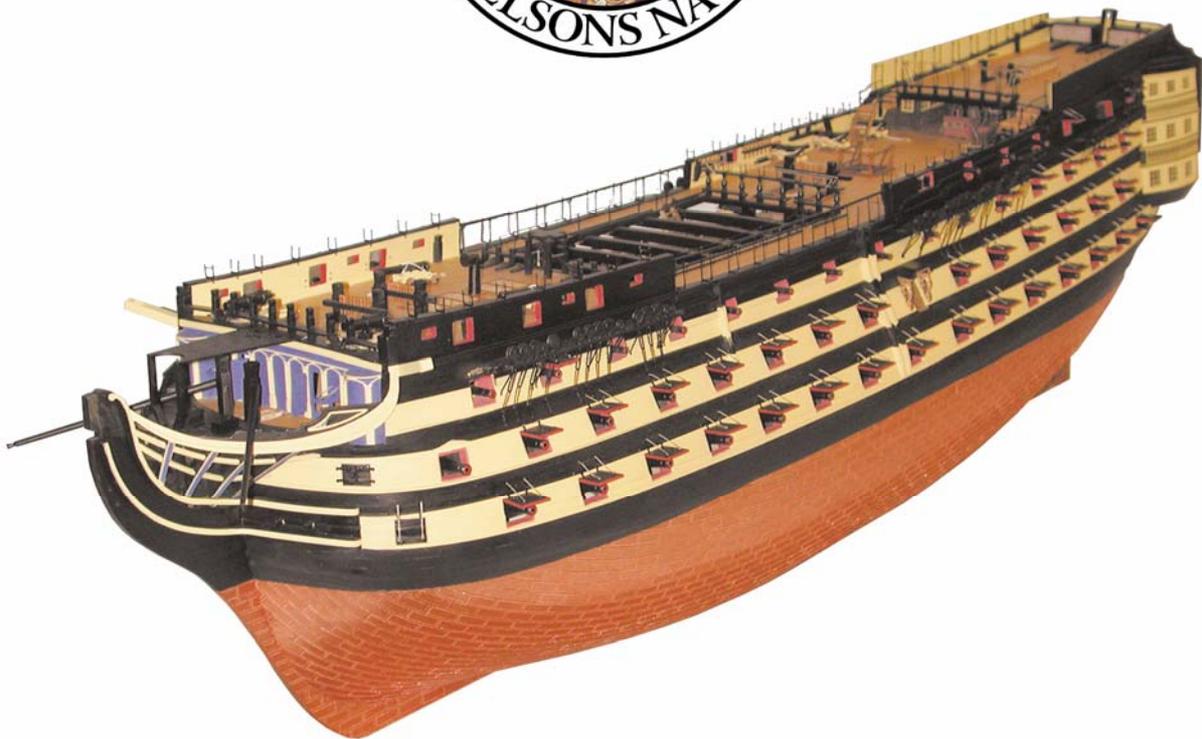


H.M.S VICTORY 1805

Exact scale model of the 100-Gun British Ship of the Line.

Ordered by the Navy Board on 6th June 1759, Victory was designed by Sir Thomas Slade. Construction commenced on 23rd July 1759 under the Master Shipwright John Lock at Chatham Dockyard. Launched on 7th May 1765 and after initial sea trials, she was laid up in ordinary for thirteen years until France joined the War of American Independence. On 12th March 1778, Victory received her first commission under Captain John Lindsay and so her career had begun.



Manual 1 of 3 Hull Construction

Additional photos of every stage of construction can be found on our website at:
<http://www.jotika-ltd.com>

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H.M.S. VICTORY 1805

After more than two years of extensive research and development, using information and sources previously unavailable, this is the most historically accurate, highly detailed model of Victory in her Trafalgar condition available.

Forever associated with Nelson's last battle, H.M.S. Victory is one of the most famous ships of all time, and is now preserved as a major part of the Royal Naval Museum in Portsmouth. The ship's survival is particularly appropriate since Victory is not only an example of the ultimate sailing warship ~ the three decker First Rate ~ but she was also the most popular and successful 100-Gun ship of the period.

Forty years old by the time of Trafalgar (1805), she had been the flagship of half a dozen Admirals, and was to continue in active service until 1812.

This was not the first ship of the Royal Navy to bear the name Victory; there were in fact four predecessors:

1. The first Victory was built in 1559. In 1586, she was rebuilt to 800 tons and carried 34 guns with a crew of 750. At the defeat of the Spanish Armada in 1588, she was the flagship of Sir John Hawkins.
2. Phineas Pett designed the second Victory. She was built at Deptford and launched in 1620. Rebuilt in 1666 to 1029 tons and carried 42 guns and a crew of 500.
3. The Royal James of 1675 was renamed the third Victory in 1691. She was rebuilt in 1695 to 1486 tons and carried 100 guns and a crew of 754.
4. The fourth Victory suffered a tragic fate. Launched in 1737, she was of 1920 tons, carried 100 guns and had a crew of 900. She was lost during a gale while off the Casquets in October 1744. Her whole crew perished with her ~ this tragedy caused the name Victory to be deleted, temporarily, from the Admiralty's list of ship names.

This, the fifth Victory, was one of twelve ships ordered by the Navy Board on June 6th 1759 ~ more than 40 years before the battle of Trafalgar for which she is famed. Designed by Sir Thomas Slade, construction began at Chatham Dockyard on July 23rd 1759, the 'marvellous year' (Annus Mirabilis). This, the year of victories, marked the turning point of the 'seven years war' for Britain. These facts may well have played a significant part in the naming of the vessel and the name Victory being restored to the Admiralty list of ships.

As with all of our models, Victory has been designed using the latest CAD/CAM technology. With this versatility, continual refinements can be made to ensure the model matches the most recent research available.

Nelsons' Prayer:

In the hours before the battle of Trafalgar, Nelson, in the Great Cabin onboard Victory composed the following prayer:

“May the Great God, whom I worship, grant to my Country and for the benefit of Europe in general, a great and glorious victory: and may no misconduct, in any one, tarnish it: and may humanity after victory be the predominant feature in the British Fleet.

For myself individually, I commit my life to Him who made me and may His blessing light upon my endeavours for serving my Country faithfully. To Him I resign myself and the just cause which is entrusted to me to defend.

Amen, Amen, Amen.”

At approximately 13:15 this same day, Nelson was struck by a musket shot fired from the French Ship Redoubtable. As Nelson died some three hours later he was heard to say:

“Thank God, I have done my duty.”

Getting started

Victory is an exact scale model designed using original Admiralty plans. All fittings, masts and rigging have been researched using contemporary sources and the most up to date reference material available.

Although the kit is as prefabricated as we can make it, basic woodworking skills are required. Estimated build time is between 2400 to 3000 hours, so a work space will have to be put aside for the job. Do not remove parts from the CNC cut sheets until actually required.

Carefully study the plans in conjunction with the instructions until you are confident to tackle each stage of construction. Patience is the key word when building any model. Treat each stage as a separate project and the overall effect of the completed subject will be enhanced.

Recommended Tool List

- 1: Craft knife
- 2: A selection of needle files
- 3: Razor saw
- 4: Small wood plane
- 5: Pin vice or small electric drill (the latter is the more recommended item)
- 6: Selection of drill bits from 0.5mm to 3mm
- 7: Selection of abrasive paper and sanding block
- 8: Selection of good quality paint brushes
- 9: Long nose pliers and wire cutters
- 10: Good quality tweezers
- 11: Dividers or compass
- 12: Steel rule (300mm)
- 13: Clothes pegs or crocodile clips
- 14: Tee-Square
- 15: Good quality pencil or Edding pen
- 16: Masking tape

Paints, stains and adhesives

- 1: White PVA wood glue
- 2: Walnut wood dye (for masts)
- 3: Cyanoacrylate (super glue) thick and medium viscosity (Admiralty Glues, Thick (AG9103) & Medium (AG9102))
- 4: Walnut wood filler
- 5: White spirit
- 6: Matt polyurethane varnish (not satin or gloss)
- 7: Black paint for 'woodwork' (Admiralty Paints: Dull Black, AP9105)
- 8: Black paint for 'ironwork' (Admiralty Paints: Matt (Metal) Black, AP9106)
- 9: White paint (Admiralty Paints: Matt White, AP9111)
- 10: French blue paint (Admiralty Paints: French Blue, AP9117)
- 11: Yellow ochre paint (Admiralty Paints: Yellow Ochre, AP9115)
- 12: Red ochre paint (Admiralty Paints: Red Ochre, AP9116)
- 13: Copper paint (Admiralty Paints: Copper, AP9126)
- 14: Gold paint (Admiralty Paints: Gold/Brass, AP9125)
- 15: Brown (wood/leather) paint (Admiralty Paints: Wood (Walnut) Brown, AP9119)
- 16: Olive green paint (Admiralty Paints: Olive Green, AP9118)

We highly recommend the use of Admiralty Paints; this is a new brand of paint which contains a specific range for 17th / 18th / 19th Century Man of War colours. This range of scale paints has been colour matched to the Admiralty colours, as still used on HMS Victory in Portsmouth. Unlike other manufacturers, these **are not** toy paints and have been designed specifically for use on model ships to give consistent coverage and colour. In order to achieve this, they may contain lead / lead chromate and as such should not be used on children's toys or surfaces that may be chewed.

Before You Begin.

Before you start building this model a little forethought now will be well worth the time given to it throughout the building process.

Although the majority of suggestions will be second nature to the more experienced modeller, this kit and others in the series can be built by the less experienced, given sufficient information.

The instructions and parts manual has been compiled to give as much information as practicable together with additional diagrams, photos and a complete set of actual scale technical plans.

Wherever possible we have tried to explain technical terms, in particular nautical terminology but it pays to have a good selection of reference books to hand.

Despite the 1:72 scale of the model, the overall size of the model is rather large. You should consider this when setting aside a work area for the build. You will also need regular access to both sides of the model, especially when rigging, you will therefore need an area large enough to walk around the model or large enough to easily turn the model through 180 degrees without risking damage. Also ensure the cords for any power tools will not interfere with the model.

A 5mm ply stand is provided with the kit. This will primarily be used to support the hull during build process. Ideally this stand should be secured to an adequate baseboard. Upon completion, the model can be placed on a display stand of your choice.

During the build it will be necessary to sand down large areas, (after the first and second planking and at other stages) it is therefore advisable to work in a well ventilated area and / or wear appropriate protection. The same applies when using paints, stains, glues, fillers etc. Good lighting is also essential to the modelmaker.

The structural parts of the model are cut from high quality birch plywood, the remaining wood parts are cut from high quality walnut ply and walnut.

Take particular care when removing parts with a craft knife and ensure all parts are identified and marked with pencil before removal. Lay the sheet from which you are going to cut the parts on a rigid flat cutting board for removal. Use a heavy-duty craft knife with a good strong blade to cut through the tabs holding the parts in place. It will also be an advantage to paint the brass etched fittings prior to removal from the sheet, they can then be touched up again when in place. Alternatively when cutting brass or copper parts, a good pair of stout scissors will suffice.

Before each stage of construction, study both the manual and the plans until you are confident in the task ahead.

The majority of the model will be painted during various stages of the build. It is important to think ahead to the next stage in the construction process and paint the various parts at a convenient time, usually before securing on the model. It is often a good idea to paint parts for the next stage and while they are drying you can be working on the current stage.

Wherever possible, offer the parts together in a 'dry' fit before final assembly.

Before Planking The Hull ~ A Note

In order that the final width of the planked hull will match the width of the stern post, some sanding will be required prior to both first and second planking.

Before the first planking is applied as described on page 6:

1. Using **Plan Sheet 2** for reference, mark the bearding line onto the keel.
2. Gently sand the shaded area, sternwards, until you have a taper that runs from 5mm wide at the bearding line to 2mm wide at the stern.
3. Continue as instructed with the first planking and upon completion the width at the stern will be 5mm.

Before the second planking is applied as described on page 9:

1. Note the bearding line onto the first planking, again using **Plan Sheet 2** for reference.
2. Gently sand the shaded area, sternwards, until you have a taper from the bearding line to 3mm wide at the stern.
3. Continue as instructed with the second planking and upon completion the width at the stern will again be 5mm.

Hull Construction

Cut out the main keel (19) from the 5mm ply sheet, together with the 5mm walnut pieces; stem (55), front keelson (56). Glue the walnut pieces into position along the ply keel edges using PVA wood glue. Tape can also be used to assist. Make sure that the structure remains perfectly flat, straight and in line whilst drying.

A suitable building board should be considered at this point. Construct the board from MDF or similar sturdy material. The board should be long enough and wide enough to protect the hull throughout construction.

After numbering all the parts of the 5mm ply sheet, remove all the bulkheads (1-18), the middle gun deck (22) and the plank termination patterns (20 & 21). Using *Plan Sheet 1* for reference, dry fit the bulkheads and middle gun deck into position and make sure that the whole assembly is square.

Remove bulkhead (1) and put it to one side, it will be fitted in the next building sequence.

If you are happy with the remaining bulkheads they can now be fitted and glued into position with PVA, together with the middle gun deck.

Supplied with the kit in 5mm ply are four dummy barrel strips (39). These strips will be used as fixing points for the 32 pounders on the lower gun deck and the 28 pounders on the middle gun deck. These strips will be inserted into the slots in the bulkheads running fore and aft throughout bulkheads (2) to (17).

When the keel and bulkhead assembly has dried to a rigid form, you will notice the slots in the bulkheads and the slight curve to which they run. In order to insert the dummy barrel strips they will either have to be warmed with a heat gun or soaked in water for a short time, only a slight curve in necessary!

Push these strips into the bulkheads (2 - 17), from the front. Once inserted they should be as far forward as possible while still allowing bulkhead 1 to be positioned, they can now be secured. Once the structure has dried thoroughly, remove any excess of the barrel strips behind bulkhead 17.

Bulkhead (1) can now be glued into position.

When this part of the construction has completely dried, it will be necessary to remove a small section of the uppermost dummy barrel strip between bulkheads (9) and (10) on both sides of the hull to allow for the positioning of the side entry ports, port and starboard (*Photo 001*).

Glue the bow forward supports (40 – 42) into position on bulkhead 1, then glue the plank termination patterns (20 & 21) into position. Also glue the stern extensions (105 & 106) into position on bulkhead 18, as shown on *Plan Sheet 1*, care should be taken to ensure they remain square to bulkhead 18.

At this stage, consideration should be given to how the finished model is to be displayed. It is recommended that using a 3mm drill, drill 3 holes up into the keel one in the centre and one in each end at an even distance apart. Upon completion of the model, three brass or stainless steel rods can be used to support the model on your chosen display board.

Photo 001



Photo 002



Now the 1.5mm ply gunport patterns (270, 271, 272, 276) can be fitted.

There are a number of important points to consider at this stage and they are as follows:

1. Care should be exercised to ensure the gunport patterns are fitted correctly because, at a later stage, the gunports must correspond with the gunports in the upper gun deck, quarterdeck and forecastle inner bulwark gunport patterns (273, 274, 275, 276).
2. Make sure that the openings have been cleared of any debris. It will also be an advantage if the openings are made square in the corners to greatly assist you when the gunport linings are fitted.
3. Make full use of glues and pins to secure the patterns, even though some of the bulkhead top sections will be removed during later building stages.

Temporarily pin the quarterdeck (446) in place.

Starting with the top gunport pattern (270), position the pattern so that:

1. The back edge is flush with the outer stern extension pattern (106), (*Photo 002*).
2. The rearmost upper gun deck gunport back edge is flush with the front of bulkhead 17.
3. Make sure that the top edge of the gunport pattern lies 1mm above the ply quarterdeck (446) between bulkheads 6 & 9, this will allow the deck planking to sit flush with the pattern at a later stage, (*Photo 003*).
- 4.

Photo 003

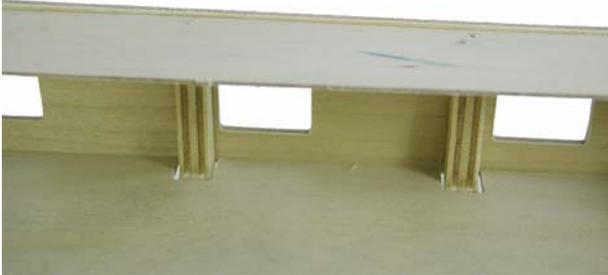


Photo 004



Once that you are happy with the positioning, pin and glue into place, remove any excess from the front of the pattern so that it is flush with the front of bulkhead 1. Repeat the procedure with the opposite pattern.

Glue and pin the patterns alternatively left and right throughout the building stage.

If building to the Trafalgar condition, the outer forecastle gunport strip (276) should now be fitted so that the rearmost edge sits flush with the raised lip of the top gunport pattern (270). (If you have decided to build to the Portsmouth (2003) specification this pattern (276) should be omitted.)

Note: The forward edge does not sit flush with the forward edge of bulkhead 1, (*Photo 004*). You will also notice that the bulkhead tops foul the gunports, do not worry as they are removed at a later stage.

The middle gunport pattern (271) can now be offered into position directly under (270), (*Photo 005*).

However, this pattern will fit around the bow and fit flush against the stem. In order to achieve this, the pattern will have to be soaked in water. It will also be necessary to bevel the edges of the plank termination patterns (20 & 21), the bow forward supports (40 - 42) and also bulkheads (1 & 2). Pin and glue as necessary.

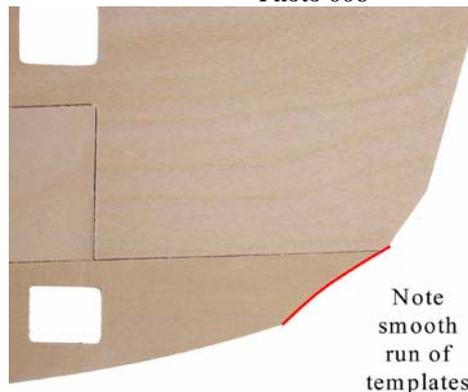
The lower gunport pattern (272) can now be fitted in a similar manner. The leading edges of the forward bulkheads will require bevelling and the pattern will have to be soaked in water.

Refer to the drawings and make sure that the rear part of pattern (270) and (272) run in a uniform manner (*Photo 006*), **any excess material should be removed from the front edge.**

Photo 005



Photo 006



The quarterdeck (446) can now be removed and the whole assembly set aside to dry thoroughly.

First Planking

Before the first planking begins, it will be necessary to bevel the edges and undersides of the bulkheads at the bow and at the stern. Bulkhead (18) will need to be bevelled along its underside to quite an angle, (*Photo 007*).

Also, taper the keel as previously instructed on page 3.

With the side patterns in position and thoroughly dry, now is the best time to bevel the bulkheads, as the structure is very rigid and sturdy.

Place a single piece of 1.5x6mm limewood across the bulkheads and you will see quite clearly where the bevelling is required. After bevelling, the first planking can be applied using 1.5x6mm limewood strip.

The first plank is laid directly against the lower edge of the lower gunport pattern (272). As the plywood bulkheads are very strong, it is recommended that 0.5mm holes be drilled into the bulkheads before the insertion of the pins. When pushing the brass pins into the planks and bulkheads, leave at least 3mm protruding so that they can be easily removed once the planks are secure, (*Photo 007*) Glue the planks into position using PVA wood glue. Ensure that you glue every area of contact with the planks and bulkheads.

The first ten planks on each side are relatively straight forward, as they require little or no tapering. As you start down to the curved side of the bow, the planks will need to be tapered to follow the natural run of the planks. In order to determine the amount of taper required for each plank to lie naturally, lay the plank from the 6th bulkhead around to the bow, mark the excess area of the plank that overlaps the plank immediately above it. Repeat this process for the stern also.

Before cutting the taper into the planks, soak them in warm water for an hour or so as this will minimise the chance of the knife blade following the grain of the wood rather than the edge of the steel rule.

Lay the first wet plank to be tapered on a clean, flat surface (a cutting mat is ideal). Press firmly with a steel rule onto the marked taper line on the plank and score down the line with a heavy-duty craft knife **several times** until the excess is cut off (**do not attempt to cut the plank in one pass!**).

Pin and glue the tapered planks into position on the hull leaving a little excess across the bottom edge of bulkhead (18) which can be trimmed to shape once the planking is complete, (*Photo 007*).

Glue two or three planks alternatively each side, this method should prevent any possible warping or twisting of the bulkheads and keel.

Use this planking method right down the hull. When planking is almost complete you will notice triangular shaped gaps at the stern (and bow to a lesser degree). This was also the case in full size practise, although not so simplified. The use of triangular shaped planks (called stealers) is needed for these gaps. Cut these to shape using the excess limewood from the ends of the planking and glue them into the gaps.

