INSTRUCTION MANUAL

MODELING THE

NEWSBOY

BRIGANTINE, 1854

Technical Characteristics

Scale: 1/8” = 1 ft.
Overall Length: 21-3/8”; Hull Length: 15-1/4”
Width: 8” (width of lower yard); Hull Beam: 3-3/8”
Height: 15-3/8” (top of main mast to bottom of keel)

Instructions prepared by Ben Lankford
Model prototype by Bob Schott
©2006, Model Shipways, Inc.

Manufactured by Model Shipways, Inc. • Hollywood, Florida
Sold by Model Expo, a division of Model Shipways, Inc. • www.modelexpo-online.com

Model Shipways Kit No. MS2108
HISTORY

The *Newsboy* was designed by Dennison J. Lawlor of Chelsie, Massachusetts for owners Dabney & Cunningham of Boston. Built in Owl's Head, Maine, at the Joshua C. Adams and Elisha Brown shipyard, the ship was launched in June 1854. She had a length of 111 feet, beam of 27 feet, and a draft of 11 feet. While designated a Brigantine, the rig is more accurately described as a hermaphrodite brig because there are no square sails on the main mast.

The *Newsboy* was engaged in the so-called triangular trade carrying lumber and manufactured goods from New England to the Mediterranean, then transporting wine, oil, and fruits to the West Indies, then back to New England with rum, molasses, and sugar.

The *Monthly Nautical Magazine* said “having a reputation for speed, by wringing reluctant laurels from her competitors who have chanced to fall in company with her at sea ....she does her designer no discredit....her log will speak for itself”.

The first plans and kit of the *Newsboy* were developed in 1948 by John Shedd, the original owner of Model Shipways in Bogota, New Jersey. The design was a reconstruction based on a hull lines plan, historical notes, and copy of the ships log of 1855 which appeared in an article in J. W. Griffith’s *Nautical Magazine and Naval Journal*, July 1856. In 1964, the model plans were redrawn by the late English Naval Architect George Campbell with some modifications to the reconstruction and more detail for the model builder. These plans were the last set developed by Model Shipways for the kit.

While the plans are reproduced from the 1964 version, the kit has been updated and reissued by Model Shipways, Inc. in Hollywood, Florida, the current owner and manufacturer of Model Shipways kits. New instructions are provided along with a more complete set of supplies for building the model. The fittings are now cast from lead-free Britannia metal and many laser-cut wood parts have been added.

Construction Stages & Table of Contents

<table>
<thead>
<tr>
<th>Brief History</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before You Begin</td>
<td>3</td>
</tr>
<tr>
<td>Working With The Plans &amp; Parts</td>
<td>3</td>
</tr>
<tr>
<td>What You’ll Need To Start</td>
<td>3</td>
</tr>
<tr>
<td>Painting &amp; Staining</td>
<td>3-4</td>
</tr>
<tr>
<td>Stage A: Shaping the Pre-Carved Hull</td>
<td></td>
</tr>
<tr>
<td>1. Using the Templates</td>
<td>4</td>
</tr>
<tr>
<td>2. Carving the Hull</td>
<td>4</td>
</tr>
<tr>
<td>3. Carving the Bulwarks</td>
<td>4-5</td>
</tr>
<tr>
<td>4. Carving the Inside of the Stern</td>
<td>5</td>
</tr>
<tr>
<td>Stage B: Completing the Basic Hull Structures</td>
<td></td>
</tr>
<tr>
<td>1. Installing the Keel, Stem &amp; Sternpost</td>
<td>6</td>
</tr>
<tr>
<td>2. Installing the Rudder</td>
<td>6</td>
</tr>
<tr>
<td>3. Drilling the Larger Holes in the Hull</td>
<td>6</td>
</tr>
<tr>
<td>4. Holes to be Drilled as Work Progresses</td>
<td>6</td>
</tr>
<tr>
<td>5. Installing the Waterway, Planksheer, &amp; Deck Planking</td>
<td>6</td>
</tr>
<tr>
<td>6. Installing Bulwark Stanchions, Cap Rail, &amp; Bow Rail</td>
<td>6</td>
</tr>
<tr>
<td>Stage C: Mounting the Hull</td>
<td></td>
</tr>
<tr>
<td>Mounting Board with Two Pedestals</td>
<td>7</td>
</tr>
<tr>
<td>Stage D: Adding the Hull Details</td>
<td></td>
</tr>
<tr>
<td>1. General Notes</td>
<td>7</td>
</tr>
<tr>
<td>2. Completing the Bulwark Details</td>
<td>7-8</td>
</tr>
<tr>
<td>3. Forward Cabin Construction</td>
<td>8-9</td>
</tr>
<tr>
<td>4. Aft Companionway and Skylight Construction</td>
<td>8-9</td>
</tr>
<tr>
<td>5. Steering Gear Cover Box &amp; Steering Wheel Construction</td>
<td>8</td>
</tr>
<tr>
<td>6. Hatches</td>
<td>8-9</td>
</tr>
<tr>
<td>7. Quarter Bitts, Pump, &amp; Binnacle</td>
<td>8-9</td>
</tr>
<tr>
<td>8. Windlass and Bowsprit Bitt</td>
<td>8-9</td>
</tr>
<tr>
<td>9. Anchor</td>
<td>8</td>
</tr>
<tr>
<td>10. Fife Rails &amp; Deck Eyebolts</td>
<td>8</td>
</tr>
</tbody>
</table>

Stage E: General Masting & Rigging Information

1. Rigging Identification | 10 |
2. Block, Deadeye, Bullseye, and Line Sizes | 10 |
3. Sails and Sail Lines | 10-11 |
4. Applying Beeswax to the Lines | 12 |
5. Seizing Rigging Lines | 12 |
6. Fittings & Block Straps | 12 |
7. Rigging Tools & Belaying Lines | 12 |

Stage F: Mast & Spar Construction

1. Shaping the Masts & Spurs | 14 |
2. Assembling the Masts | 14-15 |
3. Shaping & Detailing the Spurs | 15 |
4. Installing the Mast Assemblies | 15 |

Stage G: Standing Rigging

1. Bowsprit Rigging | 16-18 |
2. Shrouds & Backstays | 16-18 |
3. Foremast (Head) Stays | 16-18 |
4. Mainmast Stays | 16-18 |
5. Yard Lifts, Footropes, Stirrups, Slings & Trusses | 18 |

Stage H: Running Rigging

1. Foremast Staysail Rigging | 20 |
2. Main Staysail Rigging | 20 |
3. Spanker & Gaff Topsail Rigging | 20 |
4. Fore Course Yard Rigging | 21 |
5. Fore Lower Topsail Yard Rigging | 21-22 |
6. Fore Upper Topsail Yard Rigging | 22-23 |
7. Fore Topgallant & Royal Yard Rigging | 22-23 |
8. Final Touches | 22 |

Bibliography | 23 |
Before You Begin

The Newsboy is an interesting model for beginner and expert alike. This kit contains a solid hull which has been machine-carved from select, medium-hard, fine-grained basswood. This style hull provides a quick and easy lesson in the basic shapes and proportions of hull design and helps to develop woodworking skills. Although the exterior of the hull has been carved close to the hull lines as shown on the plans, further carving is necessary for reasons of accuracy. (Carving and finishing the hull to its final shape are discussed in the instructions.)

Constructing the Newsboy model also will provide you with the opportunity to develop some scratch-building techniques. During construction, you may want to substitute some of the kit fittings with your own creations. By all means try them, especially if you think you can improve the model.

If you are a beginner, completing this model will prepare you for a more complicated model such as the Pride of Baltimore II, which is outfitted with a plank-on-bulkhead hull. In the meantime, happy modeling!

