

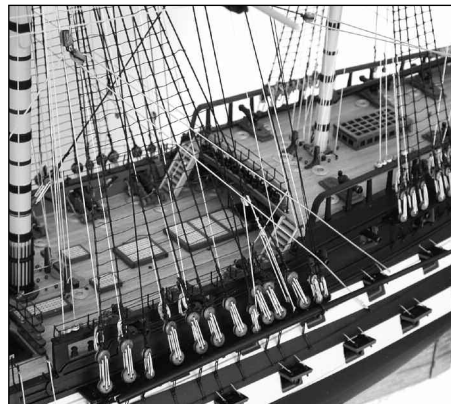
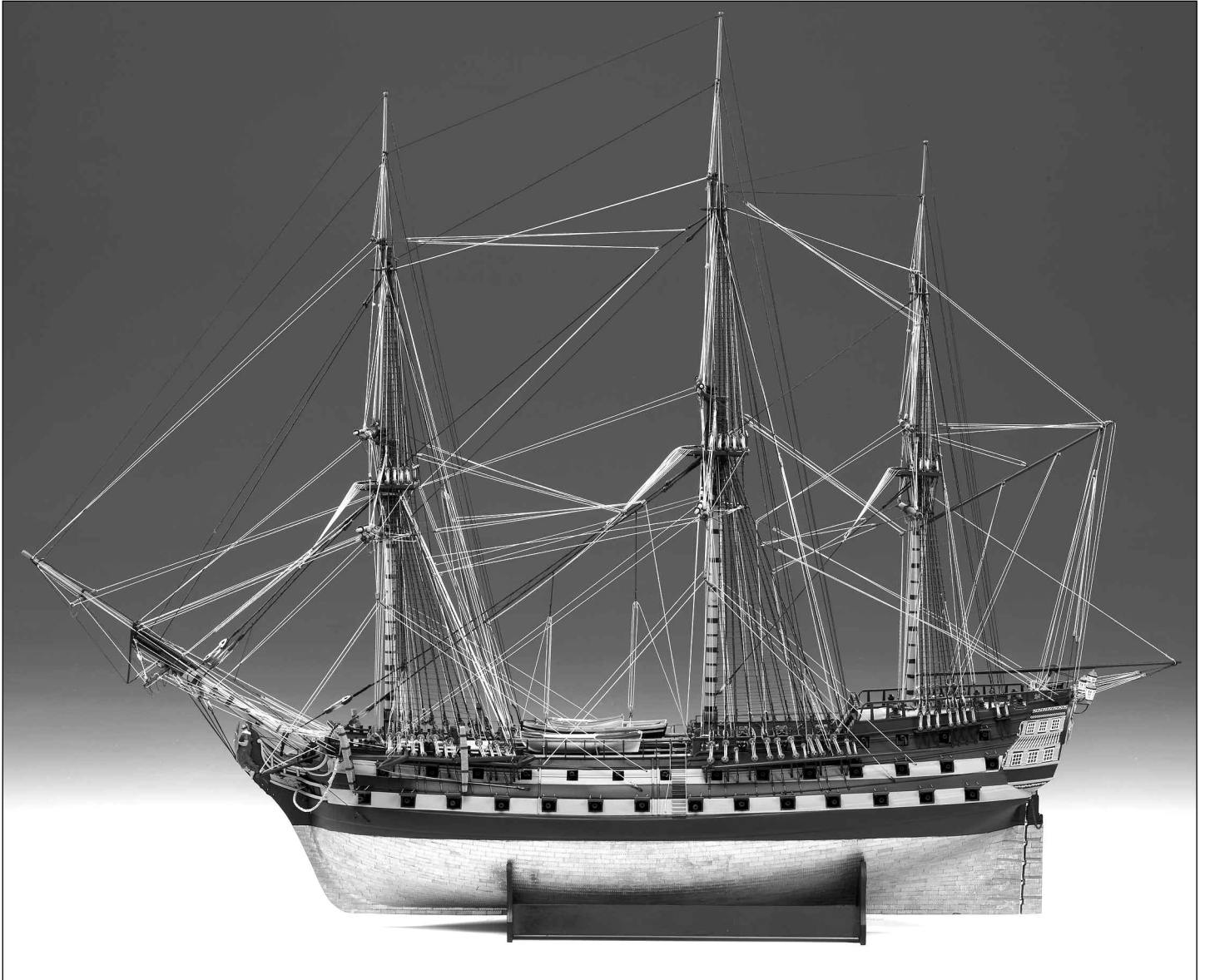


HMS Vanguard 1787

MS130004

Written instructions

Licensed by Amati, Srl, Torino, Italy



HMS Vanguard 1787

3rd Rate Arrogant Class 74 gun Ship of the Line

Building instructions

Nelson's Flagship at the Nile, HMS Vanguard was the fifth naval vessel to bear the name, the first was an Elizabethan galleon carrying 32 guns launched at Woolwich in 1586. This vessel played a considerable role in the defeat of the Spanish Armada in 1588. She was rebuilt on two occasions; at Chatham in 1615 and at Woolwich in 1631, receiving the very latest armament during her rebuilds (in much the same way that modern warships are periodically treated to technological upgrades). In 1667 she was sunk to be used as a blockship at Rochester to bar the Dutch from entering the Medway.

The second vessel to bear the name was a 90 gun ship built in Portsmouth in 1678. She capsized in the Medway in 1703 but was raised in 1704 and rebuilt at Chatham in 1710. She was once again rebuilt in 1739 and renamed Duke. Under the new name, she remained in service until 1769, when she was finally broken up in Plymouth.

The third Vanguard was a 70 gun ship launched in 1748 and sold in 1774. The fourth vessel was a Spanish gun boat of 4 guns, captured in 1780 but only remained in service for about a year.

Nelson's Vanguard was designed by Sir Thomas Slade (of Victory fame) and was one of fourteen Third Rate 74 gun ships which formed the (very successful) Arrogant class which were, in order of build;

HMS Arrogant
HMS Audacious
HMS Bellerophon
HMS Cornwall
HMS Defence
HMS Edgar
HMS Excellent
HMS Goliath
HMS Illustrious
HMS Kent
HMS Saturn
HMS Elephant
HMS Vanguard
HMS Zealous

Specifications for the Arrogant Class were as follows;

Initial design date – 1758.

Designer – Thomas Slade.

Length of gun deck – 168 feet.

Length of keel for tonnage – 138 feet.

Extreme breadth – 46 feet 9 inches.

Depth in hold – 19 foot 9 inches.

Tons burthen – 1604. 27/94.

Complement – 550 officers and men.

The Vanguard was ordered on 9th December 1779 and the keel was laid down at Deptford Dockyard on 16th October 1782. During this time, Britain was not at war so her build went ahead very slowly, being launched on 6th March 1787.

The total cost of Vanguard's construction and fitting out was just over £39,000.

As with other 74 gun ships, just over 3,000 loads of timber were needed for her construction, the majority (92%) being oak. This all equated to approximately 75 acres of forest land that was cut down to make Vanguard alone!

Her armament consisted of 28 short 32 pounders on her lower gun deck, 28 long 18 pounders on her upper gun deck and 18 long 9 pounders on her quarter deck and forecabin, Vanguard could deliver a single broadside of 781 pounds. Vanguard (and her sisters) weighed approximately 1,604 tonnes and carried a complement of around 550 officers and men.

Vanguard was classed as a Third Rate Ship of the Line. The rating of ships referred to the number of guns carried. A first rate carried 100 to 110 guns upwards (Victory was a first rate ship of the line); a second rate carried 84 to 98 guns (HMS Temeraire, of Turner painting and Trafalgar fame was a second rate 98 gun Ship of the Line); a third rate 64 to 84 guns; fourth rate 40 to 50 guns; fifth rate 28 to 38 and finally sixth rates, which carried any number of guns up to 24 if commanded by a post-captain.

Only ships of the first three rates were considered as ships of the line, as they were built to be powerful enough to lie in the line of battle due to their heavier armament.

At the time of the Battle of the Nile in 1798, Vanguard also possibly carried 6 carronades on her poop deck, and it is quite possible some of the 9 pounders on the upper deck were also replaced with carronades, as these weapons proved devastatingly effective at close quarters.

It is also possible the open stern gallery was closed in, (as with Victory in 1803), during Vanguard's refit in Chatham in 1797, however, this is only speculation and there is little evidence to support this (the high cost of the rebuild being the only evidence, but makes no mention of the stern gallery being enclosed), so the kit has been designed showing the open gallery, as built. Vanguard was also recoppered during the refit, and sailed from Chatham on 3rd February 1798 under the command of Edward Berry.

Appointed to join St. Vincent's squadron blockading the Spanish port of Cadiz, Nelson hoisted his flag in the Vanguard at Spithead on 14th March 1798.

The Battle of the Nile

Early in 1798 Napoleon visited the northern Channel ports of France which added to the rumours that an invasion of England was highly likely. It was also rumoured that there would be an expedition to the East, and the capture of a French corvette in May 1798 confirmed that an armada of French ships and transports were being fitted out in the port of Toulon. This consisted of 3,000 transports, 50 warships and 40,000 troops. It was considered that if Egypt were to be the target, Britain's trade links would be severely compromised. This situation made it imperative that the British fleet re enter the Mediterranean. The Commander-in-Chief, Earl St. Vincent who was stationed blockading off Cadiz was very pleased to witness the arrival of Nelson in the HMS Vanguard.

Nelson relished the task of seeking out the French Fleet; however, the search had a poor start when on 20th May 1798 the Vanguard was partially dismasted in heavy weather killing two of her crew, Vanguard being saved only by the efforts of Captain Ball and the crew of the Alexander and Captain James Saumarez of the Orion.

The main consequence of the severe storm was that Nelson lost the use of his frigates (the eyes of the fleet in Nelson's time), which had no alternative but to run for shelter and repairs at Gibraltar. At the same time, just a few miles away and unknown to Nelson, the French fleet set sail and left Toulon as the shipwrights toiled long and hard to repair Vanguard.

Repairs were complete a few days later and on the 7th June 1798 Nelson's squadron of 74 gun ships of the line were formed into two columns, but without frigates, and the search for the elusive French Fleet had begun.

On the afternoon of 1st August 1798, a masthead lookout on the British 74 gun ship Zealous finally sighted the enemy in Aboukir Bay off the western mouth of the Nile. Thirteen French ships of the line were anchored in a curve running to the northwest and guns had been landed on the island near the lead ship to deter a possible assault.

Nelson's plan was to concentrate the attack at the van and centre of the enemy ships. The British ships were to anchor by the stern, with ropes attached to their anchor cables to keep them at the optimum angle for firing most effectively; and having destroyed one of the enemy ships from that position they would then move on to the next enemy ship. As dusk was approaching, Nelson ordered that all British ships were to fix a lantern to the mizzen top so that the ships could be more easily distinguished between friend and foe. Captains were also required to keep measuring the depth as they entered the bay (the French Vice Admiral, De Brueys considered with some justification that the sea was too shallow for an enemy ship to attack, but had not taken into account Nelson's determination) Once the British line had taken shape, Nelson ordered dinner to be served before the battle.

De Brueys, commander of the French Fleet felt very confident in his position, with a considerable advantage in both ship size and firepower. His Flagship, the huge L'Orient of 120 guns was at the heart of the line of 13 ships, which included three large and powerful 80 gun ships of the line. From this very stable position they were supremely confident that they would be able to deliver a devastating response to any attempted assault. However the British squadron of thirteen 74 gun ships of the line and one 50 gun ship led by Nelson and his 'Band of Brothers' were formidable opponents to say the least, having spent many frustrating weeks blockading and then searching across many hundreds of miles of empty ocean. Both officers and men were all fuelled with a determination to destroy the French in battle.

At about 6.30pm on 1st August, Captain Foley in the Goliath led the line and as he approached he spotted the opportunity to ease through the shallows on the landward side, which he did with great care and even greater skill, to place himself against the enemy. He fired a complete thundering broadside into the hull of the Le Guerrier, smashing her hull and decks before anchoring against the Le Conquerant, the second French ship in the van.

After Foley, Hood followed in the Zealous, Gould in the Audacious, Miller in the Theseus and then Nelson's second in command, Saumarez in the Orion. This enabled the van to be attacked on both sides and crushed before support arrived.

The Vanguard anchored first on the outer side of the French line and was opposed to the Spartiate, the third in the French line and a thunderous duel ensued.

Throughout the approach of the British ships, the French remained steady, no colours being hoisted or a gun fired until the British were very close. HMS Culloden, commanded by Captain Troubridge was the only

British ship of the line not to take part in the battle, having grounded on the shoals in the approach to the battle.

Within half an hour of the commencement of firing, it was dark, but by that time, Le Guerrier, Le Conquerant and Le Spartiate were already dismasted. By 8.30pm, L'Aquilon and Le Souverain Peuple were taken. Captain Berry sent Lieutenant Galway with a party of marines to take possession of Le Spartiate and he returned with the French captain's sword.

Nelson on the Vanguard, which had come under extremely heavy fire early in the action, was hit in the head by a piece of iron shrapnel. Blood streamed down on his functioning eye at such a rate that Nelson thought this night must surely be his last.

Nelson was moved below decks where the surgeon was attending the injured. As Doctor Jefferson became aware of Nelson's presence, he swiftly moved to attend him, but Nelson said 'No, I will wait my turn with my brave fellows.' It is this behaviour that endeared him to both officers and the men alike. Nelson was so sure he was near death that he called for the ship's chaplain, and saw to it that messages were prepared for Lady Nelson. Luckily Nelson's wound, although messy was not life threatening and after being stitched up by the surgeon he returned to the upper deck and witnessed the last moment of the huge French Flagship, L'Orient.