Trim the excess stern planks at bulkhead (18) to shape and leave the hull to fully cure for at least 24 hours.

The next stage is to sand the hull with a coarse grade abrasive paper, followed by a medium grade. This will obviously entail a few hours work but it will form the basis for the second planking, remember to remove all pins before sanding begins.

The building cradle (43, 44 & 45) can now be constructed and secured to the building board of your choice.

Photo 007



Quarter Galleries

Refer to (*Fig 001*) for the correct assembly of the quarter galleries. Time patience and care will be required during this stage of construction but you will be greatly rewarded by the end product.

During this stage of construction, it will be necessary to glaze the quarter pattern skins (365, 367, & 369) **before** they are glued into position. Should these skins require any filing or sanding then it should be done prior to glazing.

Cut out the main quarter gallery inside pattern (373) from the 1.5mm walnut sheet together with the stern fascia inner skin (374) and upper stern counter pattern (371).

Identify, label and remove all the quarter gallery patterns from the 2mm walnut sheet.

Temporarily pin the inner stern fascia pattern (374) centrally across the stern extensions. The lower edge of the fascia pattern should follow the angles of the stern extensions, (*Fig 002*).

Insert into the side slots of (374) the top quarter gallery pattern (215) and at the same time fit this top pattern (215) into the pattern (373).

The main quarter gallery inside pattern (373) should now locate into the two slots in the top gunport pattern (270), at the same time the downward and outward angle of the top quarter gallery pattern (215) should be maintained, (*Photo 008*).

Fig 001

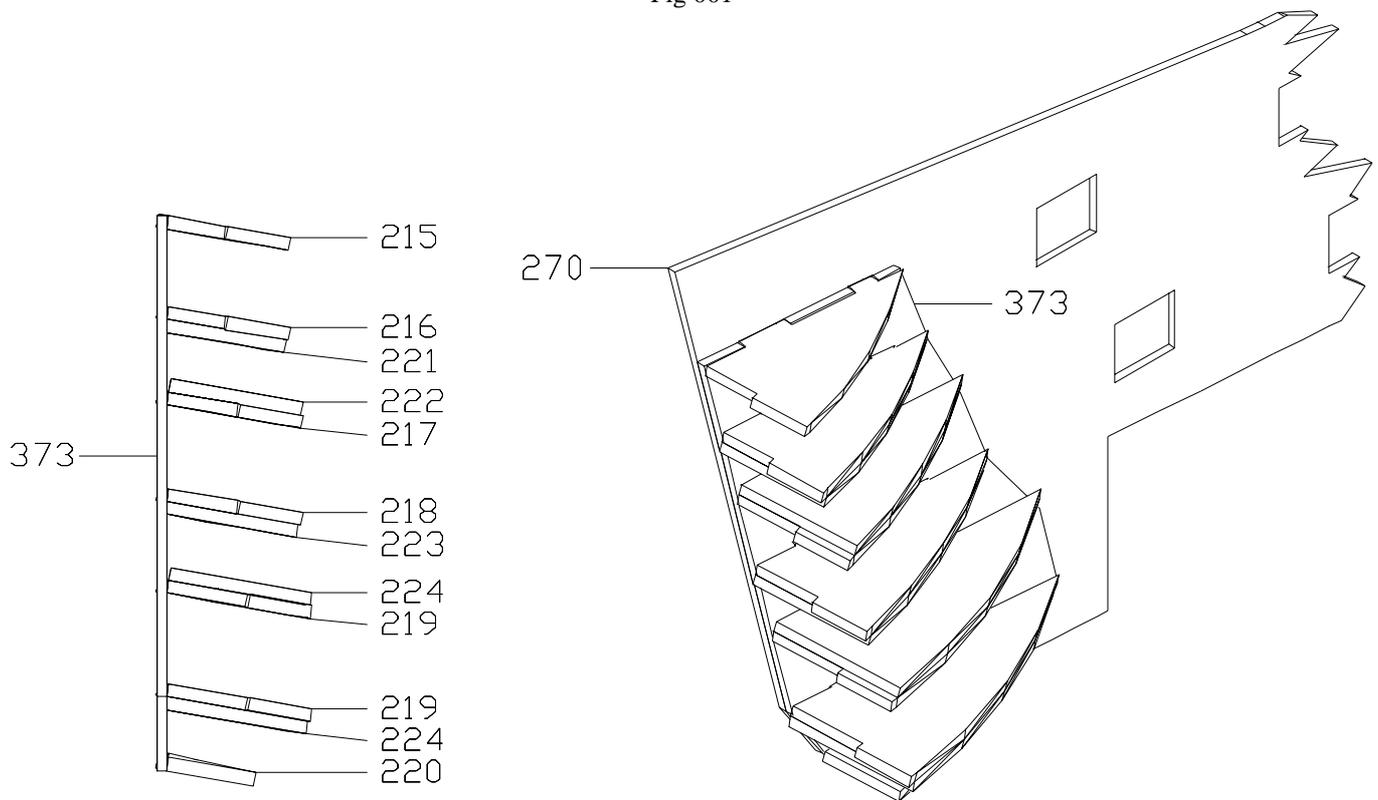


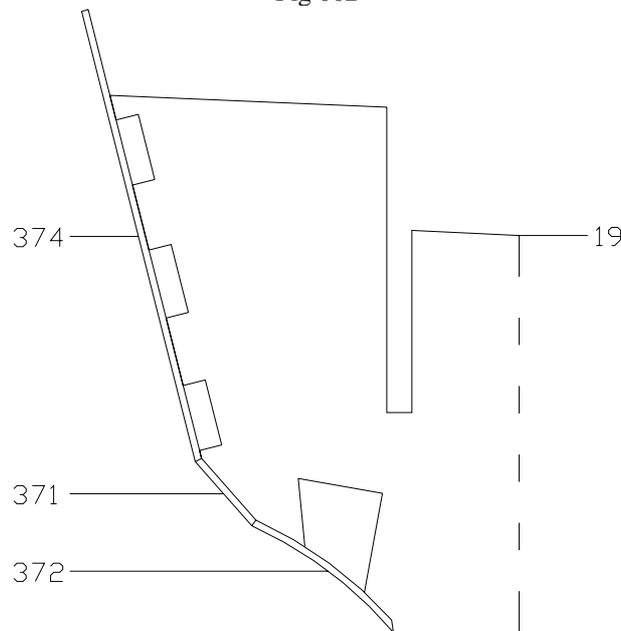
Photo 008



Photo 009



Fig 002



This building stage may appear to be more complicated than it really is, there is a need for several pieces of the structure to fit together at the same time. However, with a little patience, thought and care it will all come together.

Check the pieces fit first, re-check and check again!

When you are completely satisfied with the fit and building process then the main quarter gallery inside pattern (373) can be glued into position.

The stern fascia inner skin (374) can also be glued into position. If it is decided to use pins, take care not to distort the fascia's natural curve across the stern extensions.

Once these pieces have been glued into position, the remaining quarter gallery patterns (215-219) can also be glued in place. Work alternatively each side maintaining the correct downward angle.

You will notice that there are two patterns (219) each side. They are the same size and one fits into the full slot and the other into the half slot on the bottom edge of the stern fascia (374). Glue both patterns into place.

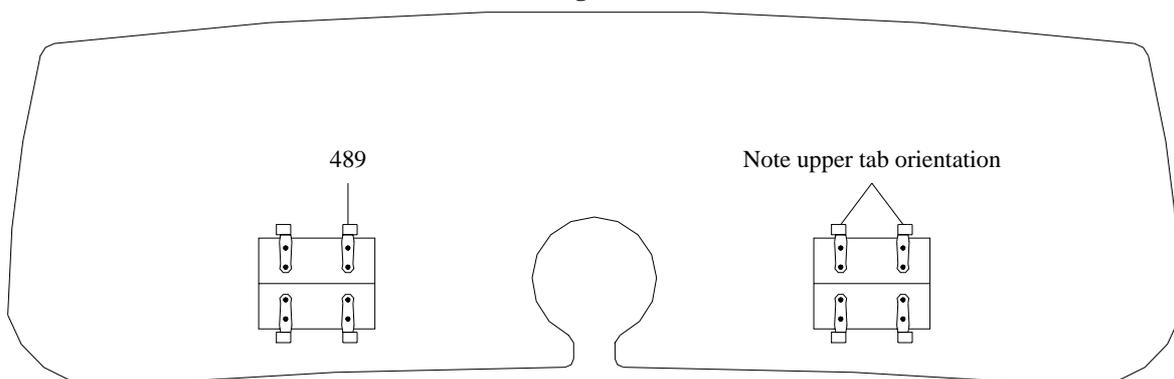
From the 1.5mm walnut sheet remove the upper stern counter pattern (371) and offer its top edge to the bottom edge of the stern fascia (374). These two edges are to butt up against each other and slight bevelling will be required, (Fig 002). Glue the counter pattern (371) into position.

The 7th quarter gallery pattern (220) can now be glued into position and its bottom edge should sit flush with the bottom edge of the upper stern counter pattern (371).

From the 1.5mm walnut sheet remove the lower stern counter pattern (372). This pattern can be fitted and glued into position in a similar manner. However, it will have to be soaked in water first but only for a short period – bear in mind that the ply wood is held together by a water soluble glue!

When you are able to offer this pattern (372) into position the top edge will also require bevelling. You will also be in a position to see how much of the first planking may need be to be sanded from the lower edge of bulkhead 18 to ensure a good fit in preparation for the second planking. With the lower stern counter pattern in place, you can attach the brass etched double door vent hinges as shown (Fig 003), and painted black.

Fig 003



Once this stage has been completed, it will become obvious that the 1.5mm walnut quarter gallery skins (365-370) will join along these patterns, you will also notice the downward and outward lie of these skins. **N.B. All trimming of these skins should be made along the foremost edge, do not trim the rear edge that sits flush against the stern fascia (374)!** The 2mm walnut quarter gallery insert patterns (221-224) can now be glued into position (*Fig 001*). They will require bevelling to form the basic shape, it is advisable to check the skins against their respective locations as you progress down the galleries. Again work on alternating sides. Before the quarter gallery skins with windows (365, 367 & 369) are glued into position, it is advisable to clean out the corners of the recess in preparation of fitting the window frames, also they will have to be glazed with the plastic glazing provided. Glue the sheet to the inside of the skin to cover the three openings. **Use PVA to do this as the fumes from super glue will discolour and cloud the glazing,** (*Photo 009*). In conjunction with the drawings provided, work down the skins fitting and gluing into position. Bevelling and shaping will be required.

Take extra care not to damage the glazing on the skins.
The stern fascia will be glazed at a later time between the inner and outer patterns.

Middle Gun Deck Planking

A small area of this gun deck will be visible through the upper gun deck companionways and the side entry ports. Using 1x4mm Tanganyika, plank the middle gun deck between bulkheads (4) and (12) and across the beam to the bulkhead risers and plank completely across the beam at the side entry ports position. Make sure the main mast hole is cleared. Glue into position the main mast sleeves (154), the mast sleeves will require filing to allow the main mast to pass through at the correct angle (as determined by the slot in the keel). When planked, lightly sand the deck smooth. Apply a coat or two of matt polyurethane varnish to seal the grain. It is advisable at this stage to paint the areas between the outside faces of the dummy barrel strip and the deck area up to the inner side of the ships sides. These areas will be visible to some degree and painting is better achieved at this stage, paint the areas matt black (Humbrol 85). Using 1x16mm walnut strip, line the entry ports. Cut the strips to length and glue on the vertical sides first, followed by the top and bottom sills. When complete, sand the outer sills flush with the side of the hull. If necessary, a smear of super glue over the strip, prior to cutting, can be used to avoid splitting.

Second Planking

The second planking is laid using 1x5mm walnut. The gluing of the second planking also differs from the first as the whole under surface of the walnut strip is glued to the surface of the first planking as well as edge to edge. Before progressing, taper the first planking as previously instructed on page 3. Referring to *Plan Sheet 2*, mark the position of the upper edge of the middle wale onto the hull, this is best achieved by measuring the distance from each gunport lower edge to the point of intersection with the wale and joining these points with a smooth line (formed by temporarily positioning a plank against the hull). This line now denotes the upper edge of the first plank, of the second planking, which can now be laid. Once the first walnut strip has been laid, work down to the keel using the same planking method as the first planking. Some slight tapering will be required at the bows and it should be treated in a similar manner to the first planking method. The walnut planking around the bows will have to be soaked in water first. The best glue to use above the waterline is medium super glue. This is to avoid the use of pins, eliminating pinholes that would have to be filled prior to painting. Super glue will stick the planks as well, if not better than, PVA wood glue. Around the bow area, where the walnut strip has been soaked in water, take extra care – wet wood and super glue will bond more or less instantly! Great care is needed to attain as neat a job as possible to minimise the need for filling. If desired, PVA wood glue can be used for the planking beneath the waterline in conjunction with pins temporarily pushed half way in, until the glue has cured. After the lower planking has been laid, identify and fit the back keelson (57) and stern post (58).

Note: Lay one or two planks on alternative sides when planking, to avoid ‘pulling’ the keel out of shape, cutting the gunport openings as you progress: cut the gunports to exactly the same size as the gunport patterns.

Note: With the lower planking completed, you can continue to plank upwards but at this stage **do not** plank over any of the gunport openings of the upper deck! This area will be planked at a later stage because eight of the centre gunports have to be lined first and this cannot be done until the upper deck inner bulwark pattern (275) has been fitted.

The Upper Gun Deck

Work can now commence on the upper gun deck. It is necessary to suspend work on the remainder of the uppermost area of the hull planking until this deck is almost completed. It is the easiest option and the way in which the prototype was constructed.

From the 5mm ply sheet identify, label and remove the upper deck camber beams (26, 28, 29, 30, 31 & 32). These beams correspond to the bulkheads as identified in the cutting list. Remove the upper gun deck (445) from the 0.8mm ply sheet.

Remove both of the upper gun deck inner bulwark gunport patterns (275) from the 1.5mm ply sheet.

Locate, fit and glue into position the upper gun deck camber beams as identified earlier, referring to *Plan Sheet 1* noting the location of the camber beams either in front of, or behind the bulkheads. When dry, the upper gun deck (445) can be fitted.

Locate and fit the deck into position on the beams so that it lies perfectly flat and even both across the beams and fore and aft. Some slight shaping may be required along the outside edges and in the slots, the deck must fit neatly. Before the deck is glued into position, offer into place the inner bulwark pattern (275) making sure the inner and outer gunport openings are aligned: back, front, top & bottom. The pattern (275) has been designed to allow some lateral movement.

When completely satisfied with the fit, glue the deck into position, making sure the mast holes (cut outs) align to the deck below and the angled slots in the keel.

Once the deck has dried and having regard to the foregoing instructions fit and glue into position the upper gun deck inner bulwark patterns (275).

Planking the Upper Gun Deck

The beakhead bulkhead (205) will be fitted at a later stage across bulkhead (1). Offer the bulkhead (205) into position, on the front of bulkhead (1), and mark a line in pencil across the ply deck behind the bulkhead (205). This pencil line is where the planking will terminate. Now mark a centre line down the ply deck.

Using 1x4mm Tanganyika strip, plank from the centre line alternatively across the deck to each inner bulwark, clearing all hatches, companionways and mast holes as you progress.

Note: If you wish to accurately represent the plank length and four butt shift system used on Victory, each plank should be either cut to a length of 85mm (approximately 20ft) or the planks can be laid full length and scored with a craft knife every 85mm, this latter method often looks the most convincing at this scale. The four butt shift system simply implies that the end of each neighbouring plank is offset by 1/5 of twice the length of the planks (34mm) such that the end of every fifth plank athwartships only is aligned (i.e. separated by a four plank shift).

Once completed, lightly sand the deck smooth and apply several coats of matt polyurethane varnish.

Glue into position the mast coats (155 & 157), make sure the mast holes are cleared, the mast sleeves will require filing to allow the mast to pass through at the correct angle (as determined by the slots in the keel). The mast coats should be varnished. Before the inner bulwarks of the upper gun deck can be planked, several gunports will have to be lined.

The only gunports that need to be lined at this stage are those without gunport lids. Referring to *Plan Sheet 2*, you will notice that the 3rd to the 10th gunports inclusive do not have lids. Using 1x16mm walnut strip, cut to length and glue on the vertical sides followed by the top and bottom sills. When complete, sand the inner and outer sills flush with the side of the hull and inner bulwark patterns. If necessary, a smear of super glue over the strip, prior to cutting, can be used to avoid splitting.

Using 1x4mm walnut strip, plank the inner bulwark patterns (275), clearing the gunports as you progress. Refer to *Plan Sheet 1*, noting the location of the quarterdeck camber beams. However, do not glue them into position, merely temporarily fit them to give you their positions whilst planking, then put them to one side.

The inner bulwarks will be painted yellow ochre (Humbrol 74).

It is now possible to resume the second outer hull planking. Continue as before using 1x5mm walnut strip and in the same manner.

Continue planking until you reach a position over the top of the gunports you have already lined. Your last plank at this stage should just come below the last gunport on the quarterdeck.

All work will now concentrate on the ships side.

The Wales

Referring to *Plan Sheet 2* and (*Photo 10, 11, 12 & 13*) carefully mark the position of the lower wale.

Note: the wales do not follow the yellow and black bands (as described in 'Lining the Gunports' Page 12), but the outline of the wales are clearly visible in the photos.

Because the positioning of all three wales are critical to maintain the natural line and aesthetics of the ships side, take your time. As with all planking, work alternately each side, remembering where necessary to soak the planks in water.

When you are satisfied with the positioning of the lower wale, planking can begin. The uppermost plank is 0.5x4mm walnut strip, the remaining four lower planks are 1x5mm walnut strip. Cut out the gunports as you progress, including both entry ports.

The best glue to use for the wales is medium super glue, again this is to avoid pin holes that would need to be filled prior to painting.

Another important point is to make sure that the top and bottom planks of each wale sit tight against the hull. At a later stage when painting the hull, colour changes take place across the wales. The better they fit, the better the painting will be.

Continue up the ships side and apply all three wales.

The middle wale is made up of three walnut strips 1x3.5mm.

The top wale is also made up of three walnut strips 1x3.5mm.

Take extra note of the way in which the top wale, bow section, centre plank runs under the roundhouse as shown *Plan Sheet 2*.

The centre plank of the top wale curves around the bow and will sit approximately 1mm above the 0.8mm ply deck. When the deck area has been planked, both the centre wale plank and the deck will be level.

Note: the top plank of this wale terminates at the beakhead bulkhead.

Photo 010

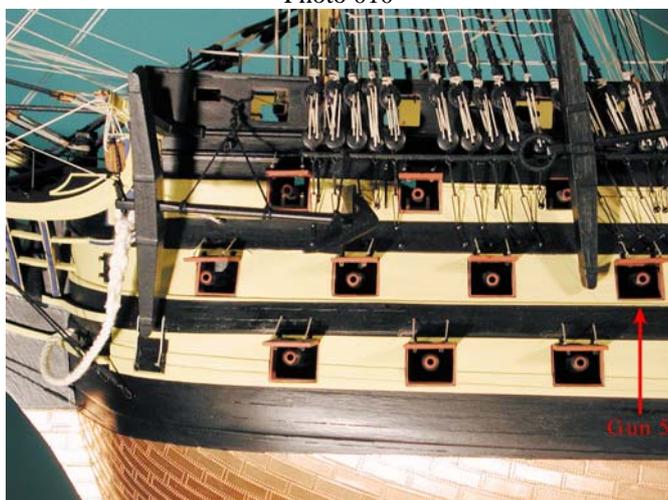


Photo 011

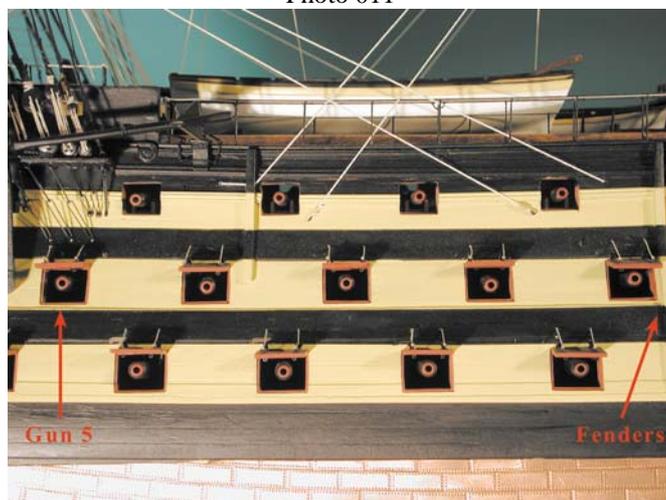


Photo 012

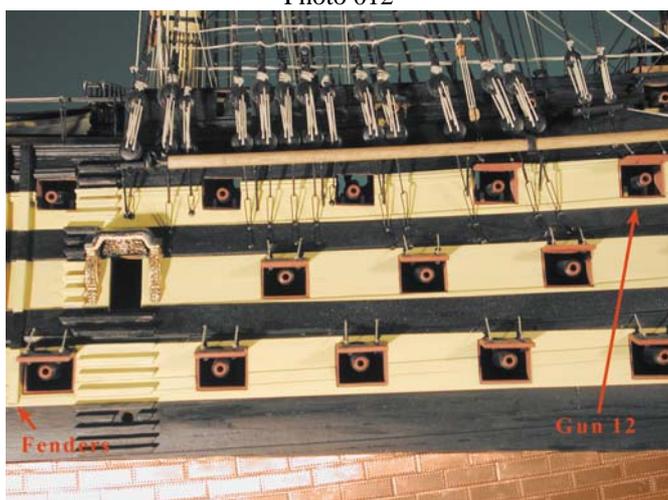


Photo 013



Lining the Gunports

Note: for all gunports, the linings are to be painted red ochre, it should be noted however that the gunports without lids should have red ochre applied to the whole inner surface. For gunports with lids, the linings are painted red ochre and the 1mm deep lip should be the colour of the surrounding ships side.