Working with the Plans & Parts

Before starting model construction, examine the kit and study the plans carefully. Familiarizing yourself with the kit will serve two purposes. First, it will let you determine that all parts have been supplied as listed. And second, you’ll be surprised at how quickly handling the parts allows you to better understand the kit requirements. Try to visualize how every part will look on the completed model. Also, determine ahead of time what must be done first. The instructions will help you in this regard, but a thorough knowledge of the plans at the outset is essential.

It is also suggested that all small fittings and hardware be sorted into labeled boxes or compartments to avoid loss during the building process.

Three Plan Sheets and Three Template Sheets are provided:
1. Hull Templates - 1 of 3 (heavy stock paper)
2. Hull Templates - 2 of 3 (heavy stock paper)
3. Hull Templates - 3 of 3 (heavy stock paper)
4. Hull Plan - Sheet 1 of 3
5. Masting and Rigging Plan - Sheet 2 of 3
6. Details & Hints Plan - Sheet 3 of 3

In addition, a set of sketches appears throughout the instruction manual to further illustrate the various stages of construction.

The Newsboy kit is manufactured to a scale of 1/8” = 1’0” and matches the plans. Consequently, most of the dimensions can be lifted directly from the plans using a “tick strip”.

This is simply a piece of paper (a roll of calculator paper tape works very well). Mark a dimension from the plan onto the tick strip and transfer it to the model.

The Newsboy kit is supplied with Britannia metal, brass, as well as wooden fittings to eliminate problems in making such parts from scratch. Because the Britannia metals contain no lead, there are no possible corrosion problems. Many of these fittings will require final finishing before installing on the model.

Before painting the cast-meal fittings, clean them up by removing all the mold-joint flash. To do this, use a No. 11 hobby blade to cut the flash, then sand with fine sandpaper. It is also suggested that you clean the fittings thoroughly with warm soapy water before applying primer. Make sure they are rinsed thoroughly and allowed to dry before painting.

What You’ll Need To Start

The following tools and supplies are recommended for the construction process.

Modelers who have built before may have their own favorites. Almost all are available at Model Shipways web site, www.modellexpo-online.com.

A. Knives and Saws
1. Hobby knife with No.11 blades
2. Razor or jeweler’s saw

B. Files
Set of needle files

C. Sharpening Stone
Necessary to keep the tools razor sharp

D. Clamps
1. A few small C-clamps
2. Several wooden clothespins
3. Rubber bands

E. Tool Set
A small carving tool set or individual gouges and chisels for shaping the hull.

F. Boring Tools
1. Set of miniature drills: #60 to #80
2. Larger bits for holes such as mast, hawse pipe, and mooring pipe holes
3. Pin vise

G. Miscellaneous
1. Tack hammer
2. Tweezers (a few)
3. Small fine pointed scissors
4. Miniature pliers
   a. Small round
   b. Flat nose
5. Bench vise (small)
6. Soldering iron or torch
   a. Solder (lead-free solder recommended)
   b. Flux
7. Sewing thread (for seizings; other rigging is supplied)

H. Sandpaper
Garnet or aluminum oxide sandpaper (#100 to #400 grit).

I. Finishing:
1. Paint brushes
   a. Fine point for details
   b. 1/4” to 1/2” flat square for hull

J. Supplies: (will be covered in detail in the Painting & Staining section and throughout instructions)
1. Paints
2. Primer
3. Stain and Varnish
4. White or Carpenter’s (yellow) Wood Glue
5. Five-minute epoxy
6. Cyanoacrylate (Super) Glue

Note about glues: White or Carpenter’s yellow wood glue will suffice for most of the model. Five-minute epoxy provides extra strength for gluing fittings. Cyanoacrylate (Super) glue, called CA glue for short, such as Zap is excellent for quick adhesion and is ideal for dabbing onto a rigging seizing to hold it in place. The best CA glue for most applications is a medium viscosity gap-filling type. The watery-thin type is recommended only to fill a narrow crack by capillary action. For CA glue, you can also purchase a liquid accelerator such as Zip Kicker. A spray or drop of the accelerator will instantly cure the glue. This is handy to eliminate clamping parts for long periods of time waiting for glue to harden.

Use CA glue with caution. You can easily glue your fingers or eyelids together and the fumes can burn your eyes. It would be a good idea to have a bottle of CA debonder on hand. This product will dissolve the glue if you do get it on your body.

Painting and Staining

It may seem strange to begin an instruction manual with direction on applying the finishes to the model. Not so! Much time and effort can be saved and a more professional result can be obtained if the finishing process is carried out during construction. Proper timing in application of finishes and the use of masking tape to define painted edges should eliminate unsightly glue marks and splotchy stained surfaces. In the end, following these general suggestions will be to your advantage.

Paint Colors

The color scheme for Newsboy is provided on Plan Sheet 1. However, the following modifications are recommended, based on Model Shipways acrylic paint colors, to better define the color:
**Underbody** - Metallic Bronze or Bright Green Trim  
**Bulwarks - Inside** - Ocean Green Trim or Clipper Pearl Blue  
**Ironwork** - Iron/Cannon Black  
**Spars** - Colonial Pine or English Oak stain. Pine stain is also recommended for deck planking.

**Other Woodwork & Furniture** - Hull Ember

**Paint:**

Use a flat-finish paint. Model Shipways line of acrylic paints are available in the recommended colors. You may also purchase an already assembled *Newsboy* paint kit from Model Shipways web site, www.modelexpo-online.com.

**Primer:**

Use a grey primer (one is provided with the *Newsboy* paint kit). The grey color will highlight sanding scratches and other defects better than white primer. Prime all woodwork to be painted, and prime all metal fittings. Lightly sand the primed items.

Use a spackling compound such as Pic-n-Patch brand to fill any scratches and defects, then re-prime.

**Stains & Finishes:**

For natural finished wood, use a protective coating after staining, such as low-sheen polyurethane varnish. You can also use an oil-resin mix like the ones sold by Model Shipways or Minwax.

For the deck and spars, Model Shipways stain or Minwax can be used. These are a combination stain-finish that will provide a light tone to the wood. The deck plank edges can be painted prior to installation with any dark color to simulate caulking.

The staining of all wood parts should be done before gluing, especially if any CA glue is used. The stain will not penetrate dried glue and leave ugly white areas in the finish.

**Brushes & Procedures:**

Use good quality soft sable or synthetic hair artist’s brushes. A small pointed brush is good for details. For the main hull areas, use a 1/4” to 1/2” flat brush.

Before painting, clean the model with a tack rag. Apply your paint in smooth and even strokes, overlapping them as you go. Thin the paint enough to eliminate brush strokes, but not run. You will need three or four coats of the light colors to cover the grey primer and maybe only two coats of the dark. Check your finish between coats and sand and add spackle as necessary to get rid of any blemishes.

You will be told how to mark the waterline location in Stage A. At this line, and anywhere else two colors meet, use masking tape. Electrician’s black plastic tape or any of the hobby tapes made of plastic film are ideal. They leave a nice edge and are not overly sticky. Do not use drafting tape unless it is Chart-pak brand. The edges are somewhat wrinkled and paint may run under them. A good trick; seal the edge of masking tape with a clear flat finish and let dry thoroughly. This will really prevent paint from running under the tape.

---

**STAGE A: SHAPING THE PRE-CARVED HULL**

Sanding alone will not shape the hull enough to precisely match the hull lines. Some carving is required, especially at the rail, keel, bow, & stern areas.

**1. Using the Templates**

For exact carving to hull lines, a template is required for the hull profile and each of the stations. You will find a template set printed on heavy stock paper in the kit. Cut the templates out carefully with a No. 11 hobby knife. Do not use scissors! You will want a nice smooth edge. The profile template is in two parts. These can be taped together to form one template. If used separately, make sure you don’t get a knuckle at the keel. Keep the keel straight.

**2. Carving the Hull**

Cut a wooden block from scrap to about 4” x 1” x 3/4” thick. Screw the block to the deck so the model can be held in a bench vise for carving. First, check the accuracy of the profile and correct it as necessary.

