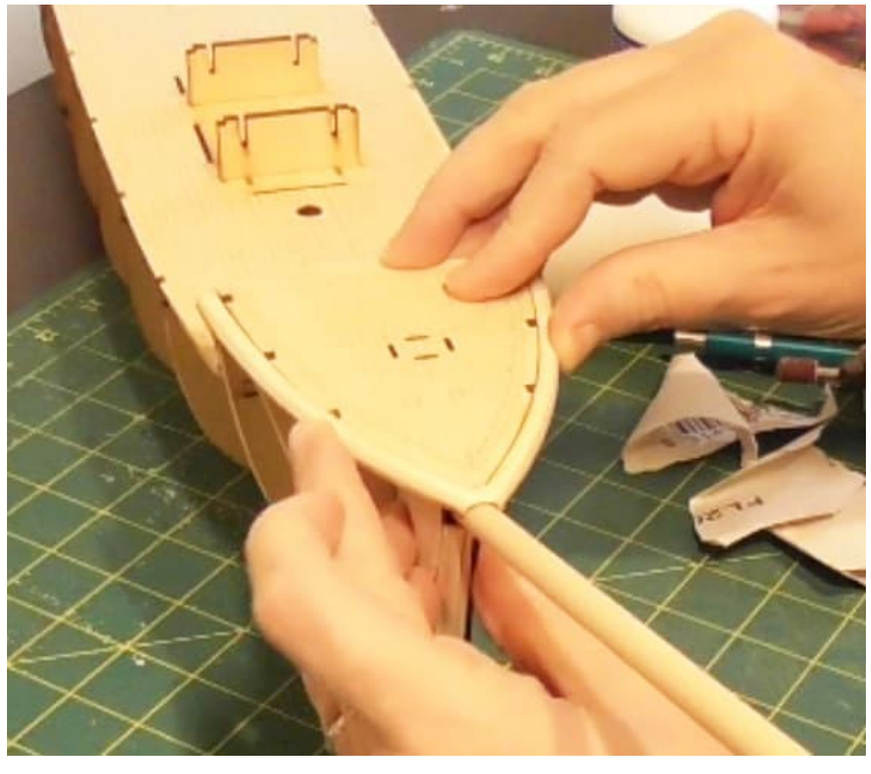
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6.17 Rail Bases continued

Use a grinding tool and a sanding board to shape a curve on the rail bases - fractionally continue to shape until the base is flush with deck top edge as shown - there may be the need to adjust the depth of the BH notches slots along the deck edge. Identity the 8mm dowel P246 - insert the dowel into the bowsprit slot and shape the underside of the peak of the forecastle rail base to fit over the dowel as shown - fractionally adjust until satisfied. **Do not glue anything is place.**



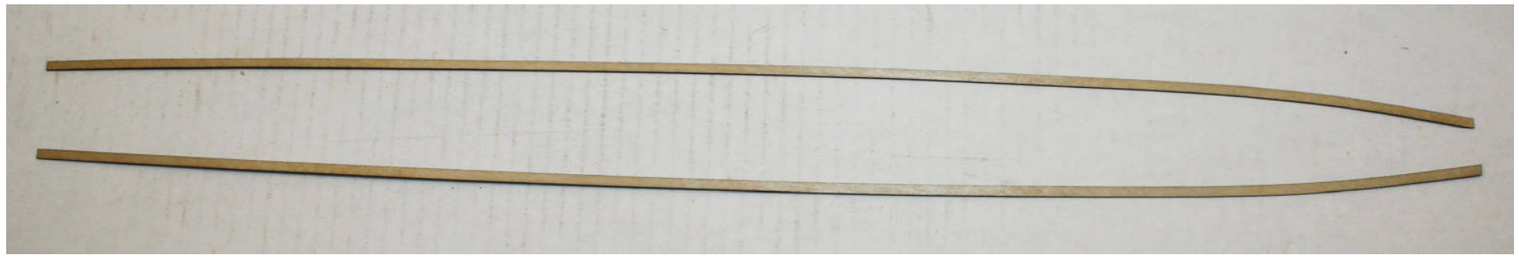


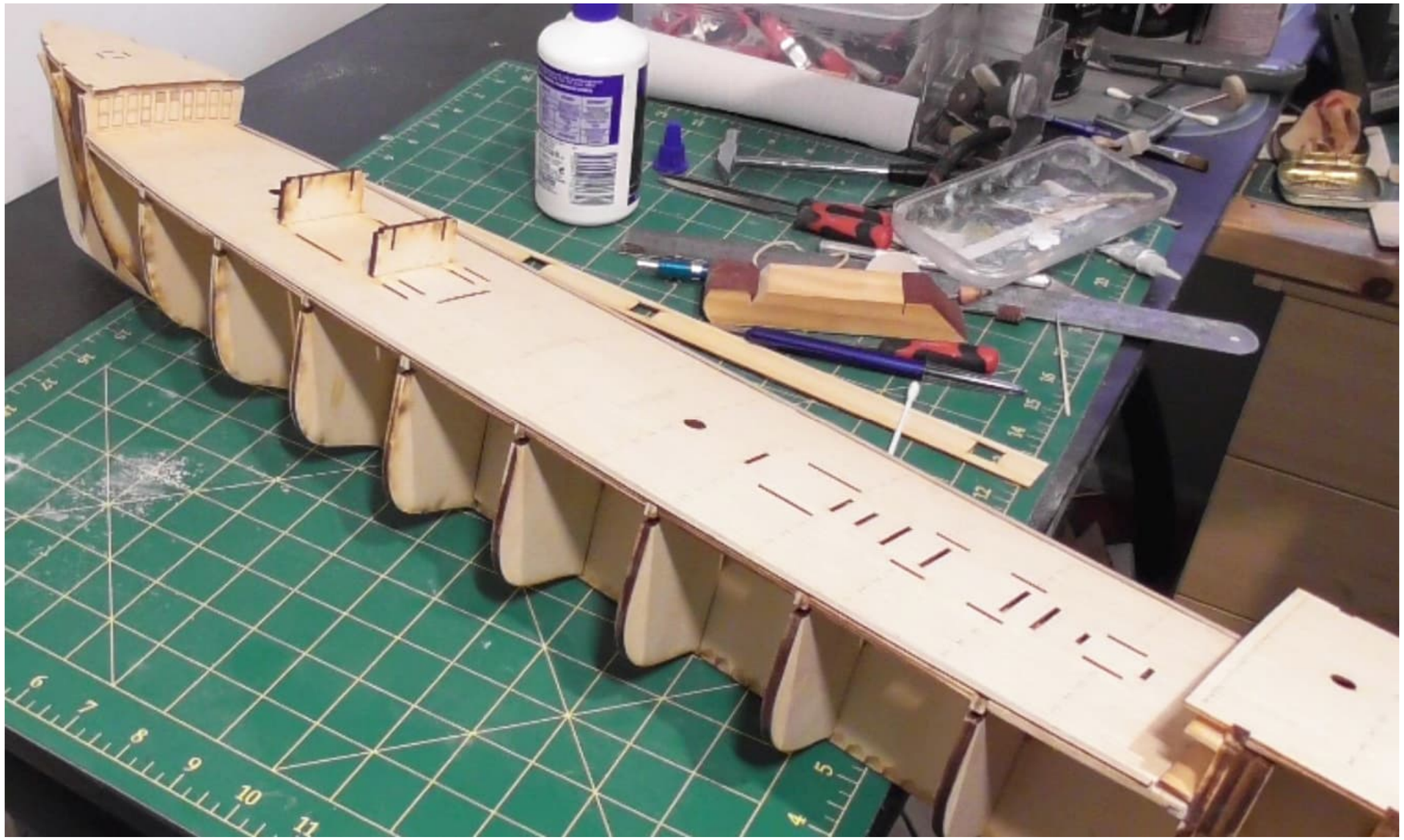


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6.18 Main Deck Edge Capping

Identify the main deck edge capping P41. Lightly sand the face and inside edge of each capping. Trial fit each edge capping in place along the edge of the main deck as shown. Once satisfied glue each edge capping in place as shown - make sure the capping is flush with the edge of the deck.





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6.19 Wardroom cabin windows

Identify the stern cabin windows P42 and the side trims P43. Glue the side trims to their respective doors as shown. Lightly sand the face of the cabin windows - use a blue pencil to colour the windows. Trial fit the side doors in place - fractionally adjust as required. Once satisfied glue each side door in place as shown.

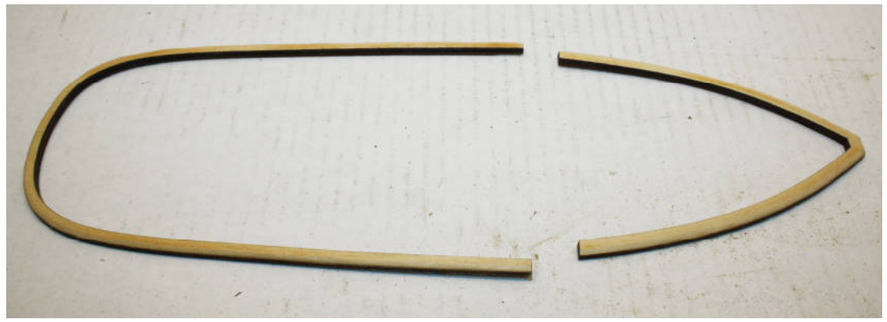


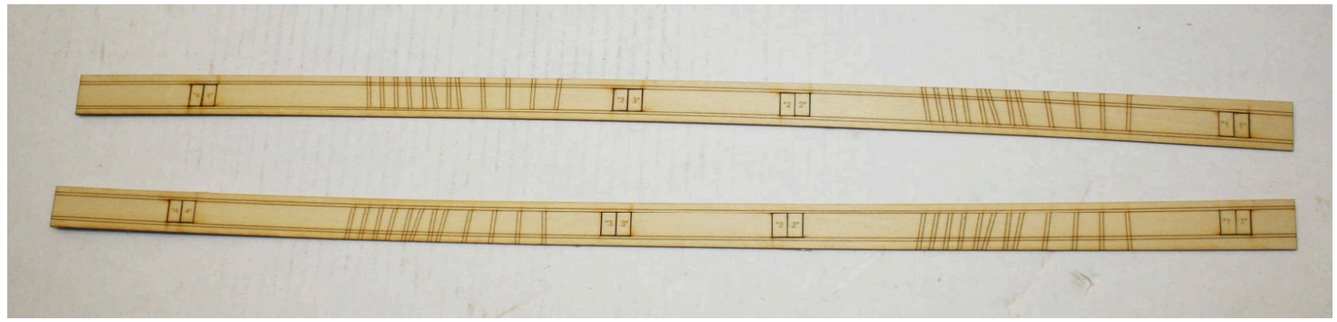


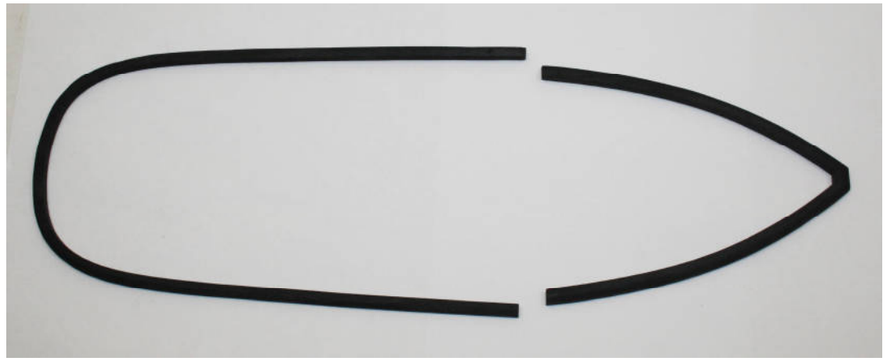
6.20 Rail Bases and Bulwarks

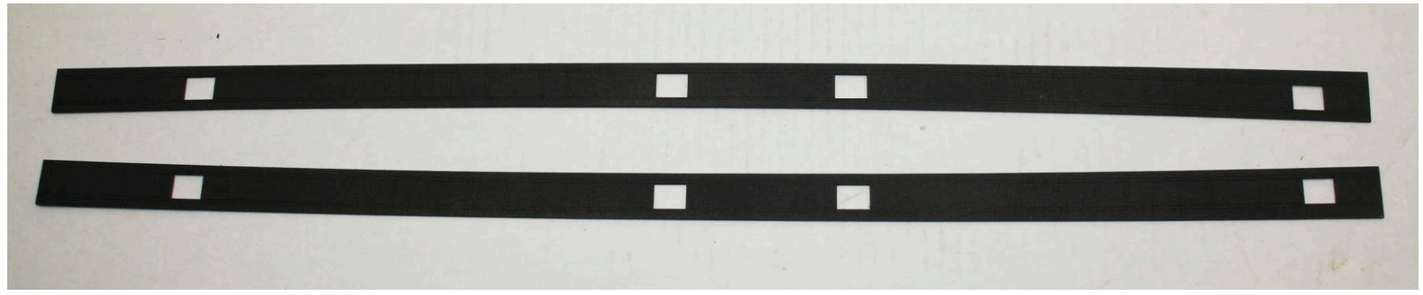
Identify the bulwarks P44.Remove the gun port doors P45 and set aside safely to be fitted later. Retrieve the quarter deck and forecastle deck rail bases. Spray paint the parts with a matt charcoal black acrylic paint - apply a couple of coats allowing to dry fully between coats - apply paint to both sides of the bulwarks.

NOTE: If the model is to be presented as Sea King do not remove the gun port doors - the laser cut can be filled with wood filler before painting.





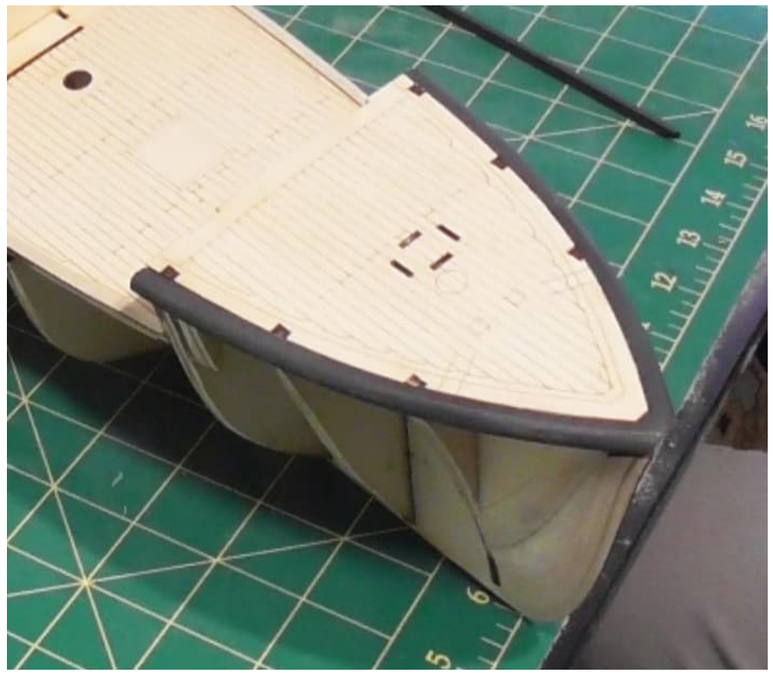


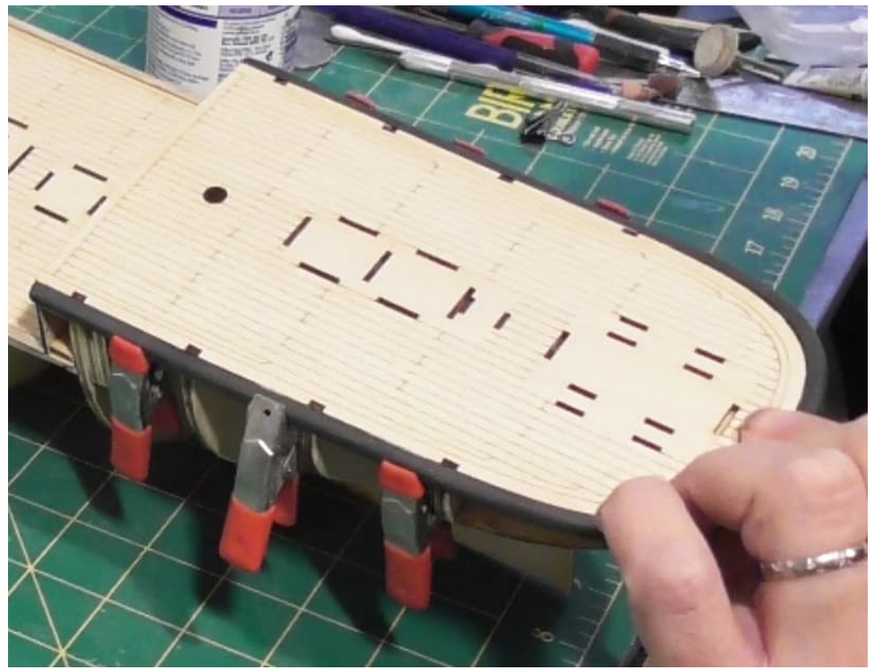


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6.21 Forecastle Deck and Quarter Deck Rail Bases

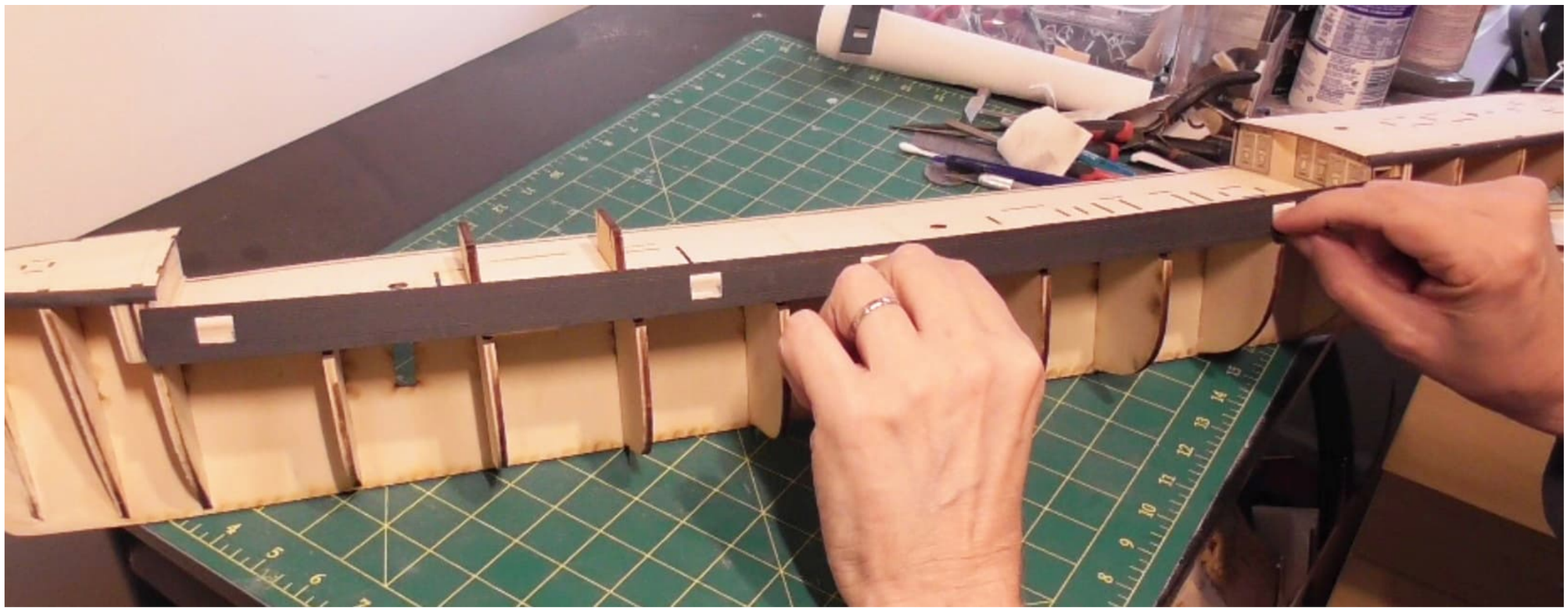
Trial fit the deck rail bases - once satisfied glue each base in place as shown.





6.22 Bulwarks

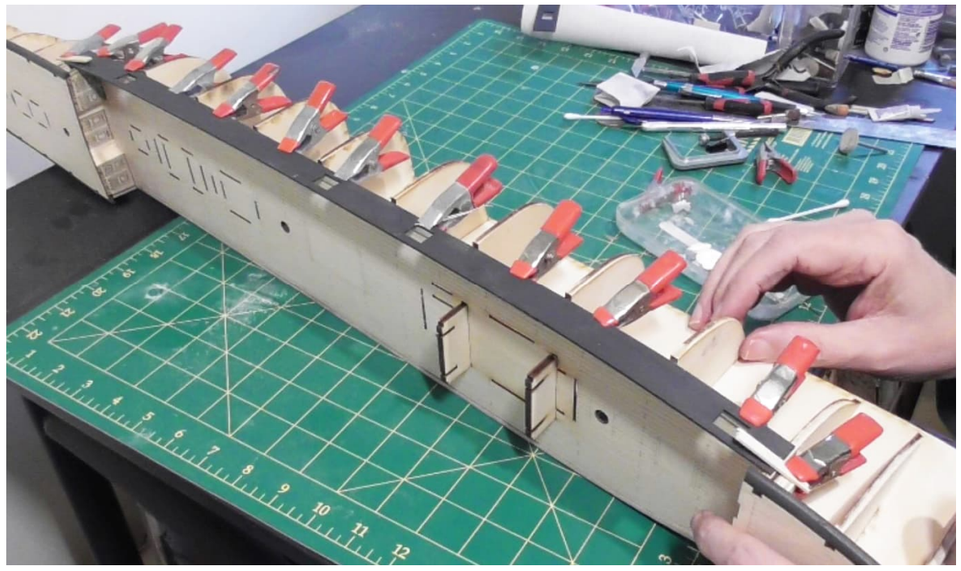
The bulwark fits between BH3 and BH12. The bottom edge of the bulwark fits flush with the underside of the main deck supports. Trial fit a bulwark in place - some fractional adjust of deck edge and cabin sides may be needed. Repeat for the other side of the hull.