The lower and middle deck gunports can now be lined. The way in which these gunports are lined differs from those gunports without lids. Line them with 1x6mm walnut strip in the same way as the gunports without lids except the lining must be set back 1mm from the ships side, refer to *Plan Sheet 2, 'Gunports with lids'*. It is of absolute importance that the linings are set back into the openings by 1mm. The gunport lids themselves have been cut to allow for this and the brass etched hinges have also been designed likewise. The hinges are glued into position onto the gunport lid and the ships side as shown on *Plan Sheet 2, 'Attaching gunport lids and hinges'*. If the recessing has not been carried out correctly then the hinges will not fit.

The remaining gunports on the upper gun deck can now be lined in the same way using 1x16mm walnut strip. Once lined, cut off any excess along the inner walls. Touch up the painting after sanding down the sills on the inboard side.

Before decking out the upper gun deck consideration should be given as to how the hull is to be painted. If the hull is to be sprayed / air brushed for example, masking will be almost impossible when the gun carriages on this deck are in place. It is worth considering.

The two colours used for the ships side are black and yellow ochre. The matt black is applied from the top of the copper plating to the top of the side and is broken up by three bands of yellow ochre. Using the photos (*Photo 10, 11, 12 & 13*) for reference, the following points should be taken into consideration:

1. The yellow bands do not follow the run of the gunports, neither do they correspond exactly to the wales.
2. The yellow bands vary in width throughout their length, being widest at midships and diminishing towards the bows and transom.
3. Referring to the photographs (*Photo 10, 11, 12 & 13*) you can clearly see that the upper edge of each yellow band (except that at the upper gun deck) roughly follows the top edges of the gunports, while the lower edge is well below the ports at midship rising and reducing in width fore and aft.

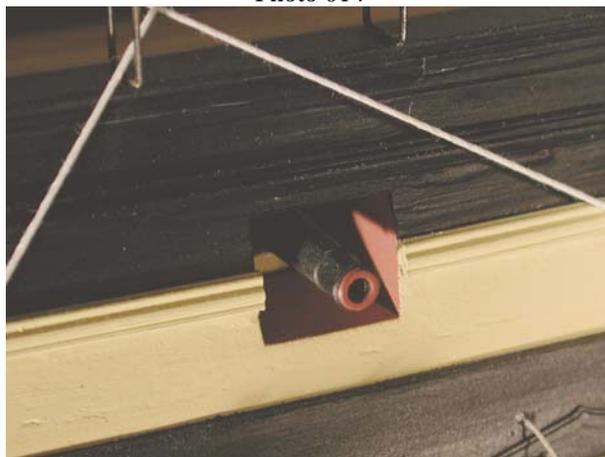
The forward most gunports on the lower and middle gun decks should now be marked in position. Taking their locations from *Plan Sheet 2*, mark in pencil their locations. They are then scored with a sharp craft knife, simply to represent the gunports in a closed position. All necessary associated fittings can be applied (brass etched hinges, eyelets and rigging). Take great care not to split the walnut planking.

Note: the middle deck gunport is a double door gunport similar to that shown (*Fig 025*).

The locating holes for the dummy barrels on the lower and middle gun decks can now be drilled. The spigots of both sets of dummy barrels are 2mm. Using a slightly oversized drill, drill into the dummy barrel strip to take the barrel spigots. Ensure that the holes are drilled horizontally so that the barrels sit about 90 degrees to the keel.

Do not glue the barrels into place at this stage. They should be painted black and their muzzle facings painted red ochre as shown (*Photo 14*).

Photo 014



The Copper Plating

Using *Plan Sheet 2* for dimensioning, mark onto the hull the waterline. Make sure the hull is completely level when marking. When coppering, the hull will have to be laid on its side. To protect the hull lay it on some large towels or similar.

Start coppering from along the keel upwards working from stern to bow. Each line of plates should be staggered by 50% to the plate below (similar to laying bricks) (*Photo 015*). To glue the plates to the hull use a medium to thick super glue. Apply a spot of glue to the middle of the underside of the copper plate. Apply the plate to the hull using a pair of tweezers and then gently push the plate onto the hull to spread the glue.

To cut the plates to the correct shape at the curves and when you reach the waterline, mark off onto the plate the excess area to be cut, lay the plate on a hard flat surface and cut off the excess with a heavy-duty craft knife. Alternatively the plate can be cut with scissors but will then need to be rolled back to flat using a small piece of softwood doweling on top of a block of flat soft wood (*Photo 016*).

If on reaching the waterline you have not achieved an absolutely straight line this can easily be overcome. Apply sellotape all around the hull just above the waterline. Press the edges down firmly to avoid any paint seepage. Using a fine brush paint the area between the top of the copper plates and the bottom edge with copper paint. Once dry remove the sellotape for a near perfect waterline. The underside of the keel and the end of the rudder and rudder post can either be coppered or, for ease, copper painted.

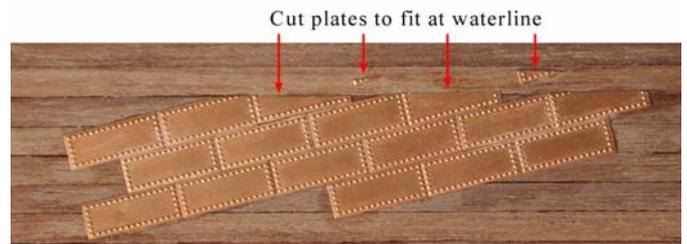
Note: The copper plates are supplied in two bags, when you are ready to start plating it is advisable to open both bags and mix them together. We have found that opening one bag, using these plates, then opening the second bag results in a colour variation between the plates due to different oxidation rates.

Photo 015



Start flush with keel and work up with 50% offsets per row

Photo 016

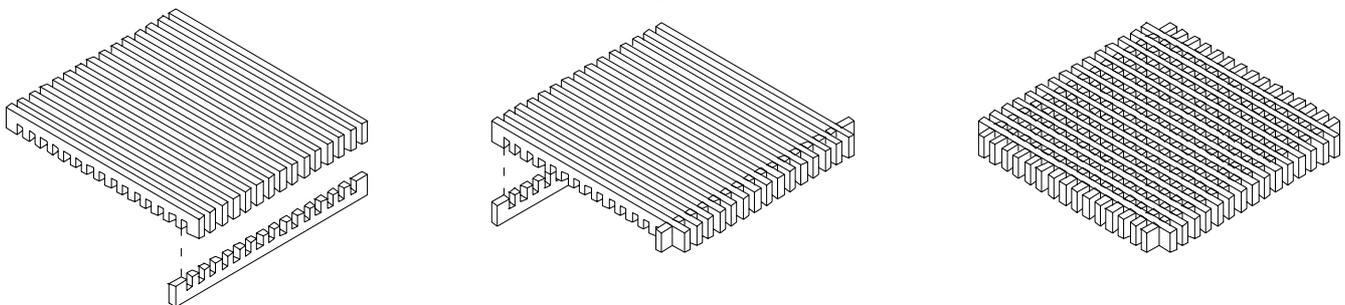


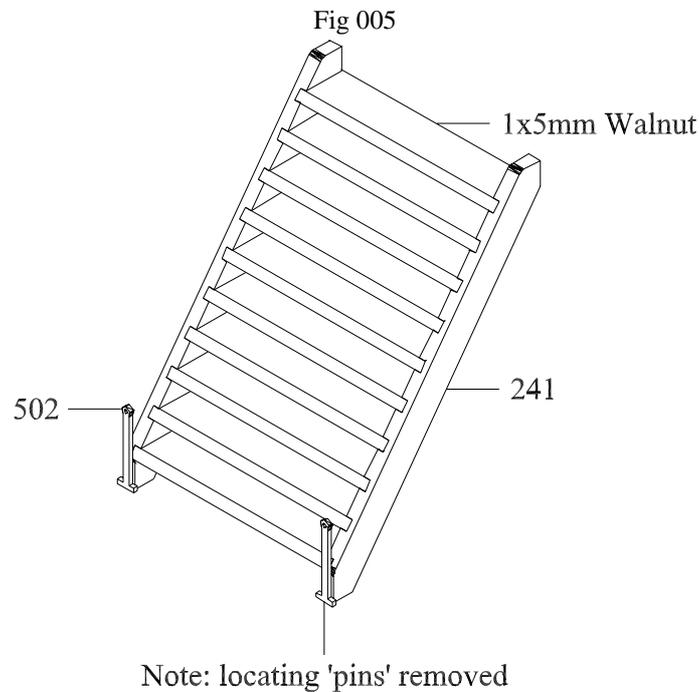
Cut plates to fit at waterline

Upper Gun Deck Fixings

Make up seven sets of grating kits from the grating strips (720) which are to be slotted together as shown (*Fig 004*). When completed, brush on watered down PVA glue to secure the strips and once dry trim to fit in their respective deck openings. The coamings on the outside of the gratings are made from 3x4mm walnut strip. The coaming should be level with the grating. When the grating assemblies are in place, cut out and glue the shot garlands (244-251) into place as shown on *Plan Sheet 3*.

Fig 004





From the 2mm walnut sheet remove the upper deck main companionway shot garlands (252), the main companionway coaming is 2x4mm walnut. With the companionway coamed, glue the shot garlands into position – this lining is intentionally lower than the other companionway and grating linings as was the case on *Victory*.

Identify the companionway ladder sides (241), make three sets up using 1x5mm walnut strip for the treads. The treads should be cut to a length 3mm less than the width of the companionway it fits into.

To assemble the ladders, slot a tread into the top and bottom of each ladder and glue into place, ideally a small jig should be made to keep the assembly square. The remaining treads can then be pushed into the slots and brushed with watered down PVA to seal the assembly. An upper deck stanchion (502) (painted black) should be glued directly to the front edge of each ladder side, as shown (*Fig 005*) with a 0.25mm natural thread tied through the end in preparation of the companionway guard rail assembly.

Glue the completed assemblies into position.

Carefully glue the small 12 pounder cannon balls (705) into the holes in the shot garlands using super glue and tweezers for placement.

Paint black and fit four large cleats (660) into position on the inner bulwarks as shown on *Plan Sheet 5*.

Gun Carriage Assemblies

The gun barrels used in the carriage assemblies are all 12 pounders (700, 701 & 702)

The dummy barrels are either 24 pounders for the middle deck (699), or 32 pounders for the lower deck (698) and will be fitted towards the end of construction.

This section will deal with complete gun carriage assemblies. Although all the cannons are 12 pounders, there are three different sizes of barrel (small, medium & long) and each respective carriage differs in its assembly.

It will be an advantage to the builder to build the carriages one size at a time, as required.

For all guns, the tackles are made up of 0.1mm natural thread together with pairs of 2mm single blocks and the breaching ropes are of 0.5mm natural thread.

Upper Gun Deck 30 x 12 Pounder Long Gun

Identify the 12pdr long gun brass cannon barrel (700).

When completed, the gun carriage should be painted yellow ochre. The barrel and other ironwork should be painted black and the gun muzzle should be painted red ochre.

Make up all of the gun carriage assemblies as shown on the *Plan Sheet 4, 'Cannon carriage assemblies'*. The shorter wheel axle is located at the front to give the carriage a taper when viewed from above.

Note: do not fit the wheels until the carriage has been assembled.

The larger wheels fit on the front of the carriage to compensate for the deck camber. The wheels themselves are simply varnished, not painted. The stub ends of each axle should be painted black.

Cut a bed bolt for each carriage from the 1mm brass wire (746) and glue into place. Glue the quoin (163) to the stool bed and glue the stool bed into place.

Note: the stool beds for these carriages are flush with the rear of the carriage sides, the stool beds for all cannons are 0.5x3mm walnut.

Mark the eyelet positions on each carriage and drill with a 0.5mm drill. There is also an eyelet at the centre of the rear and front axles. Cut the stems of the brass eyelets (480) from their brass etch sheet leaving 2mm for gluing into the carriage and glue in place.

When completed, paint the carriages as previously described. Carefully push the wheels onto the axles.

Cannon trunnions are cut from 1.5mm brass wire and should be long enough to reach the outer wall of the carriage sides. Glue in place through the cannon and onto the carriage.

Note: check the cannon orientation beforehand, the trunnion hole is drilled slightly off centre and should be nearer the bottom of the barrel when in place.

All cannons should be painted black and their muzzles red ochre.

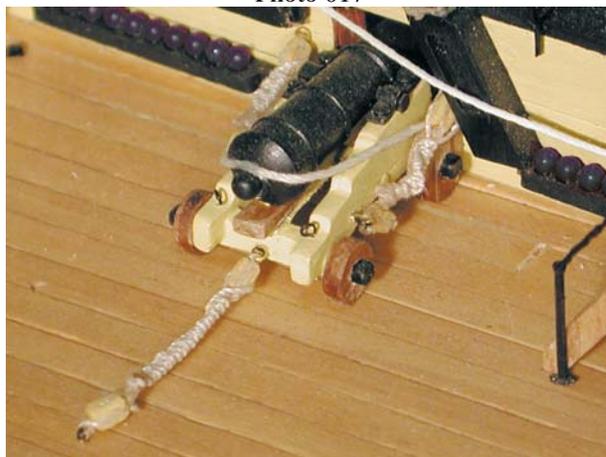
Cut out the trunnion brackets (501) from their brass etched sheet. Fit by bending the thinned centre of the bracket around the trunnion, carefully drill down through the holes in the bracket, with a 0.7mm drill, into the carriage sides. Fix in place with the brass pins (696), these can be cut short before fixing. Paint the trunnion brackets black.

All thirty 12 pounder long guns on the upper gun deck were fully rigged on the prototype and sufficient rigging has been provided to allow you to do the same. Using (*Photo 017*) for reference, if you wish to rig these guns it should be done now. However, it must be remembered that when the quarterdeck is in place the majority of the cannons and rigging will be inaccessible. It is important therefore, to realise that the gun carriages themselves should be secured to the deck with a small amount of super glue.

At each gunport location, four eyelets (480) should be positioned as shown on *Plan Sheet 3, 'Eyelet arrangement for cannon tackle'*. There is also one eyelet directly behind the carriage secured to the deck as shown on *Plan Sheet 3*.

Once the rigging is in place, brush on watered down PVA over the ropes and blocks. Again, time effort and patience is required for best results.

Photo 017

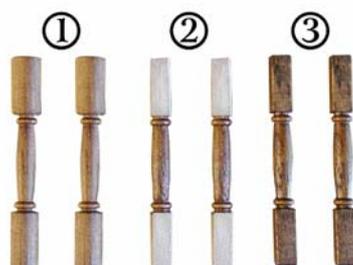


Screen to Admiral Nelson's Quarters

From the 1.5mm walnut sheet cut out the upper deck screen bulkhead (389) and fit into place. Glue the screen to the deck and to the front of the camber beam supports of bulkhead (13).

Directly in front of this screen, two support pillars (722) need to be fitted. The top and base of the support pillars need to be squared off, using a sanding block, to the shape as shown (*Photo 018*). Any discoloration should be stained back to the original colour. The pillars sit on the coaming of the grating as shown on *Plan Sheet 5*. You will need to shorten the pillar to fit, to do this it will be necessary to remove material from both the top and bottom of the pillar.

Photo 018



1. Pillars before sanding.
2. Pillars after sanding.
3. Pillars after staining walnut.

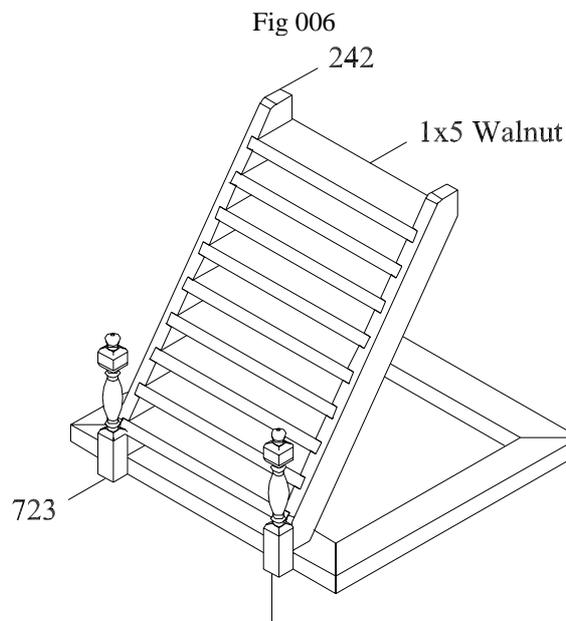
The Main Companionway Ladder Assembly

Remove the ladder sides (242) from the 2mm walnut sheet and construct the ladder in the same manner as before to an overall width of 24mm. There is a reason for this apparent leap in building instructions. Identify two small staircase balusters (723), they will be used to support the handrails in the next building sequence but have to be fitted now. The top and base of the balusters need to be squared off, using a sanding block, to the shape as shown (*Photo 019*). Any discoloration should be stained back to the original colour. The main companionway ladder, when fitted, sits on the edge of the coaming of the quarterdeck companionway, centrally. Directly in front of the ladder sides will sit the balusters to hold the ladder handrail, they should be glued in place onto the deck now, as shown (*Fig 006*). The ladder itself will be fitted later.

Photo 019



1. Balusters before sanding.
2. Balusters after sanding.
3. Balusters after staining walnut.



Note: Balusters sit directly on the deck
not on the coaming.

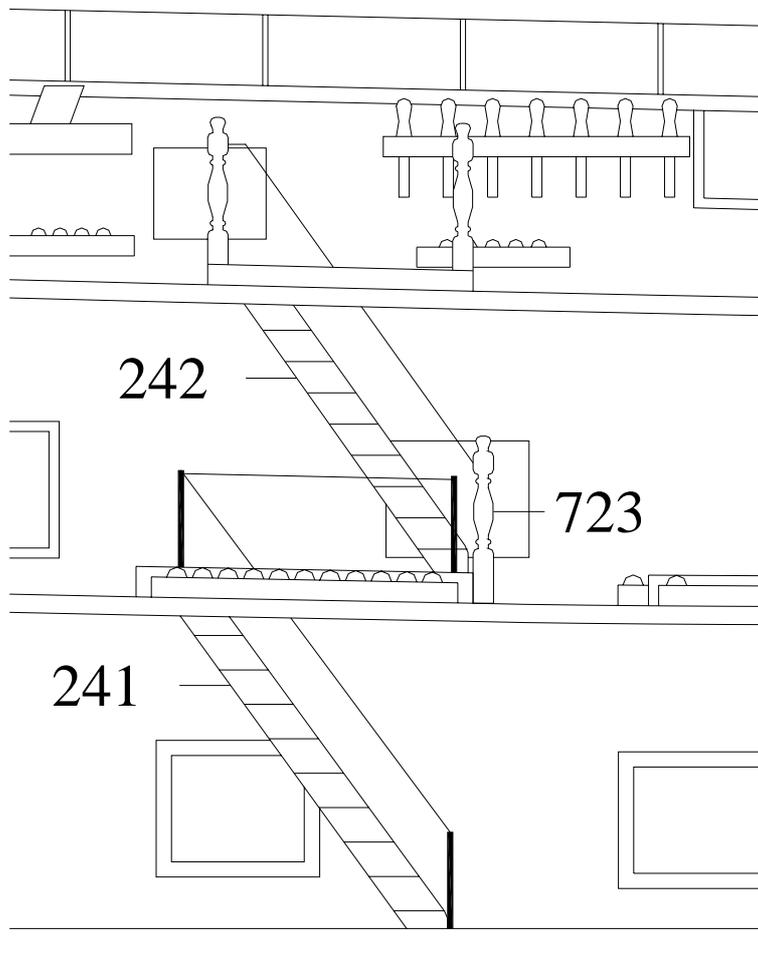


Illustration of main companionway

Elm Tree Pump Assembly

Remove the two elm tree pump bases (85) from the 4mm walnut sheet, the elm tree pump iron top plate (497) from the brass etched sheet, and assemble as shown on **Plan Sheet 3, 'Elm tree pump assembly'**. The rod is made up from 0.7mm brass wire, with a small loop fashioned in one end to pass through the pump handle (498). Now insert the wire into the hole in the centre of the pump base assembly and at the same time glue the handle to the side. This whole assembly should be painted black. Glue the assembly into position as shown on **Plan Sheet 3**.