Next, mark the centerline, rabbit lines (where hull meets keel) and station lines on the model (Figure A-1). Note that the width at the keel, stem, and sternpost (rabbet to rabbet) is 1/8”. Keep these areas flat as the 1/8” keel, stem, and sternpost will be glued on later. Place the station marks on the center of the hull bottom and on top of the rails so the marks won’t be carved off as you work. Also, add marks for the width of the hull at each station on top of the rail. Measure the marks from the centerline of the model so the marks will be the same port and starboard.

As shown on the sketch, a good way to start is to cut a slope at the rail back to the hull width marks to establish the width of the hull at the rail for the entire hull length. Now you have a line to carve to as you fit the templates. Next, start carving approximately at mid length (maximum beam) and progress forward, then aft, using chisels and gouges to cut away excess wood. Avoid carving against the grain by shifting forward or aft until you find a spot where you are going with the grain. Basswood carves easily, so you probably won’t have much problem with the grain.

Carve very slowly and take off a little wood at a time. Fit the templates as you go. Carve until the template fits reasonably well, then use sandpaper to obtain the final shape. At first the templates will not fit very well, especially at the stern where a fair amount of wood needs to be carved off. You must compare the template to the hull and visually decide where to remove wood. Cut a little off, then re-check the template.

Finally, draw a few horizontal pencil lines (like waterlines) and the vertical station lines on the hull. Use these to visually check the shape of the hull. Hold the hull at various angles, and look to see if the pencil lines are fair (even). If you have any unfairness, dips or bumps, they can usually be found with this visual check. You can also use a stiff stick of wood, about 3/32” square, and lay it on the hull at various locations. Dips and bumps in the hull will show up under the stick.

**3. Carving the Bulwarks**

Make yourself a temporary cradle to secure the hull while carving. This cradle also will serve to hold the model for most of the remaining work. Make the cradle so the model sits in it with its waterline parallel to the baseboard and table. The tops of the cradle should be below the waterline.

Later, when you are ready to paint, attach a pencil on top of a wooden block and slide it along the table to mark the location of the waterline.

The machine-carved hull has bulwarks thicker than scale so they won’t break while inside the kit box. The upper surface is cut to the underside of the cap rail. After you carve the outside of the hull, the bulwarks will be thinner. If more than about 1/16” thick it will be necessary to carve the inside of the bulwarks. This is the most difficult part so work slowly as you carve (Figure A-2). After carving, sand the surfaces smooth. If you happen to have
or want to buy a powered rotary tool like a Dremel, there are many cutters available to quickly reduce the bulwark thickness.

Note: The bulwark stanchions will go onto the inboard side of the carved bulwarks. Together with the bulwark (planks on a real ship) they must fit under the cap rail. So check now using a stanchion strip and piece of cap rail. If the stanchions will not fit, sand the inside of the bulwark a little more. Of course, you could use a wider cap rail and/or thinner stanchion, but don't go too far or the scale will not look proper.

Option: If you find carving the bulwarks too tedious, cut off the bulwark flush with the deck and build the bulwark with 1/16” basswood sheet (not included in kit), then add the stanchions.

4. Carving the Inside of the Stern
Carving the stern area is essentially the same as the side bulwarks, only you have to deal with the curve and the slope. Just be extra careful while carving.
**STAGE B: COMPLETING THE BASIC HULL STRUCTURES**

1. **Installing the Keel, Stem & Sternpost**
   The keel, stem & sternpost are laser-cut parts. Taper the stem and install the parts (Figure B-1). Note that the hull plan shows several scarf joints at the stem. Two of the joints have been eliminated with the laser-cut parts. Also, a new scarf joint has been added in the keel, so the laser cut keel is in two parts. Use pins or dowels to position the parts before gluing. Scrape off any glue squeeze-out. Fill any gaps remaining at the glue joints with wood filler and then sand.

2. **Installing the Rudder**
   The rudder, a laser-cut part, can be shaped and installed now or later. Drill the hole in the hull for the stock. The rudder is tapered and has a round front edge. The stock portion is round. The length of the stock is not important as it disappears in the wheel box on the deck. The pintles & gudgeons can be made from brass strip, self adhesive copper tape, or stiff paper. See Figure B-2 for construction.

3. **Drilling the Larger Holes in the Hull**
   Before going any further with the details, drill all the other large holes in the hull. These would include two mast holes, pilot holes in the keel for screws or pins for mounting the model on a display base, hawse pipe and mooring pipe holes.

4. **Holes to be Drilled as Work Progresses**
   There will be other holes to drill as the work progresses. For example, holes for scuppers, Britannia fittings, eyebolts, and belaying pins.

5. **Installing the Waterway, Planksheer, & Deck Planking**
   **Waterway and Planksheer** - Along the inside of the bulwarks, there is a waterway plank and on top of it a planksheer. On a real ship, the planksheer would be a single plank going to the outside of the hull with the bulwark stanchions going thru the plank. However, for the solid hull model the planksheer will be fitted in two pieces; a strip inboard and a strip outboard. The bulwark stanchions sit on top of the inboard strip. Fit the waterway first. Note that the waterway gets deeper and curves up near the bow, so you will need to cut this from the basswood sheet provided. Also, the bulwark is sloping so the waterway needs to be carved to fit the slope. Figure B-3 shows some sections thru the waterway and planksheer.

   **Deck Planks and Nibbing Strake**
   Note: This kit includes individual plank strips in lieu of scored plank sheet found in some other solid hull kits. As an option you can purchase scored decking from Model Shipways.
   Start the planking at the centerline and work outboard. Paint one side of each plank a dark color to represent caulking. Careful not to get paint on top of the plank.
   Along the waterway there is a margin/nibbing strake, cut forward and aft to prevent a feather edge on the planks as shown on the deck plan. This detail is quite nice on a model, but you could just feather the planks into the waterway.
   The nibbing strake will be a little difficult to apply. Since you don’t know exactly where the ends of each plank will stop, the nibbing strake should be cut as you go. Cut the strake where the nibs will occur as a plank without nibs. Lay a plank, cutting the end of the plank, then cut the nib in the strake. Or, you could draw a line on the deck, cut the plank ends, and cut the nibbing strake all at once. Figure B-4 illustrates the procedure.

6. **Installing Bulwark Stanchions, Cap Rail, & Bow Rail**
   Install the stanchions first, then the cap rail. The cap rail at the bow and stern where there is a lot of curvature can be cut from the sheet wood included in the kit. Add the bow rail on top of the cap rail. Figure B-5 should clarify the details.
Before proceeding with additional work it is best to mount the hull. This step will help prevent details from becoming damaged during handling and will allow you to make any alignments that require a true waterline. Proper mounting of the hull is very important and will allow the accurate building and aligning of the remainder of the model. The kit does not include any parts for mounting. However, the following mounting is suggested.

**Mounting Board with Two Pedestals** - A common mounting for ship models is a wooden baseboard with two wooden or brass pedestals. For a homemade board, a nice looking hardwood such as cherry, walnut, and maple would be ideal. You can round the top edges of the baseboard, or cut a simple chamfer. If you own a router, or can borrow one, you will be able to cut a nice fancy edge on the baseboard. Stain the base if necessary and give it a few coats of varnish or finish like Minwax.

The pedestals could be wood or brass. One pedestal needs to be longer than the other because you should have the model mounted with the waterline parallel to the baseboard. If you decide on this type mounting you should already have drilled pilot holes for the screws as noted earlier. For *Newsboy*, the pedestals should be located near station 5 and 11. If something went awry and the waterline is not level, you can add a brass shim under one pedestal to correct it. Baseboards and pedestals are available from Model Shipways web site, www.modelexpo-online.com.