The battle was furious but the British never lost the upper hand. Exhaustion from both sides slowed the action during the course of the evening. At about 10pm the L'Orient was seen to be on fire due to devastatingly fast and effective broadsides from three British ships, including the Bellerophon which herself suffered terrifying casualties in the effort. As some French sailors were ashore creating wells and replenishing stores, the opportunity had been taken for routine maintenance on the L'Orient. Paint, tar and barrels of pitch were left exposed on the deck as well as highly inflammable incendiaries. This cocktail of highly volatile material accelerated the demise of the 120 gun 3 decked French leviathan. After blazing furiously for some time the L'Orient blew up with such force that her detonation could be heard 13 miles away in Alexandria by French troops! Most of her crew were killed, including the very brave French Vice Admiral.

A midshipman on the Swiftsure heard from the survivors of the bravery of De Brueys, who having been wounded in the head, arm and then almost cut in two, was seated, with tourniquets on the stumps of his legs in an armchair directing his crew to fire until his injuries overcame him and died on the quarterdeck of his Flagship.

Nelson ordered the Vanguard's only remaining undamaged boat to pick up the L'Orient's survivors he could see struggling in the water.

After the spectacular demise of the French Flagship, the result of the battle was not in any doubt. The battle continued sporadically through the rest of the night, morning and at around 2 in the afternoon of the 2nd August, firing ceased entirely. The battle of the Nile was over. The area was a scene of complete devastation. Of the thirteen French ships of the line and four frigates, all but four were wrecked, sunk, held as prizes or grounded. Of the four ships that escaped, two were only frigates, led by rear Admiral Villeneuve (Whom Nelson defeated seven years later at Trafalgar), they were not pursued due to the British ships being in no position to chase them.

Vanguard and her crew performed magnificently throughout and after the battle, Vanguard being jury rigged before the battle even started due to the storm damage some time before the battle.

Writing years later at St. Helena, Napoleon said, "If it had not been for the English, I should have been Emperor of the East, but wherever there is water to float a ship we are sure to find you in our way. I should have reached Constantinople and India; I should have changed the face of the world".

For the French Navy the defeat was a disaster in terms of ships, men and morale, and never fully recovered from the shock of such a complete defeat. Napoleon tried to play down the impact but knew his army could not return to France as there was no Naval force left to protect the transports. The victory at the Nile also encouraged the Sultan to declare a holy war against the French and this forced Napoleon to march into Syria and besiege Acre where he "missed his destiny".

The captured French naval personnel were all well treated by the British but blamed by Bonaparte. It was convenient for him to blame the dead De Brueys, who directed the battle with such valour and bravery. He also accused Rear Admiral Blanquet of cowardice and he was hounded so much that on his release from imprisonment in England he felt obliged to resign out of the navy completely.

The ships which escaped destruction at the Nile were subsequently captured and the victory encouraged the European powers to form a second coalition against France; as Napoleon subsequently wrote: "The loss of the battle of Aboukir had a great influence on the affairs of Egypt and even more on those of the World".

Vanguard after the Nile

On Saturday 4th August, after temporary repairs were made to Vanguard, command was passed over to Hardy who remained on the ship until Nelson transferred his flag to the Foudroyant on 7th June 1799.

Vanguard had a further 12 commanders after Hardy, where Vanguard seen further service in the Caribbean and at Copenhagen in 1807 at the taking of the Danish fleet.

Returning from the Baltic, Vanguard was paid off on 14th December 1808. She was then recommissioned on 27th January 1809 under her new commander, Captain H. R. Glyn, Vanguard remained in active service until recalled to Plymouth in 1811 where she was finally paid off and 'Put into ordinary' on 15th November 1811.

Vanguard was laid up in the Hamoaze until 1814, after which she was used as a receiving ship. When the war with France ended in 1815 Vanguard was converted into a powder hulk, finally being broken up in 1821 after a very eventful 44 year career.

Making a start

The kit of HMS Vanguard is an exact scale model designed in the UK and Italy and produced and manufactured by Model Shipways. The kit is based on the original Admiralty plans as main reference for the hull, bulkhead and deck detail.

All fittings, masts and rig have been researched using contemporary sources and the most up to date reference material available to make the kit as accurate and as detailed as possible.

Although the kit of Vanguard is as easy to build as we can make it, very basic woodworking skills (and patience) are still required. Estimated build time is between 1200 to 1500 hours, so a work space will have to be made for the project. Do not remove any parts from the laser cut sheets until actually required for fitting, as they can quite easily get damaged or lost.

Take time to study the plans in concert with the instructions until you feel confident to tackle and progress through each stage of construction. Patience is the watch word when building any model. Treat each stage as a separate project and the overall effect of the completed subject will be much enhanced. The main structural parts of the model are laser cut from the highest quality plywood; the remaining wood parts are laser cut from high quality walnut ply and pure walnut sheet. Care should be taken when cutting parts from the laser and brass etched sheets. The sheet from

which you are going to cut the parts should be laid on a hard, flat surface. Use a heavy duty craft knife (a Stanley Knife is perfect) with a good strong blade to cut through the tabs holding the parts in place. Before removing the wooden parts from their host sheets, they should be numbered by reference to the cut file identification sheets. It is easier to paint most of the photo-etched parts before removing them from their sheets. They can be touched up again once in place on the model.

Recommended tool list

(All items listed were used by the designer to build the Vanguard prototype model)

- 1: Craft knife
- 2: A selection of needle files
- 3: Razor saw
- 4: Small wood plane
- 5: Pin vice or small electric drill
- 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: Pliers/wire cutters
- 10: Good quality tweezers
- 11: Dividers or compass
- 12: Steel rule (300mm)
- 13: Clothes pegs or Amati Fast Clamps
- 14: T-Square
- 15: Good quality pencil or drawing pen
- 16: Masking tape
- 17: waterline tool
- 18: Pin Pusher
- 19: Plank Nipper
- 20: Modellers Bench Vice
- 21: Keel Clamp
- 22: Cutting mat

Paints, wood stains and adhesives.

- 1: White PVA wood glue
- 2: Walnut wood dye (for topmasts and topgallant masts)
- 3: Cyanoacrylate (superglue) thick and medium viscosity
- 4: Walnut/dark wood filler
- 5: Indian ink (Black for ratlines and lower mast stays)
- 6: White spirit (For thinning down varnish and paint)
- 7: Epoxy resin adhesive
- 8: Matt polyurethane varnish (NOT satin or gloss)
- 9: Black paint
- 10: White paint
- 11: Blue paint
- 12: Yellow paint
- 13: Red paint
- 14: Copper paint
- 15: Gold paint
- 16: Flesh paint
- 17: Brown/leather

Hull construction

Before removing the component parts from their host sheet, make sure all parts have been numbered. Start the basic hull assembly by cutting out the two parts of the main keel (18) from the 5mm sheet, together with the bow pattern (181) and keel strips (171 & 172). Glue the two halves of the keel (18) together, using two pieces of scrap wood overlapping the join to help clamp the keel together. Use PVA wood glue and clamps to hold the keel parts into position until the glue has cured. Glue the bow pattern (181) and keel strips (171 & 172) into their respective positions, along the edge of the false keel (18) as shown in the drawings. It is recommended that the rudder post (173) is fitted only after the second planking is complete.

Remove all of the bulkheads (1-17), including lower deck (26), and plank termination patterns (19, 20, 21 & 22) from their host 5mm sheets. Dry fit (Trial

fit without the use of glue) the bulkheads in place to ensure all parts fit perfectly. Dry/trial fit the lower gun deck (26) into position. Extra care should be taken when fitting the lower gun deck as it has to be pushed gently into place to avoid any possible breaking/snapping of the upper bulkhead tabs, which are exposed and very vulnerable at this early stage of construction.

Once you are completely satisfied with the fit, disassemble the deck and bulkheads. Roughly bevel the edges of the front and rear bulkheads and plank termination patterns. The bottom edge of bulkhead (17) will require a lot more bevelling than the others because this is where the planking under the counter terminates. It is recommended to bevel the plank contact edges on the bulkheads as much as possible at this stage, as it will be not so easy to do once glued in place, and the chances of scratching the walnut bow and keel with the rough abrasive paper will be high.

It is also advisable to sand the aft keel at both edges, where the rudder post will be fitted, to about half its original thickness. This will ensure that the thickness of the first and second planking will be more or less flush with the rudder post (173) once fitted.

When the bulkheads have been roughly sanded, glue them into their corresponding slots in the keel. Glue and temporarily pin the lower gun deck into position at the same time; the lower gun deck will ensure that the bulkheads align perfectly as the glue sets.

Cut out and glue the two sets of stern counter patterns (275) and (276) into their corresponding slots at the rear of bulkhead (17). The larger pair fit nearest the keel. The smaller pair fit into the slots near the edge of the bulkhead. Angle the outer stern counter frames slightly inwards so that the planking will run perfectly to the stern.

Cut out the dummy barrel strips from the 1/8 Basswood sheet (273 & 274) and push them through the slots in each bulkhead as shown. Glue them firmly in place once they are positioned correctly. Glue the upper gun deck camber beams into position on the top edge of their respective bulkheads. Use clothes pegs or crocodile clips to clamp the beams into position until the glue has dried. Note: Paint dummy barrel strips black before installation.

Cut out and glue into position the semi-circular bow deck (33). The tabs push into the two horizontal slots in bulkhead (1). Plank the bow deck with 0.5x3mm Tanganyika strip. Trim the plank edges flush with the edges of the bow deck once the glue has cured, and sand the deck smooth.

Construct the front bulkhead assembly (142) as shown, including the 'roundhouse' (toilet) assemblies (73) Plank the roundhouse patterns as shown using 0.5x3mm walnut strip. Once the adhesive holding the strips has cured, trim off any excess above the top and bottom edge and sand smooth. Drill a 2.5mm hole as shown into each of the roundhouse assemblies. Glue the completed basic front bulkhead assembly in place to the front of bulkhead 1.

Upper gun deck

Cut out the upper gun deck (29) from its host 1mm plywood sheet and mark a centre line down the length of the deck to aid deck planking as shown on the drawings. The deck can be pinned and glued into place before planking. Alternatively, it can be planked before fixing into place. If the latter method is adopted, the deck will have to be cut in half down the longitudinal centre line so that you have two halves, to enable the deck to be pushed into position to the edges and slots of the bulkheads. Planking is laid using 0.5x3mm Tanganyika strip. Start at the centre line and work outwards to a point just past the notches on the edge of the deck. When complete, cut out all deck openings to size and sand the deck using fine abrasive paper. Finally, apply a couple of coats of clear matt polyurethane varnish to seal the grain.

The inner wall of the upper gun deck should be planked next using 1.5x7mm lime wood strips. The inner walls are planked from bulkhead (3) to (16), starting at deck level and working up. Use clothes pegs or crocodile clips to clamp the planks into position until the glue has cured. Take your time and apply

each plank as neat as possible as the inner wall is not as easy to sand as the outer wall. The bulkheads which have no upper deck beams (5-8) can be planked to the top edge of the bulkheads. The remaining bulkheads are to be planked up to the bottom edge of the camber beam supports for the upper deck.

When complete brush on diluted PVA wood glue to the inner side of the wall, where they are glued to the bulkheads. This will reduce the (very real) risk of the planks splitting/splintering when cutting out the gun ports. Sand the walls with fine abrasive paper until a smooth finish is attained. Make up and fit the lower gun deck fittings as shown on the drawings. To gauge the correct position for the ship's stove, dry fit the upper deck (30) and position the hole for the chimney in line with the opening for the chimney on the upper deck. Cut out and glue the top deck camber beams in the same manner as the gun deck beams.

Preparation for Gun port patterns and first planking

The basic hull structure should now be very strong and rigid. Final preparations for the gun port patterns and first planking can now be made. Temporarily pin the top deck (30) into position. Do not force the brass pins in. Plank the stern gallery platform (31) using 0.5x3mm Basswood. Pin and glue in place this part along the top edge of the stern counter patterns.

Once the top decks are securely pinned into place, sand the edges of all decks flush with the edges of the bulkheads. The edges of the bulkheads must also be bevelled and shaped to follow the run of the planking. Cut out, pin and glue the upper gun port patterns (56) into position as shown. The gun port strips should be soaked in warm water for at least half an hour before fitting in place, as this will make them much more flexible to manipulate and lie as flush as possible around the contours of the hull and bulkheads. It is essential that the gun port strips are dry-fitted initially, and held in place with a few pins to attain the correct position. The top edge of the patterns should be at the same level as the top edge of the bulkheads. Glue only when you are completely happy the fit is correct; both sides must be as symmetrical as possible. Be mindful not to inadvertently glue the upper gun deck in place when fixing and gluing the gun port patterns in place, as this will need to be removed at a later stage to cut out the gun ports and add the cannons. Once in place, fit the lower gun port patterns (57) as shown.

First planking

The first planking should now be ready to be laid using 1.5x6mm Basswood strip. The first or 'master plank' is to be laid at the bottom edge of the lower gun port pattern as shown. Because the PLYWOOD bulkheads are very strong, it is recommended that 0.5mm holes are drilled into the bulkheads before the insertion of the pins. When pushing the brass pins into the planks and bulkheads, leave at least half of the pin length protruding so they can be easily pulled out using a pair of flat nose pliers once the planks are secure. Glue the planks using PVA wood glue.