The Upper Gun Deck Companionway Guard Rails

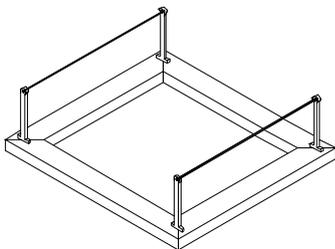
The upper gun deck stanchions (502) (painted black) can be removed from the brass etched sheet and fitted as shown (*Fig 007*). They fit onto the hatch coamings.

Using a 0.75mm drill, drill into the hatch coamings and secure the stanchions with super glue. The rope handrail of 0.25mm natural thread, previously attached to the stanchions on the deck below, can now be passed up and rigged around the main companionway sides only (*Fig 007*).

Note: the foremost two companionway guardrails on the upper gun deck are formed by stanchions (502) and skid beam support pillars (722), the handrail will therefore be shipped at a later stage.

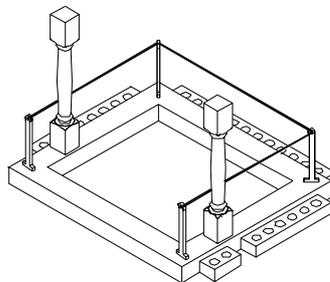
Fig 007

Aft (Main) Companionway



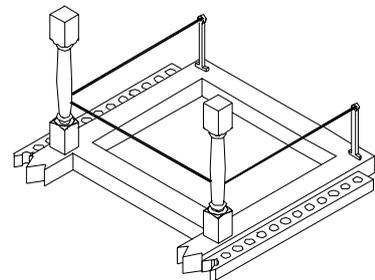
Note: Handrail runs fore to aft (from stanchions on deck below)

Middle Companionway



Note: Handrail passes through pillar (from stanchions on deck below)

Fore Companionway

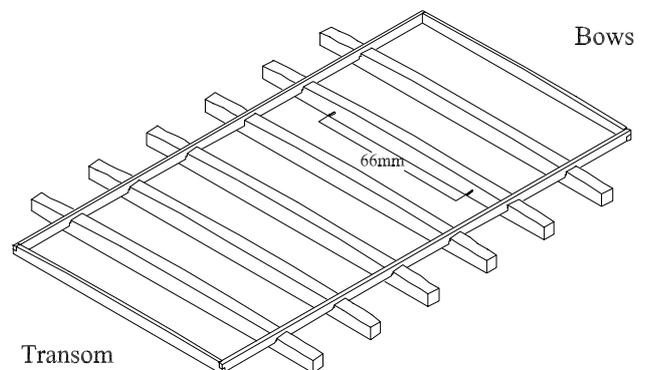
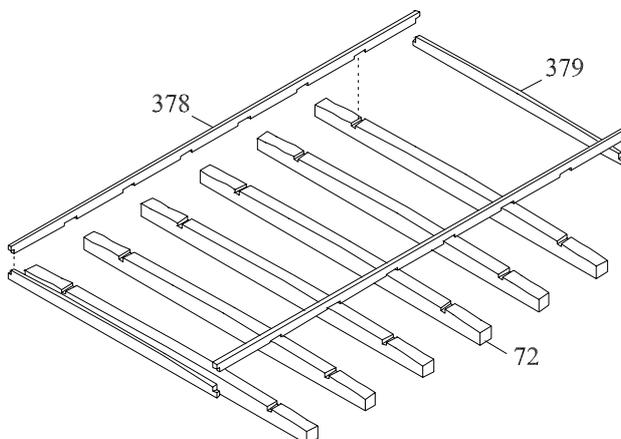


Note: Pillar is used as a stanchion for handrail (from stanchions on deck below)

Steam Trunk Assembly

Identify and remove the four steam trunk sides (396) from the 1.5mm walnut sheet. Assemble the steam trunk as shown on **Plan Sheet 3, 'Steam trunk assembly'**. NB, the assembly is not square. It sits on the upper gun deck as shown on **Plan Sheet 3** and under the forward hatch gratings on the forecastle and is therefore best glued into place during the quarterdeck fitting stage.

Fig 008



Fitting the Quarterdeck

The 'quarterdeck' (446) as referred to during this stage of construction incorporates the forecabin (at the front), the quarterdeck (at the rear) and the area in between often referred to as the waist or boat deck.

Glue (and pin as necessary) into position the quarterdeck camber beams (23 – 25, 27 & 33 – 37).

Note: their position either in front of or behind the bulkheads as shown on *Plan Sheet 1*, the top edge of the beams should be level with the top edge of the bulkhead upright stubs, as shown *Plan Sheet 1*. Allow to dry thoroughly.

By this stage, all work on the upper gun deck should be completed (except the steam trunk, bitt pins and bitts). Check all fixtures are secure, especially the gun carriages.

Remove the quarterdeck (446) from the 0.8m ply sheet and offer it into position. **Do not glue into position.** The first thing to note is that the companionway to the Admirals dining cabin is offset, it is therefore important to fit the deck the right way up so that the companionway is offset to port as shown on *Plan Sheet 4*. Make sure that the deck fits with ease, should there be no tight spots, sand as necessary. Familiarise yourself with both fitting and removal of the deck. At this stage, note the position of the steam trunk assembly and secure in place with super glue.

From the 1.5mm walnut sheet, remove the side linings (378) and the fore and aft linings (379) of the skid beam assembly, and from the 5mm walnut sheet remove the skid beams (72). Glue the assembly together (*Fig 008*) so that it will fit into the quarterdeck opening, the whole assembly should be painted black.

Note: two 0.7mm holes should be drilled (fore and aft) through the second from the front skid beam (33mm from the centreline) and 0.7mm brass wire (10mm long) inserted through the holes and secured as shown. **Again do not glue this completed assembly in place.**

Position the assembly into the opening and mark off where the beams lie under the ply deck. Drill into the deck using a 0.7mm drill, also drilling part way into the under slung skid beams. Remove the skid beam assembly and put it to one side.

The quarterdeck can now be fitted. The reason for the familiarisation of the fitting of the quarterdeck is because although it is fitted as one piece, it is done in several stages.

For the fitting of the quarterdeck, the following components will be required, the quarterdeck (446), the skid beam assembly, the fore brace bitt pins (91 & 158), and the upper deck fore brace bitt (162).

Assemble the fore brace bitt pin assembly (using the upper deck fore brace bitt (162)) as shown (*Fig 009*).

Note: a hole (sheave for the fore yard brace) needs to be drilled fore to aft through the bitt pins (158) at a distance 16mm down from the uppermost edge, the distance between the outer edges of the bitt pins should be 38mm and the quarterdeck fore brace bitt (159) should not be used. This whole assembly should be painted black.

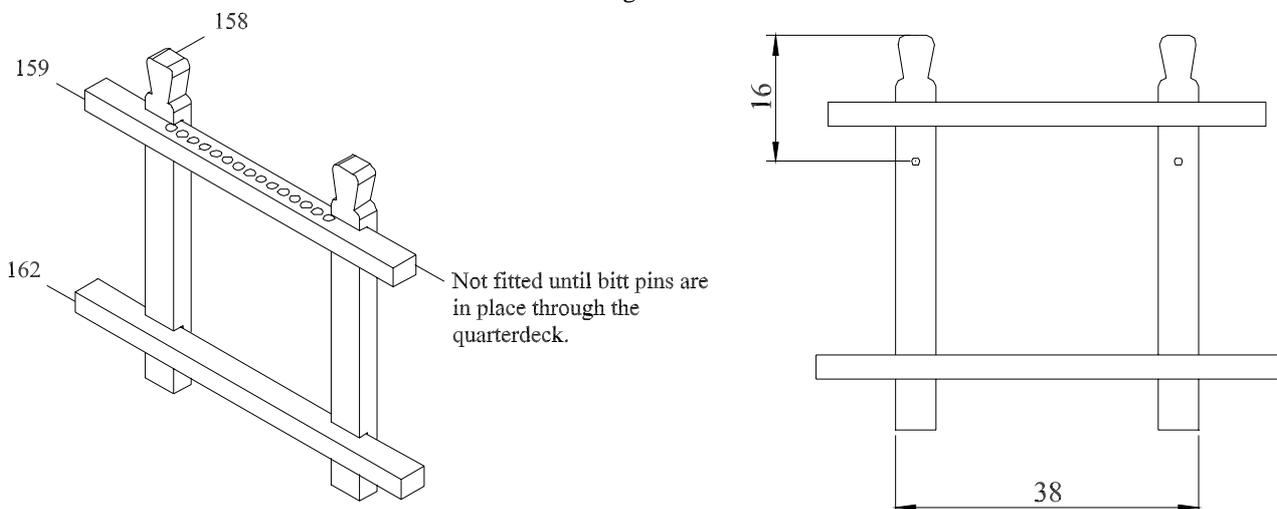
Using PVA and pins, locate and glue into position the quarterdeck from bulkhead (18) to bulkhead (13). It should be possible to lift the forward end of the quarterdeck to allow the skid beam assembly and bitt pin assembly to be positioned from underneath, **do not glue them into position at this stage.**

Temporarily position the skid beam assembly in the quarterdeck opening and check that the quarterdeck will still lie true to the bulkhead camber beams with the assembly in place, sand as necessary. When you are completely satisfied with the fit, glue and pin the skid beam assembly in place, it is essential that the assembly is permanently secured. Do not be concerned by the excess material of the skid beam surrounds standing proud of the ply deck, this will be dealt with at a later stage.

Now, apply glue to the remainder of the bulkhead camber beams (12 to 1) and also to the base of the bitt pin assembly. The bitt pin assembly is to be pushed up through the quarterdeck and at the same time lower the quarterdeck down into position. Make full use of pins and glue to secure.

When thoroughly dry, the upper deck fore brace bitt pins (91) and bitt (162) can be assembled and fitted as shown on *Plan Sheet 3 & 5*. Again the distance between the outer edges of the bitt pins should be 38mm. This whole assembly should be painted black.

Fig 009



Skid Beam Support Pillars

The skid beam support pillars (722) can now be fitted. The top and base of the support pillars need to be squared off, using a sanding block, to the shape as shown (*Photo 018*). Any discoloration should be stained back to the original colour. The pillars are positioned under the first, second, third, fifth and sixth skid beams only, as shown on *Plan Sheet 5*. As before the pillars will require shortening to sit on top of the coaming. The first and fourth pair of support pillars will also need a 0.5mm hole drilled through them, fore and aft, 11mm from the base for the rope handrails, as shown (*Fig 007*). These handrails of 0.25mm natural thread can now be rigged.

The Beakhead Bulkhead

Remove the beakhead bulkhead (205), removed from the 2mm walnut sheet earlier, and glue it into position against the forward face of bulkhead 1. It should fit onto the ply upper deck at the point where the upper gun deck planking was terminated. The beakhead bulkhead should be painted blue.

Planking the Quarterdeck

Before planking commences, it will be necessary to remove the bulkhead uprights of bulkheads 1 to 5 and 10 to 13 (Note 14 to 17 are not removed). Grip them firmly with a pair of long nosed pliers and twist them off, sand the remaining parts of the stub debris to deck level. Extra care will have to be taken when removing the forecastle bulkhead uprights.

The quarterdeck screen assembly should now be made up (329, 330, 331, 332, 333). The windows should be glazed and framed using the respective brass etched frames (503, 504, 505 ~ all painted yellow ochre). The assembly is not fitted at this time but the correct positioning must now be found and marked on the bulwark as follows. Offer the assembly onto the quarterdeck so that the forward face of parts 329 and 333 are flush against the back edge of the bulkhead 14 upright, some sanding may be necessary. When you are happy with the fit, mark the position of the assembly onto the bulwark. The assembly should now be set to one side and the uprights of bulkhead 14 removed.

Using 1x4mm tanganyika strip, plank the quarterdeck in the same manner as the upper gun deck, starting from the centreline and work across the deck, clearing hatches and mast holes as you proceed. Do not forget to clear the four square holes for the main top bowline and fore topsail sheet bitts (92) around the fore mast. Plank up to the skid beam assembly edges and sand these edges flush with the decking upon completion. The top edge of both 'sides' (378) of the skid beam assembly should be topped with 1.5x1.5mm walnut strip which will need to be painted black.

Once completed, lightly sand the deck smooth and apply several coats of matt polyurethane varnish.

Lining the Gunports

(If you have decided to build to the Portsmouth (2003) specification, the raised forecastle inner bulwark pattern (276) should not be fitted. Instead, refer to your Portsmouth Pack and follow steps 1 – 5. Remember to follow the instruction below for the quarterdeck bulwark.)

The raised forecastle inner bulwark gunport pattern (276) and the quarterdeck inner bulwark gunport patterns (273 & 274) can now be fitted. Note that the forecastle pattern (276) and the quarterdeck pattern in front of the screen assembly (274) fit flush against the outer bulwark patterns while the quarterdeck pattern behind the screen assembly (273) is secured to the bulkhead uprights. Again the gunports should be carefully aligned and the patterns should fit over the deck planking, some sanding may be necessary to ensure the screen assembly and bulwark patterns all fit together. The forecastle snatch block (61) should also be fitted into the locating slot as shown (*Fig 017*).

The forecastle bulwark openings and the forward four openings on the quarterdeck should now be lined with 1x4mm walnut and sanded flush, both inside and out. Finally the inner bulwarks should be planked with 1x4mm walnut and painted yellow ochre, this planking should butt up flush against the screen assembly when it is finally secured in place. The inner edges of the lined openings should be painted red ochre. The forward face of bulkhead 18 can also now be lined with 1x4mm walnut and painted yellow ochre.

Second Planking

The second outer hull planking of 1x5mm walnut can now be finished. It continues up the hull and terminates flush with the top edge of the gunport patterns. The aftermost three gunports on the quarterdeck can now be lined with 1x10mm walnut strip (painted red ochre), noting that they should be recessed back by 1mm from the outer hull side.

Quarterdeck Fixings

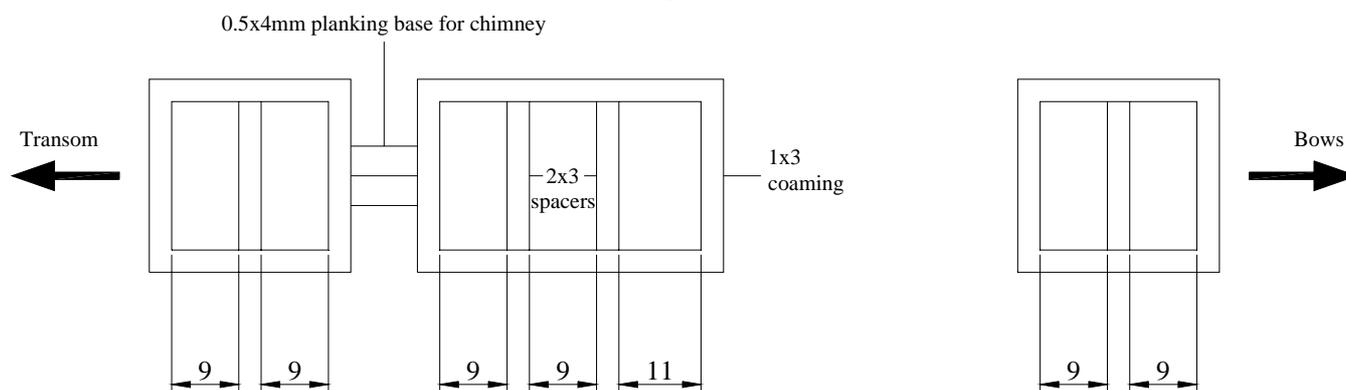
Begin by fitting a piece of 1x5mm walnut strip to the after edge (vertical) of the forecastle bulwark and to the forward edge (vertical) of the quarterdeck bulwark and sand flush inside and out. The forecastle capping rail (393) and the quarterdeck capping rail (391) can now be fitted in their respective positions. Once fitted they will also need to be sanded flush with the bulwarks, inside and out. All capping should be painted black. The ships waist capping (392) can now be fitted between the quarterdeck and forecastle bulwarks, you should note that the inner edge of this capping should lie flush to the inner edge of the quarterdeck and forecastle bulwarks and overhang the outer hull by approximately 2mm.

Forecastle Gratings

Make up three sets of gratings and cut to the dimensions as shown (*Fig 010*). These gratings will then be recessed into their respective holes on the forecastle as follows:

1. Insert the first grating into the opening so that it is recessed with just 1mm standing proud of the deck, and secure the edges to the deck with super glue.
2. Insert the 2x3mm walnut spacer into the opening flush against the grating, again this should be 1mm proud of the deck and secured with super glue.
3. Insert the next grating into the opening, again standing 1mm proud of the deck and secured with super glue.
4. Repeat stages 2 & 3 as necessary until the opening is filled.
5. When the gratings are all in position, the opening can be coamed with 1x3mm walnut strip.
6. Finally sand the completed structure until it is just 0.5mm proud of the deck, following the camber.

Fig 010



Main Top Bowline & Fore Topsail Sheet Bitts

The main top bowline and fore topsail sheet bitt pins (92) can now be positioned on the model.

Note: a hole (sheave for the fore yard brace) needs to be drilled fore and aft through the aft pair (the main top bowline bitts) at a distance 16mm down from the uppermost edge.

The pins can then be passed down through their respective slots on the forecastle and secured in position, ensuring they remain vertical. The bitts (160 & 161) can then be secured to the bitt pins, centrally and the assembly painted black.