**STAGE C: MOUNTING THE HULL**

1. General Notes
   - Don’t forget to file off any flash on Britannia metal fittings, clean the fittings and then prime them with grey primer before final paint.
   - Mark the positions of fittings and structures.
   - Drill holes for the fittings or for locating-pins or dowels. Before permanent installation, paint the parts according to the *Newsboy* color scheme or your choice of color. If wooden parts are not painted prior to installation, at least make sure you have the part sanded and ready for painting in place. Use as little glue as necessary on parts. Watch out for that glue squeeze-out. It’s hard to remove if left to harden.

2. Completing the Bulwark Details
   - Before installing anything on the deck, complete all the remaining details at the bulwarks while there are no obstacles to contend with.
   - **Knightheads & hawse timbers** - Figure D-1 illustrates the details at the bow on each side of the bowsprit.
   - **Catheads** - The catheads are laser-cut parts. Cut a hole in the bulwarks for the parts. You probably will need to shape the bottom of the catheads to fit flush against the carved bulwark. Drill the sheave holes for the anchor tackle lines, add the cleat, and the eyebolt for the jibboom shroud (Figure D-2).
   - **Doublers for fore sheet sheave holes and mooring pipes, and hawse pipe and mooring pipe lips** - Fit the doublers, then drill the holes thru the doublers and the bulwark. An actual sheave need not be used for the sheet unless you desire the additional detail. A simple hole should suffice. Drill the holes for the hawse pipes thru the waterway. The lips for the mooring and hawse pipes are Britannia castings and fit on both the outboard and inboard side. See Figure D-3 for some details.
   - **Cavils & pin rails** - There are three cavils on each side. Make these from stripwood. The pin rails need to be cut to fit around the bul-
wark stanchions. Drill and install the belaying pins before installing the rails (Figure D-4).

Channels - Fit the channels on the outboard side of the bulwarks (Figure D-5).

3. Forward Cabin Construction
Laser-cut sides and ends of the cabin are provided. The top beams are also laser-cut, but need to be cut to length. Mark the centerline, then cut off both ends.

Figure D-6 illustrates the cabin assembly. After the top planks are completed, add the galley chimney and the boat skids. The boat is a casting. Place it on the skids and lash down. The ladder on the aft side of the cabin must be made from stripwood.

The window openings where glass will show can be filled in with clear plastic sheet or with wood and painted light blue or black.

4. Aft Companionway and Skylight Construction
Figure D-7 shows the construction. Like the forward cabin, the sides, ends, and top beams are laser-cut parts. The bars for the skylight and the windows can be wire but if a little tedious for your taste, fill in the opening with wood, paint the glass areas a light blue and draw the bar lines on with ink.

5. Steering Gear Cover Box & Steering Wheel Construction
The steering gear cover box is a simple planked box with curved top. Add coamings and top moulding similar to the cabins. The wheel is a casting.

6. Hatches
Figure D-8 illustrates the basic construction of the hatches. All three hatches are similar, just the overall size and number of hatch cover panels vary. Note on the plan that an option is to cover the hatches with a canvas cover.

7. Quarter Bitts, Pump, & Binnacle
These three items are castings. Drill necessary holes and install the fittings. The plan shows a detail for lashing the binnacle to the deck. The pump casting does not have the pump handle which is portable. A handle can easily be made if you want to include it on the pump casting. The plan shows a detail of the handle.

8. Windlass and Bowsprit Bitt
The bowsprit bitt and the windlass are Britannia castings. The bitt only has the windlass pawl on the aft side. The crank and ratchet arms can be made from scratch using brass or wood. The windlass handles are portable so can be omitted or installed if you like. The connecting links can be made from wire and fitted between the crank and ratchet arms (Figure D-9).

9. Anchor
The plan shows the anchor on the port side but it could be placed on the starboard side. The anchor and anchor stock are both castings. As an option you could make the stock from wood especially if a natural finish is desired. Fit the eyebolts in the deck for attaching the anchor lashing lines. The plan shows the anchor stowed. You could add the anchor tackle from the cathead and leave it attached to the anchor. The anchor cable is chain. Run it through the hawse pipe and around the windlass. The plan shows how the anchor chain could have been laid on the deck ready for letting go. You can use this approach or simply lay the chain on deck in a coil.

10. Fife Rails & Deck Eyebolts
Before adding the fife rails, it would be a good idea to install the rigging eyebolts on the deck around the foremost hole.

Each fife rail consists of a rail/bitt casting and two round leg castings. Assemble the three parts. Drill the holes in the rails and install the belaying pins. Fit the fife rails in holes drilled into the deck around each mast hole.

There are several eyebolts for rigging shown on the deck plan. Install the eyebolts for the fore yard halliards port and starboard and the main boom sheet eyebolt on the bulwark stanchion at centerline of the stern.
FIG. D-4  CAVILS & PIN RAILS

FIG. D-5  CHANNELS

FIG. D-6  FORWARD CABIN

FIG. D-7  AFT COMPANIONWAY & SKYLIGHT

FIG. D-8  HATCHES

FIG. D-9  WINDLASS & BOWSPRIT BITT
1. Rigging Identification
All of the rigging is identified by name on the rigging plan. If you are not familiar with the names and functions of rigging lines, the book How to Build First-Rate Ship Models From Kits by Ben Lankford contains a description of Nautical terms (See Bibliography).

2. Block, Deadeye, Bullseye, and Line Sizes
Blocks, Deadeyes, and Bullseyes - The block sizes shown on the plans are actual full ship sizes (length in inches). Deadeye and bullseye sizes are given in full ship size diameters (inches).

There are a limited number of different size blocks, deadeyes, and bullseyes in the kit. The following is a suggested list of kit block sizes to use for the actual full ship sizes:

**Blocks Lengths**
- 4” to 9” - Use 3/32” length kit blocks
- 10” & 11” - Use 1/8” length kit blocks

Note: For double blocks 9” or less, use 1/8” blocks as no 3/32” blocks are available.
For the 10” Triple block, make from scratch as there are no triple blocks less than 3/16” available.

**Deadeye Diameters**
- 6” & 7” - Use 3/32” diameter kit deadeyes
- 8” - Use 9/64” diameter kit deadeyes

Note: The deadeyes are slightly oversized to scale to simplify rigging lanyards and there are two sizes to give a visible difference between lower and upper shrouds.

**Bullseye Diameters**
- 6” & 7” - Use 3/32” diameter kit bullseyes
- 10” - Use 9/64” diameter kit bullseyes

**Rigging Line** - Line sizes are also shown on the plans. These are in full ship size line (circumference in inches).

There is a limited number of different size lines in the kit. The following is a suggested list of kit supplied line sizes in diameter inches to use for the actual full ship circumference sizes:

**Line Circumference**
- 1”, 1-1/2” - Use 0.005” diameter kit supplied line
- 2”, 2-1/2” - Use 0.008” diameter kit supplied line
- 3”, 3-1/2”, 4”, 4-1/2” - Use 0.012” diameter kit supplied line
- 5”, 7-1/2” - Use 0.018” diameter kit supplied line
- 8” - Use 0.028” diameter kit supplied

Note: 0.005” to 0.012” line will be both black and tan. 0.018” to 0.028” will be only black.

Also, there are several running lines on the plans that are not sized, primarily staysail sheets and downhauls. However, the block sizes are shown. Use the following block and line size combinations:

- 3/32” blocks, use 0.005” or 0.008” diameter line
- 1/8” blocks, use 0.008” or 0.012” diameter line

3. Sails and Sail Lines
Model with Sails
The plans for this model include a full open set of sails, but you have the option of building the model with sails furled, partially furled, or with no sails.