The first four or so planks each side should be relatively straight forward to apply as only mild tapering is required. As you start down and along to the curved area of the bow, you will notice that planks will need to be tapered to follow the natural run of the planks. In order to determine the amount of taper needed for each plank to lie naturally, lay a plank at the fifth or sixth bulkhead and then lay it around the bow. Mark the excess area of plank that overlaps the one directly above it. Repeat this technique for the stern also. Although the planks may not require tapering at the stern, it is advisable to let the planks run as natural as possible which helps avoid any possible 'springing' of the planks when sanding. Before cutting the taper into the planks, soak them in warm water for half an hour or so as this minimises the chance of the blade of the knife 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 would be perfect and is highly recommended). 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. Pin and glue the tapered planks into position on the hull, leaving a little excess at the stern which can be trimmed to shape once the planking is complete. Glue two or three strips each side alternately. This technique should prevent any possible twisting/warping of the frames and keel during the glue curing process.

Use this planking technique right down to the keel. When planking is almost complete, triangular shaped gaps at the stern will be apparent. This was also the case in full size practise, although not so simplified. The use of triangular shaped planks is needed for the gap in-between the top and bottom edges of the planks, usually near the stern. The correct name for these triangular shaped planks is called stealers. Cut these to shape using the excess lime wood from the ends of the planking and glue them into the gaps. Trim off the excess stern planks to shape and leave the hull for the glue to fully cure for at least 24 hours (48 hours is recommended).

When the first planking has been completed, pin and glue the stern counter fascia (518) in place on the stern counter frames. Trim any excess that may be protruding from the sides of the fascia once the glue has cured.

Sand the whole hull that has been planked with a coarse grade abrasive paper, followed by medium grade. This will entail a few hours work. If possible, sand the hull in a well-ventilated area, ideally in an open space as the dust particles could present both a fire and health hazard. The use of light duty gloves is also recommended to reduce any risk of blisters from sanding. (A powered sanding tool would make the job easier and quicker, we used a sanding 'mouse')

Assemble and glue together the four parts that make up the building cradle (23, 24 & 25) and place the hull into it. If you intend to fix your completed model on brass pillars (commercial or self made), as with the prototype model, now is a good time to drill three holes along the bottom edge of the keel. When the hull is complete, three brass pillars can be inserted into the keel for the final fixing of the model on to your chosen display base (If desired)

Gun ports

Cut out the inner gun ports on the upper gun deck inner bulwark as suggested on the drawings. When cutting out the inner gun ports on the upper gun deck, take great care not to splinter the wood too much; this will help to minimise filling and sanding areas that are not easy to get to.

When opened to exact size, the gun ports without lids can be framed using 1x6mm walnut strip glued together edge to edge to attain a width of 12mm. Cut to length and glue on the horizontal sides first, followed by the vertical sills. When complete sand the inner and outer sills flush with the side of the hull.

Main wale position

Using the full scale hull profile view on the drawings, carefully mark the position of the top of the main wale. The easiest way to do this is to measure down from each of the lower gun port sill positions. Also, mark the wale position at the prow. To gauge how the main wale will run on the hull side, offer up a spare planking strip and pin it at the marked positions for the top of the main wale. You can even draw a line using the spare planking strip as a guide, so you will know exactly how the main wale should run from the bow to stern. Also, any slight adjustments can be made at this time, to ensure both wale lines are completely symmetrical.

Quarter Galleries

Refer to the drawings for the correct assembly of the quarter galleries. Time, patience and care are the watch words for assembling these parts. Cut out the stern fascia (117) and temporarily pin it into place to aid gauge the position of the quarter gallery components. All three edges of the quarter gallery components, (58-63) need to be bevelled to follow the angles of the hull side, stern and quarter gallery fascias; Work upwards from the lower patterns until all patterns are in place. If you plan to glaze the windows (highly recommend-

ed), pin rather than glue the quarter gallery fascias (161 & 162) in place so that they can be removed to insert the glazing when the window frames are fitted. Once the basic quarter gallery assembly is complete, lightly sand the edges. Any slight gaps between fascias will be covered at a later stage with decorative strip.

Second Planking

The second planking is applied using .5mm x 5mm walnut. It is recommended by the designer that the planking should start from the top edge of the previously marked out main wale position and work down towards and up to the keel. (Or, alternatively, as shown on the drawings, start the second planking at the top edge of the upper gunport patterns). Use the same planking techniques as the first planking, with the exception that the whole under surface of the plank is to be glued to the first planking, as well as edge to edge.

The best glue to use for the second planking is medium to thick cyano gel. This is to avoid any pin holes, which would have to be filled in prior to painting. Cyano will stick the planks as well, if not better than wood glue. Greater care however is needed to attain a very neat finish to minimise the need for filling.

Once the planking from the main wale downwards has been completed, the area above the main wale can be planked. This area should be relatively easy, as there is very little to no tapering required, due to the planks following the curvature of the main wale. However, much care is needed to attain as neat a job as possible, to help reduce the need for filling and sanding once planking is complete.

Try not to completely cover the openings for the gun ports as the planking progresses up (or down, depending on which planking method you are using) the hull. Leave an opening large enough for a knife and file to be inserted to open out the gunport openings once planking has been completed. Plank to the top edge of the bulwarks and trim all the excess protruding along the edges when complete.

Once the second planking is complete, sand the hull down with medium grit, followed by fine grit abrasive paper. Carefully cut the gun port openings to their final shape using a sharp craft knife. Finish off trimming the gun port openings using a flat needle file.

The main wale (The widest belt of extra planking that runs along the entire length of the hull, just above the waterline) can now be fixed into place. Start at the top of the marked main wale position by using two strips of 1x4mm walnut, followed by two strips of 1x5mm walnut for the lower two strips. Finally, add a strip of 0.5x3mm walnut per side, that should be abutted to the top edge of the upper-most wale planking strip, as shown (This thin plank was called a 'strake'). As with the main planking, it is advisable to soak the planks in warm water to make them more pliable before fixing in place with the use of cyano glue. When the wale is complete, sand the belt smooth and fill and sand again if required.

Next, mark the position and plank the upper wale in-between the two tiers of gun ports. This wale is made up from two strips of 1mm x 4mm and one strip of 1x5mm walnut per side. When the two sets of wales are complete, sand them smooth using fine grit abrasive paper. Fill any slight gaps with wood filler and sand back until completely smooth. If you intend painting the hull, any imperfections will show up more than if the hull is simply varnished.

Using the hull profile plans, carefully mark onto the hull the positions of the decorative walnut rail Use cyano to glue the strip to the hull, remembering all strips run parallel to the main and upper wales. Finally, add the outer hull side steps, side fenders and chesstrees as shown on the plan sheet.

Upper Gun Deck

Remove the top deck so that the upper gun deck can be fitted out. Paint the inner walls red, together with all gun port frames. Refer to the cut-away profile and the deck drawings on the plans for the correct position of hatches, ladder ways, Cavel cleats etc.

Treat each set of components as individual 'mini kits'. Paint or varnish the parts before fixing into place. The cannon assemblies which can be seen through the top deck opening can be fitted with the breech rope. The carriages that will be hidden under the top deck can be painted red and glued into position using glue that will secure the carriages in place permanently (Epoxy Resin is recommended). Do not glue the barrels in place on the carriages at this time, as they will interfere with the hull painting (and subsequent sanding in-between coats) Carefully drill a 0.7mm hole each side of the gun ports, just above the lower sill. It is advised that all copper eyelets are painted/sprayed black before fixing into position. Cut the copper eyelets stem so that about 3mm remains and glue the eyelets into the holes. Pin, as well as glue the main mast bits into position onto the deck. The gratings are made up from the combing strips, which are to be slotted together. When completed, brush on watered down PVA glue to secure the strips. When fully dry, trim to fit in each of their respective deck openings. The combings on the outside of the gratings are made from 2mm x 3mm walnut strip, as shown on the drawings.

Very carefully drill the lower gun deck dummy barrel strips to take the dummy barrel stems using a 2.5mm drill bit. Ensure the holes are drilled horizontally so that the barrels point outwards from the hull.

When inserting the dummy gun strips, paint black before inserting to make them disappear in finished model. Glue them in place against the bottom of their slots. Tung oil is superior to clear matte polyurethane varnish as it will allow glue to penetrate it, especially needed when mounting equipment on deck. When planking the inner wall of the upper gun deck paint before gluing in position. It is always better to paint before gluing parts on, as there is less chance of staining other parts and the paint is usually much deeper and normal looking.

When using water to aid in bending of wood and ply do not over soak. When doing the first planking it is easier to use a tool that scores the strip as this will facilitate bending without any water use. It is also easier to cut dry, rather than watered, wood.

Before the cannon assemblies are permanently fixed into place, and the outer hull is not cluttered with fittings, now is a good time to copper the hull

Coppering

Using the side profile plans, mark the waterline position onto the hull. Ensure the hull is completely level when marking. As the hull will have to be laid onto its side as coppering progresses, it is advised to lay the hull on soft cloth, to help avoid the possibility of the hull getting marked or scratched.

Start the coppering process at the keel working from stern to bow. Each line of plates should be staggered by half the length of the plate below (not dissimilar to the way bricks are laid).

Lay the plate on a hard flat surface and cut off any excess that requires trimming to shape when you reach the edges and waterline level with the use of a heavy duty craft knife. The time involved in coppering will take a few nights of evening work, but the end result is certainly rewarding. When you have reached the waterline and you have not quite attained a perfect straight line, this can be overcome by employing the following technique; Apply masking tape (or good quality Sellotape) just above the marked waterline position. Press the tape firmly into place to avoid any paint getting under the tape and into the masked area Using a fine brush loaded with only a minimal amount of copper paint, brush in-between the plates and the masking tape. Once dry, remove the masking tape. This should then show a perfectly crisp and straight waterline.

The bottom edge of the rudder and the keel are to be painted copper too. Copper the rudder at this stage, and glue the photo etched rudder hinges (which also need to be painted copper below the waterline area) to the rudder post and rudder as shown on the main side profile drawing.

When can I fix the cannons on the upper gun deck?

If you wish to fully rig all of the cannon on the upper gun deck, do not fix the upper deck in place at this point in time, but wait until the hull has been fully painted and hull fittings are in place. This is because the area in-between the gun ports are to be painted black and yellow, and masking off the area that need to be painted would be impossible with the cannon barrels protruding out of the hull sides.

If, however, you do not plan to rig the upper gun deck carriages at all, the upper deck can be fixed into place at this time, and the barrels fixed into position later when the hull has been painted. I would personally recommend leaving the fixing of the upper deck until the breach ropes on the exposed cannon and carriages are rigged and the outer hull painted.

The fitting of breech ropes only is perfectly acceptable for this scale of kit, as adding the main tackle would, if not done correctly, make the cannon assemblies look too over-size for the scale.

Painting the outer hull 'Nelson Fashion'

Vanguard, at the Battle of the Nile had her sides painted what is now called 'Nelson Fashion' This means that the yellow strakes followed the lines of the decks (or the gun ports), and not the lines or sheer of the wales. The side profile drawing showing the shaded area is to be painted yellow/ochre. For further study of all aspects of decoration and livery, it is suggested that L.G. Carr Laughton's Old Ships Figureheads and Sterns (ISBN 035177 5950 – Conway maritime Press) is obtained. It is also interesting to mention that the colour and tones of 'yellow' in Napoleonic times varied greatly, as some ships crews mixed the yellow ochre with a high proportion of white, while others used it undiluted.

It is all too tempting to fall for other manufacturers claims that their paint is 'true Navy colours', the reality is that there is no such thing, so do not be tempted to purchase overpriced paint that claim to be something they most definitely are not. Humbrol paints or similar are perfectly acceptable for the Vanguard paint scheme. These paints (and their equivalents) have been, and still are used by the most respected and gifted model makers in the world.

The gun port lids would have been painted red on the inside and around the edges, and black for the outer surface. This created a chequer effect when the port lids were closed and became known as 'Nelson's Chequers'.

It is advisable to paint the yellow in the first instance, as the lighter colour will need at least three to four coats, whereas only two coats may be required for the black paint. After each coat of paint, lightly sand the area that has been painted to ensure a perfect surface for the next coat of paint. Once the yellow has been applied to your satisfaction, mask off the areas to be kept yellow, as shown and then apply the black paint. Once complete, very carefully peel off the masking and touch up any areas which may have a slight amount of paint seepage; also touch up any areas which have gone into the gun port openings. Give the outer hull one coat of matt varnish to protect the paint from inevitable finger marks as you work on the rest of the hull, which can be given a further two coats once the hull is complete.

At this time, the upper gun deck cannon and carriage assemblies can be finished off completely and installed. The remaining upper deck camber beams can now be glued in place as shown, ready for the upper deck to sit on.

Upper deck (Top deck)

Before the upper (or top deck) can be finally fixed in place, mark a line down the centre of the deck length to aid planking as you did with the lower decks. Also the deck camber beams and boat beams (178) need to be positioned and glued in place to the underside of the deck; the exact distances for spacing are given in the drawings. Once the beams are firmly fixed in place, pin and glue the upper deck in place.

Make up and fix the screen bulkhead and poop assemblies as shown on the plan sheets. From the 1mm plywood sheet, first number and then cut out parts (49, 50, 51, 54 & 55), using the drawings for visual reference. Paint and add the brass etched pillars and window frames as shown. If you intend to glaze the window frames (highly recommended), do so before gluing the bulkheads in place. The designer's own recommended method of glazing the windows is as follows;
(Before you start, make sure all paint work is applied to the window frames and bulkheads/fascias, into which the windows are to be placed).

I - Place the pattern (bulkhead or stern fascia patterns) with the window frame opening onto the sheet of acetate/clear plastic provided. Using a fine pen (0.1 size tip is recommended) or similar, very carefully draw the four lines along each inside edge of the window opening onto the acetate/clear plastic sheet.