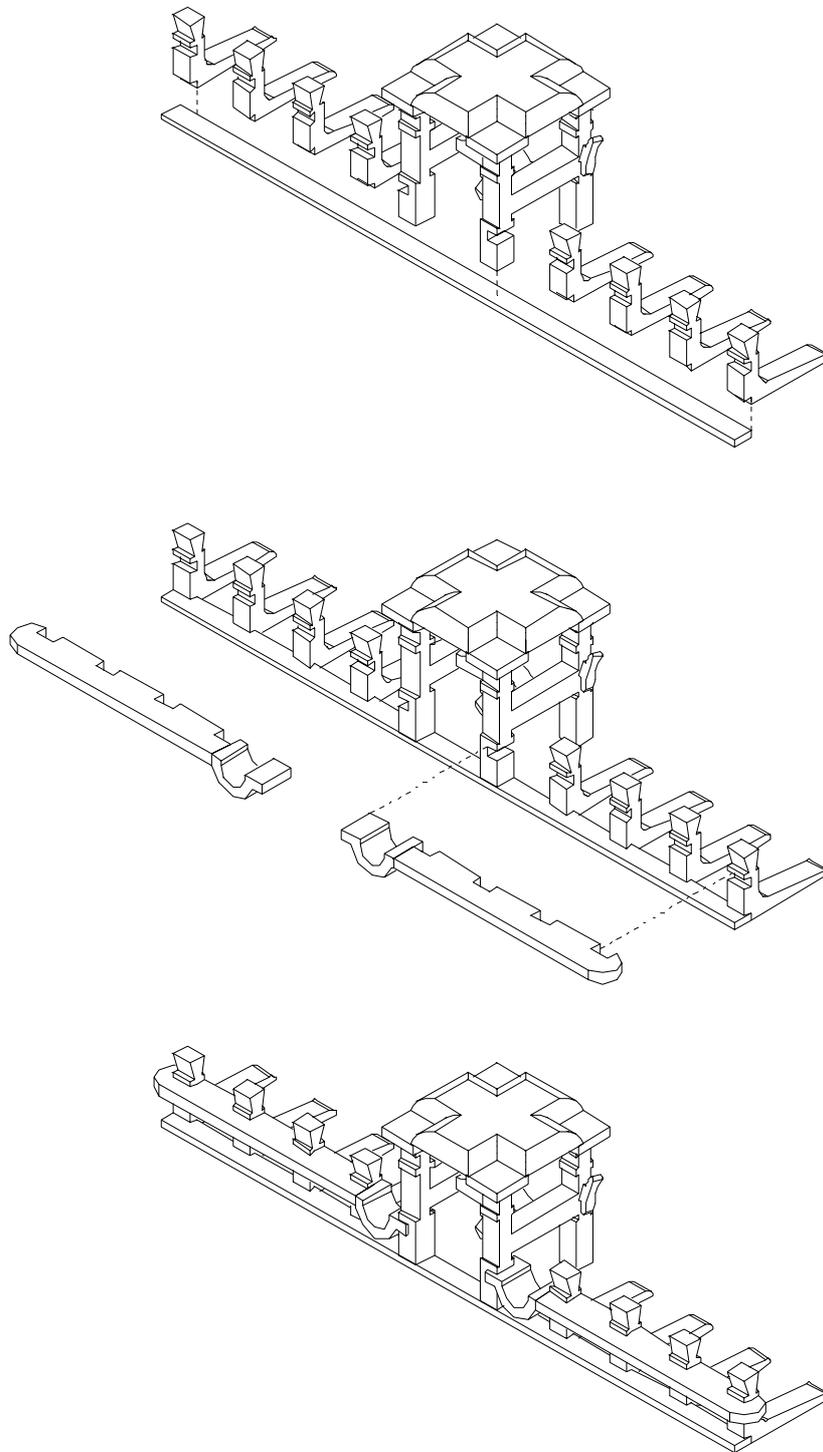
Galley Stove Chimney

An area 8mm wide between the aft forecastle gratings needs to be planked with 0.5x4mm walnut as shown (*Fig 010*). The galley stove chimney is then painted black and positioned centrally on this planking.

Forecastle Breast Beam Assembly

(Photo 020) Assemble the belfry (134, 135, 209, 340, 541, 645, 662) as shown on **Plan Sheet 4, 'Belfry assembly'**. You will notice the aft belfry support pillars are 1mm shorter than the fore, this is correct, do not level them. Line the forward edge of the skid beam assembly with 1x3mm walnut. The belfry is positioned centrally across this lining, with the shorter (aft) pillar supports placed directly onto the lining. Using (Fig 011) and **Plan Sheet 4, 'Section through bulkhead 5'** for reference the forecastle breast beam supports (193) are also fitted along the lining. The forecastle breast beam (60 & 338) completes the whole assembly. This assembly should be painted black.

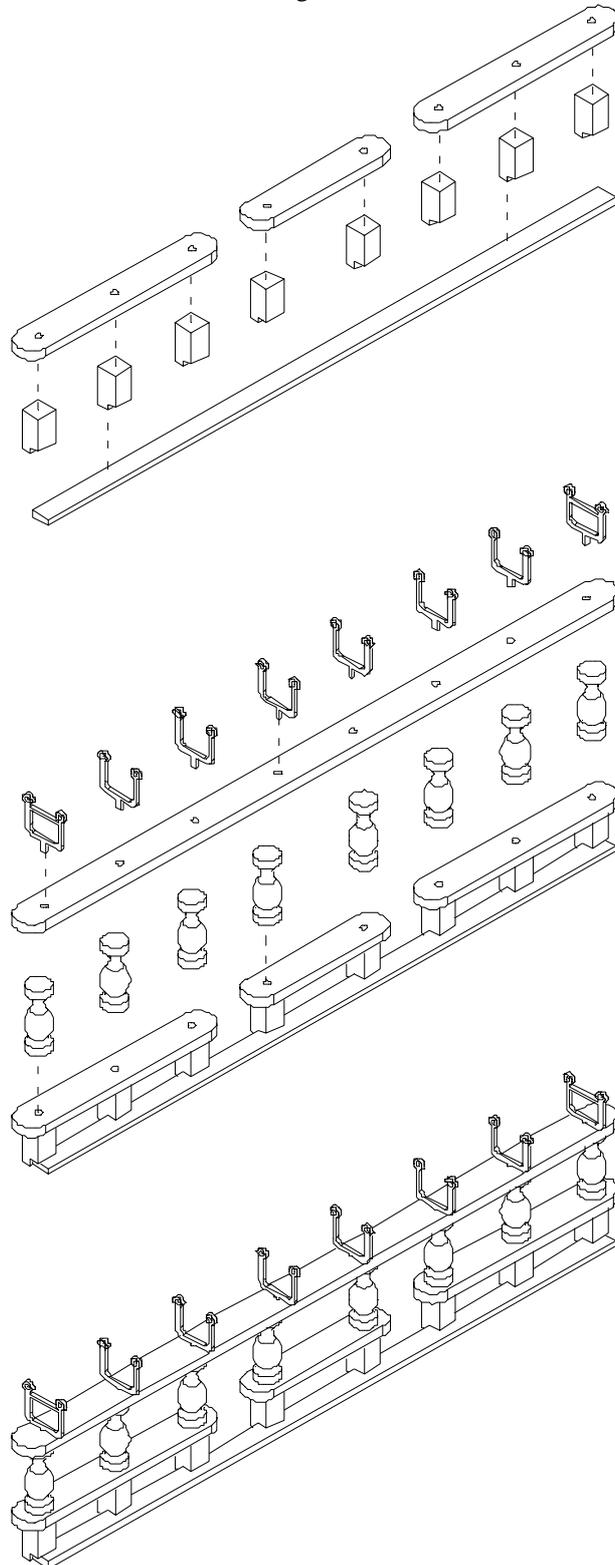
Fig 011



Quarterdeck Barricade Assembly

(Photo 021) Line the aft edge of the skid beam assembly with 1x3mm walnut. Using **Plan Sheet 4** for reference, cut eight supports each 6mm long from 3x3mm walnut. Into the front lower edge of these supports, a 1x1.5mm notch needs to be filed out so they sit half on and half off the 1x3mm lining as shown (Fig 012). Next, fit the middle rails (362 & 363) and the turned columns (723) onto the pillars and finally the upper rail (364). It is a good idea not to fit the hammock cranes (524 & 525) until a later stage, as they are easily damaged. **Note:** the supports, pillars and hammock cranes should all remain vertical while the beams follow the deck camber, holes have been drilled into the beams to aid alignment. This whole assembly should be painted black.

Fig 012



Waist Ladders

The waist ladders can now be assembled using the sides (243) and 1x5mm walnut for treads. The overall width of the ladders should be 12mm. Before fitting the ladders, paint black and fit the ships waist baluster (663). This fits against the skid beam and the lining as shown (*Fig 029*), a 1.5x1.5mm walnut rail (painted black) is fitted between this baluster and the outer quarterdeck barricade assembly supports. Using (*Fig 029*) and **Plan Sheet 5** for reference, fit the ladders in position.

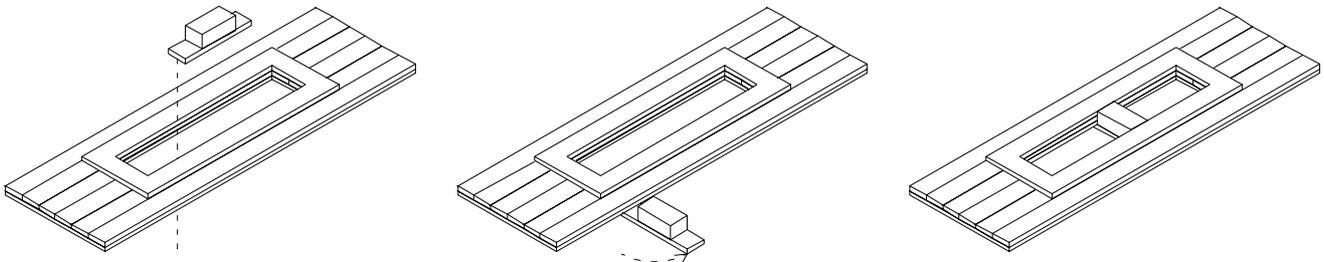
Note: the after pair of ladders fit tight against the waist baluster, (*Photo 022*).

Lining the Quarterdeck Rigging Opening

The quarterdeck rigging openings (either side of the main mast), are lined with 1x3mm walnut. There is also a centre cross beam which is fitted as follows (*Fig 013*):

1. Cut two pieces of 3x4mm walnut to a length of 8mm.
2. Glue a piece of 1x4mm walnut (16mm long) centrally to the underside of the 3x4mm piece.
3. Insert this assembly down 'through' the rigging openings, rotate and pull back up so that the 3x4mm walnut strip sits 15mm from the front of the opening, with the 1x4mm walnut strip against the underside of the quarterdeck.
4. Glue the 1x4mm walnut strip to the underside of the quarterdeck, ensuring a secure fit as this beam will take the strain of the jeers when rigged.
5. Sand the 3x4mm walnut flush with the coaming.

Fig 013

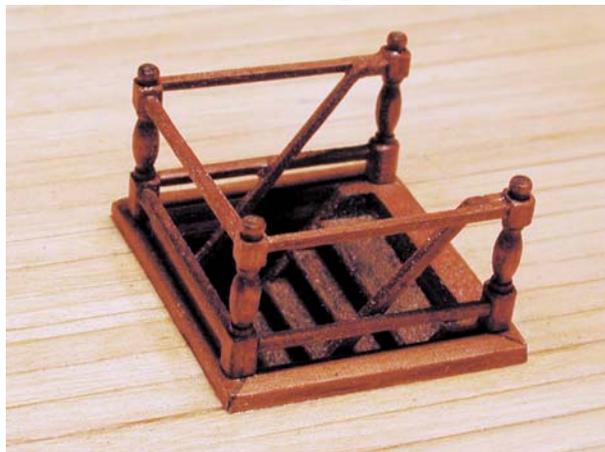


Main Companionway

Using 2x3mm walnut, form a coaming around the main companionway. Temporarily fit the main companionway ladder (as constructed earlier). Identify four staircase balusters (724) and reduce their overall height to 14.75mm, taking the excess from the base only. As with the previous balusters, square off and stain back to walnut. Referring to (*Photo 023*) you will notice that the hand rail from the upper gun deck fits onto the handrail that surrounds the companionway opening. Therefore, the position of the balusters on the quarterdeck is dictated by the position of the handrail from the upper gun deck. These handrails are constructed from 1.5x1.5mm walnut reduced to 1x1mm walnut. When you are happy with the positioning of the balusters, they can be secured into position on top of the coaming. Make sure that the balusters are vertical and square.

With the balusters in position, the ladder handrail and surround handrail can be constructed as shown (*Photo 023*). A second surround rail is also shipped approximately 2mm off the companionway coaming.

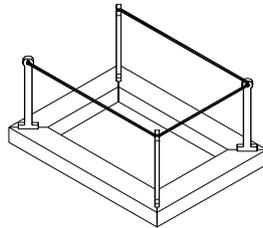
Photo 023



Companionway to Admirals Dining Cabin

Using 1x3mm walnut, form a coaming around the companionway. Assemble the ladder (240) using 1x5mm walnut for the treads. The overall width of the ladder should be 11mm. Glue two upper deck stanchions (502) to the forward lower face of the ladder and at the same time attach the 0.25mm natural handrail to each stanchion in the same manner as shown (*Fig 005*). Glue the ladder into position in the companionway. Four quarterdeck stanchions (515) should now be positioned at each corner of the companionway on top of the coaming. The rope handrails now pass up from the upper gun deck, around the companionway (through the stanchions) and are tied together at a suitable point (*Fig 014*).

Fig 014



Handrail passes from deck stanchions
below and round 3 companionway sides

Kevels, Pinrails and Shot Garlands

All kevels, pinrails and shot garlands will be painted black (the belaying pins are left natural). Start by locating the quarterdeck shot garlands (256, 257, 258, 259), these are positioned on the bulwark approximately 2mm off the deck. They do not run parallel to the deck, instead they run horizontally (as per the gunports). In order to identify the correct positioning of the aftermost shot garland, the screen assembly will again need to be temporarily fitted, the shot garland should then be placed at least 3mm in front of the cabin screen. When you are happy with their fit, glue into place with super glue. Now, carefully glue the small 12pdr cannon balls (705) into the holes in the shot garlands using super glue and tweezers for placement. Identify the quarterdeck kevels (167 & 168) and assemble the quarterdeck staghorns (166 & 387) (*Fig 015*). The foremost kevel (168) requires a 1mm hole drilled fore to aft (to simulate a sheave), approximately 5mm up from the base of the kevel, for the main yard lift when rigged. Using *Plan Sheet 4* for reference, position and glue into place.

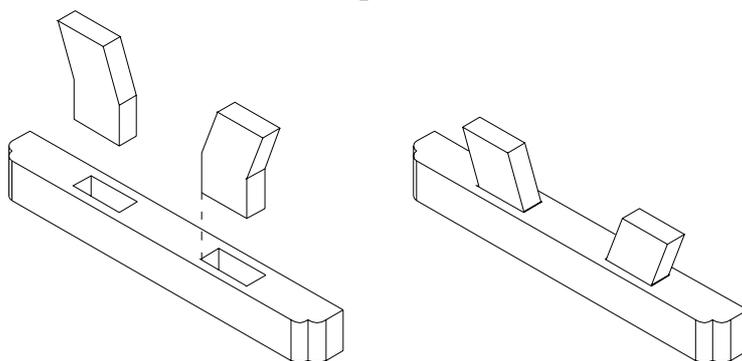
Note: the kevels are raised up off the deck.

Identify forecastle kevels (62 & 93), the foremost pair of kevels (62) require a 1mm hole drilled fore to aft (to simulate a sheave), approximately 5mm up from the base of the kevel, for the fore yard lift when rigged. Using *Plan Sheet 4* for reference, position and glue the kevels to the bulwark and deck.

Note: these kevels all sit on the deck.

Identify the quarterdeck pinrails (254 & 255). Using *Plan Sheet 4* for reference, glue **and pin** the pinrails in place.

Fig 015



The Quarterdeck and Forecastle Cannons

The 12 quarterdeck cannons are all 12pdr short guns (702) and the two forecastle cannons are 12pdr medium guns (701). Make up the carriage assemblies as before noting that the chock and stool beds align to the back of the rear axle as shown on *Plan Sheet 4, 'Cannon carriage assembly'*. Rig the cannons as previously described, you will note from *Plan Sheet 4*, the third (from the back) cannon on the quarterdeck and the forecastle cannon are lashed down to the deck in the position shown, again the screen assembly will have to be temporarily fitted to ensure correct positioning. (When in battle, the screen assembly was folded up into the deck head, on hinges, in order to manoeuvre the cannons). When the cannons are fitted and rigged, the quarterdeck screen assembly can be secured in place.

The Quarterdeck Mizzen Mast Sleeve

The quarterdeck mizzen mast sleeve (152) should now be fitted. Great care should be taken to ensure that the mizzen mast will pass through the deck(s) cleanly and to the correct rake as determined by the slot in the keel.

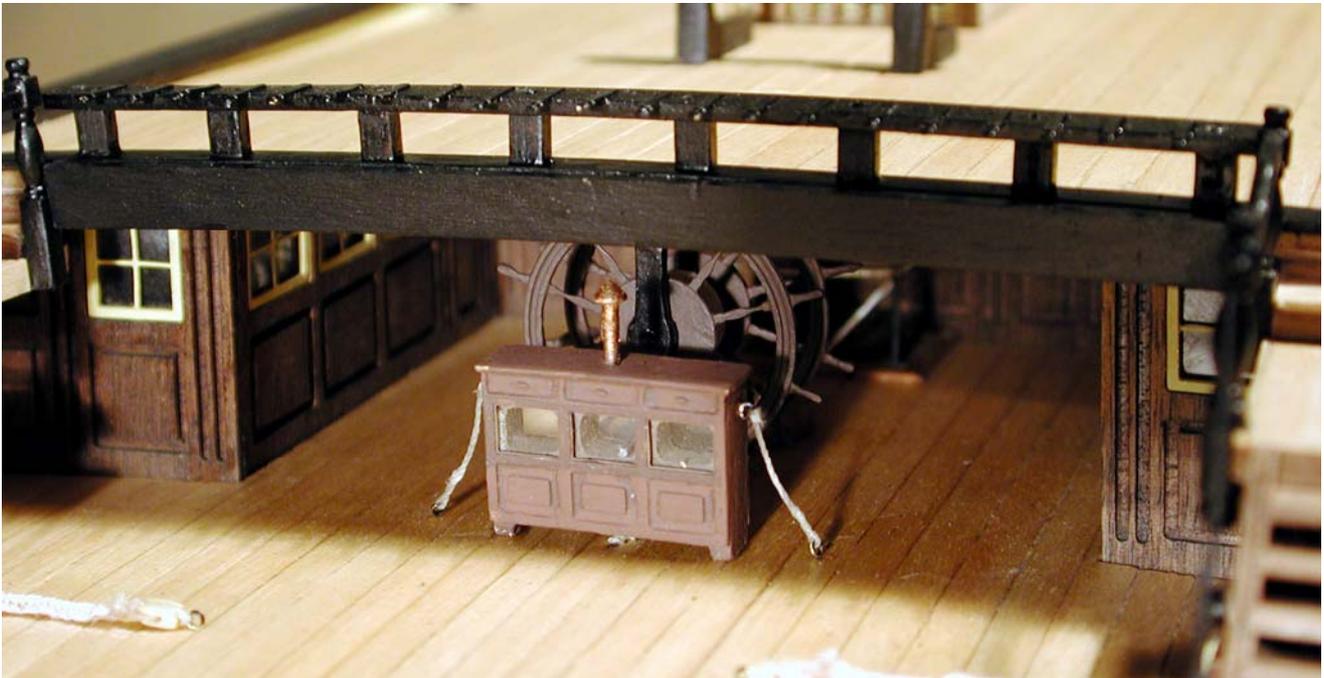
The Ships Wheel

(Photo 024) Assemble the ships wheel as shown on *Plan Sheet 4, 'Ship's wheel assembly'*. When fitting the wheel to the quarterdeck, it will be necessary to remove some material from the top only of the fore ships wheel standard (342), to allow the poop deck to lie true. For authenticity, a length of 0.5mm natural thread can be lashed around the barrel a number of times and secured through two 1mm holes drilled into the quarterdeck, to represent the tiller rope.

The Binnacle

(Photo 024) Assemble the binnacle as shown on *Plan Sheet 4, 'Binnacle assembly'*. You should note that a small groove should be filed out of the front and rear of the binnacle across the apertures to accommodate the glazing material. The assembly should be painted brown (wood effect) with a copper coloured chimney. This should be glued to the quarterdeck (half under the poop), and secured with two 0.25mm natural thread guy ropes (one either side), to the deck between brass eyelets (480).

Photo 024



The Cat-Tails

The cat-tails (64, 131) are now secured in position. The 3mm cat-tail (131) goes on first and is glued to the deck and the after edge of the beakhead bulkhead. The 5mm cat-tail (64) is then glued to the deck and after edge of the 3mm cat-tail. When thoroughly dry, sand the beakhead bulkhead flush with the cat-tails.

Identify the forecastle shot garlands (191), paint them black and fit into the corner of the forecastle, on the deck, flush against the bulwark and cat-tails. The shot garlands should be positioned so that the 'straight' end is to the inboard, as shown on **Plan Sheet 4**.

The Beakhead Capping Assembly

(*Photo 025*) Identify the beakhead bulkhead plank sheer (380). The plank sheer is positioned directly on to the top of the 3mm cat-tail. Some sanding may be required for the plank sheer to fit neatly between the bulwarks.

Note: the back edge of the plank sheer sits directly at the join of the 3mm & 5mm cat-tails, and the pre-cut timberhead locating holes are set to the rear, as shown on **Plan Sheet 18**.

The bow main rail inner timberhead (125) is now secured in position against the front edge of the bulwark, at the end of the plank sheer. The 'head' of this timberhead must also be shaped, but **only** on the **inboard, after** and **forward** faces, to accept rigging, as shown (*Photo 25 & 26*). When the headrail is fitted at a later stage, it forms the outboard face of the main rail timberhead and it too will need this shaping.

The beakhead bulkhead timberheads (121 & 122) are now glued into their respective locating holes in the plank sheer, take care to ensure the timberheads remain vertical.