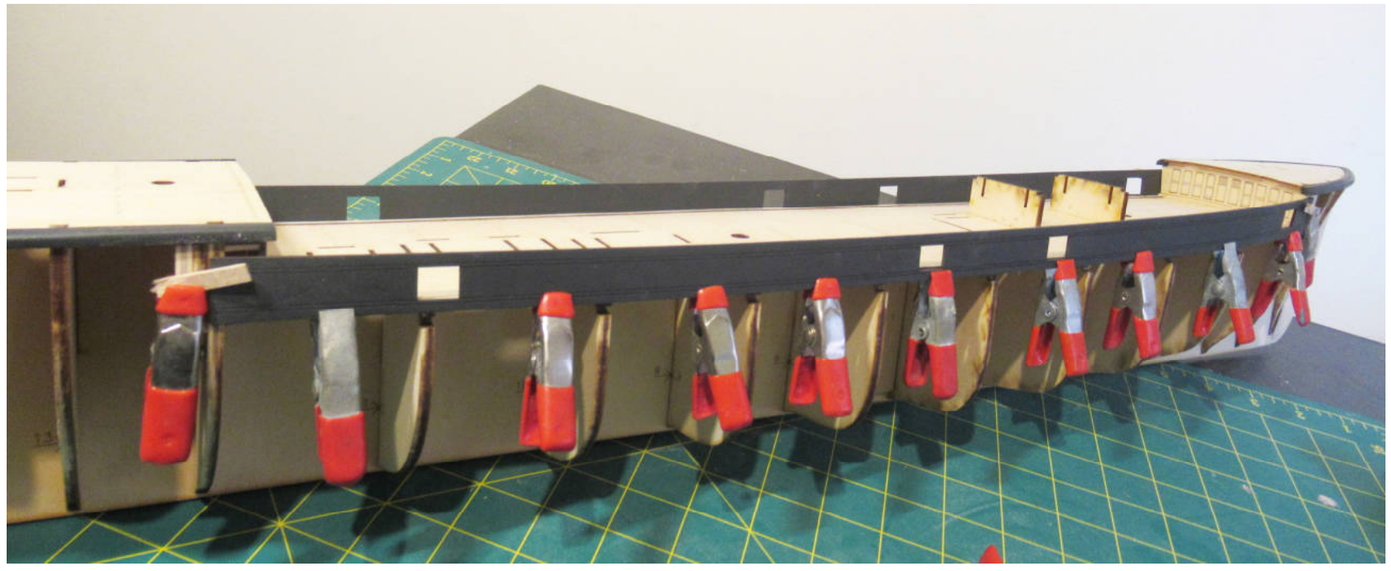


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6.22 Bulwarks continued

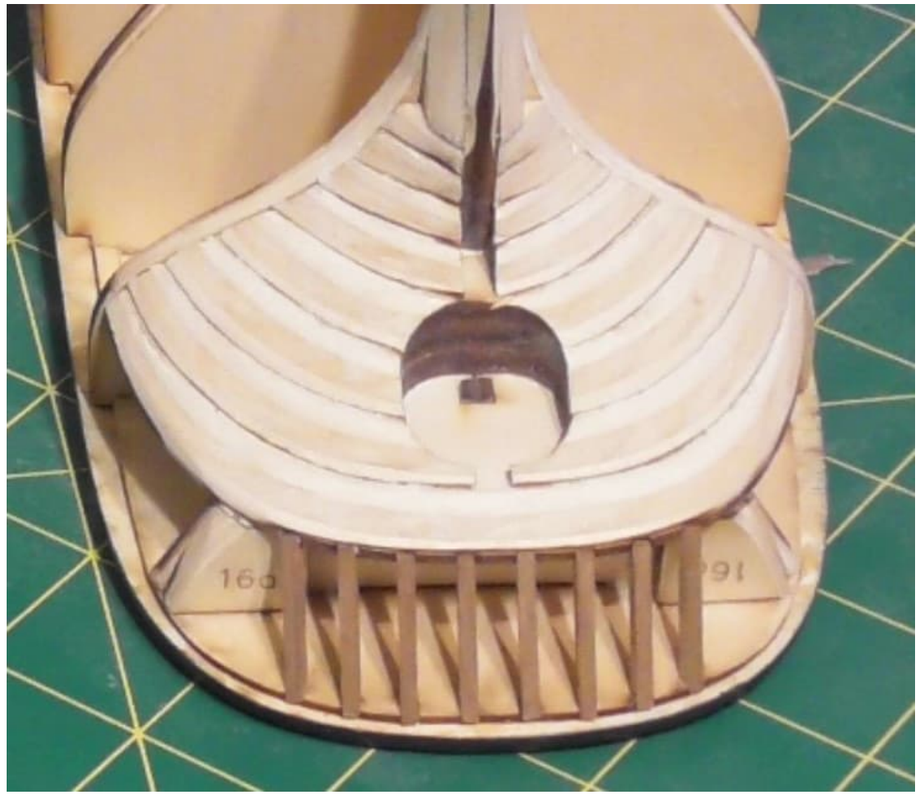
Once satisfied with the fit apply glue to the contact points on the bulwark and along the deck edge including the deck supports. Fit and clamp the bulwark in place. Use a cotton bud to remove any excess glue from the inside of the bulwark at the deck level. Repeat for the other side of the hull.



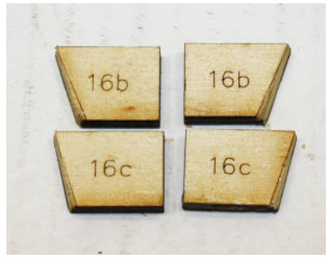


6.23 Transom

Identify the 2x3mm plywood length P46. For the transom supports cut lengths to fit into the slots between the stern top and bottom as shown - fractionally adjust and glue in place. Identify stern BH16 blocks P31B & P31C - chamfer each from the score line to the opposite edge as shown. Trial fit P31B in place in front of BH16 - fractionally adjust as required - glue in place. Trial fit P31C - fractionally adjust as required - glue in place in front of 31B as shown. Repeat for the other side.



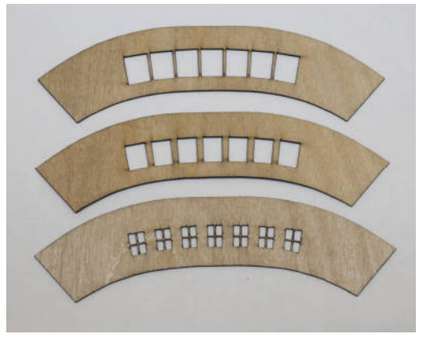


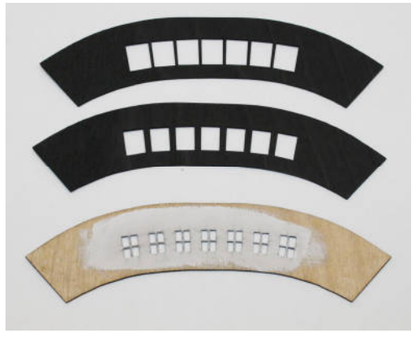


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6.23 Transom continued

Identify the transom window layers P47A-C. Apply matt white paint to layer 1 P47A as shown. Spray paint layer 2 P47B & layer 3 P47C with matt charcoal black acrylic paint as shown.
Place the end of layer 1 into a container of hot water for approximately 3 minutes - remove and gently check the flexibility of that end - trial fit in place - repeat until satisfied there is enough flex in the part. Repeat for the other end. Once satisfied apply glue to the transom supports and stern BH blocks 16a as shown. Place layer 1 around the supports coming to rest on stern blocks 16a - pin in place and allow glue to set and ply to dry naturally. Repeat the process for layer 2 P47B - glue the part in place as shown. For layer 3 P47C apply gold paint to the window uprights as shown. Repeat process to shape and fix layer 3 in place as shown. Set the 7 window cut-outs from P47C aside to be used as protective covers later in the build.





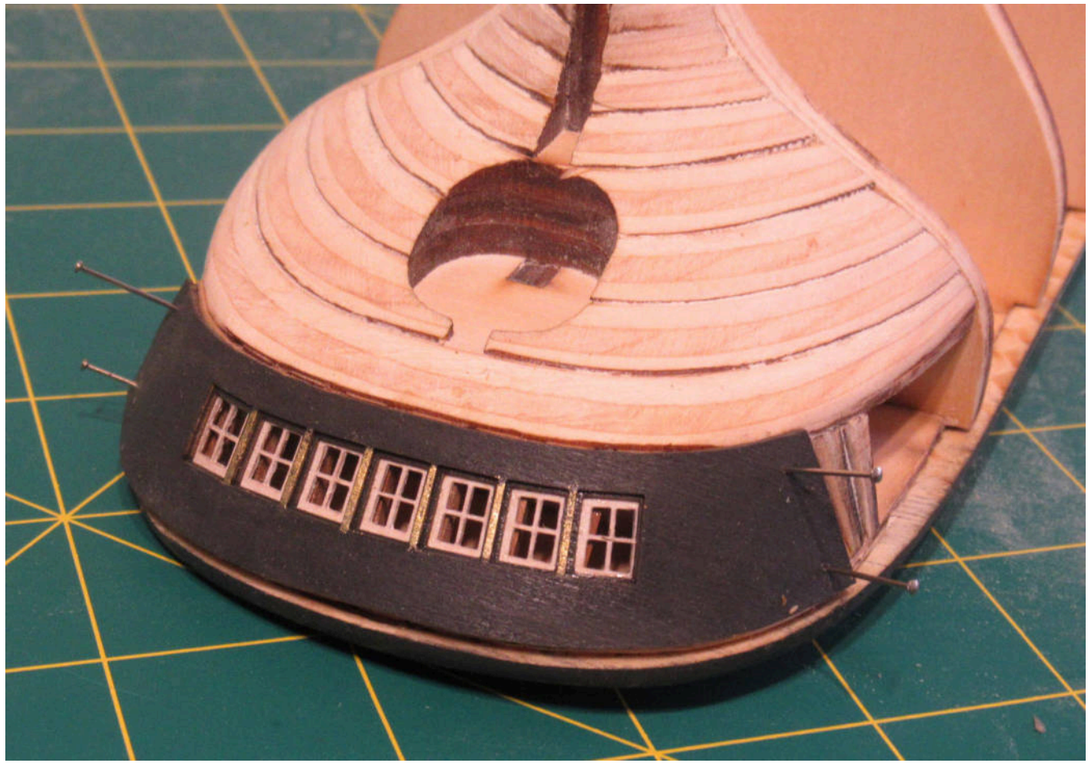












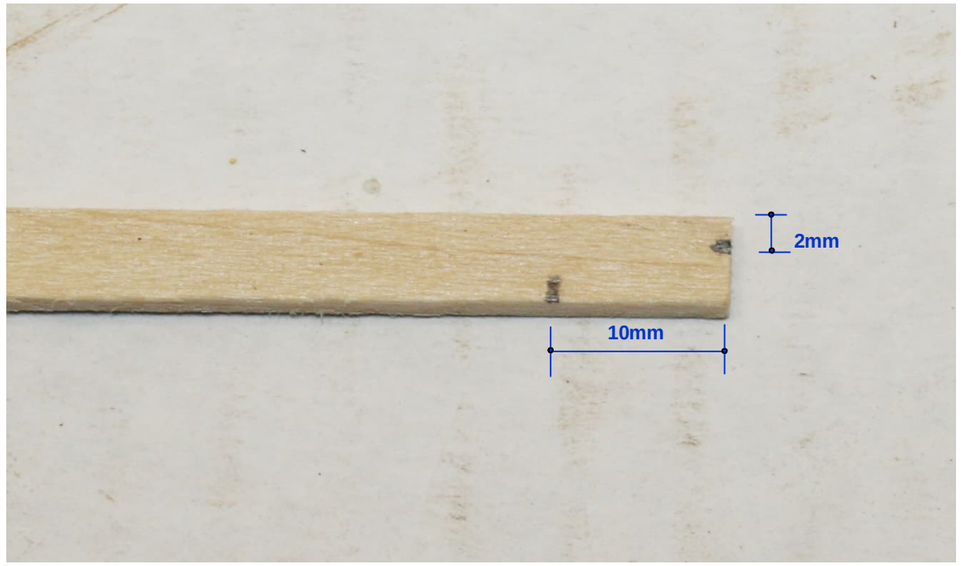
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7.0 Hull Planking

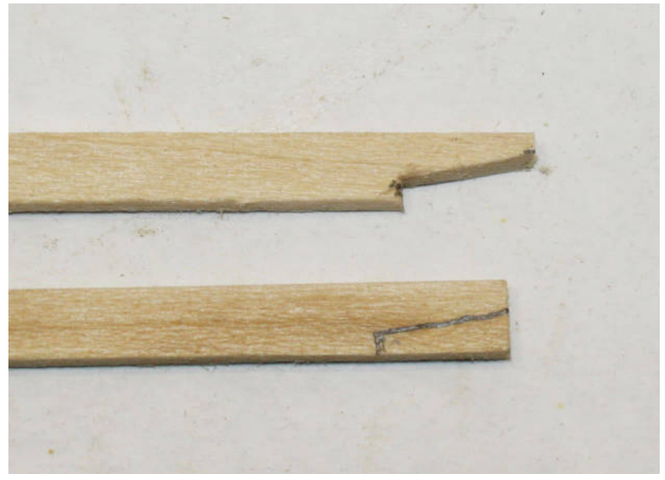
This model kit is for experienced model ship builders and, as such the model builder is expected to be able to apply a range of techniques to complete the hull planking. The hull planking techniques presented in these instructions are but one of many approaches to plank the hull of a wooden model ship.

7.1 Extended Planks

Identify the 2x5x700mm basswood planking P47 and the 2x5x500mm planking P48 - these are to plank the hull. Some planks need to be longer than 700mm - in these cases use a length of P48 by the use of a scarf joint as shown. To create the scarf joint mark one end of a plank with the dimensions as shown. Use a snap blade knife to cut the shape as shown. Duplicate that shape on one end of the extension plank and cut the timber away. Trial fit the two plank ends together - some fractional adjustment may be required using a flat file or sanding board. Once satisfied cut a 25mm length of planking and glue and clamp in position on one side of the joint as shown. Allow glue to fully dry before using the plank. When placing one of these extended planks in position on the hull be sure to position the brace piece between bulkheads. As the planking progresses down the hull stagger the location of the scarf joint along the hull between bulkheads.

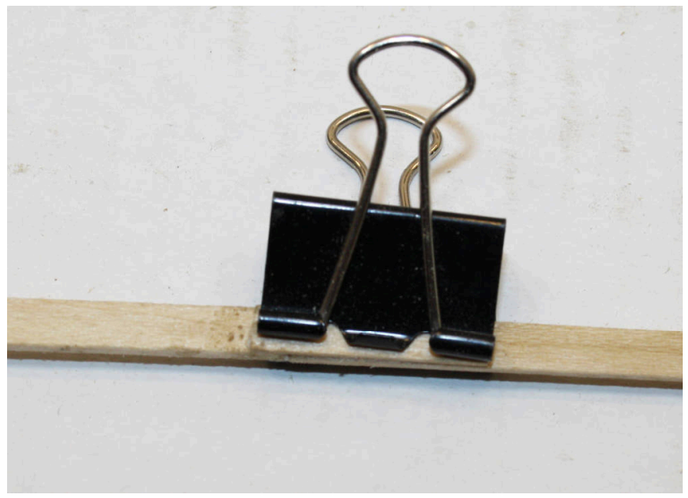










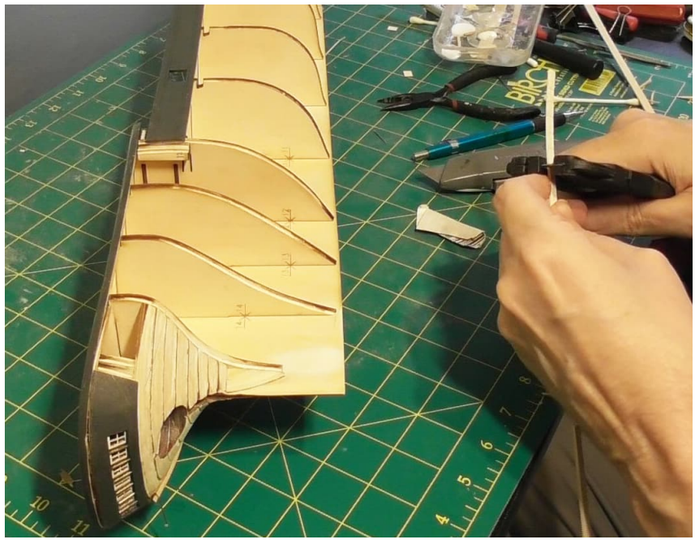


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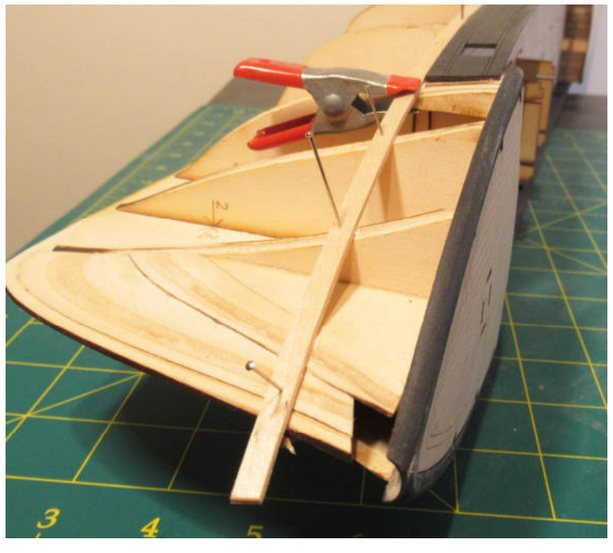
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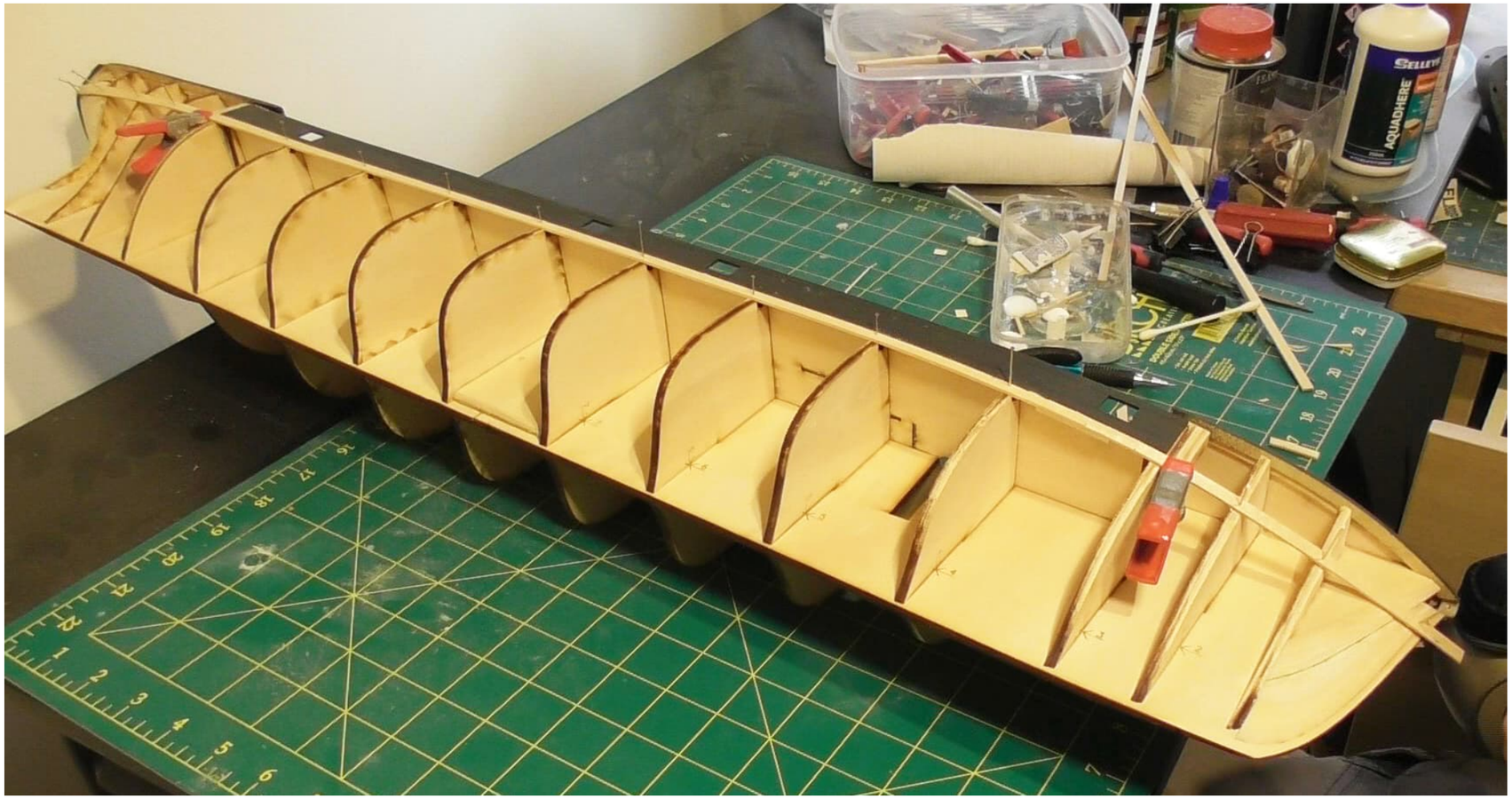
7.2 First Plank

Take an extended plank and trial fit it in place - this first plank is fitted immediately below the bulwark. Temporarily pin the plank in place along the underside of the bulwark. Allow the plank to first run its natural course to the stern - temporarily pin the plank in place - mark where the plank butts under the transom - mark with a pencil the line to shape the plank to fit snugly under the transom. Next allow the plank to run its natural course to the bow - temporarily pin in place. Trim-off any excess plank. Once satisfied remove the plank and shape its stern end. Use a hand held plank bender to lightly bend the plank at the bow crimping across the plank. At the stern crimp the plank across the plank and then at an angle to create a twist in the plank so it fits snugly beneath the transom as shown. Once satisfied remove the plank. Apply glue to the contact points of the plank and to the underside of the bulwark - pin the plank in place as shown. Repeat for the other side of the hull.