Most of the rigging text and detail sketches provided in the instructions will be addressing the model without sails. However, the following provides some typical model procedures if you prefer to add sails. Follow the plans for the specifics on each sail:

Making a model sail (Figure E-1) - Choosing the proper material is critical. Sailcloth for models must be lightweight, yet fairly opaque. Although linen is ideal, most is too heavy for small scale models, so select tightly woven cotton fabric. Wash the sailcloth several times to pre-shrink it. When dry, iron the fabric, but be careful not to scorch it. Lightly pencil in seams, tabling (hem) lines, and other reinforcements, then sew the seams using light tan cotton thread. A sewing machine makes fast work of the project. Practice on scrap fabric and balance the needle thread tension so it doesn’t pucker the material. Stitch lines to represent reinforcement patches.

---

**STAGE E: GENERAL MASTING & RIGGING INFORMATION**

---

**FIG. E-1 MAKING SAILS**

**FIG. E-2 ADDING REEF POINTS & BOLT ROPES**

---
Before proceeding, iron the sails again and be careful not to scorch them. Next, cut the sail shape using Line A shown in the sketch. Fold the hem, iron it flat, and sew as close to Line B as possible. Tuck the ends and hand stitch the corners. The sail is now ready for stretching.

Stretching the material assures the sail’s proper shape, since sewing may have altered it. Using the original pattern, trace the sail’s outline onto a piece of paper. Place the paper on a solid but porous backing, such as a wood or cork board. Now wash the sail again and lay it over the outline. Stretch the wet material to the sail’s outline’s, then secure with stick pins through its outer edges. When dry, the sail will have resumed its proper shape. Iron it one more time.

**Boltropes and Reef Points (Figure E-2)** - Although boltropes (rope sewed to the edge of a sail to give it strength and prevent the fabric from ripping) can be omitted on small scale models, they add immeasurably to larger ones. The sketch shows the correct way to sew boltropes and install reef points.

**Sewing Aids** - Visit a fabric shop and purchase a squeeze bottle of Fray-Chek, a light adhesive. Running or brushing a bead along the edge of a sail prevents the material from unraveling. Do this before attempting to roll the hem. Painting Fray-Chek on untreated fabric makes cutting easier and produces a crisp edge.

Stitch-Witchery and Wonder-Under are heat-fusing bonding tapes that resemble thin mat fiberglass. Stitch-Witchery comes in a roll and is bond-sensitive on both sides. To join two clothes, simply place a strip between them and iron. Wonder-Under comes in sheets with a thin paper backing on one side. While not needed for *Newsboy*, it is useful for bonding letters and numbers to a scale sailboat’s sail (maybe one of your future models). First, buy the colored fabric for the numbers. Place the Wonder-Under sheet on the cloth with the paper backing up. Iron the sheet to bond it to the fabric. Next, cut out the letters, numbers, logo, or whatever with scissors or a sharp blade. Peel off the paper backing, position the letter on the sail, and iron. This technique also works for making flags from colored fabric.

**Material for Furling Sails** - A sail cut to the original’s scale size is impossible to furl. The fabric is usually too heavy, resulting in a bulky furled sail. To solve this problem, either buy a lighter material such as Silkspan (model airplane covering tissue) or proportionally reduce the size of a sail by one-third when using sailcloth (Figure E-3). Depending on their size, even Silkspan sails may require reducing by one-third. Test the percentage reduction to determine how much fabric is needed for a tight furl. Don’t forget to add some seams and hems, for these details are visible even on furled sails.

**Furled and Partially Furled Sails (Figure E-4)** - Sails are often left partially furled, perhaps for drying the sail. This is a practice especially suited to square sails, with the sail pulled up with their clew lines and bunt lines. The sketch illustrates some “looks” of furled and partially furled sails.

Note: Model Shipways has silkspan and a balooner cotton sail cloth. Check their web site. The balooner cloth may be a little heavy for this model. A lighter cotton cloth would be a better choice.
Model without sails

Even without sails, some of the rigging lines such as sheets, halliards, and clew lines are to remain, along with their lead blocks. Some of the lines are to be hooked together, such as head staysail halliards and sheets, and yard clew lines and sheets. The hauling ends of these lines should be belayed at their proper locations. Installing these sail rigging lines on the model adds tremendously to the look of the model, especially at the stays where the contrasting black stay and light running lines, along with their blocks, create interesting visual detail.

4. Applying Beeswax to the Lines

Before placing rigging lines on the model, run the line through a block of beeswax several times. Then, run the line through your fingers. This heats the wax slightly and rubs it into the line. The beeswax will cut down on fuzz and protect the line from moisture.

5. Seizing Rigging Lines

Seizing of lines (binding or securing two lines or different parts of the same line) can be done as shown in Figure E-5. To prevent seizings from unraveling, add a touch of CA glue. For seizings, use the smallest line in the kit or sewing thread.

6. Fittings & Block Strops

Making Fittings - This model is of a period when iron fittings were used extensively throughout the ship. Most of these fittings on the model must be made from scratch unless a casting is provided. Brass is a preferred material for these fittings, which may or may not require soldering, but there are other options that can be considered. The following listed sketches illustrate some typical fittings and some simplified methods for modeling them. The methods can be applied to any similar fitting.

Figure E-6 - Rigging bands found around such items as masts, yards, booms, gaffs, bowsprits, and jibbooms.

Figure E-7 - Fixed yard truss.

Figure E-8 - Moving yard parrels.

Note that brass strip, self adhesive copper tape, and eyebolts are provided in the kit. Sufficient quantities are supplied no matter which method you choose for your fittings.

Block Strops - A strop is an iron or rope band or grommet around the shell of a block for attaching lines. The blocks in the kit are fairly small so it will not be easy for you to create the exact detailing. Some modeling shortcuts are in order. See Figure E-9 for some life-size ship details and model options.

Note: For the Newsboy, like the other metal fittings, iron stopped blocks will be used quite often. However, rope stopped blocks were also used and often preferred to prevent chafing of sails, safety, and other reasons.

You won’t be wrong, no matter which method you use. The reprint of the book Spars and Rigging from Nautical Routine (see bibliography) is an excellent text to consult for the period. Both iron and rope stopped blocks are discussed.

7. Rigging Tools & Belaying Lines

The belaying pins in the kit are a little oversize since they are the smallest pins available. They could be cut to a shorter length or just left as is.

To aid the rigging process homemade tools can be made from brass rod with a push fork end or a hook end (Figure E-10). Use a brass rod long enough to reach in where your hand can’t. Such tools are also available commercially. When belaying lines on small scale models it is best to secure the line to pins or cleats first. Then add a coil of line on the belaying point separately. See Figure E-11.

A word of advice - Rigging plans are sometimes hard to follow. Lines may cross each other and they sometimes go behind something or seem to disappear into thin air. Before you start the rigging, get a notebook and do a small sketch of each rigging line on a separate page. Sketch in where the lines end such as an eyebolt and label these points. If something seems to be missing
when you view your sketches, seek help or find the answer in a rigging text (consult the bibliography). Use the final sketches as you rig the model. You won’t need to crawl your way thru the rigging plan again.

When rigging such items as yards, booms and gaffs, do as much rigging as possible with the item in hand before installing the part on the model. Seize the lines to the part and have enough running rigging line so it can reach to its final destination, such as a belaying pin, with a little line left. Better to be too long than too short. Standing rigging such as yard footropes are included as these would be very difficult to do with the yard hanging at the mast.

**FIG. E-9 BLOCK STROPS**

- **HOOK**
- **EYEBOLT**
- **LASHING**
- **ROPE STROP**
- **BECKET**

**FIG. E-10 RIGGING TOOLS**

- **BRASS ROD**
- **WOOD HANDLE**
- **LARGE SEWING NEEDLE**
- **CUT WITH SNIPS OR FILE**

**FIG. E-11 BELAYING LINES**

- **PULL**
- **USE TOOL TO PUSH LINE UNDER PIN**
- **ADD WHITE GLUE TO STIFFEN**
- **SEPARATE ROPE COILS**
- **FOR A MORE OPEN, REALISTIC LOOK, OMIT THREAD & GLUE COILS TO EACH OTHER**

**MODEL OPTIONS**

- **IRON**
- **ROPE**
- **FOR WRAPPING AROUND SPARS**
- **REAL SHIP**
- **FOR WRAPPING AROUND SPARS**

**FIG. E-12**

- **BELAYING LINE TO PIN**
- **REMOVABLE PIN**
- **JIG**
- **PULL TIGHT, CUT & GLUE**
Most references call a mast a mast, and anything else such as a boom, yard, gaff, and bowsprit a spar. Let's stick with that definition. The mast and spar dowels included in the kit are round. True to scale, masts and spars must be tapered for their full length.