Note: the timberheads with notches (122) are positioned in the outermost holes with the notches facing inward toward each other, as shown on **Plan Sheet 4, 'Section through bulkhead 1'**.

Identify the beakhead bulkhead fiferail parts (63, 404 & 405). The U-pieces are positioned into the 'notches' in the outermost timberheads (122), with their aft edge flush with the aft edge of the timberheads. The fiferail centre and ends (404 & 405) then run between these U-pieces and the bulwarks, following the camber of the plank sheer beneath.

Using **Plan Sheet 5** for reference, identify brass profile 2. A length of this profile should be painted yellow and secured across the beakhead bulkhead, butted up directly under the plank sheer.

Photo 025



Beakhead Bulkhead Decoration

The Roundhouses

Remove the roundhouse patterns (328) from the 1.5mm walnut sheet and dry fit into their respective slots on the beakhead bulkhead. The lower pattern should fit directly onto the 0.8mm ply deck. In order to achieve this, a small amount of the centre plank of the upper wale will have to be removed. Glue the roundhouse patterns into position as shown on **Plan Sheet 4, 'Section through bulkhead 1'**. To form the roundhouses, plank the patterns vertically with 0.5x3mm walnut strip. Fix the roundhouse top pattern (206), to the top of the roundhouse and when complete, slightly sand the planking to form a smooth and 'round' shaped roundhouse. The roundhouses should be painted blue.

The upper gun deck, fore of the beakhead bulkhead, should now be planked with 1x4mm tanganyika, remembering to clear the hole for the bowsprit as you progress. The deck should now be flush with the centre plank of the top wale as mentioned earlier. Apply several coats of matt polyurethane varnish to the deck.

The Beakhead Pilasters

Identify the beakhead pilasters (634, 635 & 636). They should be painted as shown (*Photo 025*), yellow with blue top relief. Start by dry fitting the centre pilaster (634), some material will need to be removed from the base of each pilaster, following the deck camber, until the uppermost edge of the pattern sits flush with the uppermost edge of the roundhouses. Form the roundhouse pilaster to fit neatly around the roundhouses (a suitably sized piece of dowel is ideal for this), likewise the base of the pilasters will require some reducing. When you are satisfied with the fit of all of the parts, secure in place with super glue. You will notice two of the pilasters of the centre section have two small holes through them, drill these out with a 0.75mm drill and fit a copper eyelet into each, these will take the beakhead bulkhead door hinges.

The Beakhead Doors & Gunports

Identify and paint blue the doors and gunport lids (124 & 327). Identify and paint blue their respective hinges (490 & 492). Dry fit the door to the beakhead bulkhead opening and mark the alignment of the eyelets to the hinges, glue the hinges to the door and hang on the eyelets. The door can then be left fully functioning or glued at a position of your choosing.

Glue the hinges to the gunport lids, allowing for a recess of 1mm as shown on *Plan Sheet 2, 'Attaching gunport lids and hinges'*, and fix in position on the beakhead bulkhead.

Note: the gunport is not lined, and 0.25mm natural thread will be needed to rig the port open.

Identify and paint blue the roundhouse ports (637), these are to be glued centrally to the roundhouse as shown on *Plan Sheet 4, 'Section through bulkhead 1'*, and the centres can either be drilled out and glazed or painted black.

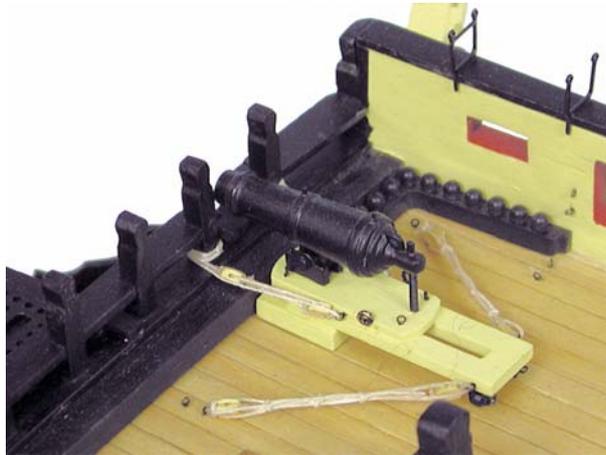
The Forecastle Carronade

Locate the carronade components, the barrel (647), the trunnion (648), the deck block (133), the sling bed (208), the carriage (339), brass etched eyelets (480), the trucks (506) and the wheels (parrell beads) (708). Assemble the carronades as shown on *Plan Sheet 4, 'Carronade assembly'*, using a piece of 3x3mm walnut cut and shaped as a chock and a length of 1.5mm wire to pass through the trunnions and barrel. Bend the trucks to shape along the profiled 'fold' line and secure parrell beads as wheels with a brass etched eyelet through the hole.

Paint the whole carriage yellow, the carronade, trucks, trunnions and eyelets black.

Using brass etched eyelets, 2mm single blocks and 0.1mm natural thread, rig the carronade in position on the forecastle as shown (*Photo 026*). Two copper eyelets are also attached to the carriage as shown to accommodate a breach rope of 0.5mm natural thread.

Photo 026



The Bows

In order to complete this part of the construction, it may be of benefit to read 'The Bows' instructions and dry fit all of the component parts together before anything is finally glued into position.

Using *Plan Sheet 5* for reference, fit the bow curved rails (126 & 127) to the stem, remembering that the figurehead scroll work (652 & 653) has to fit against the stem, between these two rails. The hair bracket (120) and lower bow cheek rail (123) can then be secured to the hull and bow curved rails as shown. The hawse hole balsters are then fitted against the lower bow cheek rail, at a distance of 13.5mm from the stem, and the hawse holes of 6mm diameter drilled out. Some sanding of these parts will be required to ensure a good, neat fit. These parts are painted as shown (*Photo 27 & 28*).

Next, fit, with pins and glue, the four head timbers (107, 108, 109 & 110) into their respective slots in the stem and paint black, their bases will require sanding to sit tight against the upper bow curved rail. When the aftermost head timber (107) is fitted, the remaining gap above should be filled with scrap 5mm walnut. **It is essential that these parts remain absolutely square, level and central.**

The rails (painted yellow) are now fitted using 2x2mm flexible beech. Using *Plan Sheet 5* for reference, the rails join the slots in the outer edges of the head timbers, terminating against the hull and upper bow curved rail as shown. The slots will require bevelling to ensure a 'true' fit. When the rails are in position, paint the outer edge of the timberheads yellow and they should then be lined with 0.5x3mm (reduced to 0.5x2mm) walnut, painted blue as shown (*Photo 27 & 28*).

The bow main rail (394) can now be fitted. Using *Plan Sheet 5* for reference, the upper edge of the 'head' of the bow main rail will sit flush with the top of the bow main rail inner timberhead (125) as fitted earlier. The lower edge of the bow main rail then follows the four head timbers and terminates flush against the upper bow curved rail, in order to achieve this, the head timbers will require bevelling.

Note: the bow main rail inner timberhead (125) should not be bevelled. Instead, the bow main rail will run past the fore outer corner of this timberhead and the bow main rail outer timberhead (395) should be bevelled to fit behind the bow main rail and against the inner timberhead. When the bow main rail is shipped, the upper edge (directly above the profiled area, running into the timberhead) should run parallel to the deck, and the 'head' of the bow main rail inner timberhead as shaped earlier should also now be worked into the main rail and main rail outer timberhead. Also note that the bow main rail should be painted as shown in (*Photo 27*), it is also shown correctly painted on the front cover of this manual.

Photo 027



Photo 028



The Bow Gratings

Two lengths of 2x3mm walnut (painted black) should now be secured against the front edge of the second and third head timbers (108 & 109) as shown (*Fig 016*). The lower, aft edge of the beakhead platform (321) should also be lined with 2x2mm flexible beech. This beakhead platform can now be painted black and glued in position, the aft edge will sit on top of the decked area fore of the beakhead bulkhead, just touching the roundhouses. The fore edge should just come over the 2x3mm walnut plank on the front edge of the second head timber.

The second beakhead platform (322) sits flush against the first, at an angle so that it sits on the 2x3mm beam across the front of the third head timber. You should clear any obstructions (such as the 2x3mm beam) from the openings in each of the gratings when the assembly is thoroughly dry.

The Stools (76 & 77) can now be located and secured in position on top of the gratings, as shown (*Fig 017*).

There is a handrail of 0.7mm brass wire, which runs from the bow main rail at the roundhouse to the bow main rail at the stem, passing through a stanchion mid way. The stanchion is made to fit from 0.7mm wire, the small loop can be formed by twisting the wire around the end of a pair of long nosed pliers. The stanchion is positioned onto the grating and against the inboard edge of the bow main rail. To fit the rail, a 0.75mm hole will need to be drilled into the top face of the bow main rail at the start and end points, a 90 degree bend is then made in each end of the rail and glued into these holes, remembering to pass the rail through the stanchion first.

Fig 016

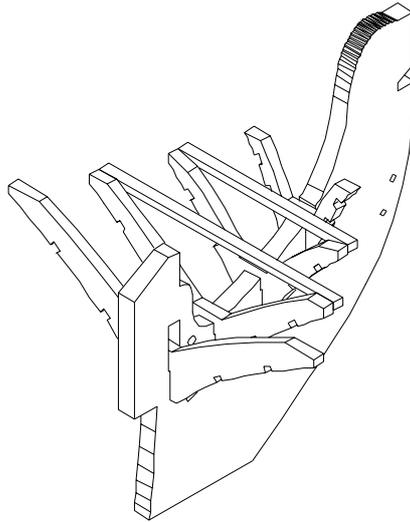
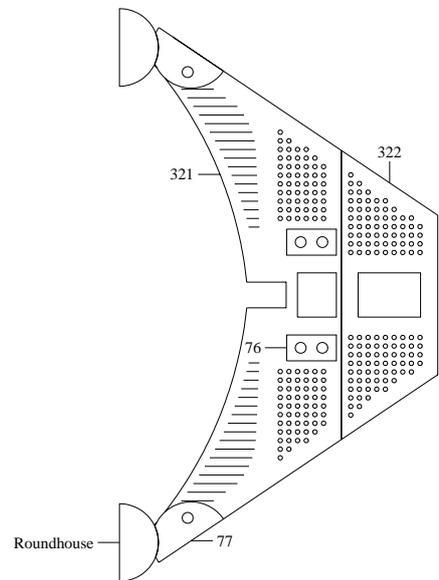
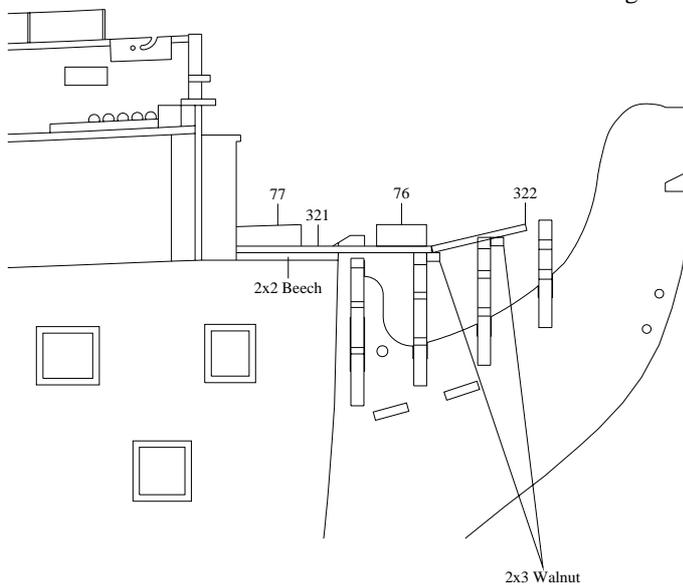


Fig 017



The Knightheads & Boomkin

Using **Plan Sheet 7**, make up the boomkins as shown, these will need to be painted black.

Temporarily insert a piece of 12.7mm dowel into the bowsprit slot. Locate, and paint black, the knightheads (65) and mark their position on the deck, do not yet fit them. The knightheads are positioned as close to the bowsprit as possible, and flush against the aft edge of the grating. Insert a brass wire pin into the underside of each knighthead and drill locating holes into the deck, again do not yet secure the knightheads. With the knightheads temporarily fitted in their locating holes, the boomkin orientation can be determined. The boomkins sit flush against the outermost edge of the knightheads at a distance of 20mm from the deck, and pass downward and outward, resting in the semi-circular cut of the bow main rails as shown on **Plan Sheet 5**. The end of the boomkins will require sanding to sit flush against the knightheads. When you are happy with the positioning of the boomkins they should be glued and pinned to the knighthead. As this assembly is fragile you can choose either to glue the knightheads (and attached boomkins) in position now or at a later stage.

The Figurehead

Using (*Photo 029, 030 & 031*) for reference, paint and fit the figurehead as shown.

Note: the starboard figurehead (Cherubim) has a blue sash while the port figurehead (Seraphim) has a red sash.

A Cherubim, indicated by the colour blue, relates to the second order of angels representing wisdom.

A Seraphim, indicated by the colour red, relates to the highest order of angels representing love of God.

Photo 029



Photo 030



Photo 031



The Cat-Heads

The cat-head is constructed as shown (Fig 018) from 1x5mm walnut, 0.5x5mm walnut, and a length of 1mm brass rod. The stop cleat is made from 1x3mm walnut. When assembled, paint the whole assembly yellow, with two blue rectangles on the fore face as shown (Photo 032) and attach a 1mm wide strip of cartridge paper as banding.

The cast crown (674) is painted as shown (Photo 033) and glued to the end. The assembly is attached to the hull, with the cat-head knee (129) against the aft edge and the cat-head support (130) against the underside, all of the parts will require sanding to sit flush against the hull. The cat-head knee is painted black, the support is painted as shown.

Note: the cat-head should be positioned such that it appears to be a continuation of the 5mm cat-tail on the forecastle.

A length of brass profile 1 should be warmed and shaped to run between the cat-head support and the upper rail (of 2x2mm beach).

Note: where the brass profile intersects the wale, this section of the wale should be removed to allow the profile to sit flush against the hull. Also, the brass profile should run over the top of the foremost middle gun deck gunport at a sufficient distance to accommodate the gunport rigol to be fitted at a later stage.

Photo 032



Photo 033

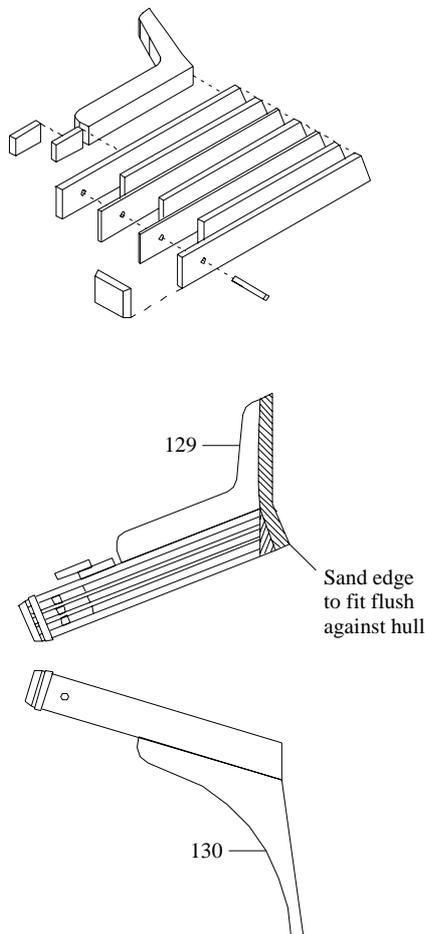
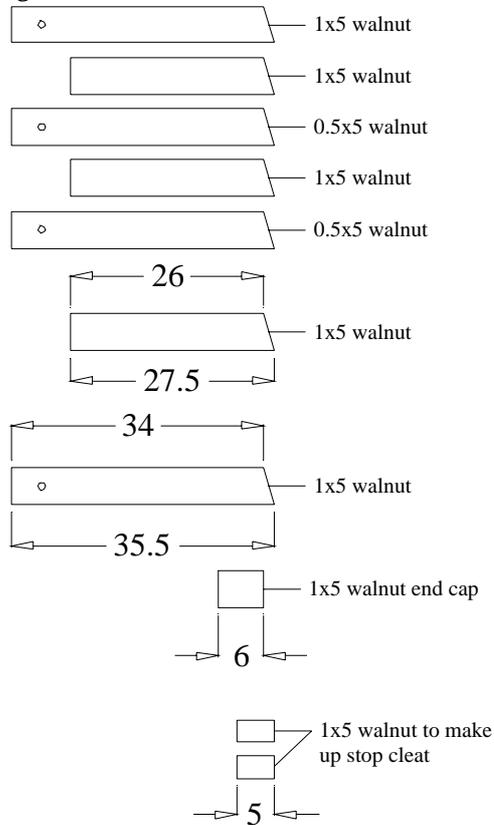


Fig 018



The Marines' Walk & Pillars

Identify the marines' walk (406) and pillars (128) and paint black. The pillars fit through the foremost opening in the second beakhead platform, and flush against the forward face of the third head timber, with the notch in the pillar securing to the beakhead platform. The marines' walk then fits directly on top of the pillars with the aft end resting on the beakhead bulkhead plank sheer, flush against the forward face of the fourth and fifth timberheads and inside the third and sixth timberheads.

The Poop Deck

Locate and fit the poop deck camber beam (38) as shown on *Plan Sheet 1*. Fit the 0.8mm ply poop deck, sand for fit and when satisfied, secure in position with pins and glue. Remove the upright stubs from the bulkheads and sand flush with the deck. Using 1x4mm Tanganyika strip, plank the deck from the centre out to the bulwark (currently consisting of the top gunport pattern and second planking), remembering to clear the openings as you progress. Cut a template from scrap 1.5mm ply, to fit against the inside face of the bulwark, glue in position and line with 1x4mm walnut. Identify and fit the poop deck capping (390), the capping should overhang the hull by approximately 1mm, the quadrant between the poop and quarterdeck capping can now be 'capped' with 1x5mm walnut and sanded flush with the inner and outer hull faces.

The front edge of the poop deck is 'capped' with a plank sheer of 1x4mm walnut, between the bulwark capping rails, flush with the front edge of the decking. The fore end of the bulwark capping rails should now be gently sanded flush with this 1x4mm plank sheer.

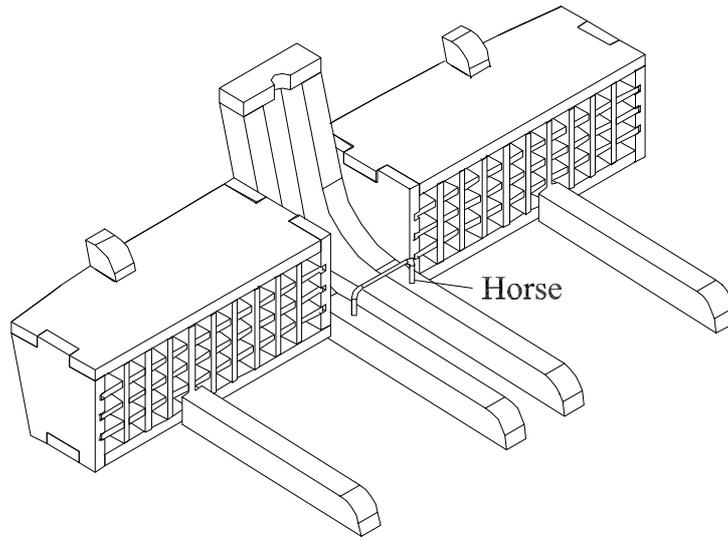
Locate the two poop deck support knees (403) and paint yellow. The knees are fitted against the quarterdeck bulwark, directly in front of the quarterdeck screen assembly, and tight against the deck head.

The Poop Deck Fixings

Flag Lockers

Locate and paint black the inner transom knees (173). These are fitted on the poop deck, flush against the inner face of the stern fascia, the knees are positioned 6mm apart, and the ensign staff support (260) is secured on top, across the knees. Identify the flag locker components, it is highly recommended that you number these parts prior to removal from their sheets. When you have removed the parts from their sheet, assemble the lockers as shown on *Plan Sheet 4, 'Flag locker assembly'*. The 1.5mm walnut outer components (399 & 400) should be painted black while the 0.8mm parts are left natural. The lockers fit onto the poop deck and flush against the knees and the inner face of the stern fascia. The outer transom knees (174 & 175) can now be fitted, the bases sit on the poop deck 20mm from the inner knees, and the tops sit on the top of the flag locker. An 'iron' horse made from 0.7mm brass also runs between the inner transom knees approximately 10mm in front of the flag lockers as shown (*Fig 019*). The horse is secured into two 0.75mm holes drilled into the upper face of the knees.