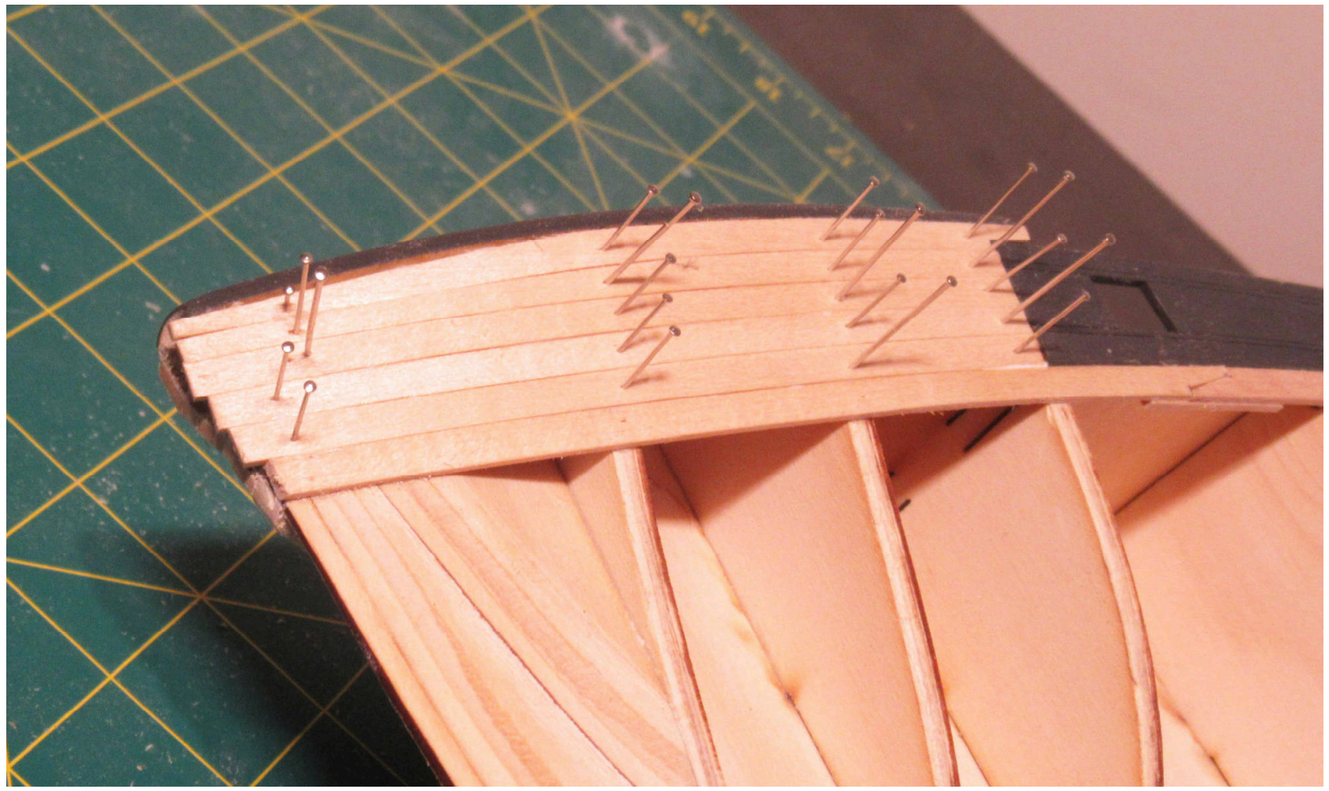


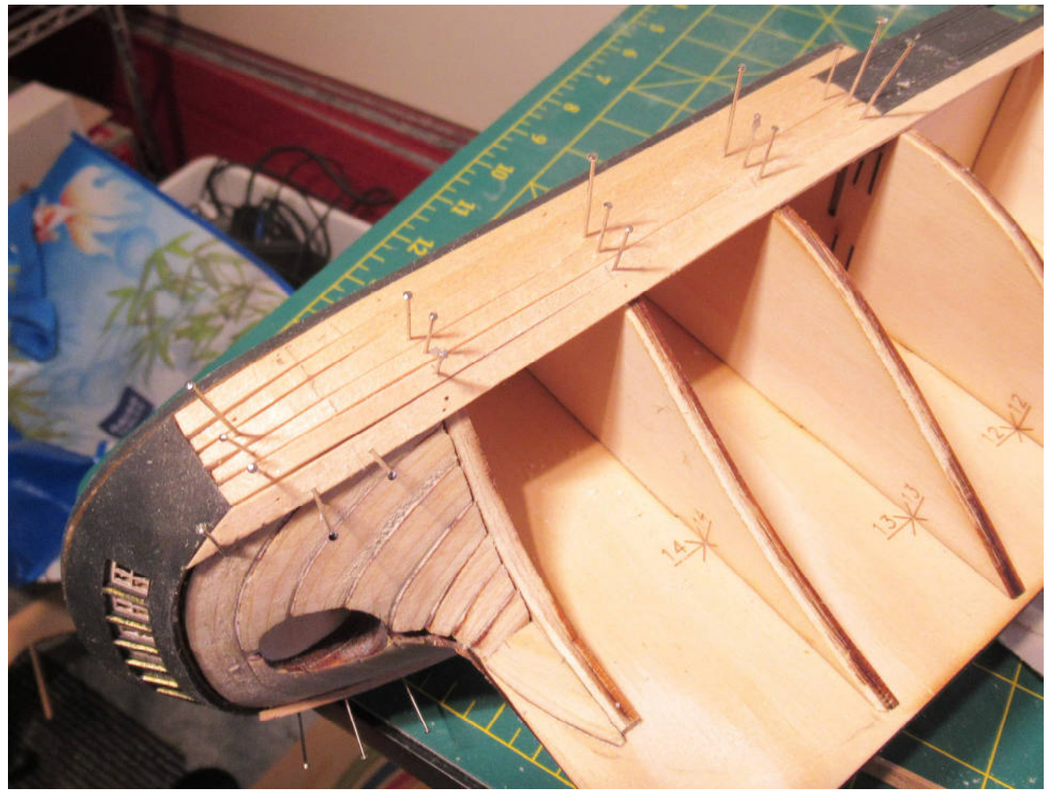


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7.3 Planking - above first plank

Cut, shape, taper and glue planks in place between the first plank and the forecastle deck edge as shown. Cut, shape, taper and glue planks in place between the first plank and the quarter deck edge as shown. Repeat for the other side on the hull.





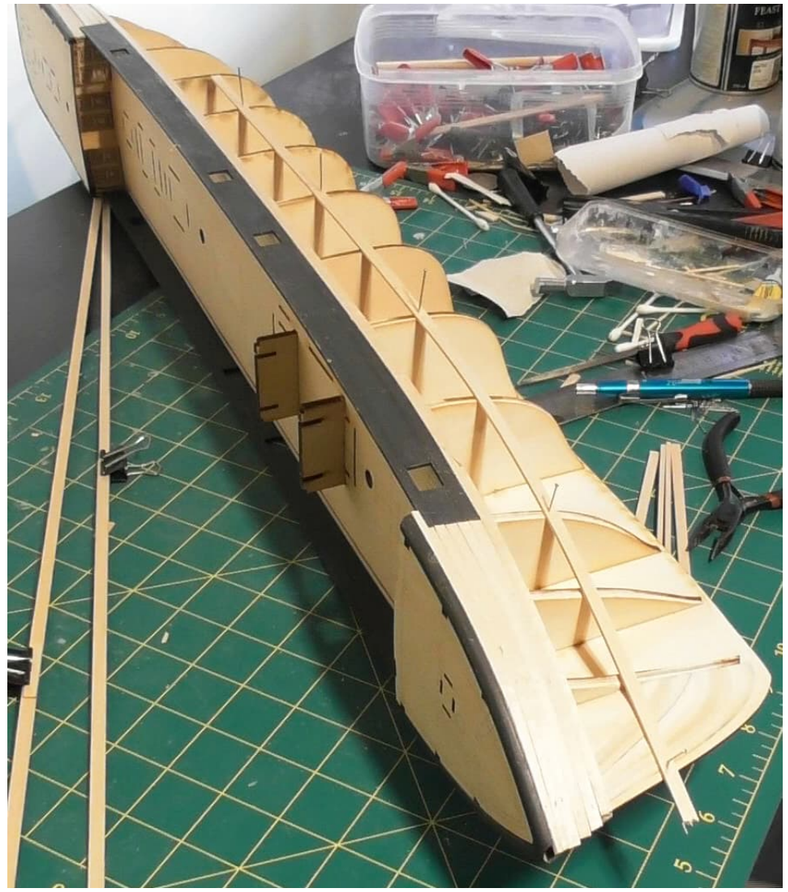
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7.4 Planking - Band One

The hull planking will be achieved in bands. Cut 4 lengths of planking long enough to fit across bulkheads 7 to 9 as shown. Place these lengths across the bulkheads immediately below the first plank fitted. Take a normal length of the planking - pin this plank temporarily in place below this band of 4 planks allowing it to run its normal course to the bow. Measure and record in a table the distances on each bulkhead between the underside of the first plank and the top of the temporary plank. Repeat the process with the temporary plank running its normal course to the stern as shown. The measurements at the mid-ship BHs will be 20mm (4x5mm). The measurements toward the bow will remain at 20mm - meaning these 4 planks will not need to be tapered as they progress towards the bow. However across the stern BHs it can be seen that the gap is widening - meaning a stealer will need to be fitted in the stern planking. Once all measurements have been taken and recorded remove the temporary plank. The following photos of planking within Band 1 will focus on the stern area only as there is no tapering required for the planks at the bow.









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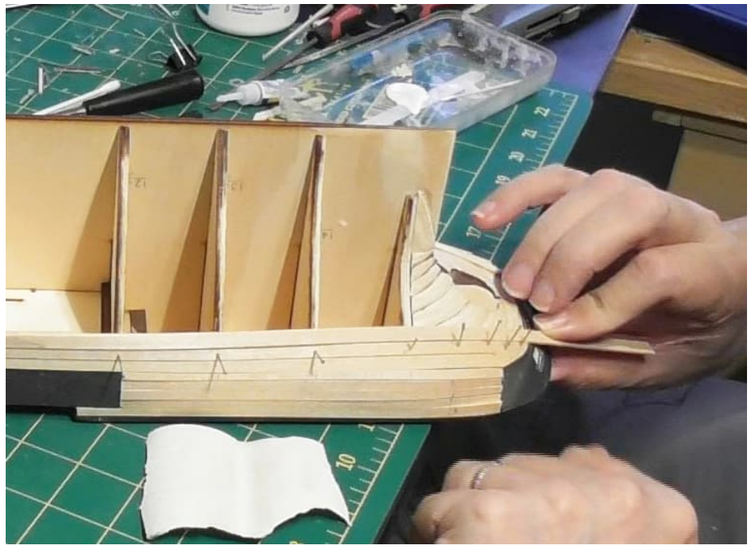
7.4.1 Planking - Band One - Plank 1

Retrieve the 7 window cut-outs from P47C - place each one in place to protect the window frames using tape. Trial fit plank 1 along the hull as shown. Shape the stern end to fit snugly under the transom. Fractionally adjust as required - once satisfied glue and pin the plank in position. Repeat for other side of hull.



7.4.2 Planking - Band One - Plank 2

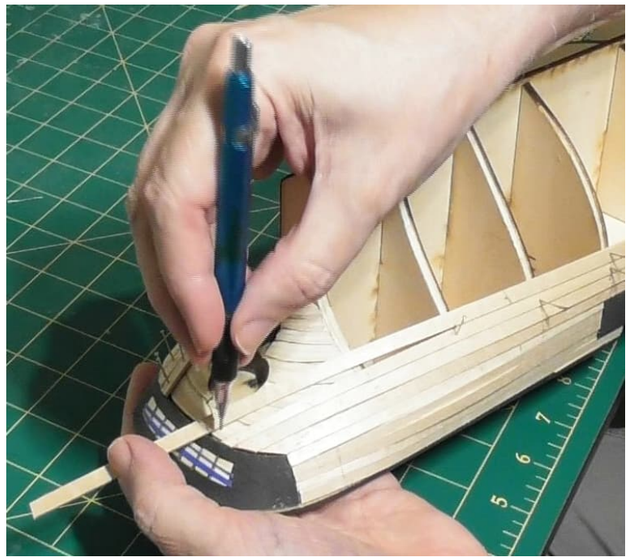
Trial fit the second plank - at the stern the plank may ride over plank 1 by approximately 1mm. Mark on plank 2 where this occurs - remove the plank and trim excess off. Fractionally adjust as required. Shape the stern end to fit snugly under the transom. Fractionally adjust as required - once satisfied glue and pin the plank in position. Repeat for other side of hull.

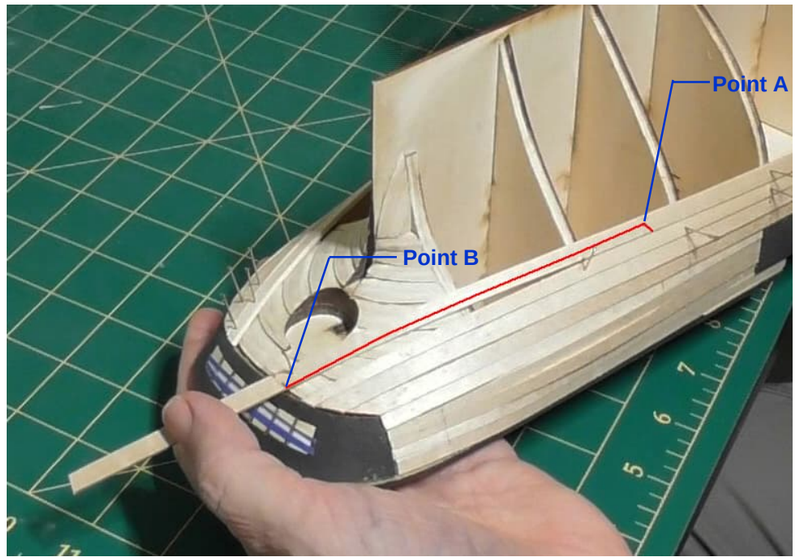


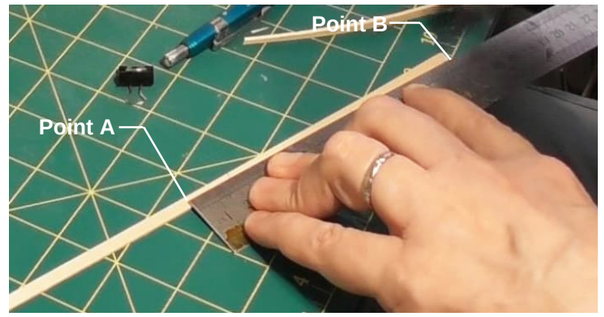


7.4.3 Planking - Band One - Plank 3

Trial fit plank 3 along the hull. Allow the plank to run its natural course - a gap will be created at the stern as shown - a stealer will need to be fitted into this gap. Make the gap 5mm wide - this will allow a full width stealer to be fitted in place. Temporarily pin the plank in place as shown - make a 3mm pencil mark at an angle at point A as shown. Remove the plank and lay it flat on the bench - use a steel rule and pointed blade knife to cut from point A to point B - leaving the plank width at point B 5mm. Completed shaping as shown.







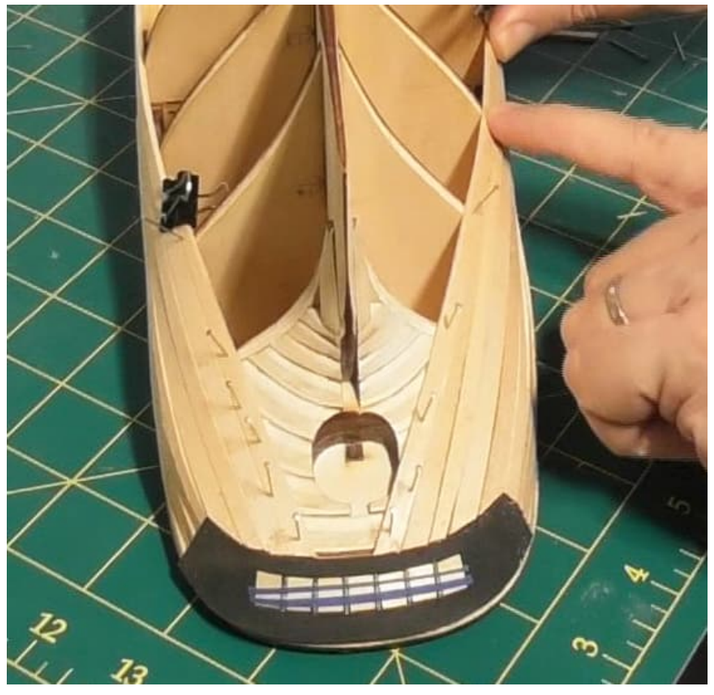


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7.4.3 Planking - Band One - Plank 3 continued
Cut and shape a stealer to fit in place - once satisfied glue and pin in place. Trial fit the reshaped plank 3 in place - fractionally adjust as required. Once satisfied glue and pin in place as shown. Use a rotary grinding tool to remove the plank over hang as shown. Repeat for the other side of the hull

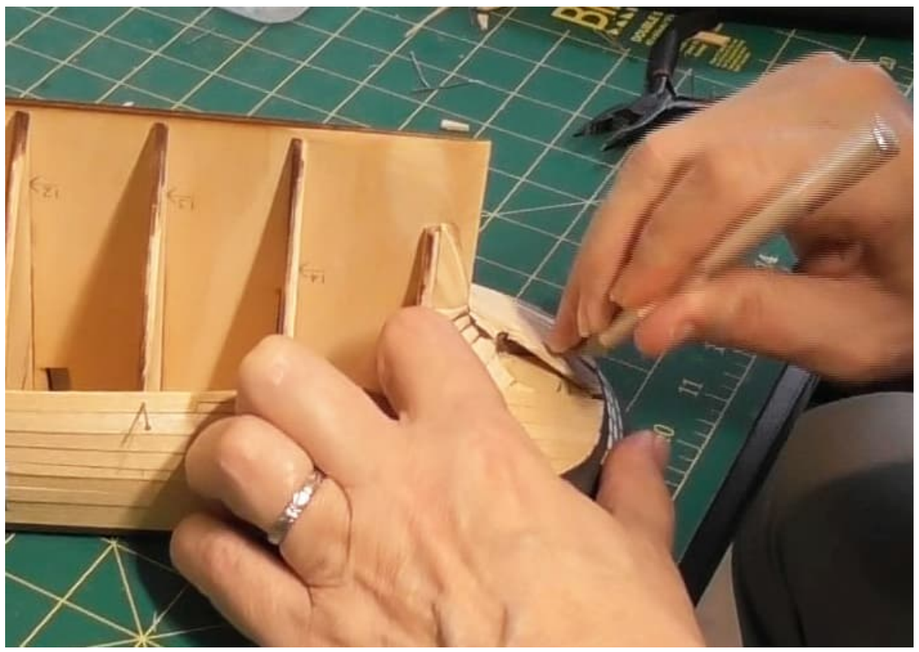






7.4.4 Planking - Band One - Plank 4
Trial fit the plank in place. Once satisfied glue and pin in place. Use a pointed blade to slowly and carefully remove the plank over hang as shown. Repeat for the other side of the hull.