1. Shaping the Masts & Spars

   **Tapering the Masts and Spars**

   The correct shape of the masts and spars are shown on the plans. Each of the mast and spars are generally tapered in a slight (parabolic) curve. However, for models, it may be difficult to accomplish a parabolic shape. A straight line taper should be sufficient. The best way to taper masts and spars from dowels is to cut the taper into squares, then octagons, and finish by sanding into a round shape (Figure F-1).

   Note that the fore topgallant mast and the main topmast have rigging stops where stays and lifts secure. A rigging stop is simply a shoulder formed by the reduction of the mast diameter going above. The shoulder prevents the lines from sliding down the mast. For the model, to actually cut the shoulders could weaken the mast and it could break. Instead, as an option, wrap the mast with thread or paper strip and glue to form a fake shoulder (Figure F-2).

   **Shaping the Mastheads & Heels**

   After tapering, the next areas of the masts to be shaped are the mastheads and heels where the masts join together at the doublings (see plans for location).

   The fore and main lower mast heads and the fore topmast head is square with chamfered edges, and has a square tenon at the top for fitting the mast caps. Also, there is a flat side on the lower masts where the trestletree cheeks fit.

   The heel of the fore and main topmast and the fore topgallant mast is square. A fid is located in each topmast and topgallant mast heel to prevent them from falling through the holes formed by the trestletrees. For this particular ship the square heel is offset forward to provide more space for the shrouds passing between the two masts.

   Figure F-3 illustrates the shaping of the mastheads, heels and the fid. Since you are dealing with wood dowels, the sketch also shows how to build the square ends by adding wood to the cut-end. Adding wood is necessary because the dimension across the flats of the square must be the same as the dowel diameter. Consequently, the diagonal of the square is greater than the dowel diameter. This method can be used for masts heels with, or without an offset as we have with *Newsboy*. It’s just a matter of cutting the initial square in an offset position or centered and adding sufficient wood so the proper detail can be carved.

2. Assembling the Masts

The mast caps are laser-cut parts. Add all bands and fittings to the caps before assembling the masts, or at least before you install the assemblies into the holes in the deck. Make the trestletrees and cross-trees from stripwood and cut the cheeks under the trestletrees from the sheet wood in the kit. Fit the topmast and topgallant masts in the mast caps, then fit the assembly to the mast below. Make sure the masts at the doublings are aligned per the plan.

   **Mast Details** - Before painting and staining the masts there are a few details to add. Drill the holes representing sheaves thru the masts for yard halyards. The mainmast has a rest for the boom. This is a casting provided in the kit. Slip and glue the casting onto the mast. You may need to file out the hole for a proper fit. Also, the chocks are a bit long so should be filed down somewhat. Add the ball on top of the fore topgallant and main topmast. Add the fittings for the futtock bands and lower...
yard trusses. And finally, add the ship's bell on the foremost. Figure F-4 illustrates some assembled mast details.

**Spanker and Gaff Topsail Mast Hoops** - These need to be put on the mainmast before installing the masts if you elect to include them. Refer to Stage H for a discussion on the hoops.

### 3. Shaping & Detailing the Spars

#### Yards

Shape the yards in the same manner as the masts. The maximum diameter of each yard is at its center. Taper the yards outward from each center.

**Yard Details** - You need to detail the yards as much as possible before placing them on the masts. Cut a shoulder on each end of the yards which is a stop for lifts and footropes. Also, drill holes (sheaves on real ship) in the ends of the yards for the sheets from the sail above.

Jackstays consist of a series of eyebolts thru which a rod is passed. The rod and eyebolts are used for attaching the head of the sail and the footrope sturups. Note that the eyebolts are on top of the yard but slightly forward of the yards centerline. Add all the parrel and truss fittings, and bands for the blocks near the center of the yards. Figure F-5 illustrates a typical yard.

#### Boom & Gaffs

The main boom and gaff also taper, but the maximum diameter of each spar should be about one-third from its fore end. Unlike the yards, there is no shoulder at the outer end of these spars. However, there is a chock in each side of the spar to act as a rigging stop. Add all the fittings like the boom sheet band and cleats.

The boom and gaffs require that jaws be added to their throats for joining to the masts. The jaws are laser-cut wood parts for this kit. The fore end of the gaff jaws are curved upward as shown on the plan. You can cut a slit in the laser-cut jaws, bend and glue to form the curve or omit this detail (Figure F-6).

#### Bowsprit, Jibboom, & Dolphin Striker

The bowsprit is round inboard, changing to square, round again, and back to square at the outer end. To save adding wood to create the squares like you did with mast heels, it would be easier to use the square strip provided in the kit instead of the dowel. Tenons are required on each end of the bowsprit to fit the bowsprit cap and the bowsprit bitt on deck.

The jibboom should be straight from the aft end to the bowsprit cap, then tapered forward. On the inboard end, cut the tenon to fit into the block at the bow. At the outer end cut the shoulders and add the rigging bands. Drill the holes for stays to pass thru.

The Dolphin Striker is a simple tapered round spar. Add the fitting at the top and bottom of the spar. The cleats at the bottom can be a bent wire with flattened ends, a detail of this is shown on Plan Sheet 3.

#### Assembly and Installation

**Assembly and Installation** - Glue the bowsprit cap (laser-cut part) onto the bowsprit. You will need to shape the holes a bit for both the bowsprit and jibboom since the cap is at a slight angle to the spars. Insert the jibboom, but don't glue it to the cap. Fit the dolphin striker (proper name martingale) to the bowsprit cap. Add the bees for the stays. Before going any further, fit the assembly to the hull to make sure the jibboom and bowsprit tenons fit correctly into the jibboom block and bowsprit bitt. Then you can complete the fittings for the assembly (Figure F-7).

### 4. Installing the Mast Assemblies

It is recommended that before installing masts, secure the yards, boom and gaff to the masts. Temporarily hang them with some line so they don't flop all around. Install the mast assemblies in the holes drilled into the deck. Check the alignment and shim if necessary, then add the mast coats. The mast coats are actually canvas covers over the wedges on a real ship holding the masts in place. For the model, mast coat halves are laser-cut parts. Add these at the deck around the masts.
1. Bowsprit Rigging
Begin the standing rigging with the bowsprit. Install the two bobstays, the inner and outer martingale stays, the port and starboard martingale backstays (all chain). Next, rig the footropes, bowsprit shrouds, and the jibboom shrouds. Figure G-1 illustrates the rig to this point. Rigging at the bowsprit will be completed while and after installing the foremast (head) stays. But first, the mast shrouds need to be installed since the head stays and all fore and aft stays go over top of the shrouds at the mastheads.

2. Shrouds & Backstays
The lower shrouds are set up with deadeyes and lanyards at the channels and attached along the outside of the ship using chain plates. The topmast and topgallant backstays are shown on the drawing set up to bullseyes and chain plates. However, there is a note at the bottom of Sheet 2 indicating the use of deadeyes as an option for a ship this size. The deadeye strops and chain plates are to be made of wire provided in the kit (Figure G-2). To set up the shrouds, make a temporary jig of wire to space the deadeyes as you do the seizings (Figure G-3). The sketch also shows the sequence for reeving the lanyards and the proper sequence for the shrouds going around the mastheads. Keep an eye on the masts as you rig the shrouds, so you will not pull them out of line.