Fig 019



Snatch Block, Cleats & Kevels

Identify the two poop snatch blocks (78). These are to be painted black and secured centrally to the poop capping, directly in front of the stern fascia.

Using *Plan Sheet 4* for reference, four medium cleats, painted black should be secured to the poop deck, two large cleats, also painted black, should be secured to the poop bulwark and a small cleat, painted black, should be secured to the starboard inner transom knee.

Identify and paint black the poop kevels (169). These are secured to the poop bulwark and poop decking as shown on *Plan Sheet 4*.

Skylight

The skylight (335, 336, 337) is assembled as shown on *Plan Sheet 4, 'Skylight assembly'*.

Note: the side and end piece windows are cut off centre, and the skylight should be assembled such that the deepest edge sits on the deck, as shown (*Fig 020*).

All of the windows are glazed and framed, the glazing can either be cut individually and pressed into the openings with the brass etched frames, or a strip of glazing can be applied to the back of the skylight components. The brass etched frames should be painted brown (wood effect) and the whole assembly left unpainted and varnished. Glue the assembly into position over the opening in the poop deck.

Fig 020

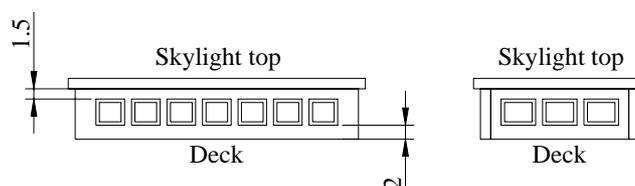
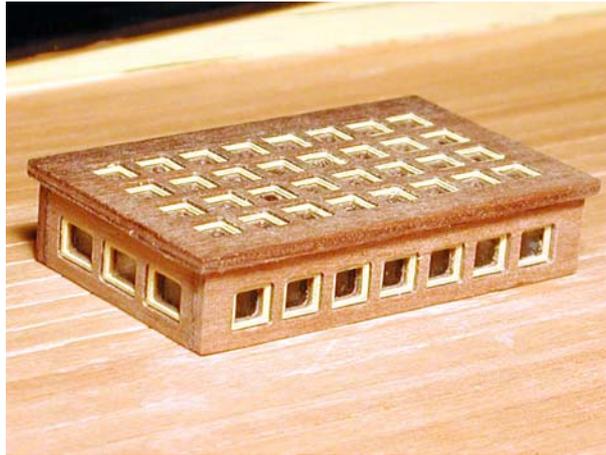


Photo 034



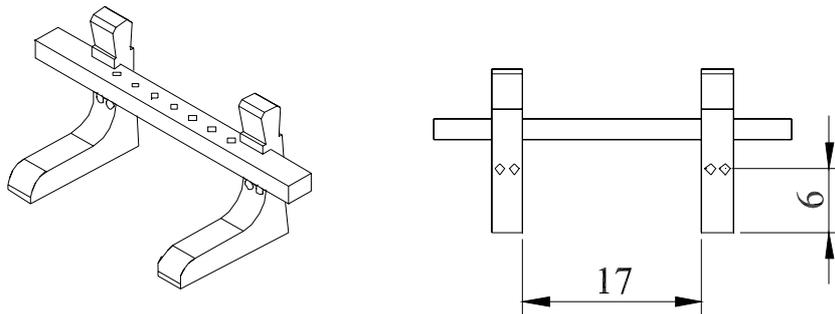
Note: paint window frames brown (wood effect), they have been painted yellow here for photographic purposes.

Mizzen Topsail Sheet Bitts

Assemble the mizzen topsail sheet bitts as shown on *Plan Sheet 4, 'Mizzen topsail sheet bitts assembly'*. The bitts should be pinned and glued to the poop deck separated by a gap of 17mm, you should also notice the bitts will follow the rake of the mizzen mast.

Note: a pair of holes (sheave for the main topsail braces and mizzen topsail sheets, when rigged) should be drilled fore to aft through the mizzen topsail sheet bitts approximately 6mm off the deck, (*Fig 021*).

Fig 021



Poop Ladder Assembly

Identify the poop ladder steps (176 & 177), glue these steps together as shown on *Plan Sheet 4, 'Poop ladder assembly'*. Glue the steps to the aft edge of the ladder extension and plank the extension up to the steps with 1x4mm Tanganyika. Line the outer faces of the extension with 1x3mm walnut strip.

Assemble the ladder (402) using 1x5mm walnut for the treads, the overall width of the ladder assembly should be 15mm and the ladder is to be glued centrally to the fore face of the extension as shown.

This entire assembly is secured to the underside of the poop deck, so that the fore face of the first step is flush with the edge of the poop deck, some sanding of the base of the ladder may be required to ensure the extension runs parallel to the deck.

The inner hand rail should now be constructed using two staircase balusters (sanded square and stained back to walnut), one quarterdeck stanchion and a brass etched eyelet. The handrail between the staircase balusters is 1.5x1.5mm walnut and the handrail between the stanchion and the brass etched eyelet on the staircase baluster is of 0.25mm black thread. It may be advantageous, using the dimensions from the ladder assembly, to construct the handrail 'off' the model and fit on as a complete assembly when constructed. The step in the 1.5x1.5mm walnut handrail is achieved by using three pieces of walnut scarfed together and sanded smooth. The outer handrail will be dealt with at a later stage.

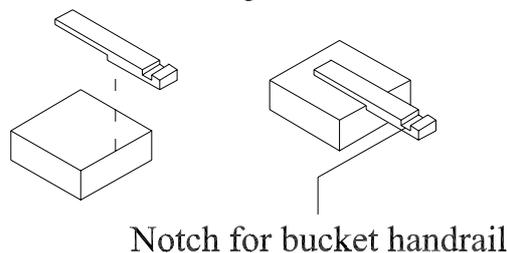
The poop deck termination rail (401) should now be glued into position across the face of the poop deck, level with the poop deck plank sheer, between the two staircase balusters.

Poop Deck Barricade Assembly

Using *Plan Sheet 4, 'Section through bulkhead 14'* for reference, cut eight lengths of 3x4mm walnut, each 5mm long. These rail supports are secured to the poop deck plank sheer and the poop deck barricade rail (388) is glued to the top face of the supports. The positioning of the supports is determined by the locating holes drilled in the barricade rail, and when attached to the plank sheer, the supports should remain vertical. The bucket pegs (546) should be secured to the top of the barricade rail as shown (*Fig 022*). This whole assembly will be painted black.

Identify the brass buckets (695). These will each need to be cross drilled with a 0.5mm drill, as close to the top edge as possible. Form a handle through the holes with 0.1mm natural thread and paint the bucket and thread black. Hang a bucket on each bucket peg and secure with a drop of super glue.

Fig 022



The Stern Fascia

Paint the edges of the windows of the inner stern fascia yellow. Identify the outer stern fascia, and clean out the corners of each window frame with a needle file. Paint the outer stern fascia black, and the window surrounds yellow as shown (*Photo 035*), including the inner sills. Glue three broad strips of glazing across the window frames on the inner stern fascia, with PVA wood glue. Glue the outer stern fascia onto the inner stern fascia, ensuring the outer edges and the window frames all line up. It is important to ensure a good fit, as the brass etched window frames will fit into the window frame recess created between the two fascia patterns. Sand the outer facing edges of the inner and outer stern fascia patterns flush with each other and line them with 1x3mm walnut, sanded flush inside and out. The walnut 'capping' will need to be soaked in water to follow the curve of the fascia, it should also be applied in several pieces, one for each curve, one for the top and one for each side. Identify the stern fascia window frames (513) and paint them yellow. It is a good idea to paint the frames while they are still on the brass etched sheet and only remove each individual frame as it is used, the frames are all similar in size but each has been designed to fit into one specific window. After painting, remove and fit each frame individually, the yellow paint can be re-touched upon completion.

Identify the two stern fascia false baluster patterns (631 & 632), they are painted as shown (*Photo 035*) with a black line running through the relief top and bottom. Glue the patterns to the outer stern fascia as shown, ensuring they are central and run true.

Identify and paint yellow the stern fascia edge moulding (608), It should be glued onto the stern fascia approximately 1mm in from the edge (the depth of the capping) all the way round.

Now, identify and paint as shown, the stern figures (665 & 666), the flowers (667 & 668) and the scrolls (669 & 670) and secure to the fascia as shown.

Locate and paint as shown (*Photo 036*) the stern trophy of arms (671) and the stern fascia top moulding (633).

Note: as you can tell from the picture, the trophy of arms sits over the top moulding, in order to achieve this a small section will need to be filed from the back of the trophy of arms. When completed, glue into position.

Identify the Victory name plate (621), paint the relief black and the raised text and surround yellow, glue into position, centrally, as shown (*Photo 035*).

Identify, paint and assemble the large and medium lantern components (538, 654, 655, 539, 656 & 657), these can be attached now or at a later stage of your choosing, using lengths of 0.7mm brass wire. We would suggest, to bend the brass etched lantern parts as follows:

1. Saw a 0.5mm groove into a piece of scrap soft wood, to a depth of no more than 0.75mm.
2. Lie the half etched bend line of the brass etched component across this groove.
3. With a heavy duty craft knife blade, gently apply pressure to the bend line, pressing the material into the groove, until the desired angle is achieved.
4. Repeat for each bend line.

With the transom now completed and using (*Fig 023*) for reference, attach 9 small cleats (662) and 4 copper eyelets (690) to the taffrail and inboard face of the inner stern fascia as shown.

Fig 023

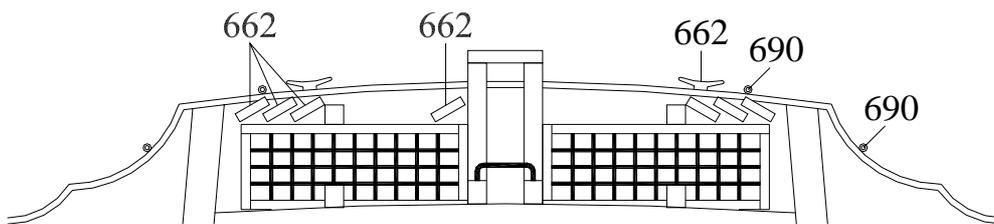


Photo 035



Photo 036



The Quarter Galleries

Paint the quarter gallery as shown (*Photo 037*).

Note: the black and yellow bands do not follow the black and yellow bands of the hull painting.

Identify and paint yellow, the quarter gallery window frames (510, 511 & 512), again do not remove these components until required. Fit the frames into their respective openings, taking care not to push through the recessed area and glazing.

Identify the quarter gallery false baluster patterns (627, 628, 629 & 630) and paint as shown on (*Photo 037*), with a black line running through the relief top and bottom. Fit the patterns to the quarter galleries as shown, any shortening of these patterns should be done at the fore end, and they should be bevelled to run into the hull side, some tweaking may be required to ensure a good fit.

Identify and paint the quarter gallery lower finishing and drop decoration (672 & 673). Secure the pattern to the underside of the quarter galleries and the hull side, some shaping may be required to ensure a good fit.

Note: there should be a slight overhang where this decoration joins the lower stern counter pattern (372).

The two quarter gallery top decoration patterns (73 & 178) can now be glued to the top of the quarter gallery, the outer edges of these pattern will require bevelling to follow the run of the quarter gallery. Likewise the inner and aft edges will need to be bevelled to sit flush against the hull and stern fascia.

Using *Plan Sheet 5* for reference, four lengths (each side) of brass profile 1 are fitted to the quarter galleries. The first is painted black and runs along the outer edge of the uppermost quarter gallery top decoration pattern (178). The remaining three are to be painted yellow and secured to the quarter galleries. The first runs along the topmost edge of the first skin, directly above the windows. The second runs along the join of the 5th and 6th skin, directly below the windows. The third runs along the top edge of the quarter gallery drop decoration. The second and third should also be joined across the transom, following the curve of the upper stern counter pattern, also with brass profile 1. In order to achieve this, they will have to be mitred. The fore end should also be bevelled to run neatly into the hull.

Photo 037



The Side Entry Port & Steps

Identify the side entry port castings (675, 676, 677) and paint as shown (*Photo 038*). Secure the castings around the entry port as shown on *Plan Sheet 5*.

Identify the steps (181 – 190) and the elm tree pump tube lining (604). Secure to the hull with super glue as shown on *Plan Sheet 5*, each component should be painted to match the yellow and black bands of the hull behind.

Photo 038



The Fenders & Chesstrees

Identify the fenders (170) and chesstrees (171). Fit to the hull as shown on *Plan Sheet 5*, they should be painted to match the yellow and black bands of the hull behind.

Note: The top edge of the fenders sits flush with the top of the waist capping rail, to achieve this a small section of the capping rail will have to be filed flush with the hull where each fender intersects it. The chesstree, however, butts up against the underside of the waist capping rail. Where the fenders and chesstrees intersect any wales, the section of wale behind will need to be removed to allow them to sit flush against the hull, alternatively a section can be filed from the back of the fenders and chesstrees.

The Channels

Identify the channels (200, 201, 202, 203 & 204). Temporarily pin the channels in place as determined from *Plan Sheet 5*, take care with both the positioning and orientation of the channels. The position is critical to ensure correct fit of the chainplates and the orientation is critical to ensure the pre-cut slots for the shroud deadeyes are in the correct position. It is easy to fit a channel upside down therefore reversing the position of the shroud deadeyes, take care. Using *Plan Sheet 2* for reference, fit the appropriate size deadeyes, in strops, to the channels. After fitting the deadeyes and strops, a strip of 1.5x1.5mm walnut is secured across the edge of the channel, covering the slots, the strip should be positioned centrally to produce a 0.25mm lip above and below. The copper eyelets and studding sail boom bracket (684) and support (685), as shown on *Plan Sheet 18*, can also be fitted now. These whole assemblies should be painted black, glued and pinned to the hull.

Note: take care when painting the deadeyes and strops to ensure the deadeyes are rotated to the correct alignment for rigging as shown on *Plan Sheet 12*, as after painting it will be almost impossible to rotate them.

The Chainplates

Before fitting any chainplates, read this section, 'The Chainplates', and the following section, 'The Gunport Assemblies', taking note of the positioning of each part as they are all fitted relative to one another. Each chainplate assembly and each gunport assembly should also be treated as an individual mini-project.

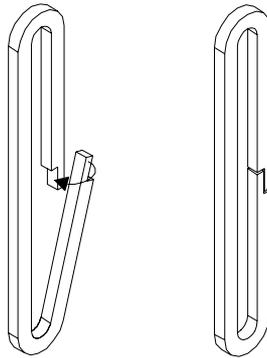
Identify the chainplates assemblies (554 - 591) on the brass etch sheet. Do not remove them from the sheet until you are ready to fit them, they all vary in length by small degrees and have been designed to fit in their own unique position. Paint all of the assemblies black while they are still in the brass sheet.

Note: the whole length of the assemblies are black regardless of the hull colour behind, do not paint any areas yellow. Some photographs show the chainplate colour corresponding to the hull colour behind (black and yellow bands), the most recent research has shown this to be incorrect.

You will notice that the chainplate assembly has also been designed in such a way that it forms a completely closed structure. To achieve this 'tuck' the long end of the chain behind the short and secure with super glue as shown (*Fig 024*).

Note: the aft pair of chainplates on the main channel will foul the rigol below, this is not an error and a section of the rigol should be filed out to accommodate the chainplates.

Fig 024



The Gunport Assemblies

When assembling and fitting the gunports, it is a good idea to concentrate on one deck at a time, starting from the top and work down.

Identify the respective lids and hinges for each deck, and scuttle hinges for the lower gun deck. The outer face of each lid should be painted black (along with the scuttles, rigols and hinges), the edges and inner face should be painted red.

Each lid is fitted with its corresponding hinges as shown on (Fig 025 & 026).

Note: The hinges are 'paired' and the upper 'tabs' facing away from each other. Also the hinges are positioned 1mm from the gunport lid inside edge, allowing the hinge to butt up against the hull when the lid is positioned in the gunport recess.

Four brass etched eyelets (480) are fitted to each lid, two to the upper face through the hole in the end of each hinge and two as close as possible directly opposite on the underside.

Note: the two eyelets on the upper face are at 90 degrees to the hull and the two on the underside are parallel to the hull, as shown on (Fig 026).

When assembled, glue the gunport lid into the gunport lining recess. At a distance of approximately 6mm above the lid (you will find exceptions to this, for example under the channels), in line with each hinge, drill a 0.5mm hole. Pass a length of 0.25mm natural thread into the hole and secure with super glue, secure the opposite end to the eyelet at the end of the hinge. Trim any excess.

When convenient, referring to 'Arrangement of Rigols' on page 48, the appropriate rigol for each gunport is fitted to the hull, between the gunport lid and the 0.5mm holes. Some of the rigols for the lower gun deck may intercept the wale, where this happens, the section of wale should be removed to allow the rigol to sit flush against the hull, likewise areas of the wales will need to be removed if they intersect gunport hinges. Also, where any rigols intercept with fenders, chesstrees or side steps, the rigols themselves should be trimmed to fit.

The scuttles are made up of a 5mm length of 0.5x3mm walnut, glue the hinge to the walnut and glue the whole assembly to the gunport lid (lower gun deck only), as shown (Fig 025 & 026).

Note: the second (from the stern) quarterdeck gunport lid is a double door as shown (Fig 025).

Fig 025

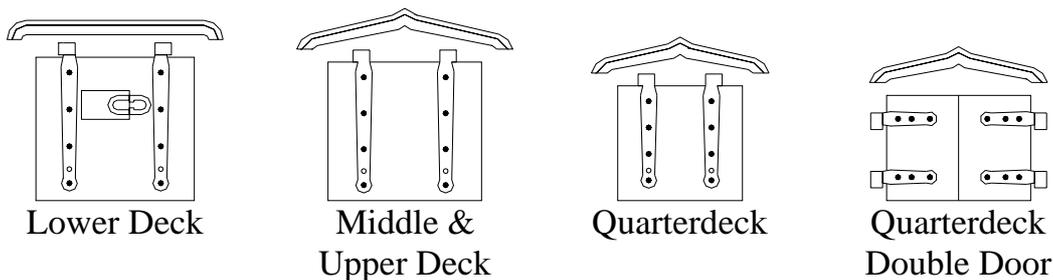
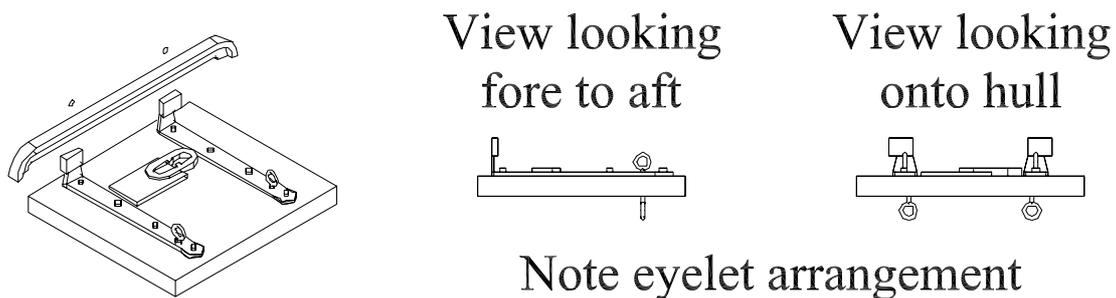


Fig 026



The Dummy Barrels

Locate the dummy barrels (698 & 699). The 32pdr barrels are for the lower gun deck and the 24pdr barrels are for the middle gun deck, paint the barrels black with red muzzles. With a 2mm drill, drill locating holes into the dummy barrel strips, through the gunports. These holes need to be square and level as they dictate the angle of the dummy barrel. With all the holes drilled, temporarily fit all of the dummy barrels, they should not all be pushed all the way into their locating holes, instead try to position the barrels to follow a similar curve to the cannons on the upper gun deck. When you have achieved the desired effect, remove one barrel at a time and re-secure it into position with super glue.

The Rudder

Identify the rudder (59), cast rudder hinges with pins (680), cast rudder hinges without pins (681), chain (703), the brass etched rudder straps (609 – 620) and spectacle plate (624). The rudder should be copper plated, as per the hull, up to the waterline, the area above the waterline should be painted black. Paint copper and secure the rudder hinges with pins to the rudder as shown on (Fig 027). Paint copper and attach the brass etched 'rudder' rudder straps to the rudder, they wrap around the hinges and the indentations can be drilled and pinned if desired using dome headed pins (696).