II - Using great care, slot and glue the (previously painted) photo-etched window frame pattern into the opening for the frame in the screen bulkhead pattern. The frame should be flush with the outer face of the fascia it sits into.

III - Cut out the previously marked window area from the acetate/clear plastic using a straight edge and sharp craft knife. Do not be tempted to cut through the plastic sheet in one go, but lightly score the line several times. This helps reduce the risk of the blade veering off and inadvertently cutting the glazing area itself.

IV - Press the previously shaped 'window panel' into the underside of the frame opening in the fascia pattern to ensure the fit is correct.

V - Apply a conservative amount of epoxy resin (or similar) around the inside edge of the window frame. Very carefully push the acetate glazing into place. Do not, under any circumstances use superglue for this job, as it will leave a frosting effect on the clear acetate glazing (usually more noticeable only when the assembly has been fixed permanently in place, making rectification work somewhat difficult), thus ruining the overall effect. Follow this technique until all glazing has been successfully applied to the frames.

Slot and glue the poop screen bulkheads together and then glue and slot the assembly into their corresponding slots in the quarterdeck. Construct the upper stern gallery bulkhead (52 & 53) and its associated parts in the same manner as the poop bulkheads and glue into place in the slots located in the stern gallery deck. Finally for this stage of construction, the stern fascia (117) can be assembled as shown. Before pinning and gluing the stern fascia (79) in place, paint it black and add the window frames and glazing in the same manner as the poop bulkhead windows.

Paint the exposed underside surface of the poop deck red (or white). Carefully pin and glue the stern fascia in place. The lower top edge of the opening should fit up against the underside of the stern gallery deck. Bevel the outer edge of the stern gallery deck to a slight angle so that the photo etched railing has maximum contact with the curved edge.

Paint and glue on the cast Taffrail; (444) to the upper area of the stern fascia. Paint the stern balcony (442) yellow and cut it out from the 0.9mm brass sheet. It is suggested that you drill five or six evenly spaced 0.7mm holes along the bottom edge of the balcony to pin it to the edge of the balcony deck. Before pinning and gluing in place, carefully manipulate the balcony to the same curve as the edge of the protruding balcony floor edge. Glue and secure the balcony rail pattern into position along the outer edge of the balcony floor using epoxy resin and brass pins. Paint and cut out the stern balcony side patterns, parts (440 & 441). Offer up each piece to the fascia and mark onto the part the area to be trimmed up to the inside edge of the cast taffrail. Once you are completely satisfied with the fit, glue into the position shown.

Paint and glue the cast decorative strip (514) above and below the stern gun port positions. Before applying the strip just below the lower row of stern windows paint and glue the Vanguard letters in place.

The exposed bulkhead tabs on the quarter deck and forecandle can now be

removed above upper deck level. Twist them off using a pair of pliers and sand the remaining 'stubs' flush with the deck surface. Sand the bulwark sides to remove any remaining wood and/or glue from the tabs which have been removed.

The upper deck is now ready to be planked using 0.5x3mm Basswood strip. A 'margin plank' should be laid around the edges of the deck area, and butted up to the bulwark edges. Lay the margin planks before starting the deck planking proper.

When the margin planks have been fitted and glued in place, start the deck planking at the centre line of the deck and work outwards towards the sides.

The deck planking can be enhanced if desired, by using 'scale length' planks. On the real ships, deck planking was laid using either what is known as a 'three-butt shift' or 'four-butt shift' in a staggered formation. For a ship as large as a '74', like Vanguard, a 'four butt shift' is recommended. This means that four between butt joints are laid on the same deck. Start by measuring a plank to a length of 120mm (full length plank) and glue it to at the centreline of the deck. Next, cut 2 x 90mm lengths and glue them to either side of the 120mm plank, followed by cutting 2 x 60mm lengths glued either side of the 90mm planks. Finally, cut 2 x 30mm lengths and glue them either side of the 60mm planks. Repeat this procedure until the whole deck surface is covered. It is not recommended that 'caulking' is attempted, as the small scale of the model would make the 'caulking' too visible. At this scale (1:72nd), it is highly likely that no caulking would be visible.

When deck planking is complete, sand the deck and coat at least one layer using matt varnish to seal the grain from possible soiling as work progresses. The insides of the bulwarks are next to be planked using 1x4mm walnut strip. Some expert modellers prefer to paint the lowest bulwark plank red before fitting into position, as this will give a perfect, crisp line in-between the deck and inner bulwark surfaces. This also eliminates the need to mask off the deck edge area when painting the inner bulwarks. It is advised to leave gaps in-between the gun port openings in order to make it easier when it comes to trimming the plank edges back to the Gunport positions.

Once planked sand the inner bulwarks smooth (if required) and paint red. Eyelets for the cannon tackle and cleats can be added once the bulwarks have been fully painted. The remaining deck fittings can now be made and fixed in place, including all of the capping rails, timberheads; binnacle, ships wheel assembly, hatch combings and gratings. It is advisable to paint the forecandle capping rails black before assembly (the underside of the rails are very difficult to paint perfectly once in situ), and give them another coat, including timberheads, once fixed in place.

Poop deck

Before fixing the poop deck (32) in place, glue the deck beam (182) to the inside edge of the deck as shown. Also make sure the poop camber beams have been fixed into position (14a & 15a) and the cannon and carriages (461) located under the poop deck are fixed in place. As with the other decks, glue the poop deck in place. Again, as with the upper deck, pull off any exposed bulkhead tabs protruding above the deck and sand flush. Plank the poop deck in exactly the same manner as the rest of the decks using 0.5x3mm strip. Once complete, build up and add the poop deck knees (108 & 109), mizzen mast bitts (203 & 205) and skylight assembly (122, 143 & 145).

Head rail assembly

From the host 3mm PLYWOOD sheet, cut out the three 'V' shaped bow rail frames (277, 278 & 279). Dry fit the frames into position in the slots on the top edge of the bow. The slots for the cast railing need to be carefully filed at an upward angle looking from the side so that the cast railing can fit correctly inside the notches. Before gluing the vertical 'V' frames in place, paint each one black. Cut out the head rail deck grating (167, 168 & 169) from the 1.5mm ply sheet and carefully glue into place. Add the 'Seats of Ease' (toilets - 163 & 177) to the positions shown on part number (168). The curved edge fit on the top edge of the foremost part of the 'roundhouse' deck. Once the headrail

frames and gratings are securely glued in place, very carefully sand the edges of the vertical frames, at the top so that they are flush with the gratings platform which in turn, ensures the correct fit for the upper headrails.

Once complete, paint yellow/ochre and then add the upper headrails (123) to the upper edge of the vertical frames as shown. The bow upper cheek rails (90) are almost ready to be added. Before they can be added, the bottom edge of the headrail frames will need to be filed slightly and for the upper bow cheek rail to fit correctly. Paint the upper bow rail cheek yellow/ochre before fixing in place.

Next, fix the upper bow cheek in place (206, paint yellow/ochre before fixing). The hull contact edges will need to be carefully shaped and bevelled to allow maximum contact with the hull. Paint black and fix parts (17 & 48, the hawse hole patterns) immediately below the upper bow cheeks as shown, followed by the lower bow cheek rail (86) and lower bow cheek (206), again painting yellow/ochre before fixing in place.

Manipulate, paint yellow/ochre and push the two sets of cast rails (514 – decorative cast strip) into the slots in the 'V' frames as shown. To complete the basic headrail assembly, add a 1x3mm walnut strip (painted blue) to each outer edge of the 'V' headrail timbers to enclose the decorative rail. Dry fitting and shaping of the 1x3mm strips will be needed to attain the correct shape, top and bottom. To add a little more depth to the 1x3mm walnut strips, you can use very thin strips of 'Plasticard'/plastic strip (The type used for the prototype model was from a manufacturer called 'Evergreen Scale Models', Item No. 111, 0.4x0.75mm) to border the edges of the walnut strip (as with the prototype model) Paint the strip yellow before carefully applying it to the edges of the 3mm walnut strip. (This same method was also used to border the side edges of the catheads).

Carefully pin and glue the catheads (179) and support brackets (179a) into position. Use the side and overhead views on the plans for exact positioning. The support brackets will need to be slightly bevelled on the hull contact edge to attain a perfect fit to both the side of the hull and the lower edge of the cathead.

Using the front profile drawing, carefully manipulate the decorative strip that runs from the upper decorative strip rail to the bottom of the cathead bracket. Paint the strip before carefully manipulating it into the correct shape. Use cyano to glue it into place only when you are sure the shape is correct. To complete the head rail and cathead structure, glue the cathead crossbeam (179b) as shown. Paint gold and glue onto the end of each cathead the decoration from the 0.5mm photo etched sheet (376)

Poop railings and barricades

Identify and cut from their tabs in the 1.5mm laser cut sheet the 12 poop rail supports (110, 111, 112, 113, 114, 115, 116, 127, 128, 129, 130 & 131) per side. It is recommended that you cut out one at a time and glue in place before proceeding with the next support, as they are all of differing height and could be very easily mixed up. When the supports are all glued in place, paint them black. Next, add the poop upper railing cap (45 - lower), before gluing in place, this could be painted either red or green to break up the black slightly if desired. Once fixed in place, paint black and glue the top part of the poop rail (44) in place, leaving a lip equidistant from each edge of the rail it is glued to. Finally, paint black and add the finishing rail (180) to the forward edge of the poop rail (44). Add the brace sheaves (201) as shown, along with the timberheads (189) that are located along the inside edge of the poop deck. Add the belaying racks as shown, remembering to pin as well as gluing them into position, as they will have to take the strain of multiple rigging lines. Make up and glue in place the carronades (462 & 463) as shown.

Make up the poop and quarterdeck barricades as shown. Paint the hammock cranes black and glue into place once complete. Make up the fore-castle rails and belfry as shown, paint the assemblies black before gluing into place.

Gun port lids

Using the drawings, make up the gun port assemblies as shown. For the lower gun ports, cut out the lower gun port strips (64). Plank the top surface using 1x4mm walnut strip and then carefully mark out 14x14mm segments. Carefully cut the segments to their correct length to form the gun port lids. Add the gun port lid hinges (292 for the lower gun ports, 338 for the upper gun ports and 337 for the upper deck half port lids). Cut down 4 eyelet stems per gun port lid to a length of about 1.5mm. Glue and insert the eyelets into the holes at the ends of the hinges, including 2 eyelets on the under side of the lids. For the lower gun port lids only, add the scuttle hatches (372) as shown. Paint the outer surface of the lids black, and the inner surface, including the edges, red. Drill the hinge positions into the top of each gun port on the hull and fix and glue each gun port lid into position.

Drill a 0.7mm hole into the hull 6mm up from each hinge position. Glue and insert a 40mm length (approx) of 0.1mm natural thread into each of the holes and leave until the glue has dried. When fixed, tie off the end of the thread to the eyelet at the ends of the hinges and cut off the excess once fixed.

Channels

Cut out the Fore, Main and Mizzen channels, together with the smaller Mizzen back stay channels from the 1.5mm walnut sheet (67-70). Using the plans for correct positioning, pin as well as glue the channels into place (as shown). A strong join must be attained because the channels will need to take a large amount of stress once the shrouds and back stays are rigged. Paint black, cut out, bend and fix the channel brackets (288) in place on the under-side of the channels as shown.

Using the drawings, assemble the deadeyes and associated etched brass chainplate parts as shown. Paint all of the strops and chainplate links black before removing them from their host sheet. It is important to note that the angle of each chainplate should follow the angle of its corresponding shroud. To achieve this, cut to length from the appropriate diameters of dowel the fore, main and mizzen lower masts. Using a length of thread to gauge the angle of the shrouds and backstays, mark onto the hull the correct angle that the chainplates should be, thus ensuring the chainplate assemblies follow the exact same line of its associated shroud.

When all of the chainplates are fixed securely in place, any slight damage to the paint work can now be touched up (if required) using black paint. Plank the edges of the channels with 1x2mm walnut strip. Finally, paint both the channel capping strip and the channels black.

Drill the various holes into the hull for rigging, including eyelets as indicated on the full size profile view drawings.

Finishing off the hull

Make up the three lantern assemblies as shown on the drawings. Drill and glue the assemblies into place on the cast taffrail as shown. 1mm holes will need to be carefully drilled into the Taffrail and decoration for the lantern stems and support brackets. Paint the photo etched lantern frames (373) white and the upper and lower finishings (450 & 451) yellow/ochre. The stems (1mm brass wire) and brackets (374) for the lanterns can be painted black. Using the full scale overhead and side views as reference, mark and drill a series of 1mm holes along the top surface of the quarterdeck capping rail. These are for the insertion of the remaining hammock cranes. Paint all the hammock cranes black before removing them from their host sheets. It is advisable to cut out and glue each set for a particular capping rail area in turn, rather than cutting them all out first as they could easily be mixed up. When all hammock cranes have been secured in place, thread 0.5mm black thread through each of the holes at the top of the hammock cranes and then tie off the ends of the thread to an eyelet on the capping rail, near the hammock cranes. Drill and fix a stanchion to each corner of the companionway openings

and thread 0.5mm natural thread through the holes for the rope railing.

Paint and fix the figurehead in place, (the back of the figurehead may need some filing to ensure a correct fit to the bow). Paint yellow and fix the bow decoration (431 & 432) in place.

Using the plans as reference, make up the 2 boomkins (These were extensions onto which the fore course sail tack block were attached), as shown and pin and glue them into the forecabin bulkhead, at about half way up and approximately 10mm apart.

Carefully look around the hull assembly for any parts that may need re-touching with paint. Make sure all deck fittings are in place, including cleats, mast bases, eyelets etc.