The fore topmast shrouds are set up similar to the lower shrouds but instead of having chain plates they set up to iron futtock shrouds. The fore topgallant and main topmast shrouds have no deadeyes and pass thru the cross-trees and set up to a band around the mast. Figure G-4 illustrates the upper shrouds.

After the shrouds are in place, proceed to add the ratlines and the sheer poles (Figure G-5). The sketch shows real ship practice and various model options. Note there are no ratlines on the main topmast shrouds.

3. Foremast (Head) Stays
Forestay - The forestay is a double line seized together just below the masthead and just above the deck. The lower ends set to bullseyes with lanyards on each knighthead at the bow (Figure G-6).
Fore Topmast Stay - This stay is also double and is seized together just below the masthead and above the bowsprit. The lower ends pass thru the port and starboard bee holes on the bowsprit and are secured by bullseyes and lanyards at the bow (Figure G-7).
Inner and Outer Jib Stays - The single line jib stays feed thru a hole in the jibboom, down to cleats on the dolphin striker and are set to bullseyes and lanyards at the hull. Note that the inner jib stay goes to the port side and outer stay to starboard (Figure G-8).
Fore Topgallant Stay and Fore Royal Stay - These stays pass thru holes at the end of the jibboom, under the cleats on the dolphin striker, and are set to bullseyes and lanyards at the hull. Note that the topgallant stay goes to port and royal to starboard (Figure G-9).

4. Mainmast Stays
Mainstay - The stay is double and is seized together just below the masthead and just above deck. The lower ends are set to thimbles and eye bolts at the deck on each side of the mast (Figure G-10).
Middle Stay - This stay is fixed to an eyebolt at the mainmast cap and to a bulleye and strop around the fore masthead (Figure G-11).
Main Topmast Stay - The top of the stay is seized around the rigging stop on the main topmast, passes thru an eyebolt on the foremast cap and sets to an eyebolt on the foremast trestletree (Figure G-12).

Main Topgallant Staysail Stay - Seize the stay around the upper rigging stop of the main topmast. The lower end is secured to an eyebolt in the fore topmast head cross-tree (Figure G-13).

Main Topgallant Stay - The upper end is seized around the upper rigging stop of the main topmast. The lower end is seized to a bullseye and strop around the fore topgallant mast lower rigging stop (Figure G-14).
5. Yard Lifts, Footropes, Stirrups, Slings, & Trusses

These lines and fittings are actually a part of the standing rigging but we will defer the instruction to running rigging, Stage H. These rigs are best installed along with some running rigging while working with the yards.

FIG. G-7
FORE TOPMAST STAY

FIG. G-8 JIB STAYS

FIG. G-9 FORE TOPGALLANT & ROYAL STAYS
FIG. G-10 MAINSTAY

- Eye at main masthead similar to fore stay
- Foremast
- Seize
- Stay around metal thimble - can be omitted on model
- Eyebolts in deck

FIG. G-11 MIDDLE STAY

- Eyebolt in cap
- Mainmast head
- Seize
- Bullseyes & lanyards
- Stop chock
- Strop around foremast head

FIG. G-12 MAIN TOPMAST STAY

- Rigging stop on main topmast
- Eyebolt on cap
- Seize
- Eyebolt in trestle tree port or starboard
- Foremast

FIG. G-13 MAIN TOPGALLANT STAY

- Rigging stop on main topmast
- Eyebolt on cap
- Seize
- Eyebolt in trestle tree at centerline
- Fore topmast

FIG. G-14 MAIN TOPGALLANT STAY

- Seize
- Rigging stop on main topmast
- At upper rigging stop
- Fore topgallant mast
- Bullseye
- Strop around mast
Before starting on the running rigging, have all your blocks stopped and/or seized to a line as much as possible. Some running lines may pass thru a sheave hole, then require a block. If so, try starting at the block and rigging backward. Of course, if in such a situation a block is required on both sides of the sheave you are stuck with having to seize at least one of the blocks on the model.

As noted in Stage E, the instructions concentrate on a rig without sails. However, if you intend to install sails, either full-up or furled, refer back to Stage E for some of the suggested details.

1. Foremast Staysail Rigging

The fore staysail, fore topmast staysail, Inner jib, outer jib, and flying jib are all rigged essentially the same. Except for the fore staysail, they have a halliard, downhaul, tack, and sheets which are fitted port and starboard. With sails removed, the sheets and tack are generally removed along with the sails. The halliard and downhaul can remain and hooked together. Place the hook point just above the downhaul block which is seized to the lower end of the stay just above the jibboom.

The downhauls belay to the cleats on top of the bowsprit inboard as shown on the belaying diagram.

The fore staysail does not have a downhaul. Bring the halliard down to the deck and hook it to the bottom of the forestay on one of the bullseye lanyards.

Topside, all halliards feed thru a single block seized at the mast or on the stay as shown on the plans. The halliards then go to the deck and are belayed to belaying pins on the fore fife rail. Refer to the belaying diagram on plan Sheet 2.

Figure H-1 illustrates some of the staysail rigging.

2. Main Staysail Rigging

The main staysail, main topmast staysail, and main topgallant staysail rig is similar to the foremast staysails with the following exceptions:

- **Halliards** - The halliards feed thru single blocks seized to the top of the stays. The belaying diagram does not specifically indicate where these lines are belayed. Belay the main topgallant staysail halliard to spare pin 52 on the port pin rail. Belay the main topmast staysail halliard to spare pin 59 on the starboard pin rail. Belay the main staysail halliard to spare pin 45 on the main fife rail.

- **Downhauls** - The blocks for the downhauls are located differently from the fore staysails. However, just hook the halliards to the downhaul just above the blocks. The downhauls belay to the fore fife rail.

3. Spanker & Gaff Topsail Rigging

With no sails you must decide how to display the gaff; up or down. The appropriate decision is down and about parallel with the boom. Some models like it up to fill the space aft of the mast. You can do this but with no vangs on this particular rig, the gaff would tend to flop sideways. One solution is to glue or pin the jaff jaws to the mast.

We will assume the gaff is down and proceed on that basis. You were advised earlier to add mast hoops on the mainmast before it was installed. You should have some mast hoops for the spanker and the gaff topsail on the mast. However, these are not supplied in the kit. Ignore them or make your own from wood or use some brass rings.

- **Boom Topping Lift & Boom Sheet** - Rig the topping lift first to position the boom, then the sheet to hold it down. The topping lift is fixed to an eyebolt at the mast cap. Rig the running tackle below the boom and belay it to the cleat on the starboard side of the boom (Figure H-2). The lower block for the boom sheet is hooked to an eyebolt on centerline at the deck. The two hauling ends belay to cleats on the bulwark port and starboard (Figure H-3).

- **Spanker Outhaul** - Tie a knot at the outer end of the boom, run the outhaul thru the hole in the boom and belay it to the cleat on the port side of the boom.

- **Gaff Throat and Peak Halliards** - Rig the halliards per the plan. The peak halliard goes down on the starboard side and belays to the starboard pin rail on the bulwark. The throat halliard goes down on the port side and belays on the fife rail. To prevent the gaff from swinging sideways, loop a line around the aft end of the boom and gaff (Figure H-4).

- **Gaff Topsail Inhaul & Outhaul** - With the sails off hook the inhaul and outhaul together just above the gaff. The outhaul passes thru a hole in the gaff and belays to a cleat on the starboard side of the boom. The inhaul passes thru a block below the gaff jaws, then belays to the fife rail (port side).

- **Gaff Topsail Halliard, & Downhaul** - Hook the halliard and downhaul somewhere near the mainmast top. The downhaul goes to port and belays to pin 41 on the fife rail. The halliard goes to starboard and belays to pin 44 on the fife rail.