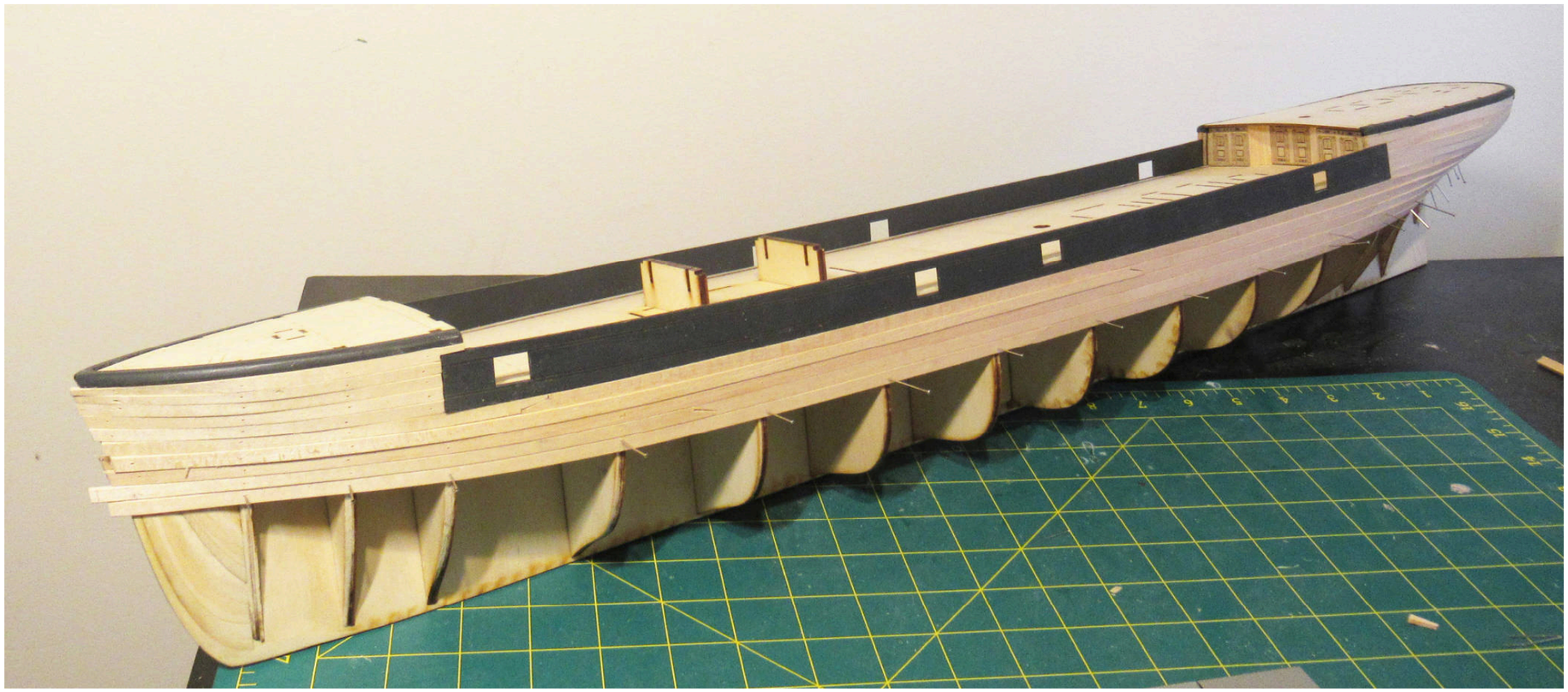


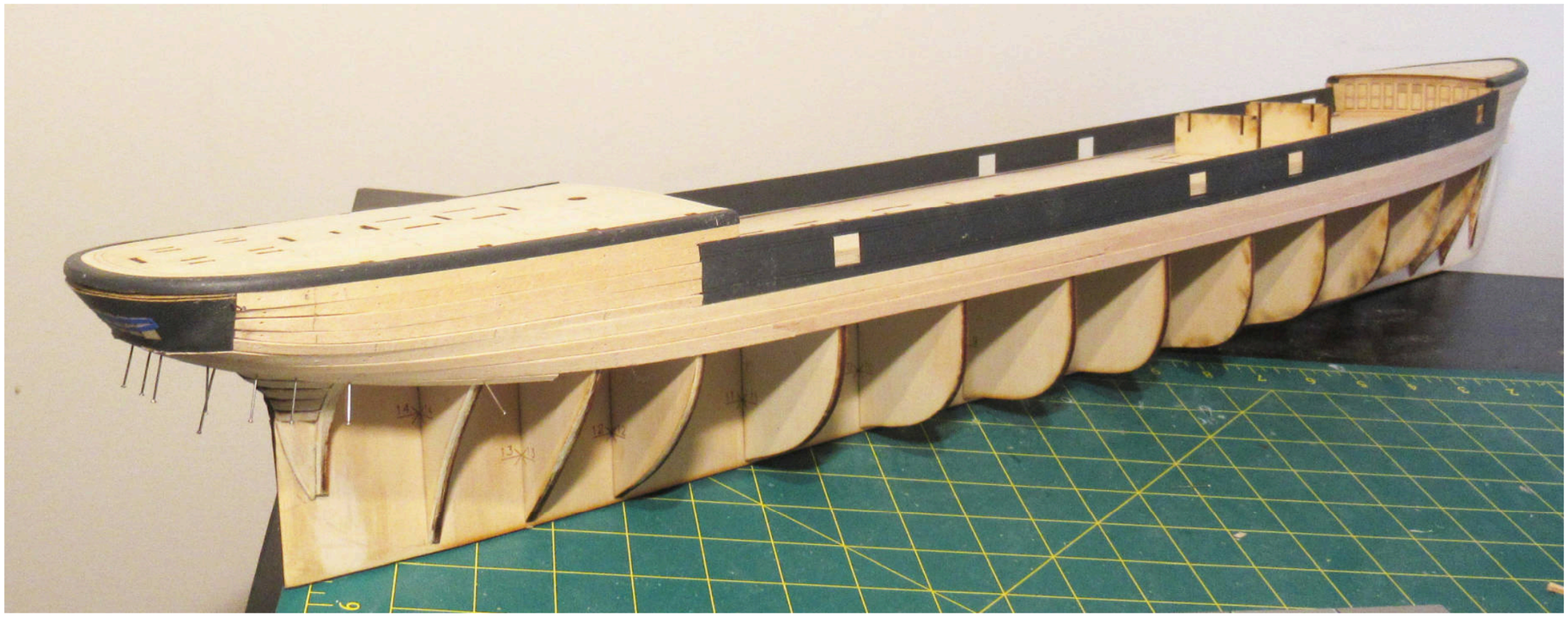




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7.4.5 Planking - Band One - Completed

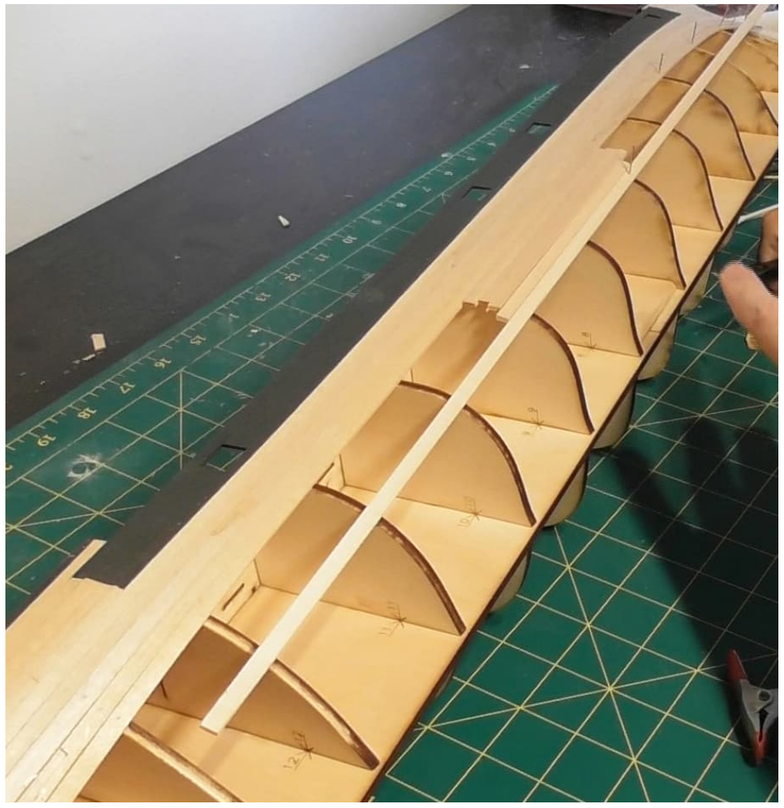


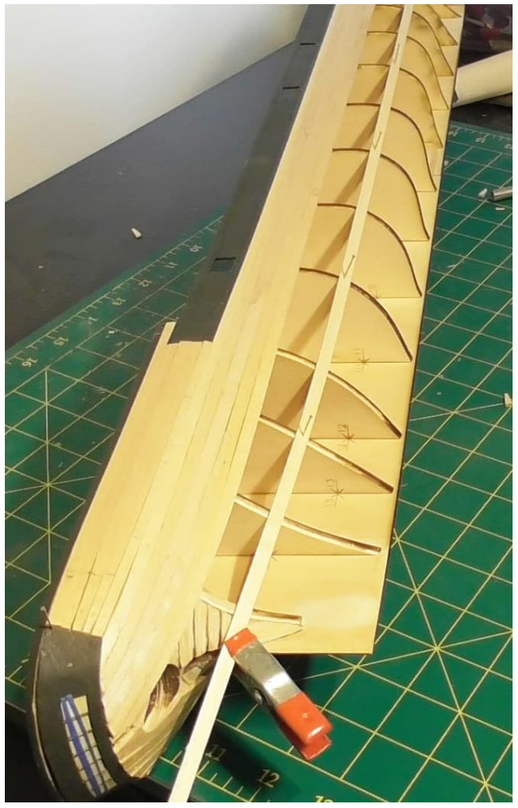


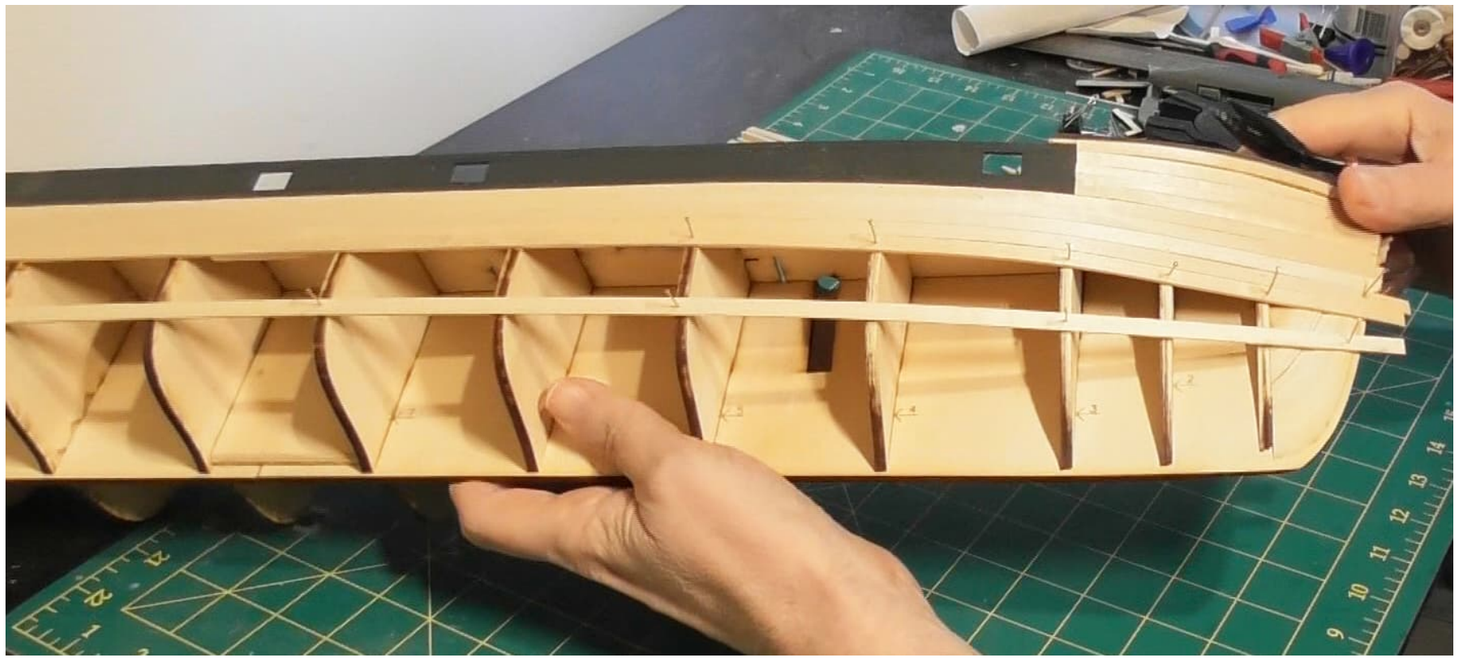
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7.5 Planking - Band Two

Use the 4 short lengths of planking and place across bulkheads 7 to 9 as shown. Place these lengths across the bulkheads immediately below the last plank fitted. Take a normal length of the planking - pin this plank temporarily in place below this band of 4 planks allowing it to run its normal course to the bow. Measure and record in a table the distances on each bulkhead between the underside of the last plank fitted and the top of the temporary plank. Repeat the process with the temporary plank running its normal course to the stern as shown. The gap reduces both fore & aft - this means there will be the need to taper and shape the planks within this band. The following photos of planking within Band 2 are a guide - the model builder can choose their own planking technique to achieve the same result.



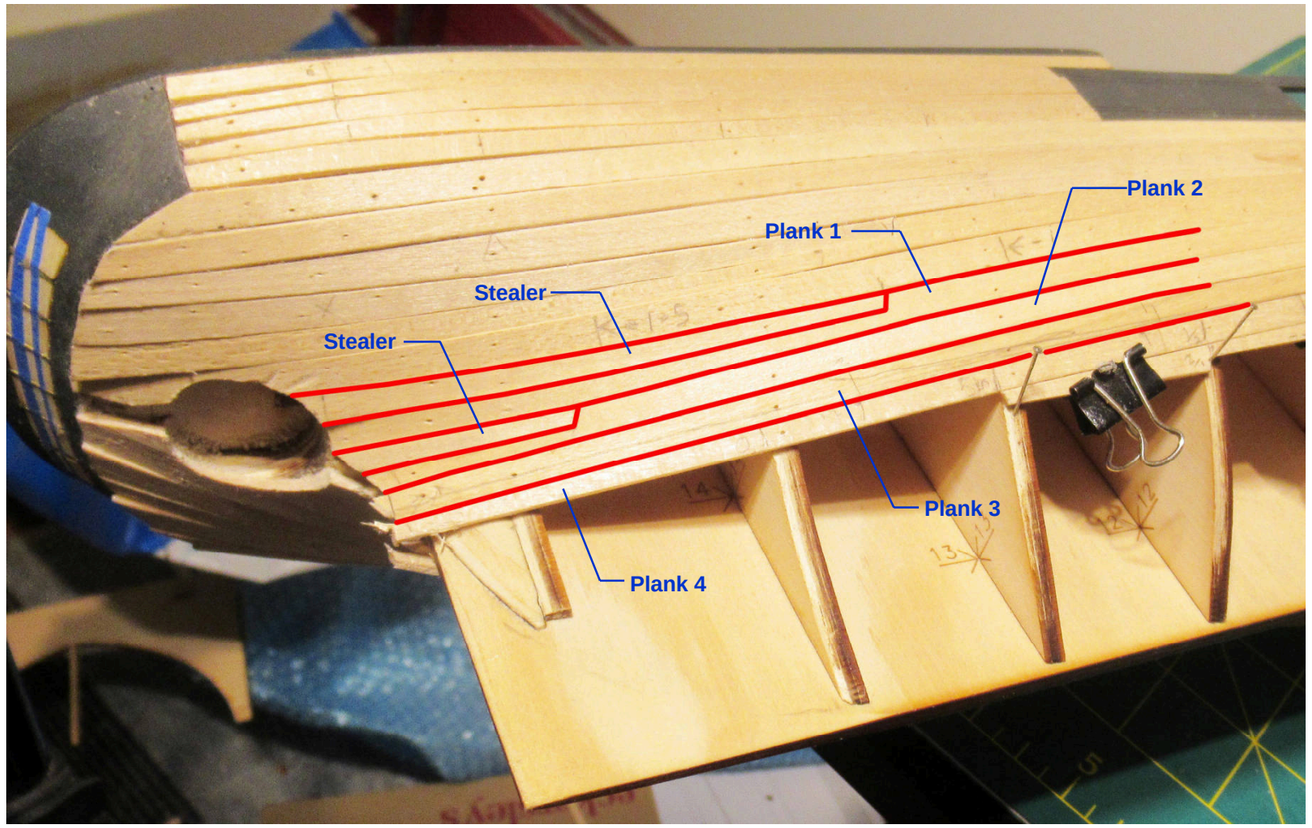


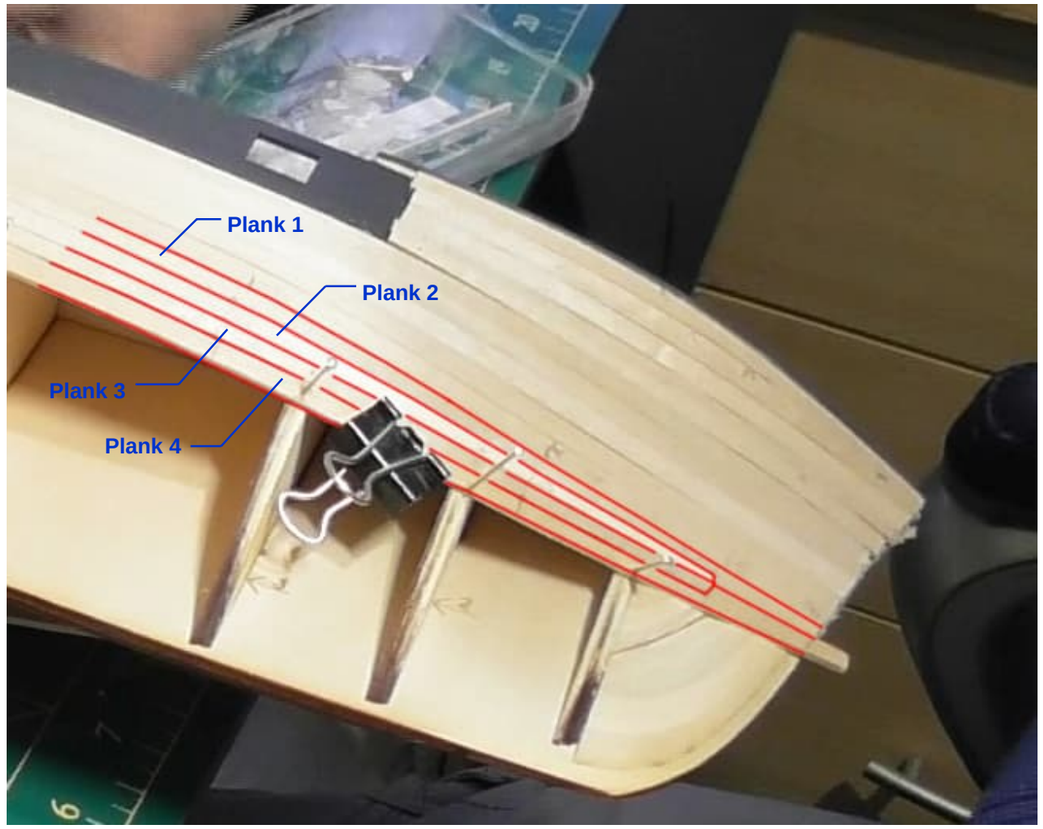


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7.5.1 Planking - Band Two - Planks 1 to 4
At the stern trial fit planks - allow the planks to run their natural course - determine where stealers will be required. Cut and shape planks and stealers accordingly.

At the bow 4 planks are reduced to 2 - measure and shape the planks accordingly as shown.

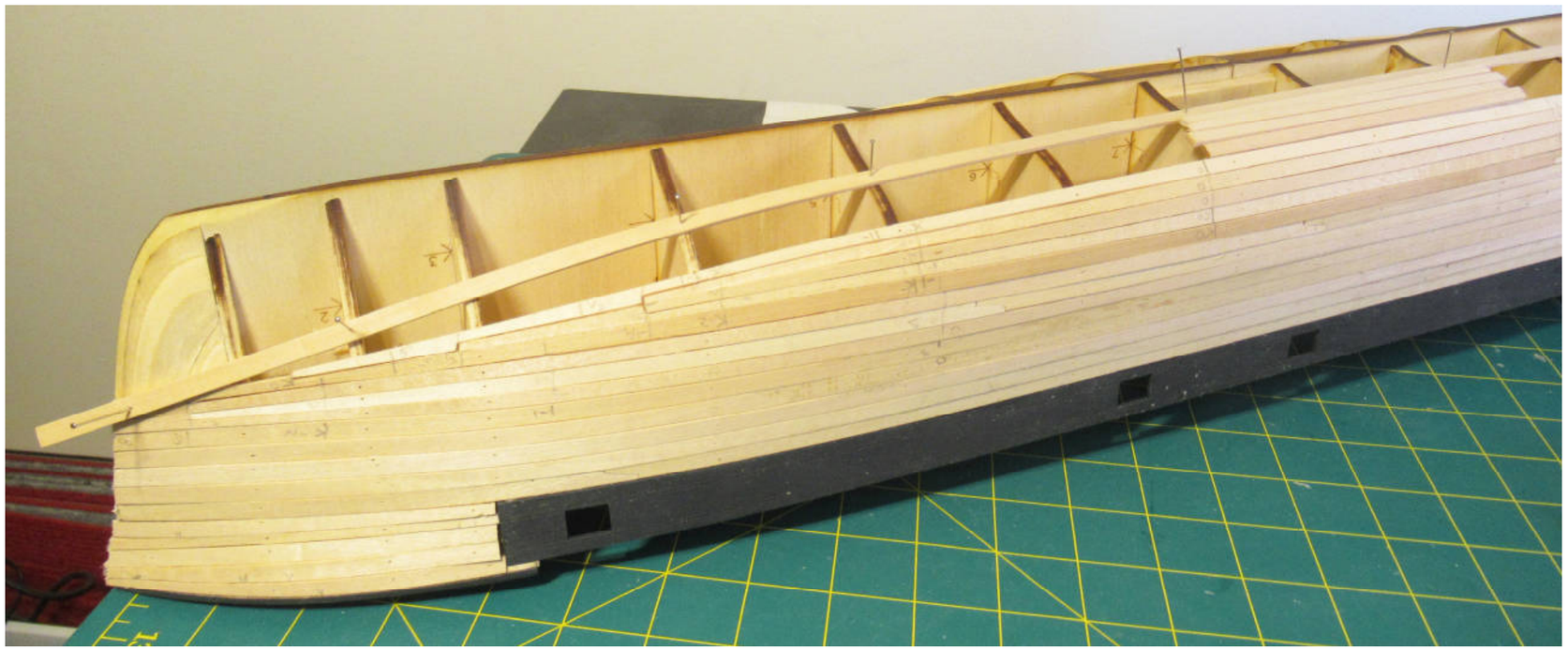


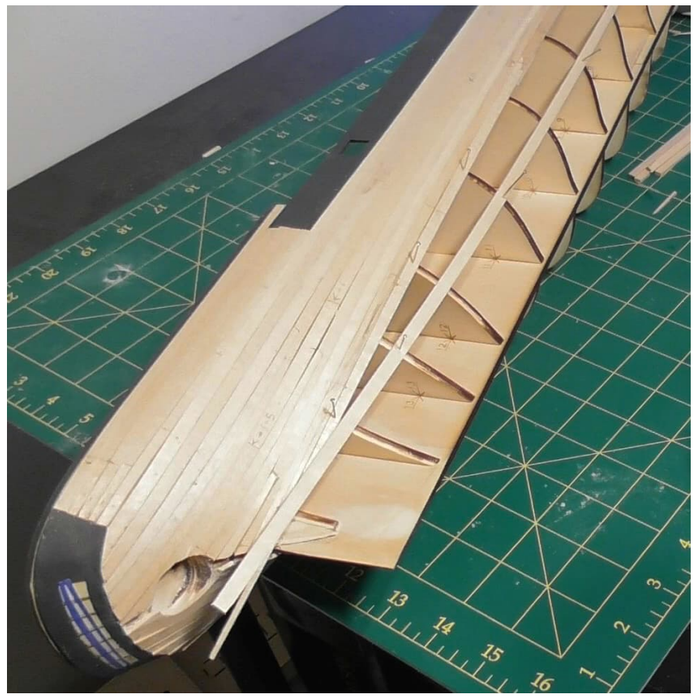


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7.6 Planking - Band Three

Use the 4 short lengths of planking and place across bulkheads 7 to 9 as shown. Place these lengths across the bulkheads immediately below the last plank fitted. Take a normal length of the planking - pin this plank temporarily in place below this band of 4 planks allowing it to run its normal course towards the bow. Measure and record in a table the distances on each bulkhead between the underside of the last plank fitted and the top of the temporary plank. Repeat the process with the temporary plank running its normal course towards the stern as shown. Notice the temporary plank does not reach the bow or stern - instead coming to a point intersection with the last plank of band two as shown. Utilise the measurements taken, apply the planking techniques of tapering, reducing 4 planks to 2 and plank joints creating interlocking joints as shown to close band three as shown.