When the hull assembly is complete, spray (highly recommended) or brush on a couple of coats of clear matt varnish from the waterline upwards.

The hull can also now be permanently fixed to your choice of base.

Ships Boats construction

At this point the main hull can be put to one side. Build the ships boats as mini kits; this will take about two weeks of evening work. The keels and bulkheads for the ships boats are to be located on their dedicated host 2mm plywood sheet. Number each part using the identification sheet before removing from their host sheet. Take out one boat set at a time for building.

Insert each bulkhead into its associated slot in the keel. Glue the bulkheads in place and add the floor to secure the basic 'skeletal' assembly, ready for the bulkheads to be sanded and bevelled.

When the glue has completely cured, sand and bevel each bulkhead in exactly the same way as you did on the main hull. The hull, as with the main model, is double planked, but using thinner 0.5x3mm walnut strip. As pins cannot be used to hold the planks in place it is highly recommended that cyano glue is used, instead of PVA wood adhesive. As the bulkheads are to be removed above floor level, the glue should be used very sparingly. Cover bulkheads with scotch tape before glueing.

Planking is applied by employing the same techniques as the main hull. Start planking at the top of the bulkheads and work down to the keel. When the first planking is complete, give the shell a light rub down using fine abrasive paper before starting the second planking. Do not rush the planking process and try to ensure no gaps are left in-between the planks. When the planking is complete, brush on a small amount of diluted PVA wood glue to cover the entire hull. This will ensure that all of the planks are thoroughly bonded together, thus reducing the chances of the planks 'springing' apart when being sanded. Using great care, sand the finished hull until a smooth finish is achieved. Any slight imperfections that may still be visible can now be filled and then re-sanded.

The exposed bulkhead frames can now be carefully removed. Use a fine pair of flat nosed pliers for this job. Sand the inner hull smooth after removing the bulkheads. Plank the floor with 1x2mm walnut strip. Cut the hull ribs from 1x1mm strip. Cut each rib slightly longer than required and glue them at the intervals shown for each boat in the drawings to simulate the hull ribs.

You could use fine plastic profile strip instead of the walnut strip, to simulate the boats ribs if the finished boats are to be painted. The plastic strip works well, and can be obtained from any good model or craft shop.

When the glue has dried, trim the ribs so that they are flush with the top of the hull. Using a pair of dividers or compass, mark onto the inside of the hull a line 3mm down from the top of the hull for the 'rising plank' (1x1mm walnut strip, or 1x1mm plastic strip can be used) onto which the thwarts or seat edges are secured.

Plank the 'front deck' of the boat from the first bulkhead to the prow and trim

the edges flush with the hull. As the ships boats were constantly subjected and exposed to all weathers, both inside and out were usually painted (or at the very least, heavily varnished). The insides could be painted green, white or red. The outside of the boats were usually painted white; (This was the most common option, although the Captain enjoyed the option of painting the boats in the livery of his choosing, either by supplying the paint himself or using paint from the Boatswain's stores).

Thwarts can be simulated by simply using 1x3mm walnut strip cut to length to fit the inside width of the boat. Rowlock planks are 1x2mm walnut strip glued to the top edge (gunwales) of the boat.

Paint and fit out the boats with their fittings (oars, grab hooks, anchors) as shown.

Cut out the boat cradles and glue onto position on the boat beams on the waist of the main hull. Drill, glue and insert a copper eyelet either side of the cradles, into the boat beams for the securing rope. Place the boats into their respective positions as shown on the boat drawing.

Masts and Bowsprit

Cut the masts and bowsprit to their correct lengths as follows:

1:	Bowsprit	12mm dowel	282 mm long
2:	Foremast	10mm dowel	402mm long
3:	Mainmast	12mm dowel	455mm long
4:	Mizzen mast	8mm dowel	387mm long
5:	Fore Topmast	8mm dowel	246mm long
6:	Main Topmast	8mm dowel	275mm long
7:	Mizzen Topmast	6mm dowel	202mm long
8:	Jib-boom	6mm dowel	207.5mm long
9:	Fore Topgallant Mast	4mm dowel	176mm long
10:	Main Topgallant Mast	4mm dowel	198mm long
11:	Mizzen Topgallant Mast	4mm dowel	153mm long

Taper and shape each mast to the sizes shown on the drawings. Taper the masts by using a plane or similar to obtain an octagonal taper. Sand the taper with medium grade sand paper followed by a fine grade of sand paper to finish. A small modelling lathe would be more appropriate for this job.

Bowsprit

The bowsprit is to be tapered at both ends, with the top end being filed flat at the top to take the Bees (71 – These are the sheave blocks for the fore-topmast stay and preventor stay). The top should be filed to a diameter of 3mm to form a tenon for the bowsprit cap. Gammoning cleats and all other cleats to the masts and yards are simply made from 5mm lengths of 1x2mm walnut strip glued in position. They are then shaped to a wedge by slicing the top edge to an angle with a sharp craft knife.

Mark out the position of the Jib boom saddle (75) and glue in position. The bowsprit/jib boom cap (183) should now be bevelled at the top and bottom edges to follow the same angle as the bowsprit. Glue the lower hole in the cap into the tenon on the end of the bowsprit. The cap must be at an angle of 90 degrees to the keel. Next, push the jib boom through the upper hole in the cap until the jib boom is about 10mm past the jib boom saddle. Lash 0.5mm black thread around the jib boom approximately five times, just forward of the jib boom saddle, as shown to secure the jib boom in place.

Cut out the Dolphin striker from its 1.5mm wood sheet (170). Drill two 0.7mm holes 5mm apart and 2mm from the top of the Dolphin striker (as shown on the drawings). Pin and glue the Dolphin striker to the forward face of the bowsprit cap. Paint the area from the bowsprit cap down to the lower end of the Jib boom black, including the Dolphin striker. Using the drawing for correct sizes and positions, tie on all of the blocks and deadeyes associated with the bowsprit.

Masts

The make up of all three mast sets is almost identical therefore only a detailed make up of the Foremast assembly will be given.

1 – Mark onto the mast the positions of the cheeks (103) and bibbs (156)

2 – File the 'head' of the lower mast square to the dimensions shown. The top should be filed square down to the bibb and cheek top edge positions.

3 – Plane and file the area of the mast that the cheeks will be fixed to. File until the cheeks fit flat onto each side of the mast. Fit the cheeks into position, taking great care to ensure that both top edges are at exactly the same height – this in turn will insure that the trestletrees will sit correctly.

4 – File or turn the top of the mast so that it is 5mm in diameter and 5mm deep, for the mast cap to slot into.

5 – Assemble the lower top assembly (including the lower crosstrees and trestletrees) as shown on the drawings. Once complete, it is advisable to drill and insert all eyelets for the assembly before fixing the tops in place on the mast.

6 – Slot and glue the completed top assembly into position so that the trestletrees (194) rest on the top edge of both the bibbs and cheeks. It is very important to make sure the top is angled correctly in relation to the mast at this stage. Adjust the top assembly if required before the glue has set, using the drawing for reference.

7 – Add the lower shroud bolsters and the tie-cleats as shown.

8 – Mark onto the lower mast the positions of the 'iron' bands (these gradually superseded the rope only wooding towards the end of the eighteenth century), wooding and boarding pike rings. For the latter, it is highly advisable to temporarily fit the mast in place on the model. Once in place mark about 2mm up from the fore mast base onto the mast the position of the lower boarding pike ring (383). Once marked, remove the mast from the model and mark onto the mast the position of the upper boarding pike ring (383).

When you have both positions marked, slot the rings in place and apply a small amount of cyano glue to secure them into their final position. It is important that both sets of holes in the rings align correctly. To ensure that they do, cut out from the 0.5mm brass etched sheet one boarding pike (384), and slot it through both holes in the upper and lower ring. Turn one of the rings until the pike sits parallel with the mast.

Paint the lower mast yellow at this point, and the boarding pike rings black. The boarding pikes are to be inserted into their respective holes around the rings only once the fore and main masts have been stepped into final position. (The bottom edges of the boarding pikes are to rest on the top surface of the mast bases).

9 – Apply the mast wooding and mast bands as described and shown on the drawings to their respective marked positions on the mast.

10 – Make the fore topmast as shown on the drawings. Once it has been turned to all of the correct diameters and shapes shown, it is very important to slot the lower mast cap (184) into the fore topmast at this stage. (Before the 'fid' is inserted).

11 – With the lower mast cap already slotted through the topmast, the lower square section can now be made up. First, file the 14.5mm square section area so that all four sides are the same. Using scrap 1x6mm wood strip, clad the 14.5mm square section so that all four sides are built up to the dimensions shown in the drawing.

12 – Drill out and insert the 'fid', as shown clearly on the drawings. The 'fid' secures the topmast in position, and prevents the mast from falling through the lower top trestletrees, and smashing down to the deck.

13 – Make up the topmast crosstree (81) and trestletree (80) assembly as shown. When complete, slot and glue the assembly in place over and into the topmast head. The lower edge of the trestletrees should rest on the top edge of the topmast hounds, as shown.

As with the lower top, ensure the assembly is sitting in the correct position and at the correct angle in relation to the topmast. If not, adjust accordingly before the glue has cured.

14 – Make up the topmast head sheave assembly as directed on the drawings. Add the topmast bolsters as shown.

15 – Make up the fore topgallant mast to the dimensions and diameters shown on the drawings.

16 – As with the lower mast cap, slot the topmast cap into the fore topgallant mast before cladding the bottom square section using 4x1mm wood strip and adding the fid, as shown.

17 – Carefully insert and glue the mast sections into their respective mast caps. The 'fid' should ensure that each mast will rest at their correct positions.

18 – Paint the lower tops and upper crosstrees and trestletrees black. For the lower mast; paint the area in-between the bottom of the bibbs up to the lower mast cap black. For the topmast, paint the area in-between the lower end of the topmast hounds up to the topmast cap black. The hounds (conical shaped area) on the topgallant mast should also be painted black. The non painted areas of the masts should be stained with a dark/walnut wood dye and then finished using a matt polyurethane clear varnish.

19 – Finish off the mast assemblies by tying on all blocks/deadeyes which fit directly onto the masts. If you are to fit sails to the models, add the extra blocks for the sails as indicated on the plans. If you plan to leave off the sails (recommended) do not tie on the extra blocks.

Yards

All yards and stunsail booms are to be made up to the dimensions shown on the yard drawings using the appropriate sizes of dowel supplied in the kit. Plane or file the yards octagonal and then mark the centre of each yard. The centre of the yards remains octagonal and the last third of each end is tapered to the dimensions shown in the yard plan sheets.

Drill and glue the stunsail boom brackets (284, 285, 287, 288, 515 & 516) in place on the lower and topsail yards of the fore and main mast to the positions shown. Do not insert the stunsail booms through their brackets until the yards have been painted. Manufacture the yard and sling cleats using 1 x 2mm walnut strip cut to size, as shown. Mark and drill the holes for the foot rope stirrups that are located on the underside of the yards using a 0.5mm drill bitt for the photo etched stirrups to slot into (524). Glue and insert the stirrups into their respective slots in the yard. The stirrup "ties" can be simulated by tying 0.25mm (stained black) thread once around the yard at the position of the stirrups. All of the yards should be painted black, including the mizzen driver and boom. (Although some captains painted the mizzen boom yellow/ochre at this time.) Tie the footropes to the ends of the yards using 0.5mm black thread. Thread them through the eyelets at the end of each stirrup. Secure the inner end to the outer side of the sling cleat on the opposite side of the yard, as shown. Do not tie the thread taut, but leave it a little loose, to simulate the natural hang. Secure all blocks and brace pendants to the yards as shown on the yard drawings. The spritsail yard, fore and main yard and crossjack yard is tied to the mast with "trusses" which are simulated with the use of 0.5mm black thread tied as shown. The fore and main yard trusses also have tackles, as shown on the drawings.

The remaining yards are tied to the masts with Parral beads and ribs held together by 0.25mm thread pushed through the holes in the beads and ribs and then tied to the mast inside the sling cleats. The Parral ribs are brass etched parts which should be painted black before removing from their host 0.5mm brass etched sheet. The mizzen driver, boom and mizzen topgallant

yard are held in place onto the mast with Parral beads. If you intend to fit sails, tie the sails to the yards as indicated before fixing the yards to the masts. The fixing of the yards to the masts and subsequently, rigging the yards, can be made a little less awkward by pinning and gluing the yards onto the masts. Drill a 1mm hole to the centre of each yard where it makes contact with the mast. Drill another 1mm hole to the yard position on the mast. Insert a small length of 1mm brass wire (or a brass pin with the head cut off) into the hole in the yard to act as a securing pin. The yard can then be glued and pinned to the mast, making certain rigging lines easier to apply. When all the yards have been secured to the masts, the three mast sets and bowsprit can be stepped into their corresponding holes in the foredeck, poop deck and forecastle. It is advisable to apply a small amount of PVA glue to each mast before fitting in position. (If the masts are not held in place by a small amount of glue, there is a possibility that they may 'rotate' slightly when setting up the shrouds and stays)

Rigging

The rigging as shown on the plan sheets in the kit have been drawn following extensive research, both contemporary and modern to ensure the rigging layout is as accurate as we can make it.

The rigging is based upon the original directives from the Admiralty of the "1773 Establishment"; This was a standardised 'Masting and rigging directive' for each class of ship.

Brush on diluted PVA wood glue for the majority of the knots. Super glue can be applied to the ends of the rigging thread to aid pushing it through the holes in the blocks. (But do not use superglue for anything else unless you are fully experienced and fully conversant with the rigging of period ships, and have adopted your own techniques that work best for you).