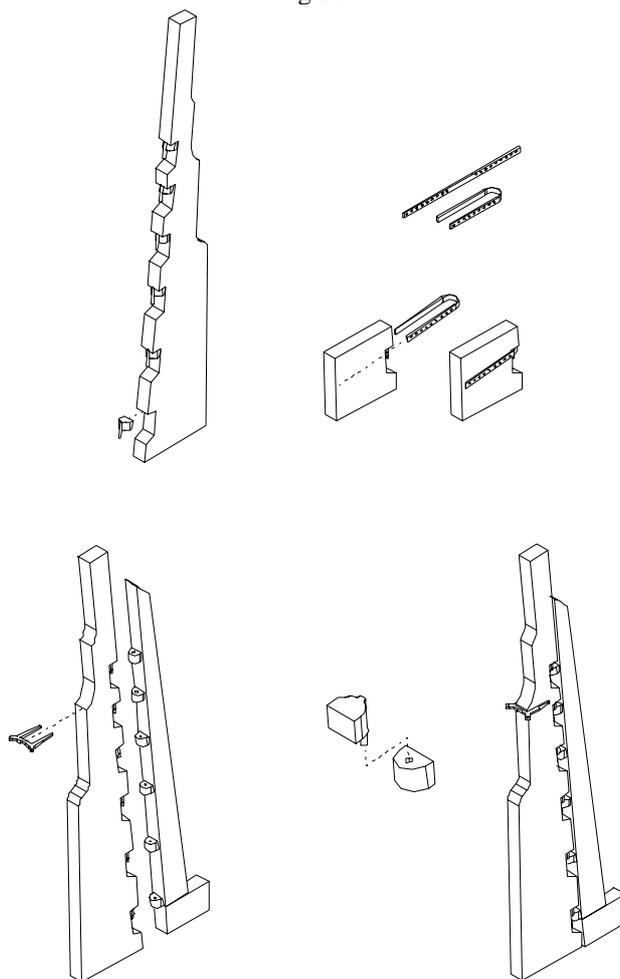
Locate and paint black, the spectacle plate and fit to the rudder as shown.

When this assembly is complete, offer the rudder up to the hull and mark on the position of the rudder hinges without pins.

Paint the hinges without pins copper and secure to the hull. Paint the 'hull' rudder straps copper and secure them to the hull, they wrap around the hinges, the indentations can be drilled and pinned if desired using dome headed pins (696). The rudder can now be passed up through the locating hole in the lower stern counter and hung on the hinges.

Run a length of chain from the holes in the spectacle plate to a copper eyelet positioned under each casting drop of the quarter gallery, as shown on *Plan Sheet 5*. The chain should be painted black.

Fig 027



The Waist Deck Stanchions

Using (*Fig 029*) for reference, secure the 18 quarter deck stanchions (515) to the deck as shown, eight upper gun deck stanchions should also be secured to the upper gun deck, directly in front of the waist ladder sides.

The waist stanchions should also have lengths of 1.5x1.5mm walnut running between them (except at the top of the ladders) as shown (*Fig 029*).

Rig hand ropes between the stanchions with 0.25mm black thread as follows:

1. From the forward most stanchion on the upper gun deck to the forward most stanchion on the waist.
2. From the second stanchion on the upper gun deck, up to the second on the quarterdeck. Along through the third to seventh stanchions on the quarterdeck and down to the third on the upper gun deck.
3. From the aftermost stanchion on the upper gun deck to the aftermost stanchion on the quarterdeck and secured to the end of the upper rails of the quarterdeck barricade assembly.

Hammock Cranes

All hammock cranes are to be painted black with natural hand ropes of 0.1mm thread.

Forecastle Hammock Cranes

(If you have decided to build to the Portsmouth (2003) specification, identify the Portsmouth hammock cranes (P09 & P10) and follow step 6 of the Portsmouth Pack.)

Identify the forecastle hammock cranes (516 & 517). Paint them black and using *Plan Sheet 5* for reference, fit them to the top of the forecastle bulwark.

Note: the pin on the inside of the hammock crane fits flush against the inside face of the bulwark, the pin toward the middle of the hammock crane should be secured with glue into a 0.7mm hole drilled into the capping rail. The closed hammock cranes (517) are located at the foremost and aftermost positions.

Using 0.1mm natural thread, rig the hammock cranes from front to back, one length of thread inboard and one length of thread outboard.

Waist Hammock Cranes

Identify the waist hammock cranes (518 & 519), waist rail stanchions (520) and waist rail supports (521). Paint them black and using *Plan Sheet 5* for reference, fit them to the top of the waist capping rail, the 'U' pieces positioned to the inboard.

Note: the locating holes should be drilled centrally across the capping rail, resulting in the hammock cranes overhanging the hull. The closed hammock cranes are located at the foremost and aftermost but one positions, the aftermost position is occupied by the rail stanchion (520).

Rig the outside, from closed hammock crane to closed hammock crane with 0.1mm natural thread.

A piece of 1.5x1.5mm walnut strip, painted black, is secured into the 'U' end of the hammock cranes, along the entire length of the waist, the rail supports (521) are secured to the underside of the rail and to the closed hammock cranes, there should also be two supports, one either side, attached to the middle hammock crane and underside of the rail.

Quarterdeck Barricade Hammock Cranes

Identify the waist rail hammock cranes (524 & 525). Paint them black and using *Plan Sheet 4, 'Section through bulkhead 9'* for reference, fit them centrally to the top of the upper rail of the quarterdeck barricade assembly.

Using 0.1mm natural thread, rig the hammock cranes from port to starboard, one length of thread fore and one length of thread aft.

Note: The closed hammock cranes (525) are located at the outermost positions.

Quarterdeck Hammock Cranes

Identify the quarterdeck hammock cranes (522 & 523). Paint them black and using *Plan Sheet 5* for reference, fit them to the top of the quarterdeck bulwark.

Note: the pin on the inside of the hammock crane fits flush against the inside face of the bulwark, the pin toward the middle of the hammock crane should be secured with glue into a 0.7mm hole drilled into the capping rail. The closed hammock cranes (523) are located at the foremost and aftermost positions.

Using 0.1mm natural thread, rig the hammock cranes from front to back, one length of thread inboard and one length of thread outboard.

Poop Deck Barricade Hammock Cranes

Identify the poop rail hammock cranes (526 & 527). Paint them black and using *Plan Sheet 4, 'Section through bulkhead 14'* for reference, fit them centrally to the top of the barricade rail.

Using 0.1mm natural thread, rig the hammock cranes from port to starboard, one length of thread fore and one length of thread aft.

Note: The closed hammock cranes (527) are located at the outermost positions.

Poop Hammock Cranes

Identify the poop hammock cranes (528 - 537). Paint them black and using *Plan Sheet 5* for reference, fit them centrally to the top of the poop capping rail.

Note: The closed hammock cranes (528 & 537) are located at the foremost and aftermost positions and the aftermost hammock crane is positioned on top of the poop snatch block.

Using 0.1mm natural thread, rig the hammock cranes from front to back, one length of thread inboard and one length of thread outboard.

Poop Ladder Hand Rail

Position one quarterdeck stanchion (515) on the outboard side of the poop ladder extension and one at the foot of the ladder, on the quarterdeck as shown on *Plan Sheet 4, 'Poop ladder assembly'*. Rig a length of 0.25 black thread between the two.

Fashion a length of 0.7mm brass wire, painted black, to the same shape as the inboard 1.5x1.5mm walnut handrail and glue or solder in position between the stanchion on the ladder extension and the inboard post of the foremost poop hammock crane.

Poop Deck Bulwark Barricade

(If you have decided to build to the Portsmouth (2003) specification, this stage should be ignored.)

Glue 5 lengths of 0.5x4mm walnut together, edge to edge, creating a 'board' approximately 230mm long and 20mm wide.

Using *Plan Sheet 5* as a guide, cut a barricade from the board to fit against the outer edge of the poop hammock cranes, the barricade should run from the stern fascia to the front edge of the poop deck. The top plank should be positioned just below the 'O' of the hammock crane, and run the full length, i.e. all cutting across planks should be made from the lower edge. The outer face of the bulwark should be painted black and the inner face painted yellow. When the barricade is complete, it should be glued to the outside of the hammock cranes and secured with thread as shown (*Photo 039*).

The barricade was initially fitted to Victory in 1780 when she carried 6 carronades of 18 pounds on the poop deck and were intended as protection, for the hammocks, against the flash back of these carronades. Although the carronades were removed from the poop deck at the time of Trafalgar (they were removed during the re-fit of 1803), the barricade still remained.

Likewise the six gunports (three per side) were also still present in the barricade and they should be cut from the barricade now, using *Plan Sheet 5* for their positioning.

Photo 039



Anchor Assembly

The bower and sheet anchors on Victory are all the same size. Identify and paint black, the anchors (678), the anchor palms (679), the anchor stocks (94) and the anchor palm block components (74, 75 & 407). Using (Fig 028) for reference, glue the pairs of anchor stocks together, with the anchor located between their notches, and simulate iron bands with cartridge paper. **Note:** the stocks run perpendicular to the arms, they are not parallel.

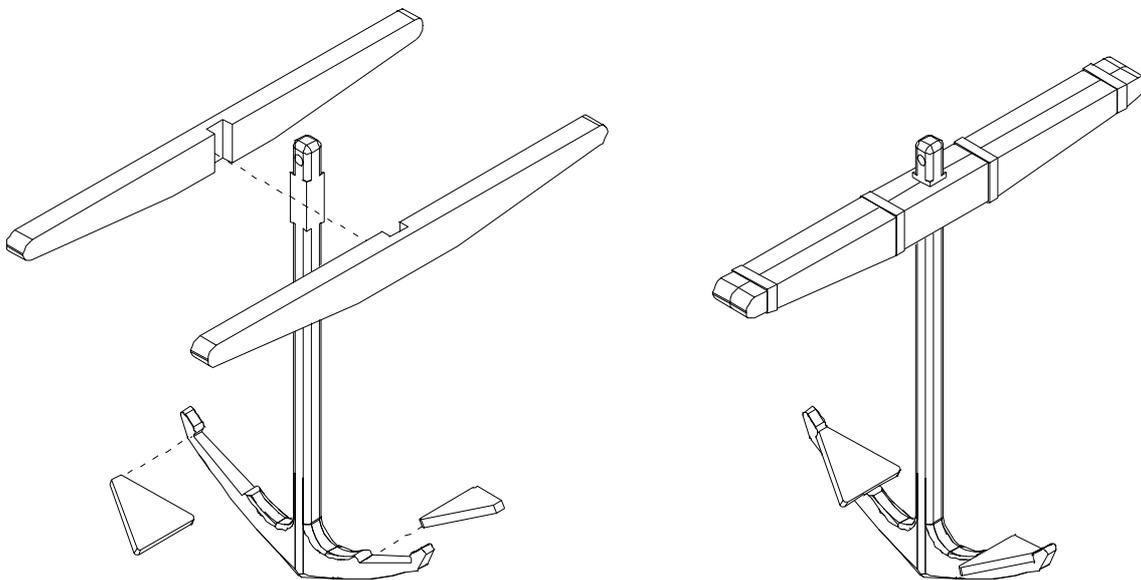
Glue the palms to the anchors in the locating slots of the anchor blade. When the assembly is complete, using a length of 1.5mm brass wire form a ring through the eye of the anchor, the ring should have a diameter of approximately 15mm and have 0.5mm black thread applied as 'puddening'.

Assemble the sheet anchor palm block (74 & 407). The top (407) should be glued to the base so that its outer edge is overhanging the outer edge of the base by 1mm and the slot should run from inboard fore, to outboard aft. Using *Plan Sheet 5* for reference, the completed palm block should then be secured against the hull, with the top secured against the top of the waist capping. The inner edge of the top should be sanded flush with the inner edge of the capping below.

Using *Plan Sheet 5* for reference, the bower palm block (75) should be positioned between the first and second gunports of the upper gun deck and secured to the hull with the 'notch' of the inner face resting on the middle wale.

The anchors will be rigged in position at a later stage.

Fig 028



Brass Rails

Using *Plan Sheet 5* and (Photo 040) for reference, identify the three different brass profiles (692, 693, 694). Again using *Plan Sheet 5* for reference, fit the brass rails to the hull. The rails should all be painted to correspond to the hull colour behind.

Note: the rail of brass profile 1 above the quarter gallery runs along the outer face of the quarter gallery second top decoration (178). When the rails are fitted, locate and fit to the hull the fore lower studding sail boom bracket (194) and the D-block for crossjack lifts (180), using *Plan Sheet 5* for reference.

Photo 040

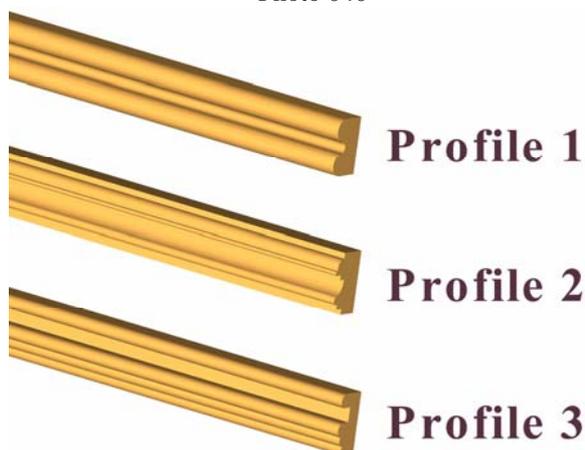
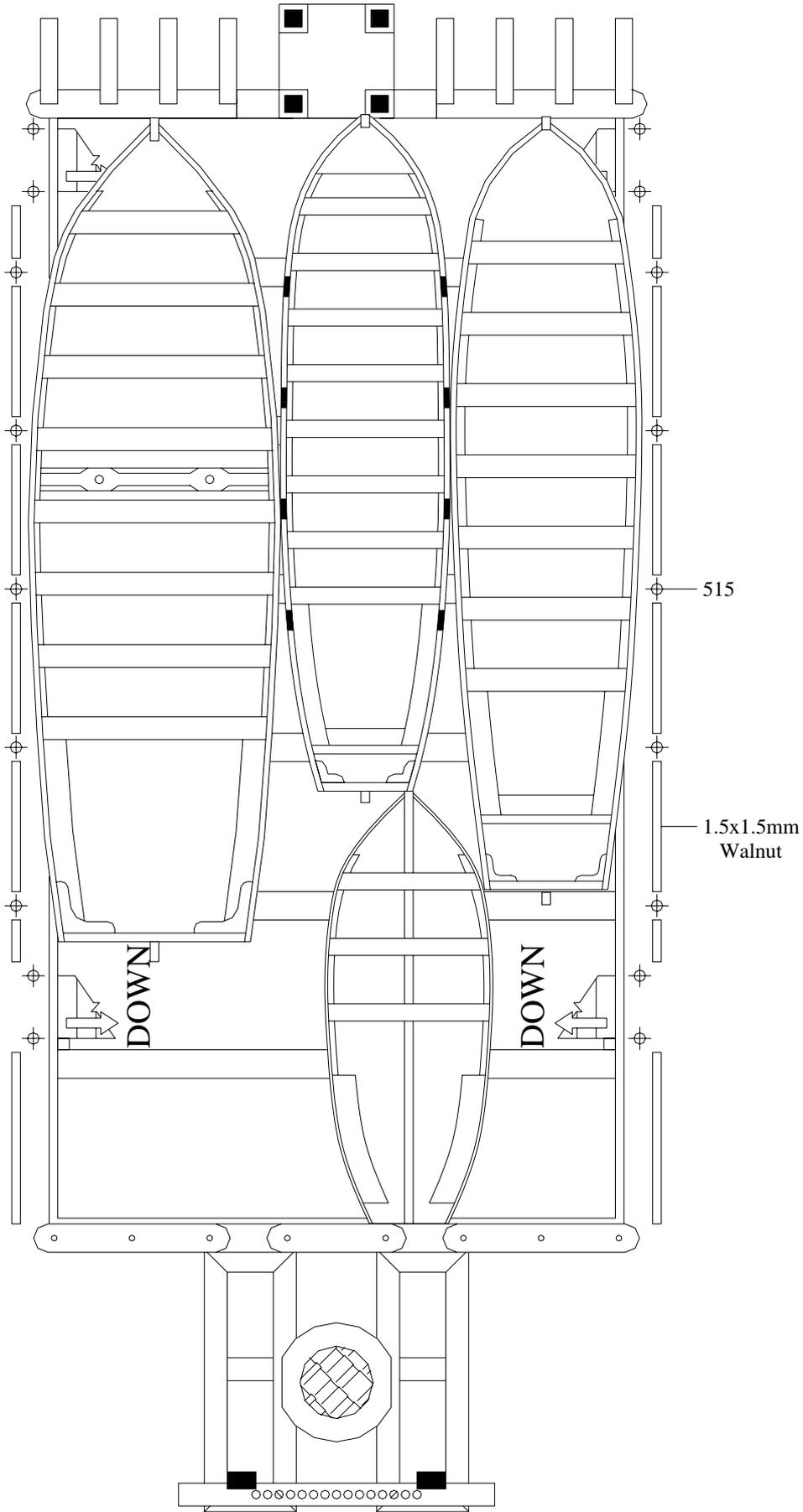
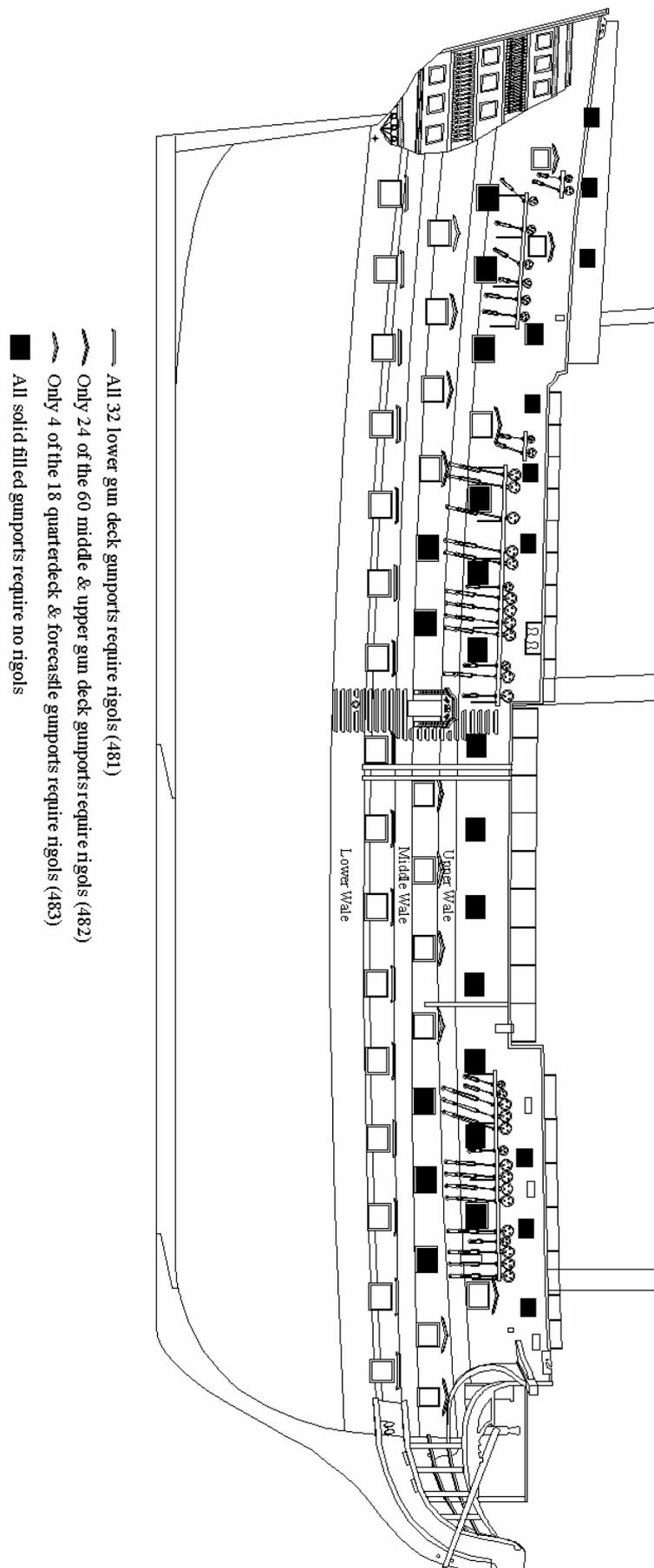


Fig 029



Arrangement of Rigols



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