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7.7 Planking - Band Four

Use the 4 short lengths of planking and place across bulkheads 7 to 9 as shown. Place these lengths across the bulkheads immediately below the last plank fitted. Take a normal length of the planking - pin this plank temporarily in place below this band of 4 planks allowing it to run its normal course towards the bow. Measure and record in a table the distances on each bulkhead between the underside of the last plank fitted and the top of the temporary plank. Repeat the process with the temporary plank running its normal course towards the stern. Notice the temporary plank reaches the stern but does not reach the bow - instead coming to a point intersection with the last plank of band three.

Utilise the measurements taken, apply the planking techniques of tapering, reducing 4 planks to 2 and plank joints creating interlocking joints as shown to close band four.







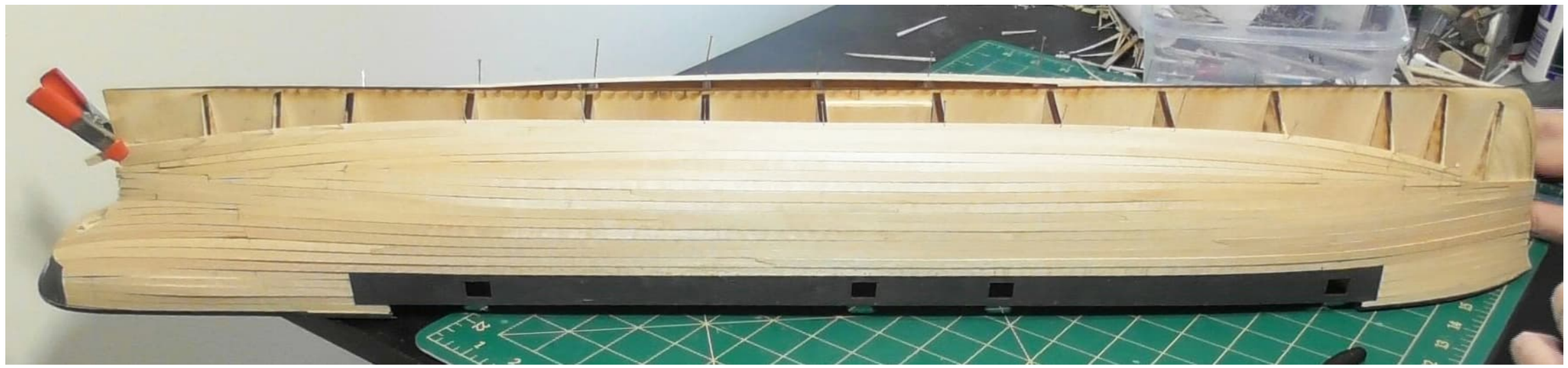
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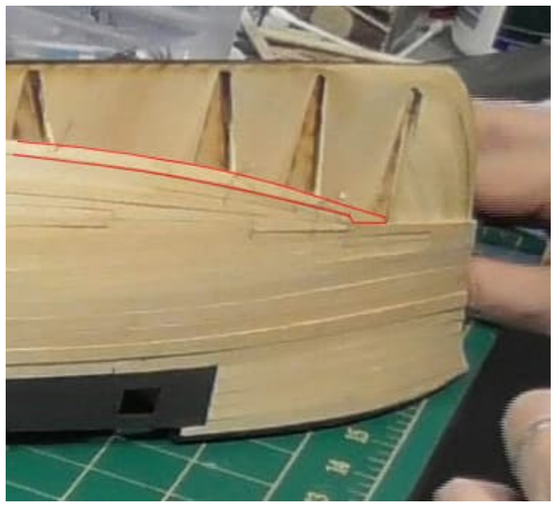
7.8 Planking - Last Band

Take measurements, apply the planking techniques of tapering, and creating plank joints and interlocking joints as shown to close the band.

7.8.1 Planking - Last Band First Plank

Fit this plank as shown - note at the stern the plank is allowed to run its natural course. At the bow an interlocking joint is created as shown. Repeat for the other side of the hull.



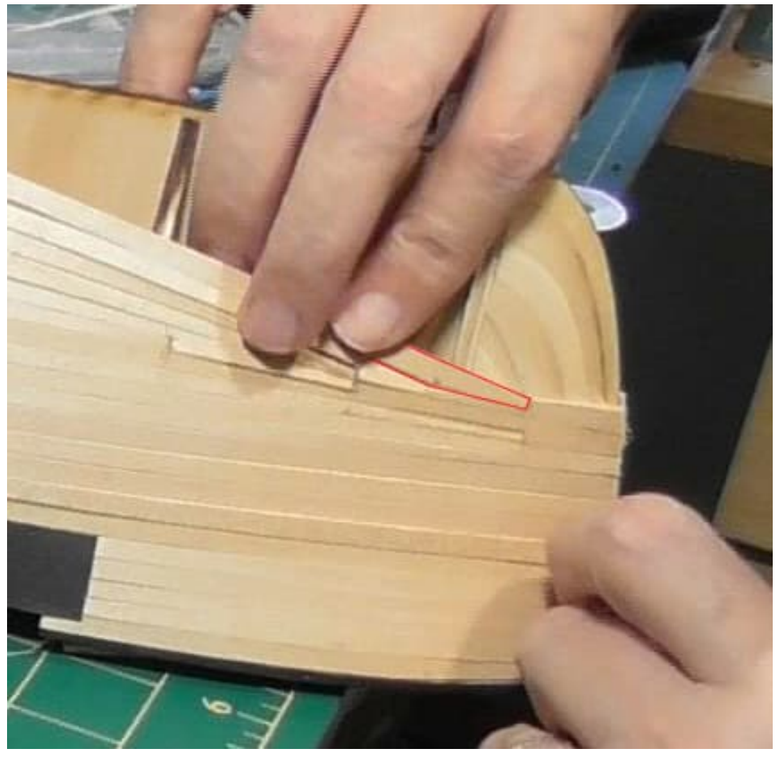


7.8.2 Planking - Last Band - Second Plank

Fit a wedge at the bow as shown. Lay a plank along the hull allowing it to run its natural course to the bow as shown - mark when it overlaps with the wedge. Remove the overlap area in the wedge. Shape the bow end of the plank to fit into this area as shown - fractionally adjust as required. Glue and pin the plank in place along the length of the hull - allow the plank to follow its natural course to the stern. Repeat for the other side of the hull

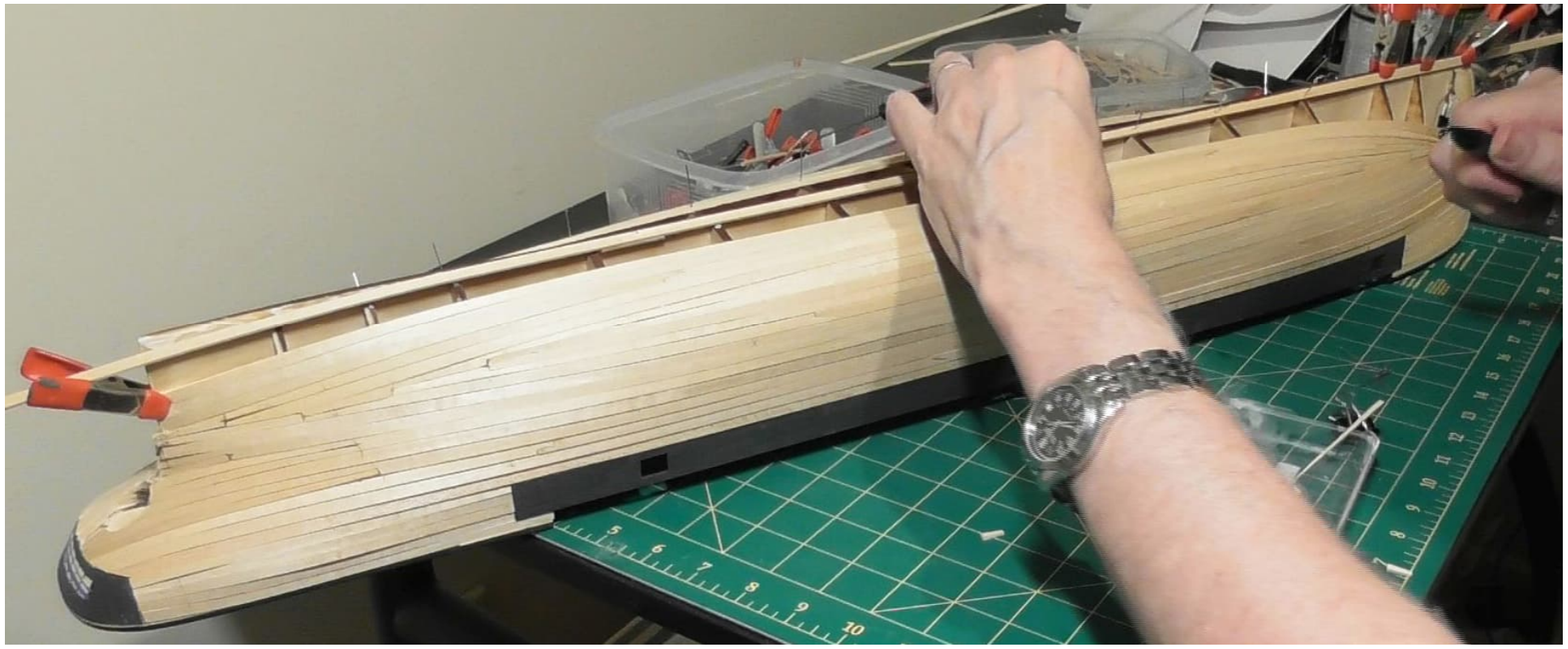






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7.8.3 Planking - Last Band - Third Plank
This plank is the garboard plank - it is fitted along the length of the hull immediately adjacent to the base of the keel. Glue, pin and clamp the plank in place as shown. Repeat for the other side of the hull.



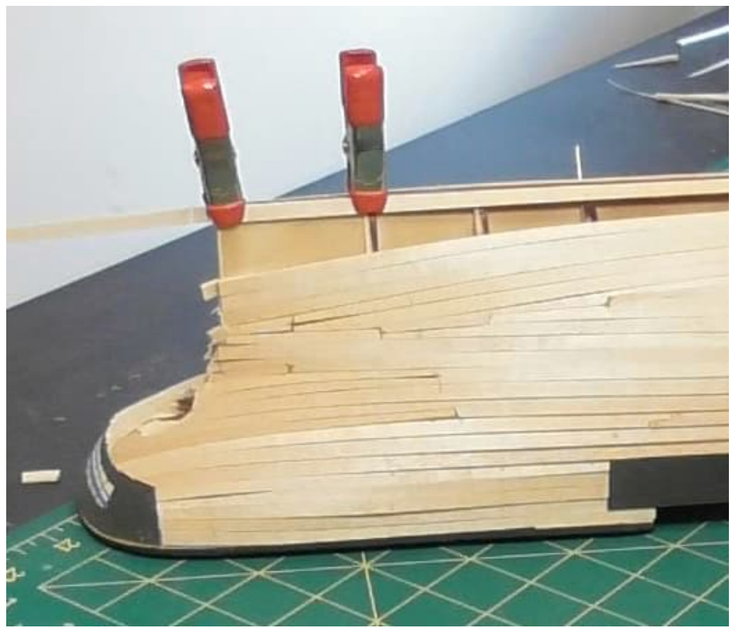


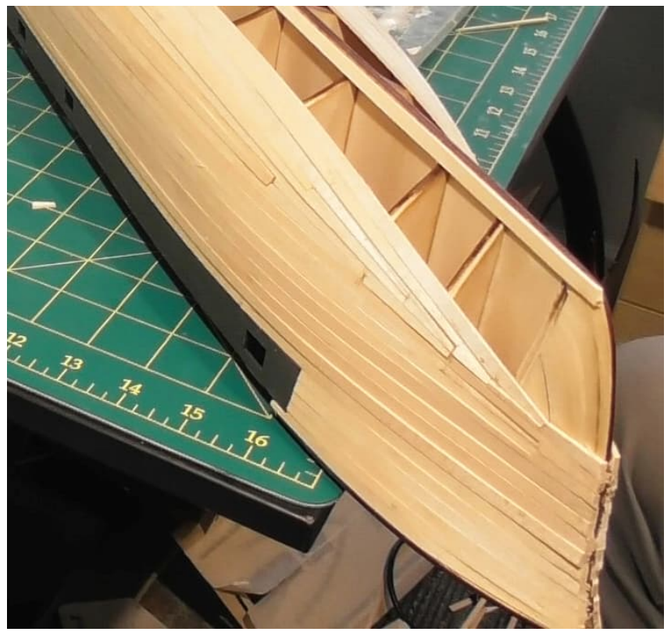


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7.8.3 Planking - Last Band - Fourth Plank

As can be seen the gap at the bow is wide - progressing along the hull the gap narrows before becoming wide again at the stern. Take measurements, apply the planking techniques of creating wedge joints along the plank as shown. The 4th plank will require a wedge to be fitted at the stern as shown. Notice a wedge joint has been made further along the plank - see the following sheet. At the bow the plank is fitted immediately below the garboard plank as shown.



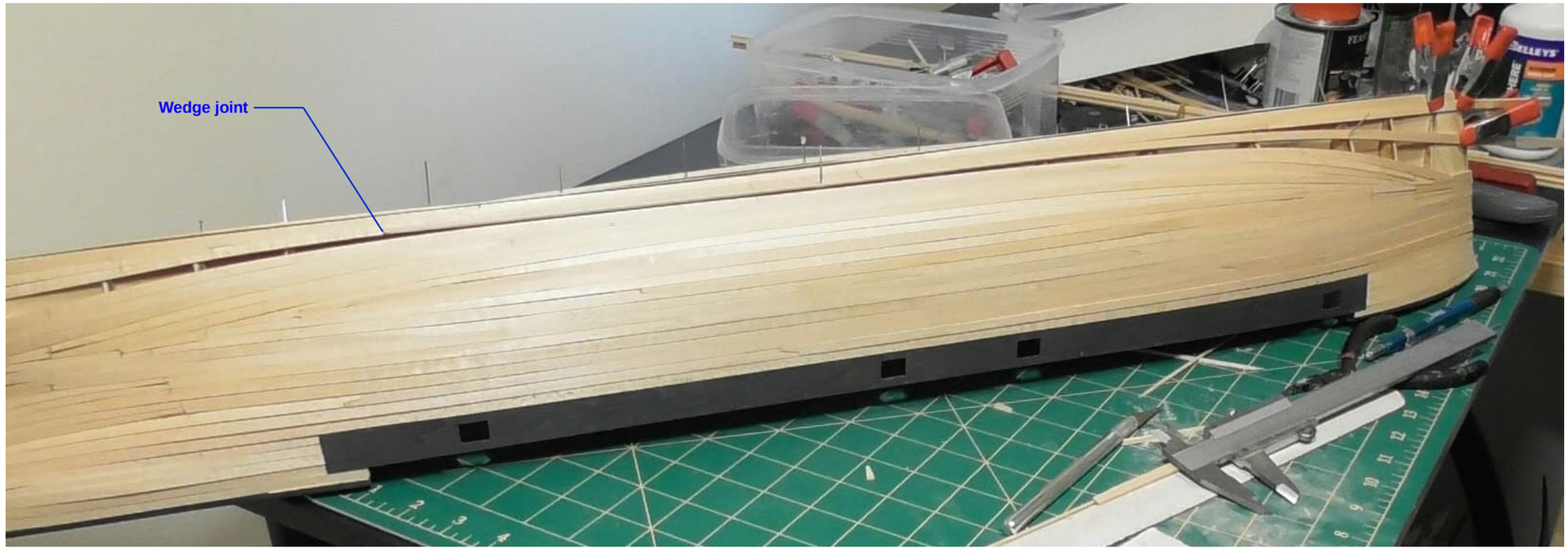




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7.8.3 Planking - Last Band - Fourth Plank continued

The continuation of the 4th plank is shown from the wedge joint - taper the plank to meet the wedge joint to the full plank width at the bow. Allow the plank to run its natural course towards the bow as shown. Once satisfied glue and pin the plank in place. To fill this gap shape and fit wedges in place as shown.





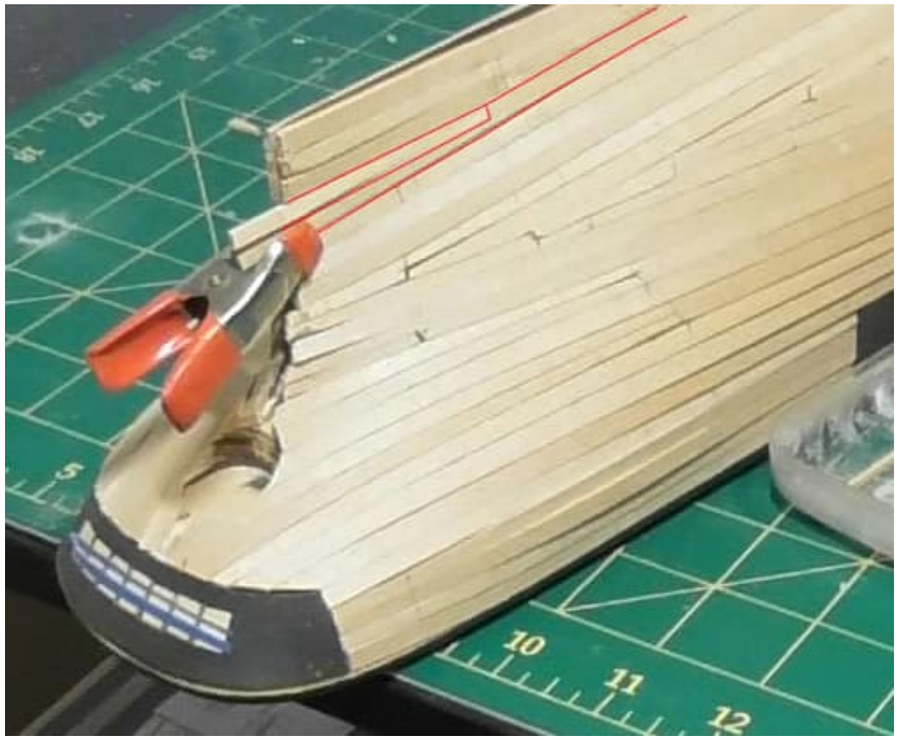
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7.8.3 Planking - Last Band - Close the band

The remaining gap is closed by trial fitting a plank along the hull - there maybe the need to fractionally adjust the width of the gap mid-ship to fit the plank in place. At the stern shape and fit a wedge to close the band. At the bow shape and fit a number of wedges to close the band. Once satisfied glue, clamp and pin the plank and wedges in place. Repeat for the other side of the hull.







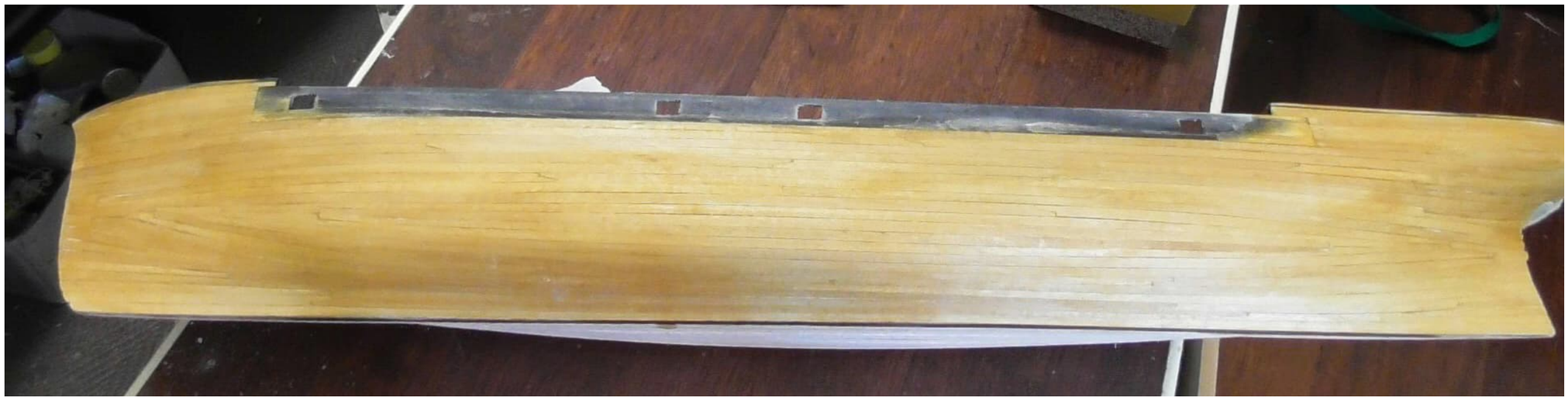


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7.9 Sanding the Hull

Take the hull to a well ventilated area and using a medium and fine grade sanding blocks sand the hull until it is completely smooth. Fill any minor gaps with a mixture of sanding dust and white wood glue - once dry sand again. Use a small piece of sandpaper to reach any hard to access areas on the hull. Take your time in this process to achieve a good result. Next apply shellac (French Polish) to the hull - allow to dry and then review the hull. The shellac will reveal any small remaining imperfections - use fine grade sandpaper to address these imperfections.