The lower masts are to be rigged first, starting with the 'tackle pendants'. There should be a pair of these rigged each side of the fore and main mast and one each side of the mizzen mast.

Shrouds are next to be set up. The correct sequence should be as follows; Forward, starboard, Forward port alternately. 1.22mm black thread is used for the fore and main lower shrouds, and 1mm black thread is used for the mizzen lower shrouds. Roughly measure out the length of each pair of shrouds by offering up the thread to the mast and cut the required number of pairs before setting up. One end of each shroud should be rigged with a deadeye. The upper and lower deadeyes need to be spaced correctly, if not, the different spacing could potentially ruin the overall effect of the completed model. To ensure the spacing of the upper and lower deadeyes is in uniform, fabricate a simple spacing jig as follows;

Cut two lengths of 1mm wire 35mm long, bend 10mm from each end to an angle of 90deg. This should leave about 15mm between each end. The same style of jig can be made for the 5mm and 3.5mm dead eyes with a spacing of about 12mm.

One end of the jig can be inserted into the middle hole of the lower deadeye on the chainplate with the other end inserted into the middle hole on the shroud deadeye. Thread the loose end of the shroud through the top, around the mast and back through the top down to the second deadeye on the chainplate. Insert a loose deadeye into the second spacing jig with the other end of the jig in the corresponding chainplate deadeye. The loose end of the shroud should then be wrapped around the deadeye, and then seized into place using 0.25mm thread. Secure the pair of shrouds as with the tackle pendants and push the knot up to the bolster. Rig the lanyards to the deadeyes using 0.6mm natural thread. Continue this technique until all lower mast shrouds have been set up.

Each pair of shrouds should be reasonably taut, but not too taut as this could pull or bend the masts out of alignment.

A 'Futtock stave' should now be attached to each set of shrouds, about 50mm down from the top. These are made by cutting 1mm brass wire to just a little longer than the length of the spread of the shrouds. Secure the bar horizontally to each shroud using the smallest diameter thread and paint black. The 'Catharpins' are to be rigged to the Futtock Staves next. The 'Catharpins' job was to keep the lower shrouds taught. Four individual lengths of 0.6mm black thread are to be rigged as clearly shown on

the 'Rigging Sequence one and two' drawings. Only three sets are required on the mizzen.

The 3.5mm and 5mm deadeyes for the futtock shrouds can now be set up. Take the thread down to the futtock stave, wrap it once around the stave and tie the futtock shroud to the lower shroud, just under the futtock stave. Repeat until all the futtock shrouds and deadeyes are set up. Set up the top mast shrouds as shown in the 'Rigging Sequence one and two' drawings.

Set up the topmast futtock shrouds, again using 1mm brass wire and paint black. Set up the topgallant shrouds using 0.6mm black thread. There should be one pair and one single each side of the fore and main masts and only one pair rigged each side for the mizzen. Secure the shrouds to the hound position on the topgallant mast. The end of the thread should then be pushed through the corresponding hole located at the end of each crosstree and finally down to the Topmast lower deadeyes where it is secured, as shown on the drawings.

Ratlines

Use 0.10mm natural thread for the simulation of the ratlines. Tie them to each shroud with a clove hitch knot only. Use tweezers to manipulate the thread around the shrouds. Leave a small amount of excess thread at each end of the start and finish of each row of ratlines to make the trimming of the ends of the ratlines when complete less awkward. The spacing between each row should be about 5-6mm. Dab on watered down PVA glue to the outer ratlines to the shrouds. When all the ratlines are tied stain them by carefully brushing on Indian ink. (Black thread is not used because it is lot 'stiffer' and is more prone to pull the shrouds out of shape). Before applying the ink, cover the back of the shrouds with paper to ensure no drops of ink are spilt or spattered onto the deck (which 'will' happen if not masked off, irrespective of how careful you are). When the ink has dried it will probably be necessary to pull the ends of the ratlines, to bring the shrouds back to shape as slight shrinking may have occurred whilst the Indian ink dried. The final task is to trim off the excess thread with a small (and very sharp) pair of scissors, making sure you trim as close to the knot as possible.

The cast shroud cleats are now ready to be tied into position, just above the upper deadeye on some of the lower shrouds. They have two notches near the centre concave curve of the casting. Paint the shroud cleats black before tying in place. Wrap 0.25mm thread around the cleat and into the notches. Secure the cleat into position with a knot to the shroud.

For visual reference of the location of the shroud cleats, please look at the overhead belaying plan view located on the rigging sequence plans.

Stays

The main and fore stays should be set up before the preventor stays. Main and fore stays use 2mm thread. Main and fore preventor stays use 1.7mm natural thread. The area of stay that loops around the masthead can be simulated as shown on the drawings. (A black plastic or 3mm wooden bead can be used to simulate the 'mouse', as an alternative to the drawings provided)

Rig the top of the mizzen stay using the same technique as the fore and main stays. The lower end is secured to the lower main mast with the use of 5mm deadeyes, as shown.

The topmast stays are rigged in the same manor as the previous stays. However, the lower end of the fore topmast stay, instead of being lashed with closed heart blocks, reeves through the starboard bee slot on the bowsprit, and down to an eyelet on the forecastle bitts near the bowsprit. The loose end of the preventor stay reeves through the lower port bee slot and seized as the stay on the opposite side. This is clearly shown on the drawings.

Rig the main topmast top stays as the previous stays. The end of the preventor stay runs through a 5mm single block and tied below the foremost cap,

down the foremast. A sister block should be tied to the end of the stay so that it hangs about 70-80mm above deck level. A single 5mm block should then be secured to an eyelet just aft of the base of the foremast. A length of 0.25mm thread is then tied to the 5mm block and then the 0.25mm thread is to be run through the lower hole of the sister block, then back down through the hole in the 5mm single block, and up again through the upper hole in the sister block and finally belayed to the bitts just behind the foremast, as shown.

The main topmast stay runs through the hole in a 5mm single block seized below the bibbs on the foremast. The stay then should be threaded through the gap behind the mast top and down to the deck where it is rigged in the same manner as the preventor stay.

The mizzen topmast stay is rigged using the same techniques as the previous stays. The lower part is seized with a 3.5mm deadeye in-between the main top and cap, as shown.

Finish off the remaining stays as shown on the plans. Using the plans for visual and size reference, tie on the various blocks to the shrouds and stays for certain running rigging, namely yard braces.

Running Rigging

Apply the running rigging in accordance with the sequence shown clearly on the Rigging Stage plans. Belay the ends in accordance with the belaying plan shown on each sheet. If you intend not to rig sails to the model, follow the rigging sequence on the plans.

If you have fitted sails, use the sail plan set as reference for the rigging. The belaying points for the rigging are the same whether sails are fitted or not.

Although at first glance the rigging seems daunting, if you follow the sequence step by step as shown on the plans, the sequence is not as bad as you perhaps initially thought.

There is only a small amount of textual instruction for the running because the designer feels that too much written instruction for something as (at first sight) complex as the running rigging can perhaps cause more confusion for the modeller, rather than help. Therefore, the rigging sequence has been clearly categorised into smaller stages on the plans. (Sometimes, a simple explanatory picture/drawing says more than words could ever do – the running rigging sequence being a classic example)

If you wish to pursue the rigging further e.g. reef tackle etc. extra blocks and rigging can be purchased. For further information there are several excellent books published such as 'James Lees' Masting and Rigging of English Ships of War 1625 to 1860'. This is published by Conway Maritime Press and was used as main reference for drawing the mast and rigging plans for Vanguard.

Anchors

All that is left to complete your model is to make up and lash the anchors in place. Clean and file off any mould lines on the four anchor castings. Paint the castings black before adding the stock. File or sand the underside of the wooden stocks, so that they form a taper near the ends, as shown on the drawings. The iron hoops are cut from black cartridge paper to a width of 2mm and glued in position around the stock using PVA glue. The anchor ring is made from 1mm brass wire bent around 8mm dowel to obtain the shape. To add a little more authenticity, 0.5mm black thread can be wound round the rings to represent 'puddening'

The anchors nearest the bows have a hawse rope tied to the anchor ring with the other end pushed into the hawse holes on the bows and glued in position. Both sets of anchors should then be lashed to the hull using 0.5mm natural thread wrapped around the centre shank. The ring and crown of the anchors should then be tied off onto the nearest available forecastle timber heads.

When the model is complete carefully look over the model to see if there is any scraps of wood, loose strands of thread or dust left on the deck. A glass display case is recommended for the finished model as dust settles quickly and is not easily removed without causing possible damage to the model.

We hope you have enjoyed building the kit

VANGUARD

PARTS LIST

Pt. No	Description	Material	QTY	Pt. No	Description	Material	QTY
1	Bulkhead	5mm Plywood	1	54	Poop bulkhead pattern	1mm Plywood	2
2	Bulkhead	5mm Plywood	1	55	Panelling back piece for part 54	1mm Plywood	2
2a	Deck support frame	5mm Plywood	1	56	Gun port pattern (upper)	1mm Plywood	4
3	Bulkhead	5mm Plywood	1	57	Gun port pattern (lower)	1mm Plywood	4
3a	Deck support frame	5mm Plywood	1	58	Upper side gallery patt (tabbed)	1mm Plywood	4
4	Bulkhead	5mm Plywood	1	59	Upper side gallery pattern	1mm Plywood	4
4a	Deck support frame	5mm Plywood	1	60	Lower side gallery pattern (tabbed)	1mm Plywood	4
5	Bulkhead	5mm Plywood	1	61	Lower side gallery pattern	1mm Plywood	8
5a	Deck support frame	5mm Plywood	1	62	Upper side gallery pattern	1mm Plywood	4
6	Bulkhead	5mm Plywood	1	63	Lower side gallery counter pattern	1mm Plywood	2
6a	Deck support frame	5mm Plywood	1	64	Lower gun port lid template	1mm Plywood	2
7	Bulkhead	5mm Plywood	1	65	Upper gun deck gun port lid templ.	1mm Plywood	2
7a	Deck support frame	5mm Plywood	1	66	Upper deck gun port lid template	1mm Plywood	2
8	Bulkhead	5mm Plywood	1	67	Main Channel	1.5mm Walnut Ply	2
8a	Deck support frame	5mm Plywood	1	68	Fore Channel	1.5mm Walnut Ply	2
9	Bulkhead	5mm Plywood	1	69	Mizzen Channel	1.5mm Walnut Ply	2
9a	Deck support frame	5mm Plywood	1	70	Mizzen backstay Channel	1.5mm Walnut Ply	2
10	Bulkhead	5mm Plywood	1	71	Bowsprit Bees	1.5mm Walnut Ply	1
10a	Deck support frame	5mm Plywood	1	72	Roundhouse Top canopy	1.5mm Walnut Ply	2
11	Bulkhead	5mm Plywood	1	73	Roundhouse frame pattern	1.5mm Walnut Ply	6
11a	Deck support frame	5mm Plywood	1	74	Bowsprit fairlead	1.5mm Walnut Ply	1
12	Bulkhead	5mm Plywood	1	75	Jibboom Saddle	1.5mm Walnut Ply	1
12a	Deck support frame	5mm Plywood	1	76	Beakhead Bulkhead doors	1.5mm Walnut Ply	2
13	Bulkhead	5mm Plywood	1	77	Main Topmast trestle tree	1.5mm Walnut Ply	2
14	Bulkhead	5mm Plywood	1	78	Main Topmast cross tree	1.5mm Walnut Ply	3
14a	Deck support frame	5mm Plywood	1	79	Main Topgallant mast cap	1.5mm Walnut Ply	1
14b	Deck support frame	5mm Plywood	1	80	Fore Topmast trestle tree	1.5mm Walnut Ply	2
15	Bulkhead	5mm Plywood	1	81	Fore Topmast cross tree	1.5mm Walnut Ply	3
15a	Deck support frame	5mm Plywood	1	82	Fore Topgallant mast cap	1.5mm Walnut Ply	1
15b	Deck support frame	5mm Plywood	1	83	Mizzen Topmast trestle tree	1.5mm Walnut Ply	2
16	Bulkhead	5mm Plywood	1	84	Mizzen Topmast cross tree	1.5mm Walnut Ply	3
17	Bulkhead	5mm Plywood	1	85	Mizzen Topgallant mast cap	1.5mm Walnut Ply	1
18	Main Keel	5mm Plywood	1	86	Bow lower cheek rail	1.5mm Walnut Ply	2
19	Front plank termination pattern	5mm Plywood	2	87	Quarter bulwark rail pattern	1.5mm Walnut Ply	2
20	Front plank termination pattern	5mm Plywood	2	88	Forecastle bulwark rail end pattern	1.5mm Walnut Ply	2
21	Front plank termination pattern	5mm Plywood	2	89	Timberheads for Quarter bulwark	1.5mm Walnut Ply	4
22	Stern Plank termination pattern	5mm Plywood	2	90	Bow upper cheek rail	1.5mm Walnut Ply	2
23	Hull cradle pattern	5mm Basswood	1	91	Side chess tree	1.5mm Walnut Ply	2
24	Hull cradle pattern	5mm Basswood	1	92	Upper gun deck bulwark cleats	1.5mm Walnut Ply	6
25	Hull cradle pattern cross beam	5mm Basswood	2	93	Quarter deck bulwark capping rail	1.5mm Walnut Ply	2
26	Lower gun deck pattern	5mm Plywood	1	94	Quarter deck barricade base pattern	1.5mm Walnut Ply	1
27	Side gallery up finishing pattern	5mm Plywood	2	95	Poop bulwark lower rail pattern	1.5mm Walnut Ply	2
28	Side gallery low finishing pattern	5mm Plywood	2	96	Timberhead for main bow rail	1.5mm Walnut Ply	2
29	Upper gun deck pattern	1mm Plywood	1	97	Deck cleats	1.5mm Walnut Ply	12
30	Upper deck pattern	1mm Plywood	1	98	Ships wheel standard	1.5mm Walnut Ply	2
31	Stern gallery platform	1mm Plywood	1	98a	Ships wheel end drum	1.5mm Walnut Ply	2
32	Poop deck pattern	1mm Plywood	1	98b	Ships wheel main drum	1.5mm Walnut Ply	3
33	Upper gun deck front platform	1mm Plywood	2	99	Forecastle upper capping rail	1.5mm Walnut Ply	2
34	Ships stove pattern	1mm Plywood	1	100	Forecastle lower capping rail	1.5mm Walnut Ply	2
35	Ships stove pattern	1mm Plywood	1	101	Forecastle beakhead bulkhead rail	1.5mm Walnut Ply	2
36	Ships stove pattern	1mm Plywood	1	102	Main Mast cheeks	1.5mm Walnut Ply	2
37	Ships stove pattern	1mm Plywood	1	103	Fore Mast cheeks	1.5mm Walnut Ply	2
38	Ships stove pattern	1mm Plywood	1	104	Fore beakhead bulkhead timberheads	1.5mm Walnut Ply	8
39	Ships stove pattern	1mm Plywood	1	105	Capstan ring	1.5mm Walnut Ply	4
40	Ships stove pattern	1mm Plywood	1	106	Capstan slotted ring	1.5mm Walnut Ply	2
41	Ships stove pattern	1mm Plywood	1	107	Capstan capping	1.5mm Walnut Ply	2
42	Ships stove pattern	1mm Plywood	1	108	Stern fascia knee (inner)	1.5mm Walnut Ply	2
43	Ships stove pattern	1mm Plywood	1	109	Stern fascia knee (outer)	1.5mm Walnut Ply	2
44	Poop upper railing cap	1mm Plywood	2	110	Poop rail support timber	1.5mm Walnut Ply	2
45	Poop upper railing cap (for 44)	1mm Plywood	2	111	Poop rail support timber	1.5mm Walnut Ply	2
46	Quarter gallery columns pattern	1mm Plywood	2	112	Poop rail support timber	1.5mm Walnut Ply	2
47	Hawse plate (long)	1mm Plywood	2	113	Poop rail support timber	1.5mm Walnut Ply	2
48	Hawse plate (short)	1mm Plywood	2	114	Poop rail support timber	1.5mm Walnut Ply	2
49	Poop bulkhead pattern	1mm Plywood	1	115	Poop rail support timber	1.5mm Walnut Ply	2
50	panelling back piece for part 49	1mm Plywood	1	116	Poop rail support timber	1.5mm Walnut Ply	2
51	Poop bulkhead pattern	1mm Plywood	2	117	Stern fascia	1.5mm Walnut Ply	1
52	Stern screen bulkhead	1mm Plywood	1	118	Capstan pawls	1.5mm Walnut Ply	14
53	Panelling back piece for part 52	1mm Plywood	1	119	Forecastle timberheads	1.5mm Walnut Ply	28