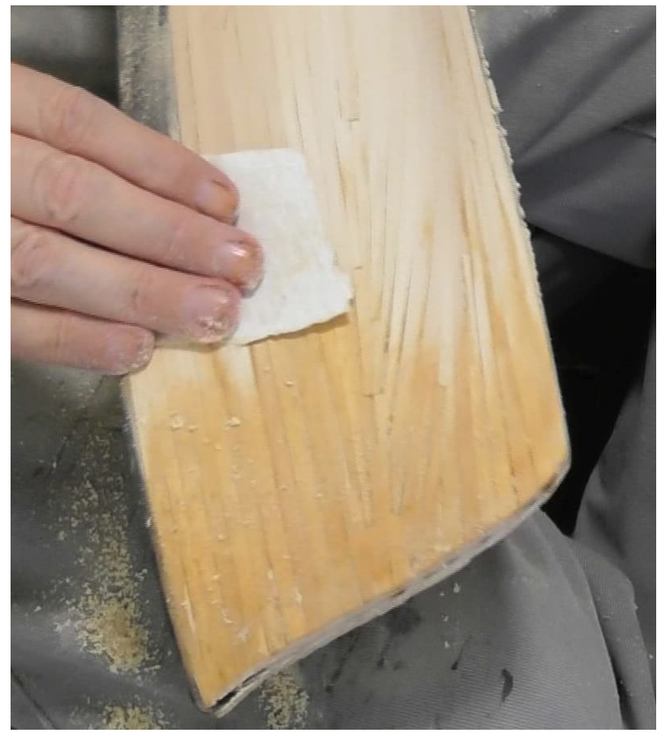
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7.9 Sanding the Hull continued

Continue to sand the hull - the stripes of shellac indicate the planks are a little uneven - as you continue to sand the stripe of shellac will be removed and there will be a smooth transition across the planks. Take your time with this process. Continually review the hull to identify any remaining shellac.

Remember in the deadwood area to gradually reduce the plank thickness so there is a smooth transition from the planks to the stern post thickness of 4mm.





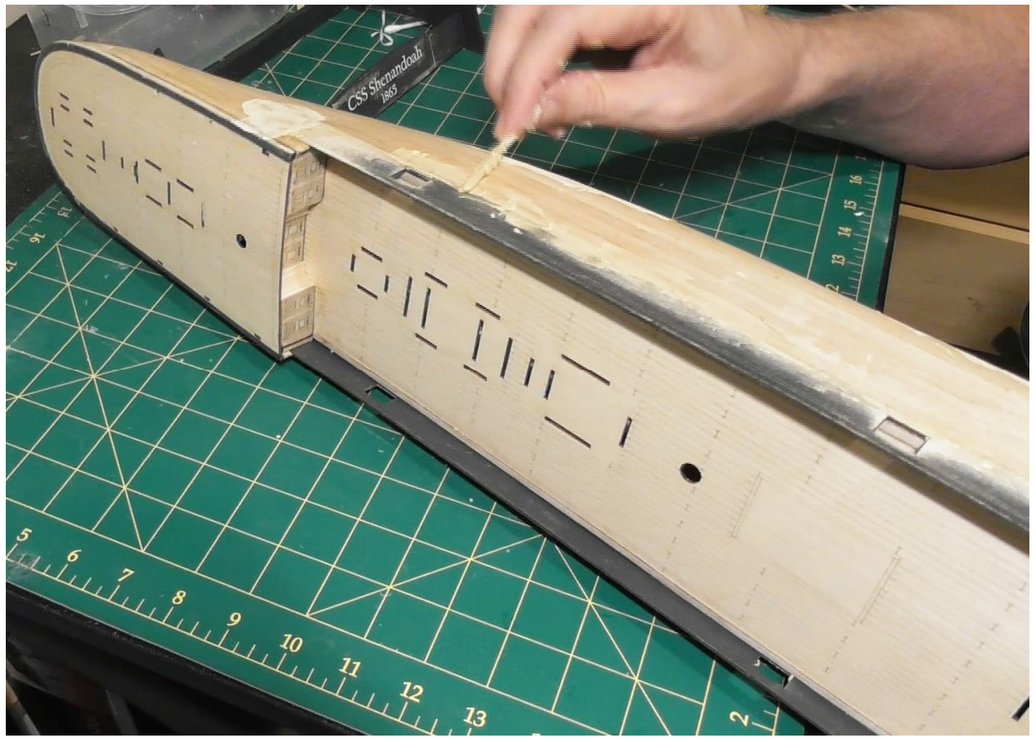


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7.9 Sanding the Hull continued

Using a water based wood filler - mix with some water to form a soft paste - apply this paste to parts of the hull to fill any gaps and to achieve a smooth transition across all the planks. Keep working the paste into the hull as shown. Once satisfied allow the paste to fully dry - then in a well ventilated area sand the hull fully again.







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7.10 Stem Post, Stern Post and Keel

Identify the stem post P50, stern post P51 and the keel parts P52A and P52B. Trial fit the parts in place - ensure the slots for each parts are clear of any glue residue. Once satisfied glue and pin the stem post in place as shown - drill a few 0.8mm holes in the stem post and use map pins to hold it in place while the glue sets then remove map pins. Glue and clamp in place the stern post as shown. Starting from the stem post glue and pin in place the keel P52A followed by P52B. Once all the parts are fixed in place use wood filler to fill any gaps. Lightly sand the parts. Make sure there is a smooth transition from the planking to the stem post and to the stern post.







7.11 Bowsprit Hole

Insert a length of 8mm dowel into the bowsprit hole as shown to make sure the hole is clear of any impediment.



7.12 Transom Detail

Identify the transom detail P53 - briefly insert into a container of hot water - remove and glue in place as shown - tape may be needed to hold the edges in place while the get sets.

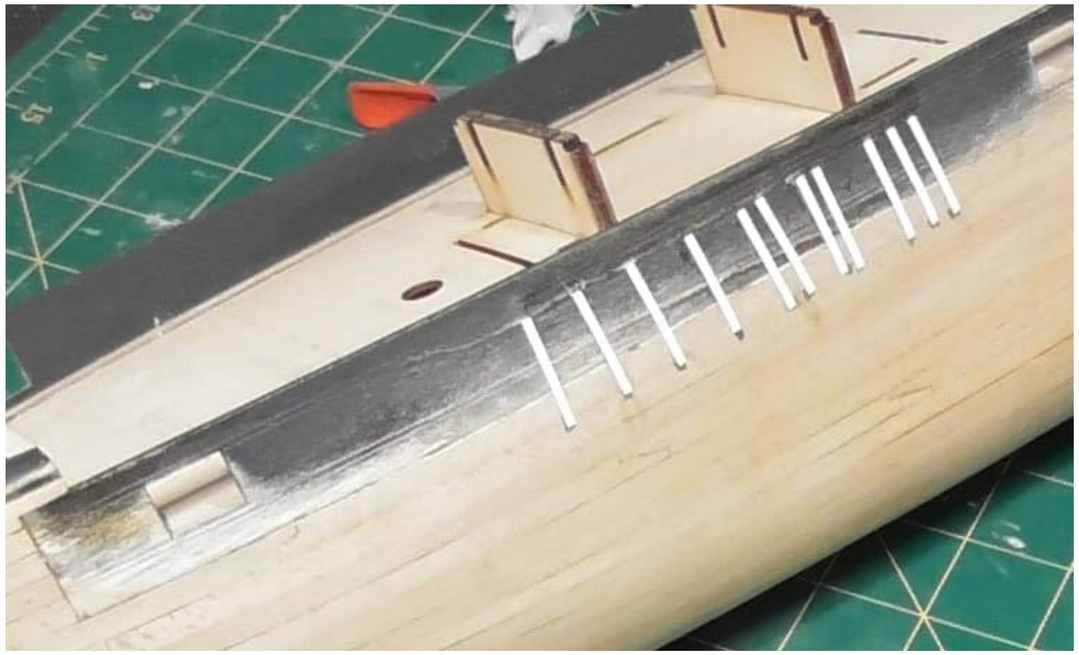


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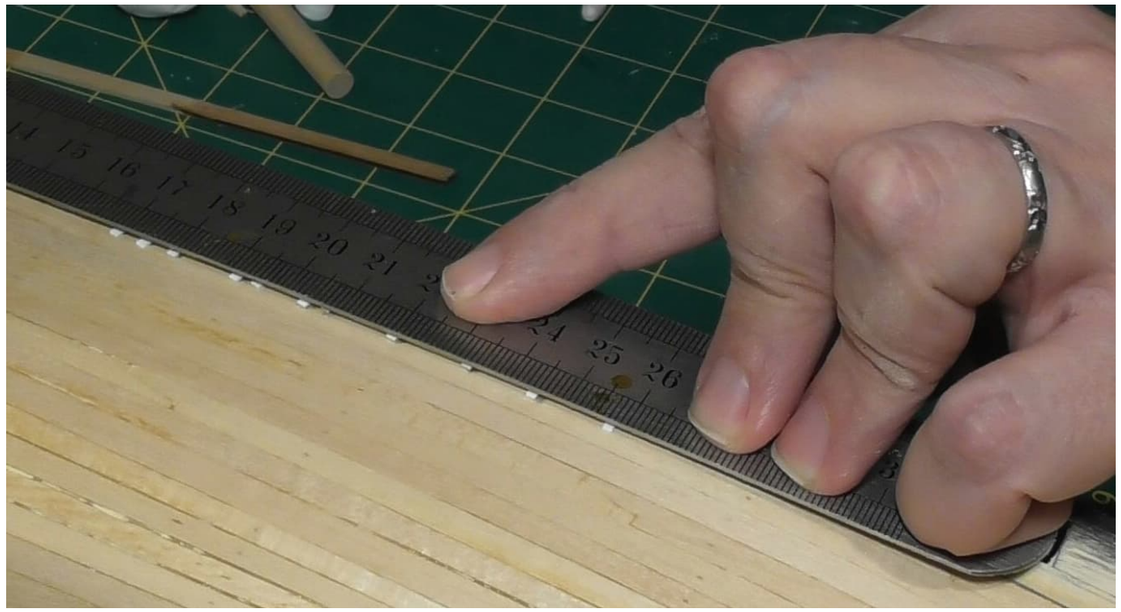
7.13 Deadeye Straps

Identify the deadeye straps for the main and fore masts P54. Cut at the score lines 48 x 22mm lengths. On the bulwark see the score lines for the straps. Highlight these score lines with a pencil as shown. Take a length of batten strip P25A - starting with the foremast straps clamp the strip in place along the underside of the top edge of the two gun ports as shown. Glue in place the cut straps immediately below the strip and following the score lines as shown. Identify on the hull the bottom of the first plank fitted - pencil mark as shown. Align a metal rule with these lines and use a knife to trim the excess strap length as shown. Repeat for the other side of the hull.









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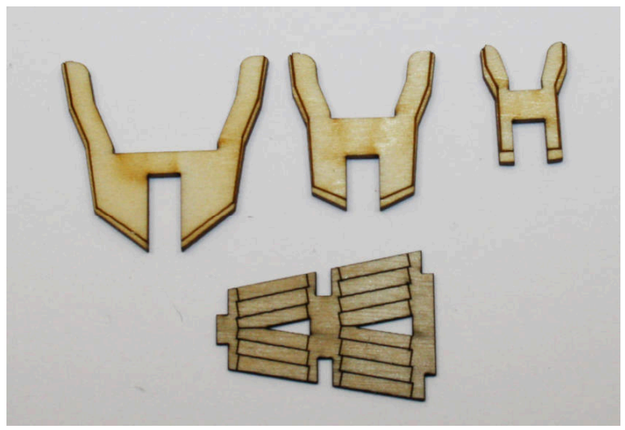
7.13 Deadeye Straps continued

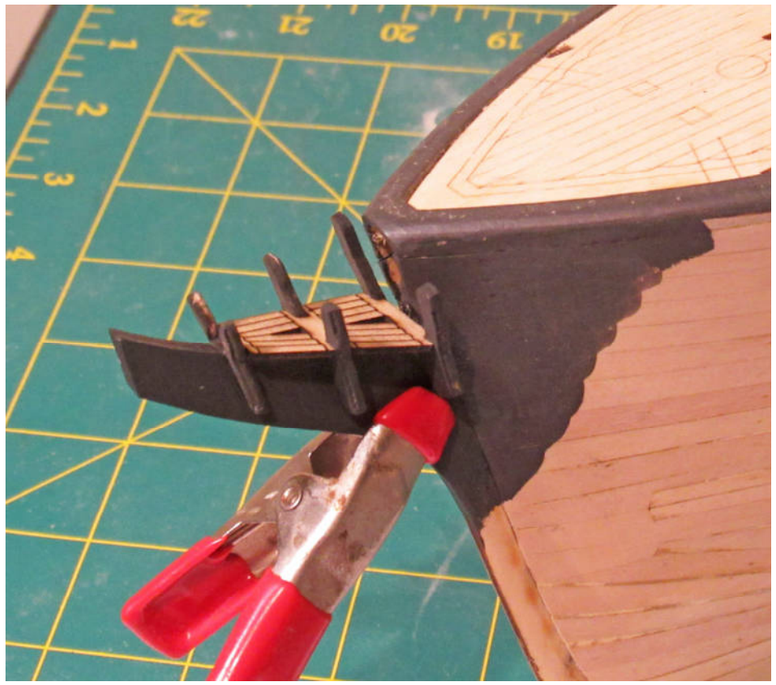
Apply the same approach for the main mast straps as shown. Repeat for the other side of the hull.



7.14 Head trusses and Head Floor

Paint the bow area matt black as shown. Identify the Head trusses P55A-C - notice the fairing score line - shape each truss accordingly. Paint the trusses matt black as shown. Trial fit the trusses in place - fractionally adjust as required - once satisfied glue in place as shown. Identify the Head floor P56 - trial fit and fractionally adjust as required - once satisfied glue in place across the base of the trusses.





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7.15 Head board and Trail board

Identify the head board P57 and head board trim P58. Glue the trim in place onto the board as shown. Identify the trail board P59 and trail board trim P60.Glue the trim in place onto the board as shown. Paint both assembled boards matt charcoal black as shown.







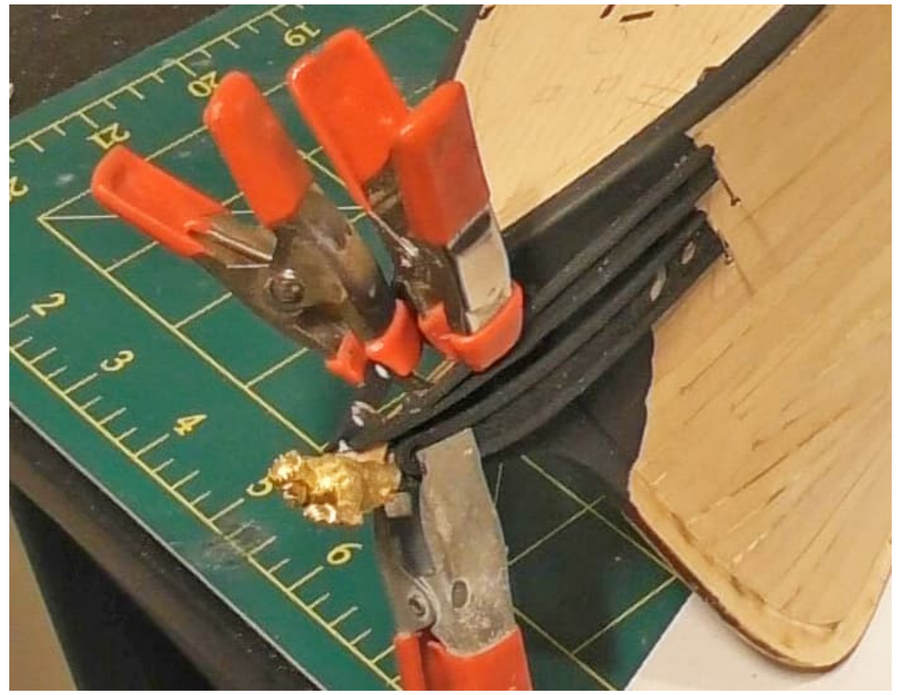


7.16 Sea King figurehead, Head board and Trail board

Identify the Sea King figurehead P61 - temporarily fit in place - glue packing pieces in place if needed. Trial fit the assembled head board in place - the board fits from the top back of the figurehead and the top edge rests across the top of the head trusses as shown - fractionally adjust as required - glue in place once satisfied. Trial fit the assembled trial head board in place - the bottom edge of the board rests across the lower edge of the head trusses as shown - fractionally adjust as required - before gluing in place mark the hawse holes - remove the trail board and drill the holes - once finished glue the trail board in place as shown. Remove the figurehead and store safely for fitting later.





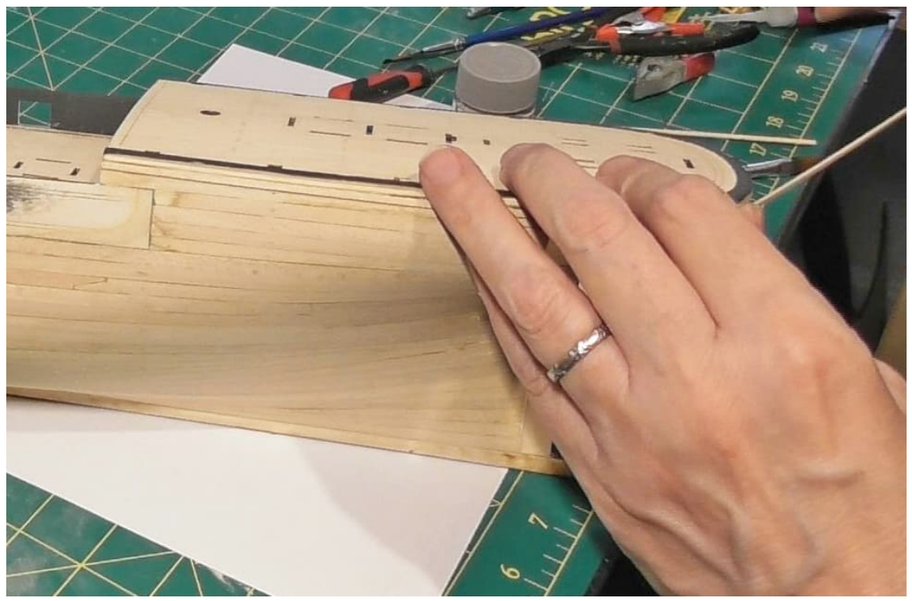


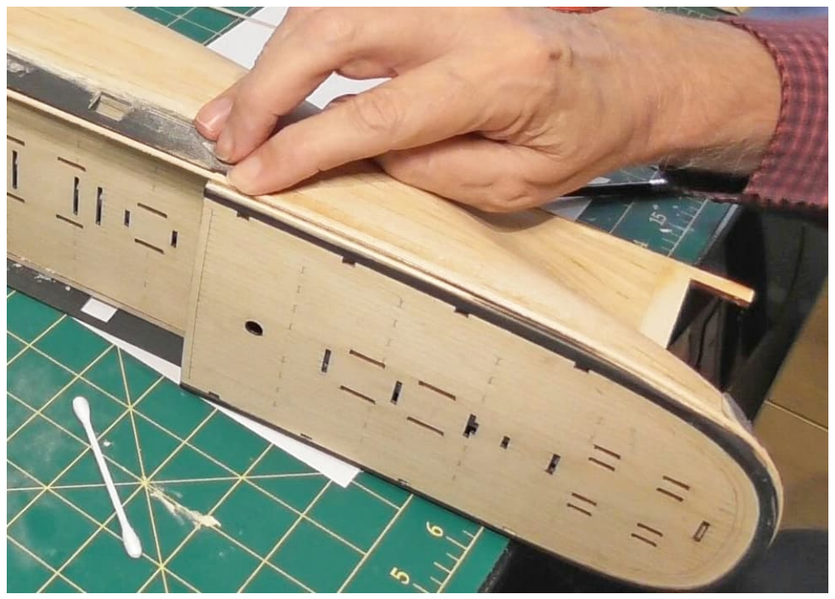
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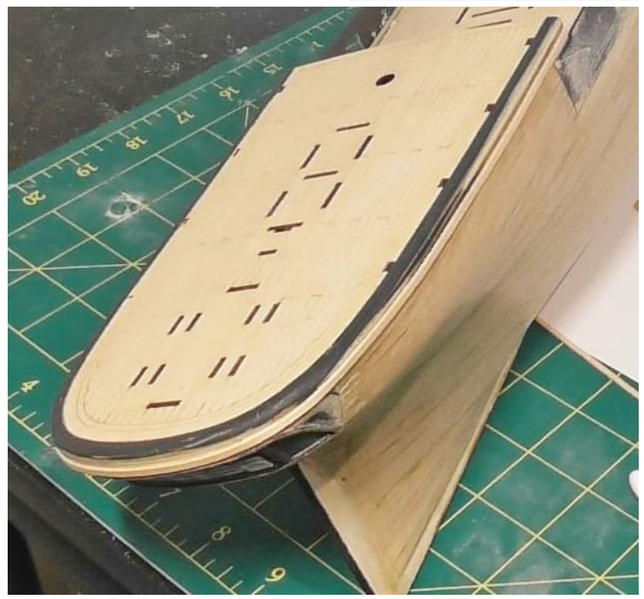
8.0 Battens

8.1 Quarter Deck Batten

Take a length of batten strip P25A as a batten - using a cyanoacrylate (super glue) start at the forward edge of the top plank of the quarter deck - immediately below the quarter deck base rail - slowly and carefully glue stitch the strip around the top edge of the quarter deck as shown. Trim-off excess strip.

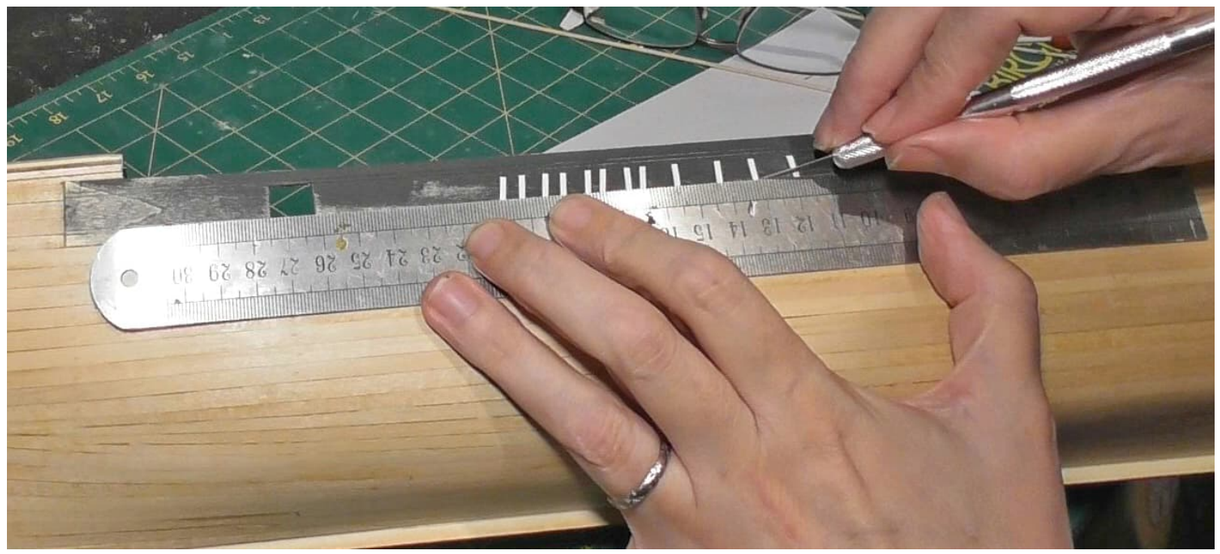






8.2 Lower Hull Battens

Starting with the foremast straps align a steel rule along the bottom edges of the gunports - following the score line of the bulwark. Use a pointed blade knife to slowly and carefully cut through each of the straps. Next move the rule down to the next score line and again cut through the straps.