Pt. No	Description	Material	QTY	Pt. No	Description	Material	QTY
120	Poop lower rail	1.5mm Walnut Ply	1	189	Deck timberheads	3mm Walnut	16
121	Poop upper rail	1.5mm Walnut Ply	1	190	Fore topmast cap	3mm Walnut	2
122	Poop skylight canopy	1.5mm Walnut Ply	1	191	Cavel cleats	3mm Walnut	6
123	Main bow rail	1.5mm Walnut Ply	2	192	Main mast trestle tree	3mm Walnut	2
124	Fore mast base	1.5mm Walnut Ply	2	193	Main mast cross tree	3mm Walnut	2
125	Main mast base	1.5mm Walnut Ply	2	194	Fore mast trestle tree	3mm Walnut	2
126	Mizzen mast base	1.5mm Walnut Ply	3	195	Fore mast cross tree	3mm Walnut	2
127	Poop rail support timber	1.5mm Walnut Ply	2	196	Mizzen mast trestle tree	3mm Walnut	2
128	Poop rail support timber	1.5mm Walnut Ply	2	197	Mizzen mast cross tree	3mm Walnut	2
129	Poop rail support timber	1.5mm Walnut Ply	2	198	Quarter deck main mast bitts	3mm Walnut	2
130	Poop rail support timber	1.5mm Walnut Ply	2	199	Q. deck main mast bitt cross beam	3mm Walnut	1
131	Poop rail support timber	1.5mm Walnut Ply	2	200	Fore bitts cross beam	3mm Walnut	2
132	Skid beams	1.5mm Walnut Ply	4	201	Main brace cleat	3mm Walnut	2
133	Quarter deck barricade mid-rail	1.5mm Walnut Ply	4	202	Fore bitt supports	3mm Walnut	4
134	Chimney base	1.5mm Walnut Ply	1	203	Mizzen bitt rail	3mm Walnut	1
135	Binnacle housing pattern	1.5mm Walnut Ply	2	204	Main bitt rail	3mm Walnut	2
136	Binnacle housing canopy	1.5mm Walnut Ply	1	205	Mizzen bitt supports	3mm Walnut	2
137	Binnacle housing side pattern	1.5mm Walnut Ply	2	206	Bow cheeks	3mm Walnut	4
138	Ships bell cross beam	1.5mm Walnut Ply	1	207	Mizzen topmast cap	3mm Walnut	2
139	Belfry supports	1.5mm Walnut Ply	2	208	Main topmast cap	3mm Walnut	2
140	Belfry canopy (lower)	1.5mm Walnut Ply	1	209	34 foot launch keel	2mm Plywood	1
141	Belfry canopy (upper)	1.5mm Walnut Ply	1	210	34 foot launch false keel	2mm Plywood	1
142	Beakhead bulkhead fascia	1.5mm Walnut Ply	1	211	34 foot launch front platform	2mm Plywood	1
143	Poop skylight end patterns	1.5mm Walnut Ply	2	212	34 foot launch main floor	2mm Plywood	1
144	Quarter deck barricade end rail	1.5mm Walnut Ply	4	213	34 foot launch aft floor	2mm Plywood	1
145	Poop skylight side patterns	1.5mm Walnut Ply	2	214	34 foot launch plank term. patterns	2mm Plywood	2
146	Forecastle rail support timbers	1.5mm Walnut Ply	8	215	34 foot launch bulkhead	2mm Plywood	1
147	Forecastle rail	1.5mm Walnut Ply	2	216	34 foot launch bulkhead	2mm Plywood	1
148	Hawse bolsters	1.5mm Walnut Ply	2	217	34 foot launch bulkhead	2mm Plywood	1
149	Main top	1.5mm Walnut Ply	1	218	34 foot launch bulkhead	2mm Plywood	1
150	Main top gunwale	1.5mm Walnut Ply	1	219	34 foot launch bulkhead	2mm Plywood	1
151	Fore top	1.5mm Walnut Ply	1	220	34 foot launch bulkhead	2mm Plywood	1
152	Fore top gunwale	1.5mm Walnut Ply	1	221	34 foot launch bulkhead	2mm Plywood	1
153	Mizzen top	1.5mm Walnut Ply	1	222	34 foot launch bulkhead	2mm Plywood	1
154	Mizzen top gunwale	1.5mm Walnut Ply	1	223	34 foot launch cradle	2mm Plywood	1
155	Main mast hounds	1.5mm Walnut Ply	2	224	34 foot launch cradle	2mm Plywood	1
156	Fore mast hounds	1.5mm Walnut Ply	2	225	32 foot barge keel	2mm Plywood	1
157	Mizzen mast hounds	1.5mm Walnut Ply	2	226	32 foot barge false keel	2mm Plywood	1
158	Mizzen gaff/boom jaws	1.5mm Walnut Ply	2	227	32 foot barge front platform	2mm Plywood	1
159	Stern fascia Taffrail	1.5mm Walnut Ply	1	228	32 foot barge main floor	2mm Plywood	1
160	Quarter gallery lower pattern	1.5mm Walnut Ply	2	229	32 foot barge aft floor	2mm Plywood	1
161	Quarter gallery up window pattern	1.5mm Walnut Ply	2	230	32 foot barge aft platform	2mm Plywood	1
162	Quarter gallery low window pattern	1.5mm Walnut Ply	2	231	32 foot barge plank term. patterns	2mm Plywood	2
163	Seat of ease bench	1.5mm Walnut Ply	2	232	32 foot barge bulkhead	2mm Plywood	1
164	Belaying pin rail	1.5mm Walnut Ply	2	233	32 foot barge bulkhead	2mm Plywood	1
165	Belaying pin rail	1.5mm Walnut Ply	2	234	32 foot barge bulkhead	2mm Plywood	1
166	Belaying pin rail	1.5mm Walnut Ply	2	235	32 foot barge bulkhead	2mm Plywood	1
167	Bow grating pattern	1.5mm Walnut Ply	1	236	32 foot barge bulkhead	2mm Plywood	1
168	Bow grating pattern	1.5mm Walnut Ply	1	237	32 foot barge bulkhead	2mm Plywood	1
169	Bow grating pattern	1.5mm Walnut Ply	1	238	32 foot barge bulkhead	2mm Plywood	1
170	Dolphin striker	1.5mm Walnut Ply	1	239	32 foot barge bulkhead	2mm Plywood	1
171	Keel (rear)	5mm Walnut	1	240	32 foot barge cradle	2mm Plywood	1
172	Keel (front)	5mm Walnut	1	241	32 foot barge cradle	2mm Plywood	1
173	Rudder post	5mm Walnut	1	242	28 foot pinnace keel	2mm Plywood	1
174	Rudder	5mm Walnut	1	243	28 foot pinnace false keel	2mm Plywood	1
175	Bow timberheads	5mm Walnut	2	244	28 foot pinnace front platform	2mm plywood	1
176	Forecastle snatch cleats	5mm Walnut	2	245	28 foot pinnace main floor	2mm Plywood	1
177	Seat of ease lower bench	5mm Walnut	2	246	28 foot pinnace aft floor	2mm Plywood	1
178	Upper deck/boat support beams	5mm Walnut	7	247	28 foot pinnace aft platform	2mm Plywood	1
179	Cathead	5mm Walnut	2	248	28 foot pinnace plank term. patterns	2mm Plywood	2
179a	Cathead support bracket	3mm Walnut	2	249	28 foot pinnace bulkhead	2mm Plywood	1
179b	Cathead cross beam	5mm Walnut	1	250	28 foot pinnace bulkhead	2mm Plywood	1
180	Poop rail end pattern	5mm Walnut	2	251	28 foot pinnace bulkhead	2mm Plywood	1
181	Bow pattern	5mm Walnut	1	252	28 foot pinnace bulkhead	2mm Plywood	1
182	Poop deck camber beam	5mm Walnut	1	253	28 foot pinnace bulkhead	2mm Plywood	1
183	Bowsprit cap	5mm Walnut	1	254	28 foot pinnace bulkhead	2mm Plywood	1
184	Fore mast cap	5mm Walnut	2	255	28 foot pinnace bulkhead	2mm Plywood	1
185	Mizzen mast cap	5mm Walnut	2	256	28 foot pinnace bulkhead	2mm Plywood	1
186	Main mast cap	5mm Walnut	2	257	28 foot pinnace bulkhead	2mm Plywood	1
187	Main mast bitts (front)	5mm Walnut	2	258	28 foot pinnace cradle	2mm Plywood	1
188	Main mast bitts (rear)	5mm Walnut	2	259	28 foot pinnace cradle	2mm Plywood	1

Pt. No	Description	Material	QTY	Pt. No	Description	Material	QTY
260	18 foot cutter keel	2mm Plywood	1	327	Rudder pintle	0.5mm brass etch	1
261	18 foot cutter false keel	2mm Plywood	1	328	Rudder pintle	0.5mm brass etch	1
262	18 foot cutter front platform	2mm plywood	1	329	Rudder pintle	0.5mm brass etch	1
263	18 foot cutter main floor	2mm Plywood	1	330	Rudder pintle	0.5mm brass etch	1
264	18 foot cutter aft floor	2mm Plywood	1	331	Rudder pintle	0.5mm brass etch	1
265	18 foot cutter plank term. patterns	2mm Plywood	2	332	belfry arm for ringing bell	0.5mm brass etch	1
266	18 foot cutter bulkhead	2mm Plywood	1	333	Parral ribs	0.5mm brass etch	64
267	18 foot cutter bulkhead	2mm Plywood	1	334	Mizzen euphroe block	0.5mm brass etch	1
268	18 foot cutter bulkhead	2mm Plywood	1	335	Fore euphroe block	0.5mm brass etch	1
269	18 foot cutter bulkhead	2mm Plywood	1	336	Main euphroe block	0.5mm brass etch	1
270	18 foot cutter bulkhead	2mm Plywood	1	337	Short gun port/door hinges	0.5mm brass etch	28
271	18 foot cutter bulkhead	2mm Plywood	1	338	Upper gun port lid hinges	0.5mm brass etch	44
272	18 foot cutter bulkhead	2mm Plywood	1	339	7mm deadeye strop	0.5mm brass etch	48
273	Lower dummy barrel strip	3mm Plywood	2	340	5mm deadeye strop	0.5mm brass etch	32
274	Lower dummy barrel strip	3mm Plywood	2	341	5mm deadeye futtock strop	0.5mm brass etch	28
275	Inner stern counter pattern	3mm Plywood	2	342	3.5mm deadeye futtock strop	0.5mm brass etch	12
276	Outer stern counter pattern	3mm Plywood	2	343	Chainplate strap (long upper)	0.5mm brass etch	44
277	Main head rail support	3mm Plywood	1	344	Chainplate strap (long lower)	0.5mm brass etch	44
278	Main head rail support	3mm Plywood	1	345	Chainplate securing strap	0.5mm brass etch	44
279	Main head rail support	3mm Plywood	1	346	3.5mm deadeye strop	0.5mm brass etch	16
280	Chimney baffle	0.5mm brass etch	1	347	Stern relief carving above window	0.5mm brass etch	1
281	'VANGUARD' letters	0.5mm brass etch	8	348	Main stern relief carving	0.5mm brass etch	1
282	Futtock hooks	0.5mm brass etch	42	349	Stern relief carving above window	0.5mm brass etch	1
283	Rigging hooks	0.5mm brass etch	96	350	Quarter gallery upper finishing relief	0.5mm brass etch	2
284	Lower stunsail boom bracket	0.5mm brass etch	4	351	Lower quarter gallery window frame	0.5mm brass etch	1
285	Upper stunsail boom bracket	0.5mm brass etch	4	352	Lower quarter gallery window frame	0.5mm brass etch	1
286	Low stunsail boom bracket (inner)	0.5mm brass etch	4	353	Lower quarter gallery window frame	0.5mm brass etch	1
287	Upper stunsail boom bracket (inner)	0.5mm brass etch	4	354	Lower quarter gallery window frame	0.5mm brass etch	1
288	Channel support brackets	0.5mm brass etch	28	355	Lower quarter gallery window frame	0.5mm brass etch	1
289	Long oars	0.5mm brass etch	26	356	Lower quarter gallery window frame	0.5mm brass etch	1
290	Short oars	0.5mm brass etch	26	357	Upper quarter gallery window frame	0.5mm brass etch	1
290a	Kedge anchor main flute	0.5mm brass etch	6	358	Upper quarter gallery window frame	0.5mm brass etch	1
290b	Kedge anchor end piece	0.5mm brass etch	6	359	Upper quarter gallery window frame	0.5mm brass etch	1
290c	pike for boats	0.5mm brass etch	8	360	Upper quarter gallery window frame	0.5mm brass etch	1
291	Lower gun port hinges	0.5mm brass etch	64	361	Upper quarter gallery window frame	0.5mm brass etch	1
292	Chainplate strap (short upper)	0.5mm brass etch	32	362	Upper quarter gallery window frame	0.5mm brass etch	1
293	Chainplate strap (short lower)	0.5mm brass etch	32	363	Ships stove hatch	0.5mm brass etch	2
294	Poop bulkhead window frame	0.5mm brass etch	1	364	Ships stove round hatch (1 hole)	0.5mm brass etch	1
295	Poop bulkhead window frame	0.5mm brass etch	1	365	Ships stove round hatch (2 holes)	0.5mm brass etch	1
296	Poop bulkhead window frame	0.5mm brass etch	1	366	Ships stove rectangular hatch	0.5mm brass etch	2
297	Poop bulkhead window frame	0.5mm brass etch	1	367	Ships stove top hatch	0.5mm brass etch	1
298	Poop bulkhead window frame	0.5mm brass etch	1	368	Ships stove end panel	0.5mm brass etch	1
299	Poop bulkhead window frame	0.5mm brass etch	1	369	Ships stove end panel (no holes)	0.5mm brass etch	1
300	Poop bulkhead window frame	0.5mm brass etch	1	370	Ships stove side panel	0.5mm brass etch	1
301	Poop bulkhead window frame	0.5mm brass etch	1	371	Ships stove side panel	0.5mm brass etch	1
302	Stern screen bulkhead wind. frame	0.5mm brass etch	1	372	Lower gun port lid scuttle hatches	0.5mm brass etch	32
303	Stern screen bulkhead wind. frame	0.5mm brass etch	1	373	Lantern frames	0.5mm brass etch	3
304	Stern screen bulkhead wind. frame	0.5mm brass etch	1	374	Lantern support brackets	0.5mm brass etch	3
305	Stern screen bulkhead wind. frame	0.5mm brass etch	1	375	Channel boom bracket (gooseneck)	0.5mm brass etch	4
306	Stern screen bulkhead wind. frame	0.5mm brass etch	1	376	Cathead end decoration	0.5mm brass etch	2
307	Stern screen bulkhead wind. frame	0.5mm brass etch	1	377	Quarter gallery decoration	0.5mm brass etch	4
308	Upper stern window frame	0.5mm brass etch	1	378	Quarter gallery decoration	0.5mm brass etch	2
309	Lower stern window frame	0.5mm brass etch	1	379	Mid-deck rail stanchion	0.7mm brass etch	2
310	Lower stern window frame	0.5mm brass etch	1	380	Mid-deck hammock crane (extra)	0.7mm brass etch	2
311	Lower stern window frame	0.5mm brass etch	1	381	Mast top stanchion	0.7mm brass etch	12
312	Lower stern window frame	0.5mm brass etch	1	382	Main mast boarding pike ring	0.7mm brass etch	2
313	Lower stern window frame	0.5mm brass etch	1	383	Fore mast boarding pike ring	0.7mm brass etch	2
314	Lower stern window frame	0.5mm brass etch	1	384	Boarding pikes	0.7mm brass etch	50
315	Lower stern window frame	0.5mm brass etch	1	385	Mid-deck hammock cranes	0.7mm brass etch	18
315	Lower stern window frame	0.5mm brass etch	1	386	Quarter deck hammock cranes	0.7mm brass etch	44
316	Lower stern window frame	0.5mm brass etch	1	387	Stanchions	0.7mm brass etch	40
317	Upper stern window frame	0.5mm brass etch	1	388	Poop bulkhead column	0.9mm brass etch	1
318	Rudder gudgeon	0.5mm brass etch	1	389	Poop bulkhead column	0.9mm brass etch	1
319	Rudder gudgeon	0.5mm brass etch	1	390	Poop bulkhead column	0.9mm brass etch	1
320	Rudder gudgeon	0.5mm brass etch	1	391	Poop bulkhead column	0.9mm brass etch	1
321	Rudder gudgeon	0.5mm brass etch	1	392	Poop bulkhead column	0.9mm brass etch	1
322	Rudder gudgeon	0.5mm brass etch	1	393	Poop bulkhead column	0.9mm brass etch	1
323	Rudder gudgeon	0.5mm brass etch	1	394	Poop bulkhead column	0.9mm brass etch	1
324	Rudder gudgeon	0.5mm brass etch	1	395	Stern screen bulkhead column	0.9mm brass etch	1
325	Rudder pintle	0.5mm brass etch	1	396	Stern screen bulkhead column	0.9mm brass etch	1
326	Rudder pintle	0.5mm brass etch	1	397	Stern screen bulkhead column	0.9mm brass etch	1

Pt. No	Description	Material	QTY	Pt. No	Description	Material	QTY
398	Stern screen bulkhead column	0.9mm brass etch	1	469	1:72 Scale Royal Navy anchor	Casting	4
399	Stern screen bulkhead column	0.9mm brass etch	1	470	* Not in use		
400	Stern screen bulkhead column	0.9mm brass etch	1	471	* Not in use		
401	Stern screen bulkhead column	0.9mm brass etch	1	472	* Not in use		
402	Upper side gallery column	0.9mm brass etch	1	473	Wood strip	1.5x6.5mm Basswood	90
403	Upper side gallery column	0.9mm brass etch	1	474	Wood strip	.5x5mm Walnut	240
404	Upper side gallery column	0.9mm brass etch	1	475	Wood strip	1x4mm Walnut	40
405	Upper side gallery column	0.9mm brass etch	1	476	Wood strip	.5x3mm Walnut	55
406	Upper side gallery column	0.9mm brass etch	1	477	Wood strip	1x1mm Walnut	18
407	Upper side gallery column	0.9mm brass etch	1	478	Wood strip	1x2mm Walnut	35
408	Upper side gallery column	0.9mm brass etch	1	479	Wood strip	2x3mm Walnut	6
409	Upper side gallery column	0.9mm brass etch	1	480	Wood strip	1x3mm Walnut	12
410	Lower side gallery column	0.9mm brass etch	1	481	Wood strip	.5x3mm Basswood	150
411	Lower side gallery column	0.9mm brass etch	1	482	Wood dowel	12mm Walnut	2
412	Lower side gallery column	0.9mm brass etch	1	483	Wood dowel	10mm Walnut	1
413	Lower side gallery column	0.9mm brass etch	1	484	Wood dowel	8mm Walnut	6
414	Lower side gallery column	0.9mm brass etch	1	485	Wood dowel	6mm Walnut	4
415	Lower side gallery column	0.9mm brass etch	1	486	Wood dowel	4mm Walnut	8
416	Lower side gallery column	0.9mm brass etch	1	487	Wood dowel	3mm Walnut	3
417	Lower side gallery column	0.9mm brass etch	1	488	Deadeye	7mm Walnut	88
418	Beakhead bulkhead columns	0.9mm brass etch	1	489	Deadeye	5mm Walnut	120
419	Quarter galley balustrade (left)	0.9mm brass etch	1	490	Deadeye	3.5mm Walnut	40
420	Quarter galley balustrade (right)	0.9mm brass etch	1	491	Sister block	8mm Walnut	20
421	Lower stern window column	0.9mm brass etch	1	492	Single block	2mm Walnut	10
422	Lower stern window column	0.9mm brass etch	1	493	Single block	3mm Walnut	140
423	Lower stern window column	0.9mm brass etch	1	494	Single block	5mm Walnut	80
424	Lower stern window column	0.9mm brass etch	1	495	Single block	7mm Walnut	20
425	Lower stern window column	0.9mm brass etch	1	496	Double block	7mm Walnut	20
426	Lower stern window column	0.9mm brass etch	1	497	Double block	4mm Walnut	20
427	Lower stern window column	0.9mm brass etch	1	498	Closed heart block	6mm Walnut	4
428	Lower stern window column	0.9mm brass etch	1	499	Closed heart block	10mm Walnut	4
429	Lower stern window column	0.9mm brass etch	1	500	Black thread	1.22mm	50yds.
430	Ships wheel	0.9mm brass etch	2	501	Black thread	0.95mm	40yds.
431	Prow decoration (right)	0.9mm brass etch	1	502	Black thread	0.7mm	20yds.
432	Prow decoration (left)	0.9mm brass etch	1	503	Black thread	0.6mm	20yds.
433	Lower quarter gallery window decor.	0.9mm brass etch	1	504	Natural thread	0.10mm	120yds.
434	Lower quarter gallery window decor.	0.9mm brass etch	1	505	Natural thread	0.28mm	80yds.
435	Lower quarter gallery window decor.	0.9mm brass etch	1	506	Natural thread	0.6mm	20yds.
436	Lower quarter gallery window decor.	0.9mm brass etch	1	507	Natural thread	0.7mm	30yds.
437	Upper quarter gallery window decor.	0.9mm brass etch	1	508	Natural thread	0.95mm	5yds.
438	Upper quarter gallery window decor.	0.9mm brass etch	1	509	Natural (stain black)	1.7mm	2yds.
439	Channel stunsail boom securing ring	0.9mm brass etch	4	510	Natural (stain black)	2mm	2yds.
440	Stern balcony side pattern (right)	0.9mm brass etch	1	511	Natural thread	2.5mm	2yds.
441	Stern balcony side pattern (left)	0.9mm brass etch	1	512	Hull sheathing	Copper tape	18"
442	Stern balcony rail	0.9mm brass etch	1	513	Wood strip (Gun port frames)	1x6mm Walnut	20
443	Door hinges	0.5mm brass etch	8	514	Decorative strip	Casting	26
444	Taffrail main decoration	Casting	1	515	Lower stunsail boom ring	0.9mm brass etch	4
445	Stern bracket decoration (Left)	Casting	1	515a	Inner lower stunsail boom ring	0.9mm brass etch	4
446	Stern bracket decoration (Right)	Casting	1	515b	Topsail yard stunsail boom ring	0.9mm brass etch	4
447	Quarter gallery lower finishing (R)	Casting	1	515c	Topsail Yard stunsail boom ring	0.9mm brass etch	4
448	Quarter gallery lower finishing (L)	Casting	1	516	Acetate sheet 200x150		1
449	Figurehead	Casting	1	517	Black cartridge paper		1
450	Lantern Top canopy	Casting	3	518	Stern counter pattern (laser)	1.5mm Walnut ply	1
451	Lantern lower finishing	Casting	3	519	* Not in use		
452	Shroud Cleat	Casting	40	520	* Not in use		
453	Turned column	8mm Walnut	8	521	Anchor stock	3mm Walnut	8
454	Turned column	6mm Walnut	12	522	Wood strip (Laser cut)	2x2mm Walnut	8
455	belaying pins	Walnut	44	523	Cannon shot	2.5mm diameter	220
456	nails	Brass	200	524	Footrope stirrups	0.50mm Etched Brass	128
457	Ships bell	Casting	1	525	Grating kit (450 individual grating)		450
458	Sand bucket	Casting	12	526	Sail cloth	18"x36"	2
459	Upper gun deck cannon	Casting	28				
460	Lower gun deck dummy barrel	Casting	28				
461	Upper deck cannon	Casting	18				
462	Carronade base	Laser Cut	6				
463	Carronade barrel	Casting	6				
464	Ladder kit	Wood	8				
465	Eyelet	Brass	250				
466	Parral beads	Wood	130				
467	Wire	1mm diameter Brass	7'				
468	* Not in use						

NOTE:

* Not in use - These part numbers were included in order to build variants of this kit.