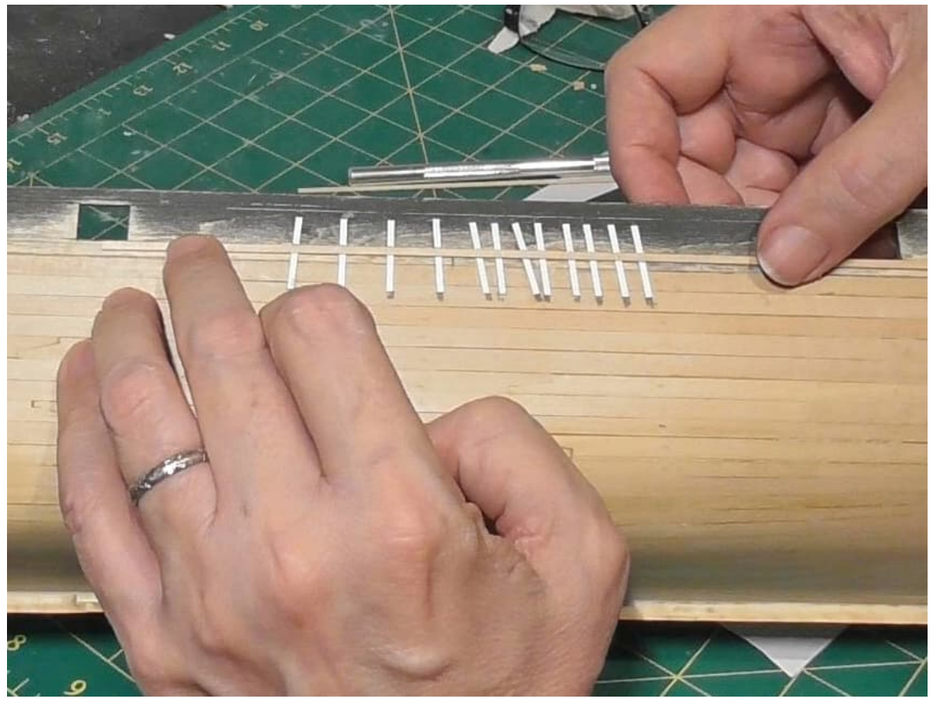


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8.2 Lower Hull Battens continued

Once the two cuts on each strap are complete remove the strap pieces as shown. Trial fit a length of batten strip P25A in the gap. Fractionally adjust the gap as required. Repeat for the main mast and then the other side of the hull.







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8.2 Lower Hull Battens continued and Forecastle Deck Battens

Take lengths of batten strips P25A. Using a cyanoacrylate (super glue) start at the top edge of the trail board - slowly and carefully glue stitch the strip along the hull aligning with the base of the gunports and passing through the gap in the straps as shown - finishing at the lower corner of the transom as shown. Note: There will be the need to joint lengths of the batten strips to complete the run along the hull. Cut and glue in place a length of batten strip P25A to run along the lower edge of the forecastle deck rail base as shown - repeat for the other side. Identify the fairleads P74 - glue each in place 15mm from the end to the forecastle deck batten as shown.





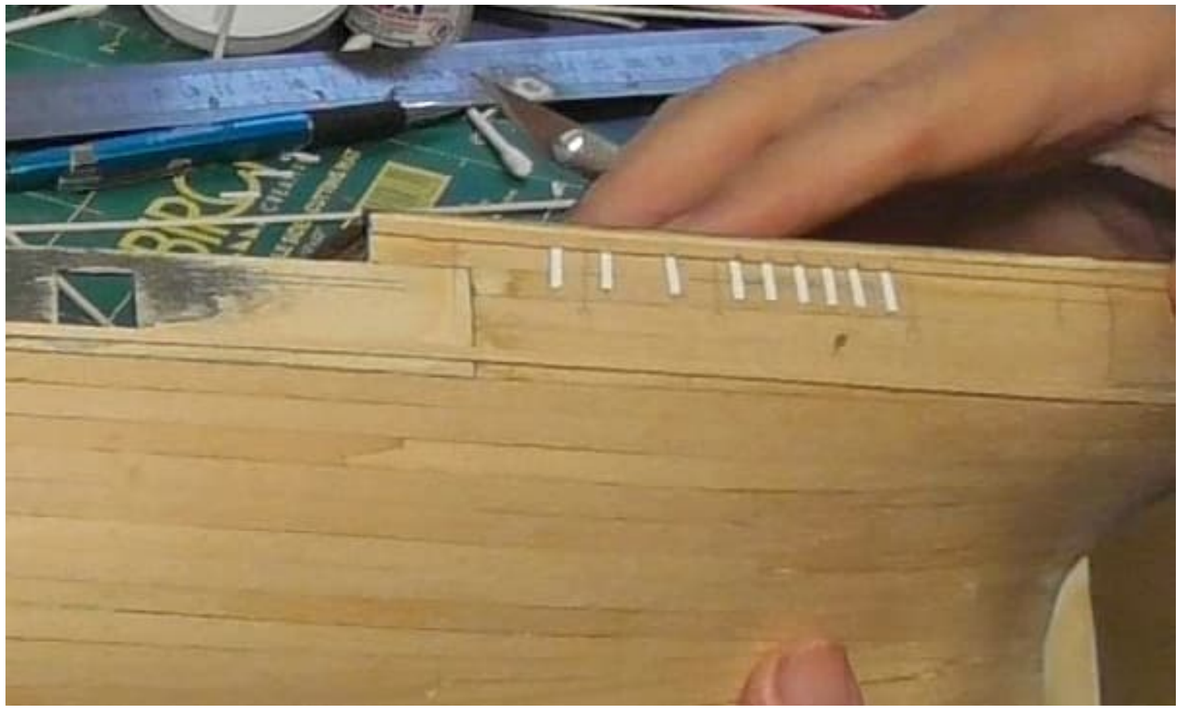
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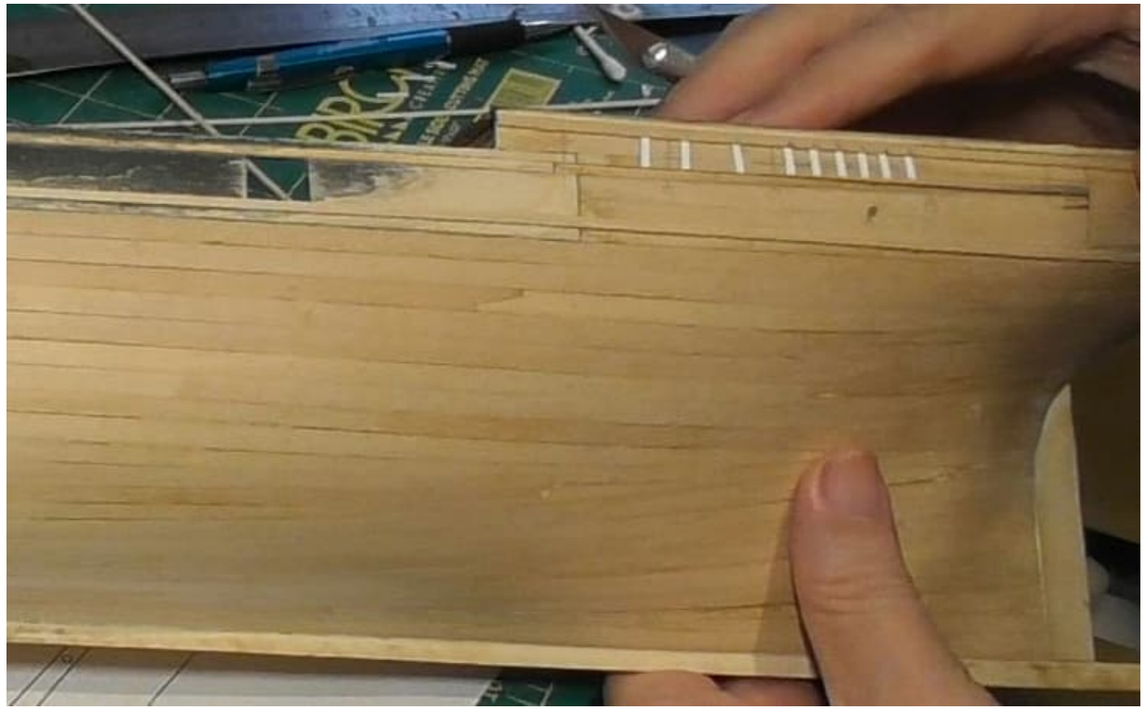
8.3 Mizzen Mast Deadeye straps

Identify the mizzen mast D/E strap and quarter deck port hole template P62 Sheet 128. Cut-out the template and place starboard template immediately below the quarter deck batten and aligned with the forward edge of the cabins as shown. Mark the location of the straps above and below template - also mark the location of the portholes. Identify the mizzen D/E straps P63 - cut to length using the score lines. Glue the straps in place as shown. Align a length of batten strip P25A along the top edge of the gunports - allow the plank to run its course along the hull as shown - clamp in place - allow to run over the mizzen mast straps as shown - use pointed blade knife to trim excess length of straps.





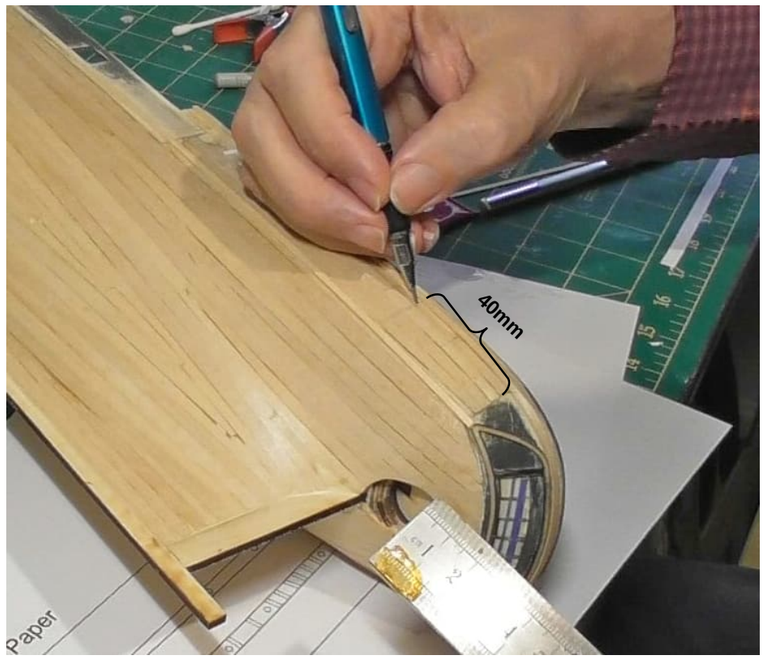


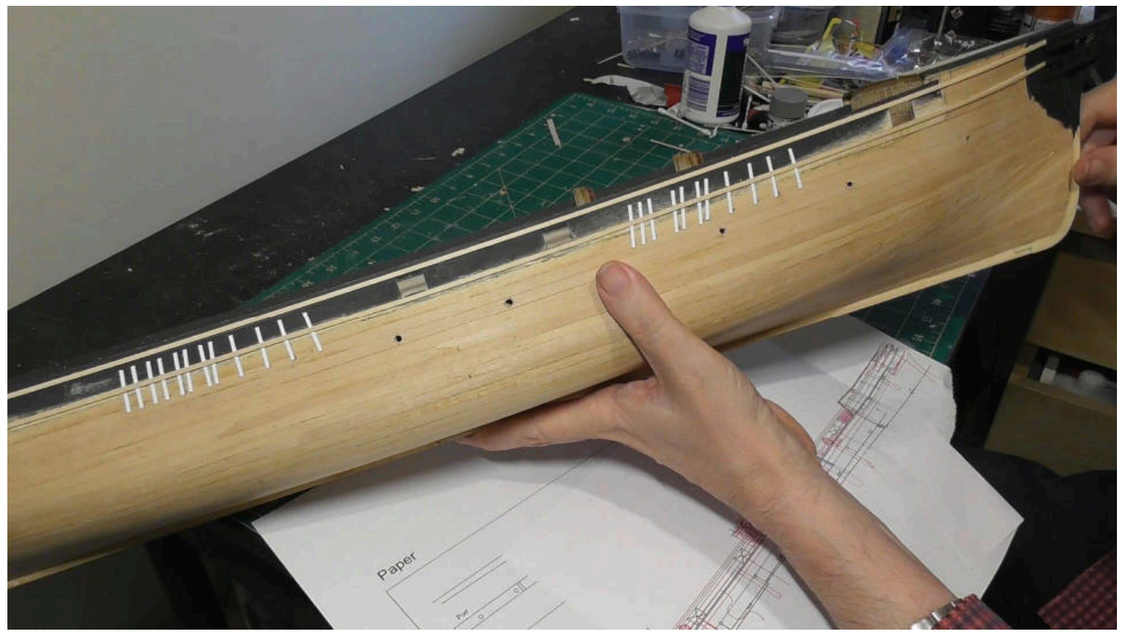


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8.4 Upper Hull Battens

Measure from the edge of the transom frame 40mm along the hull planking as shown - mark a vertical line - the upper hull batten finishes at this line. Taking a length of batten strip P25A glue the upper batten in place - start at the top of the head board as shown and following the score lines progress along the top edge of the gunports - finish the batten at the vertical line as shown.





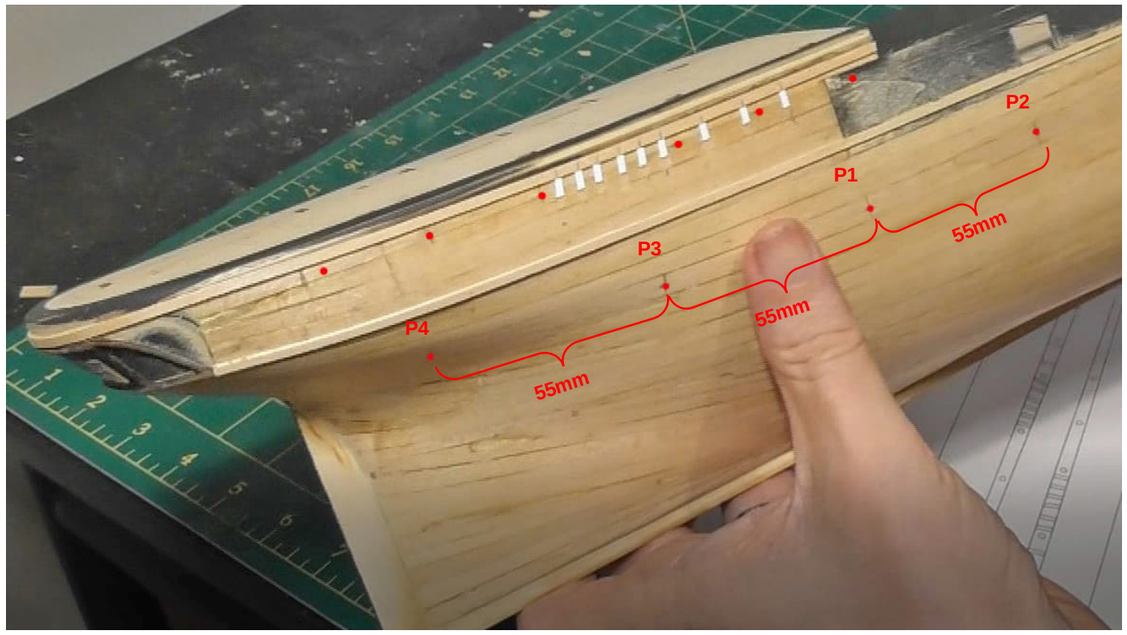




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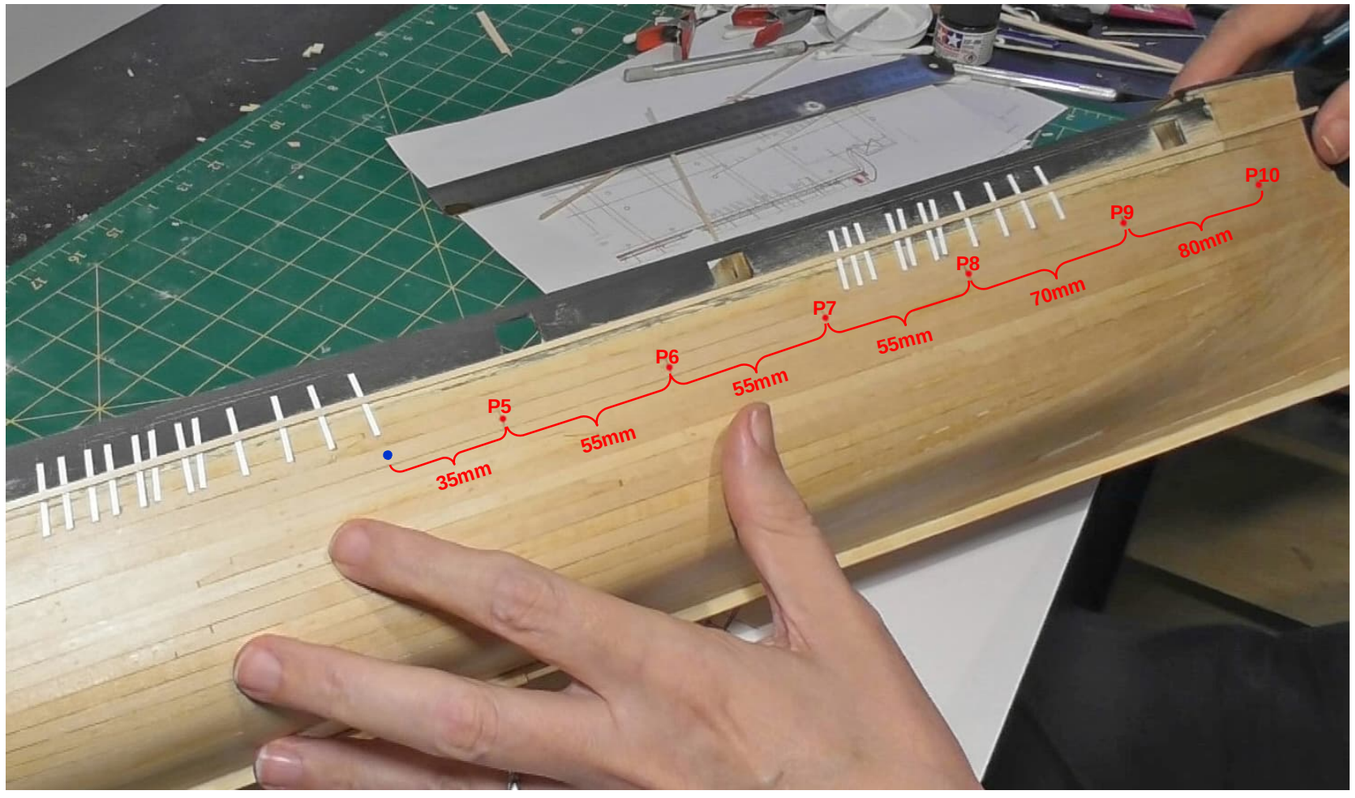
8.5 Port Holes

At the stern end of the bulwark draw a line vertically down to the third plank below the bulwark and place a mark in the centre of the plank - this is P1. Make the measurements as shown to mark P2, P3 & P4. Mark each point with an awl and drill 3mm holes. For the forecastle port holes mark the points as shown - mark with an awl and drill 2mm holes. For the quarter deck port holes use the D/E strap template to locate the port holes - mark with an awl and drill 2mm holes.





From the first main mast strap project vertically down to the third plank below the bulwark - mark this point as shown in blue. Progressing forward mark the points P5 to P10 along this plank at the distances shown. Mark points with an awl and drill 3mm holes.

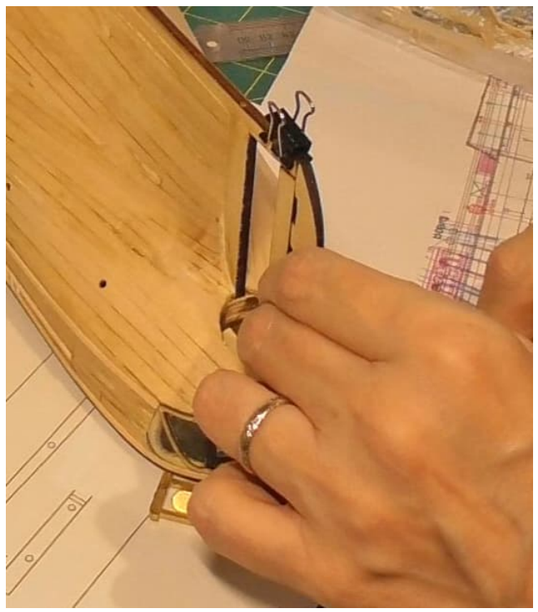


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8.6 Rudder and Propeller Assembly

Identify the rudder post P64, rudder P65 and the propeller assembly P66. Trial fit the rudder post and clamp in place as shown. For the rudder round the edges of straight side and slightly taper to the curved side. Place the rudder in place against the post with its bottom aligned with the bottom of the keel as shown and mark the location of the hinge slots onto the post. Identify the rudder hinges P67 - fit each hinge in place on the rudder and post as shown - drill 0.7mm holes into post and rudder and fix hinges in place with glue and nails P68. Trial fit the assembled post and rudder - fractionally adjust as required. Temporarily place the propeller assembly in place as shown to give the exact location of the post and rudder - once satisfied glue and clamp the post in place as shown. Once glue has set remove the propeller assembly.









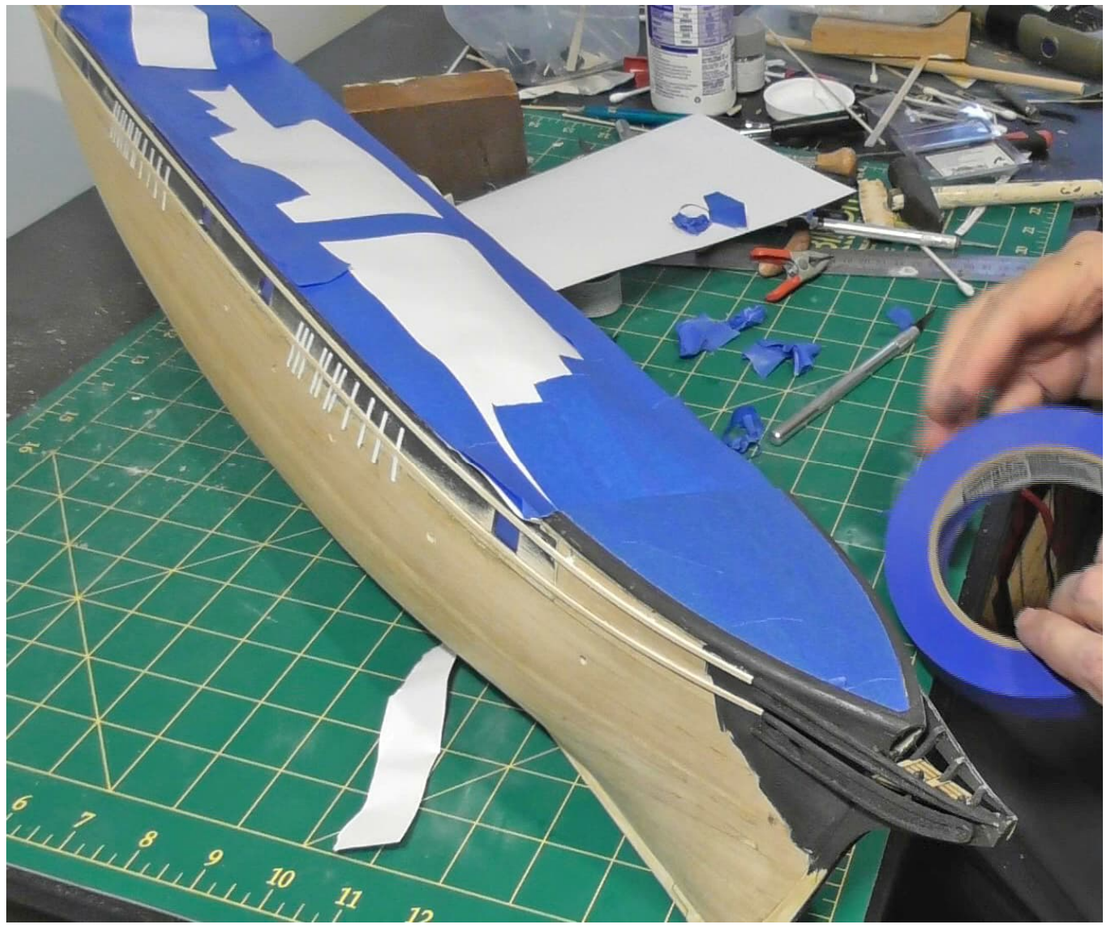


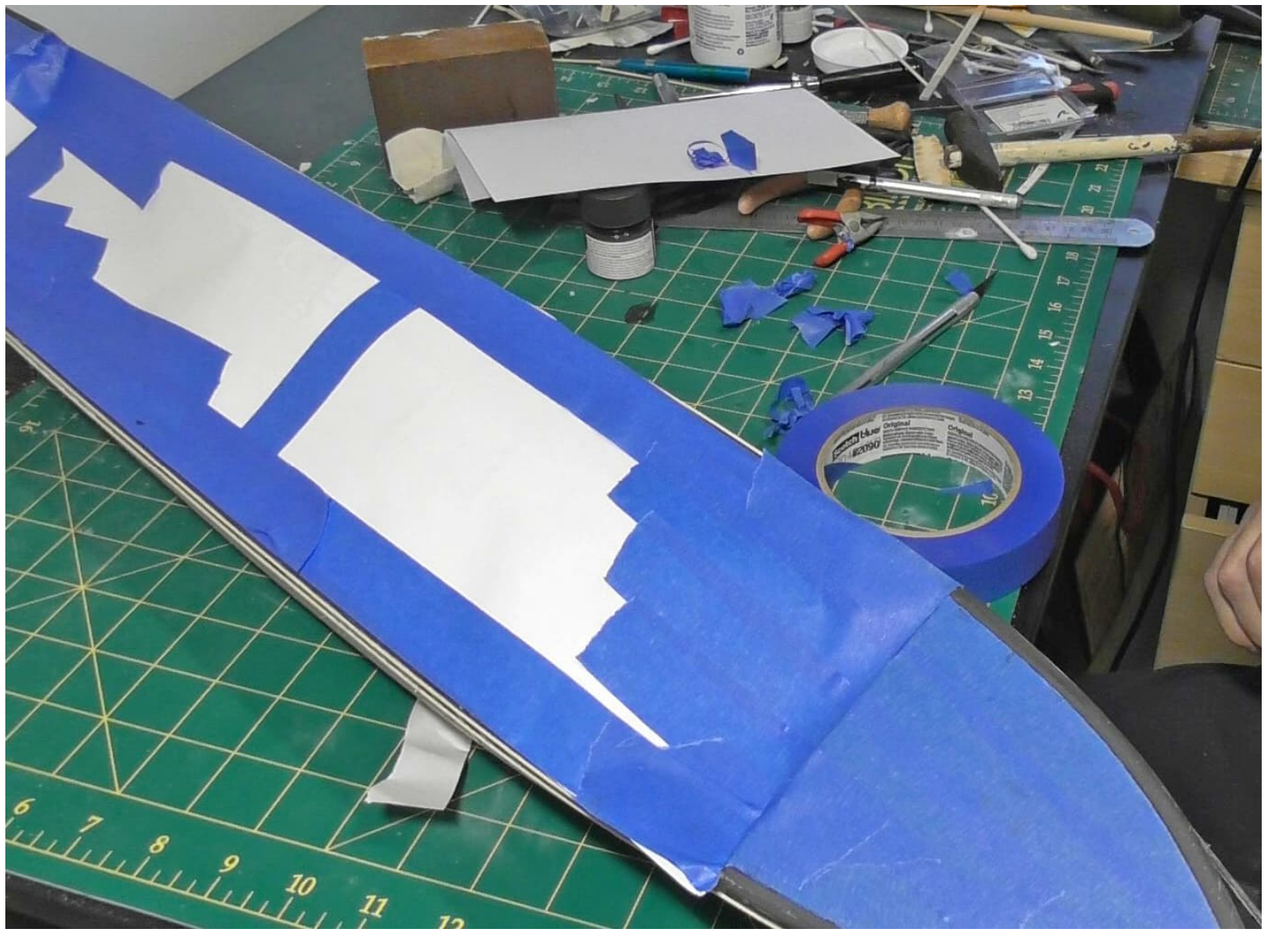


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8.7 Painting the Hull

The whole exterior of the hull is to be spray painted with matt charcoal black acrylic paint. Use masking tape along with paper to fully and securely seal the deck and head floor. Make sure the transom windows are sealed using the window cut-outs. Make sure the gun ports are sealed. Check and re-check.







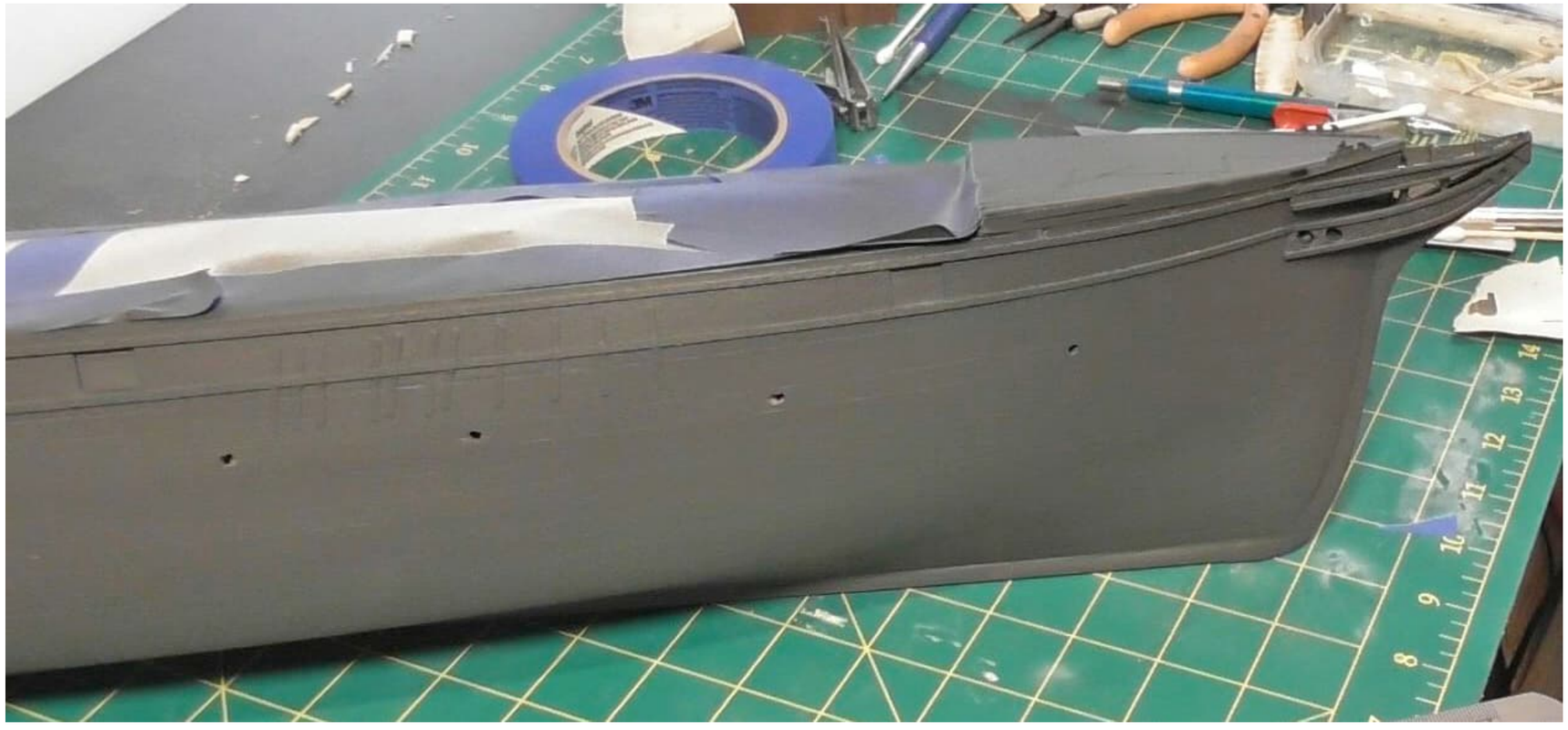
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8.7 Painting the Hull continued

In a well ventilated area, spray paint the model with matt charcoal black acrylic paint. Do not over-spray - lightly apply at least two coats allowing each coat to fully dry before applying another coat.



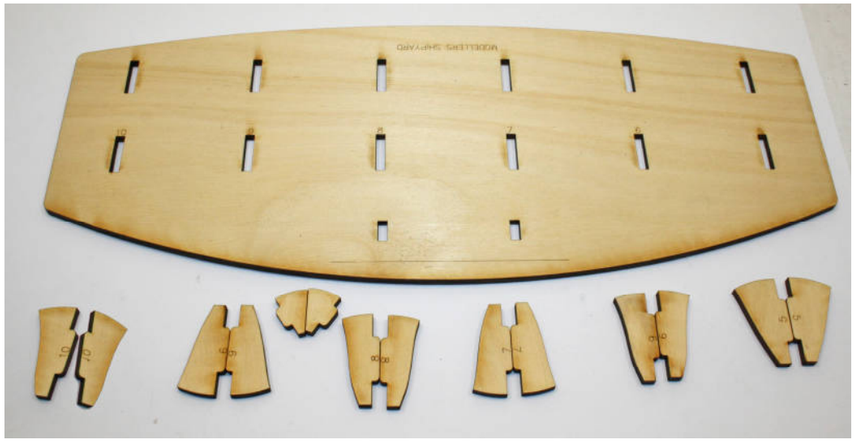




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8.7 Painting the Hull continued

Identify the display base P69, model supports P70A-F and name plate supports P71 - note the model supports are numbered along with their respective location on the base. Glue the model supports in place along with the name plate supports. Spray paint the assembled display base with matt charcoal black as shown. At mid-ship from the underside of the lower batten measure vertically down 27mm - mark the point with a white pencil line as shown. Use a white pencil to highlight the scroll on the trail board as shown. Identify the Angel decorations P72 - paint white and glue in place as shown. Identify the Scroll decorations P73 - paint gold and glue in place as shown. Paint the transom detail and window frames gold as shown.













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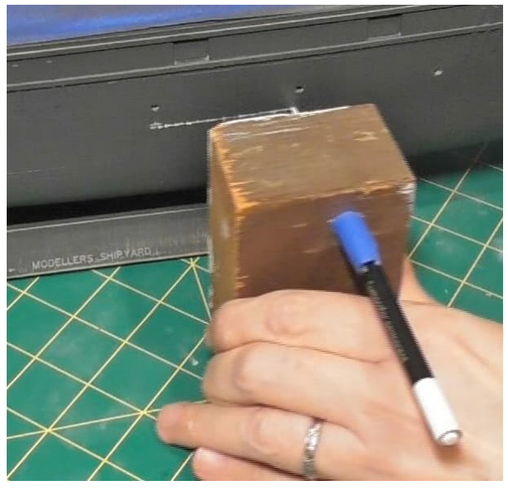
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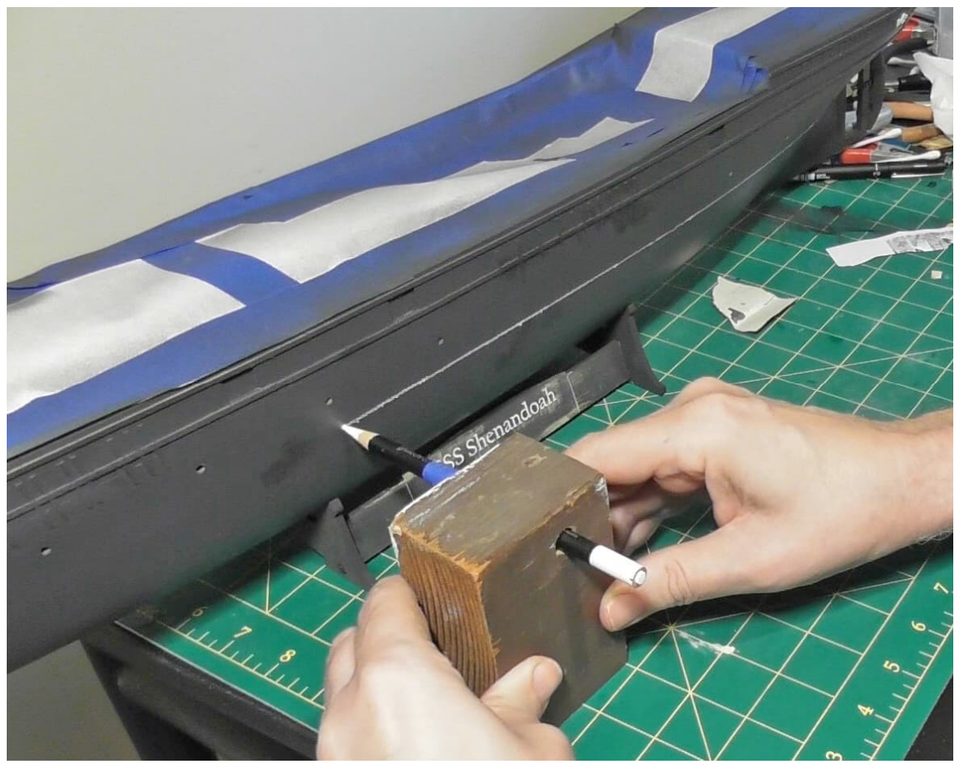
8.8 Copper Line

With the model in its display stand use vernier calipers to measure up from a flat level surface approximately 65mm. Take a block of wood with square sides and drill a large enough for the white pencil to fit through. Fit the pencil as shown - use some tape to ensure a firm secure fit. Slowly move the block along and around the hull marking the hull with the white pencil as shown. Take your time.





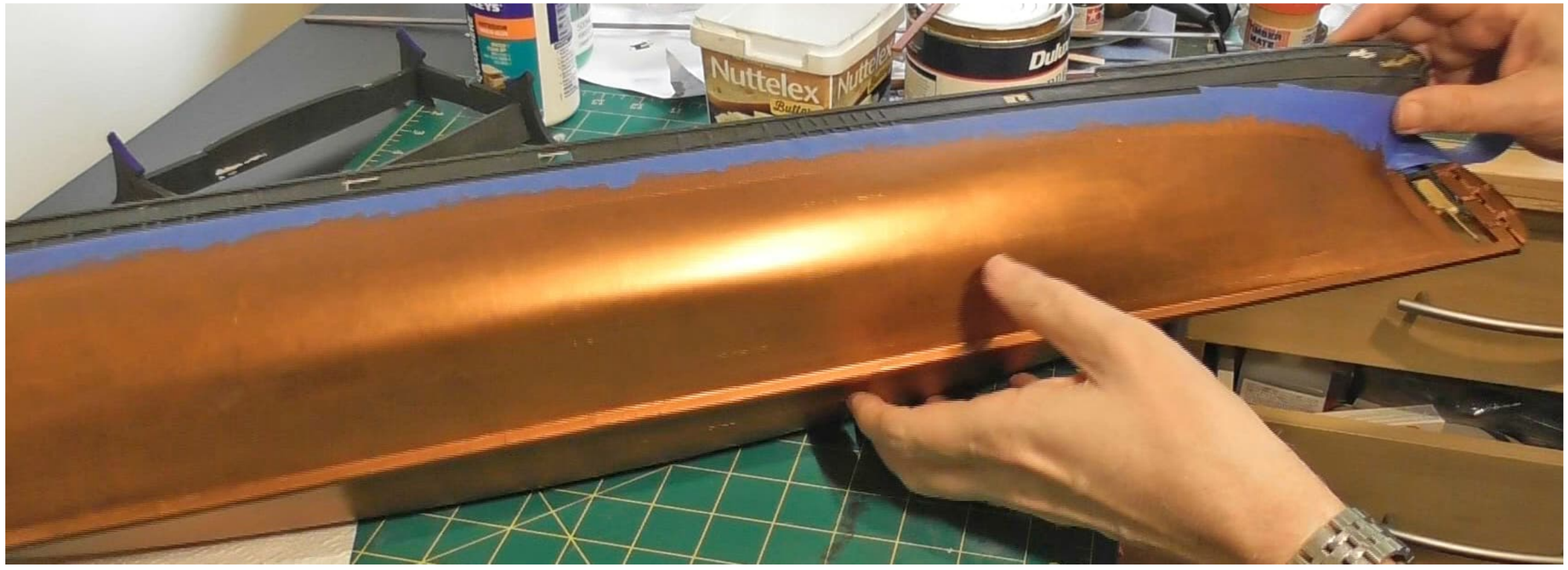




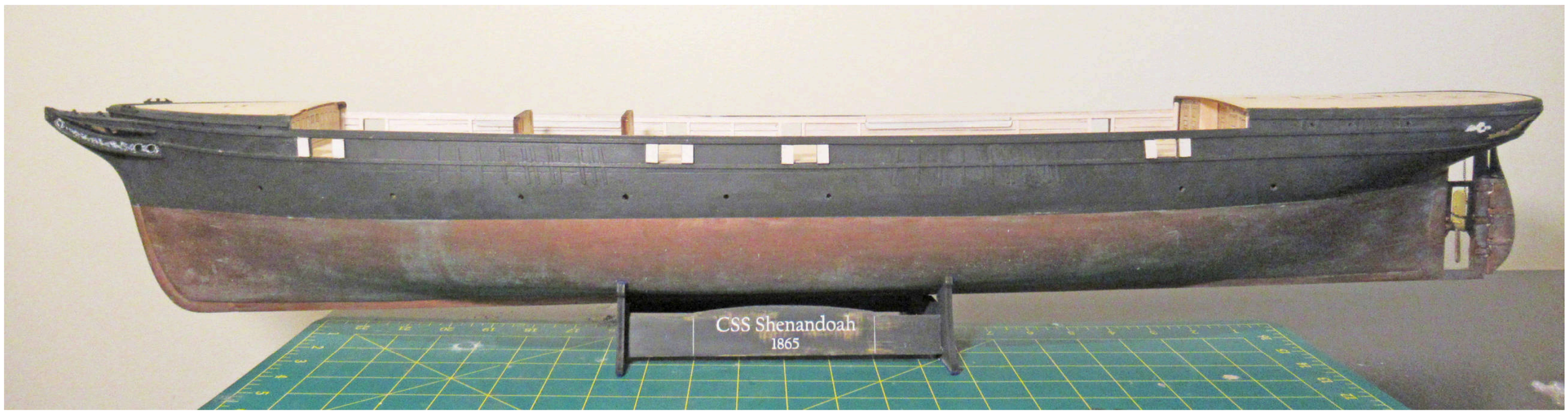
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8.9 Copper Painting & Patina

Place masking tape along the marked copper line around the hull as shown. Use a paint brush to evenly apply copper paint as shown - allow the coat to fully dry - apply a second coat. Set hull aside to allow to dry for at least 24hrs in a well ventilated dry area. If you wish to give a weathered effect to the hull use a soft cloth to sparingly apply the patina. Use long sweeping strokes. Allow the patina to dry and time for the patina effect to appear - apply additional patina if required.







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