- **Flag Halliard** - The flag halliard belays to the cavil on the starboard bulwark. However, with the gaff in the down position the line would be draping across the deck, so it is best to leave the halliard off.
4. Fore Course Yard Rigging

Footropes & Stirrups - Remember these are black standing rigging lines. Beeswax the footropes heavily so you can droop them into a natural hanging curve and they will stay in place (Figure H-5).

Sling & Truss - The course yard has no halliard or parrel, but a fixed sling and truss since the yard is not hoisted like other yards. The sling fitting band and truss fittings should already be on the yard and mast. When fixing the yard to the mast, connect the truss and add the chain sling (Figure H-6).

Lifts - The lifts are port and starboard. Seize the line around the shoulder at the end of the yard, pass thru a block at the mast cap and down to a purchase just above the deck. The purchase is belayed to the fife rail.

Buntlines & Leechlines - These port and starboard lines pass thru bullseyes on the yard and blocks on the fore top cross-trees, then proceed down and are belayed to the bulwark pin rail. Without sails the lines could be omitted. However, for added detail knot the lines under the yard blocks, or connect the ends of the leechline and buntline together (Figure H-7).

Reef Tackle - This port and starboard rig could also be omitted on the model without sails, or the rig installed and the block that would be attached to the sail just pulled up under the block on the yard. The more lines you add to the model certainly enhances the detail.

Sheets, Tacks, & Clew Garnets - All lines port and starboard. With sails off, hook the sheet, tack, and clew garnet together. Locate the hook point just below clew garnet block on the yard (Figure H-8). Unlike the fore and aft head sails where the sheets would clutter the deck, the lines for the course sail hang nicely in place and all belay at the rail.

Braces - Add the port and starboard brace blocks and their leader at the ends of the yard. The brace standing end and the lead block are seized to the main shrouds (Figure H-9).

5. Fore Lower Topsail Yard Rigging

Footropes & Stirrups - The footropes & stirrups are rigged essentially the same as for the course yard.

Truss - Like the course yard, the lower topsail yard is fixed by the truss fitting but there is no sling.

Lifts - The lifts are fixed lines and should be black. The upper end can be set to an eyebolt on the side of the trestletree port and starboard. The lower end is seized to the yard but inboard of the shoulder at the end of the yard.

Buntlines - Rig similar to the course yard, knotted under the yard bullseye. The block above the yard is hanging at the end of a line which is attached to the shroud above. The buntline belays to the bulwark pin rail.

Clew lines and Sheets - Hook the clew lines and sheets together just below the clew line block on the yard. The sheet passes thru a hole in the end of the course yard, thru a block under the course yard, then down to a purchase tackle on the deck. The clew line has no purchase and goes directly to the bulwark pin rail (Figure H-10).
Braces - The braces are rigged similar to the course yard except the standing end of the brace is seized to the mainstay instead of the shrouds as in the case of the course yard.

6. Fore Upper Topsail Yard Rigging

Footropes & Stirrups - The footropes & stirrups are rigged essentially the same as for the lower topsail yard.

Parrel - The upper topsail yard moves up and down. To hold the yard against the mast a parrel is used. You should already have the parrel fittings on the yard. You need to add the parrel line or strap to hold the yard against the mast (Figure H-11).

Lifts - The lifts are fixed lines and should be black. The upper end can be set to an eyebolt on the side of the topmast cap port and starboard. The lower end is seized to the yard shoulder at the end of the yard.

Halliard - The halliard (for lifting the upper topsail yard) passes thru a sheave hole in the mast, then down to a tackle set to an eyebolt in the deck at the starboard rail.

Buntline and Downhaul - This particular sail does not have a buntline, but it has a downhaul at the end of the yard port and starboard. With no sail, the yard is down on top of the lower topsail yard. The downhaul is seized to the shoulder of the lower topsail yard, passes thru a block at the end of the upper topsail yard, thru another block near the center of the yard, then down to belay at the fife rail.

Sheets - This sail has no sheets. If the sail were installed, the foot would be laced along the jackstays of the lower topsail yard.

Braces - The braces are rigged similar to the lower topsail yard.

7. Fore Topgallant & Royal Yard Rigging

Footropes, Stirrups, Lifts, Parrels, & Halliards - Rigging is similar to the upper topsail yard except the topgallant halliard goes to a tackle on the port side and the royal to the starboard side.

Buntlines & Leech Lines - The topgallant has a buntline and leech line that go into a common line which passes thru a block at the topgallant hounds. The royal has only buntlines but the port and starboard lines connect to a single line. All these lines would be cumbersome to add on the model without sails, so it is recommended they be omitted.

Sheets and Clew Lines - Rig these lines similar to the lower topsail yard, hooking the two lines together just above the yard.

Braces - The port and starboard braces are single lines seized to the shoulder at ends of the yards and pass thru blocks at the main topmast. They belay to the fife rail.

8. Final Touches

After all the rigging is in place, re-check every line, and make sure all the seizings are sound. If necessary, add another touch of CA glue to seizings. Check to see if there are any shiny places on the rigging. If necessary, tough-up standing rigging with black paint, or black liquid shoe polish. For running rigging, use a tan stain, or brown liquid shoe polish.

Check to see if any of the painted wooden parts were marred or scratched during the rigging process and touch-up as necessary.
BIBLIOGRAPHY

1. *Masting and Rigging the Clipper Ship & Ocean Carrier*
   
   by Harold A. Underhill. Brown, Son and Ferguson, LTD, 1946.
   
   An excellent reference for masting and rigging details in the age of iron fittings.

2. *Spars and Rigging From Nautical Routine, 1849*
   
   
   The Ship Model Society of Rhode Island reprinted in a limited edition the section on spars and rigging from Nautical Routine published in 1849 by Murphy and Jeffers, past midshipmen, U. S. N. It presents a detailed description of the spars, rigging, sails, and other gear of a full-rigged ship. In addition to his own experience at sea, Murphy consulted the most experienced riggers he could find in order to ensure that the book represented the state of the art in 1849. The result is a treatise of great value and reliability to anyone interested in understanding the rigging of a sailing vessel.

3. *The Neophyte Shipmodeller’s Jackstay*
   
   
   Excellent visuals and background information on building models from kits. Good detail on hulls and rigging. Great for beginners.

4. *How to Built First-Rate Ship Models From Kits*
   
   
   Comprehensive reference covers construction methods for solid hull, plank-on-bulkhead, and plank-on-frame kits. The book is profusely illustrated and includes glossary of nautical terms.

   Note: Many books are available through Model Shipways website, www.modelexpo-online.com. Please check current catalog or website for availability.
Other Fine Kits from Model Shipways

SULTANA
Model Shipways Kit No. MS2016

WILLIE L. BENNETT
Model Shipways Kit No. MS2032

BLUENOSE
Model Shipways Kit No. MS2130

RATTLESNAKE
Model Shipways Kit No. MS2028

PHANTOM
Model Shipways Kit No. MS2027

EMMA C. BERRY
Model Shipways Kit No. MS2150

CHARLES MORGAN
Model Shipways Kit No. MS2140

BENJAMIN LATHAM
Model Shipways Kit No. MS2109

NIAGARA
Model Shipways Kit No. MS2240

FLYING FISH
Model Shipways Kit No. MS2018

BEDFORD WHALEBOAT
Model Shipways Kit No. MS2645

USS CONSTITUTION
Model Shipways Kit No. MS2040

RATTLESNAKE
Model Shipways Kit No. MS2028

PRINCE DE NEUFCHATEL
Model Shipways Kit No. MS2110

FLYING FISH
Model Shipways Kit No. MS2018

PRIDE OF BALTIMORE II
Model Shipways Kit No. MS2120

OUR GUARANTEE
If less than delighted, return your purchase within 30 days in original condition.

MODEL SHIPWAYS
Sold & distributed by Model Expo, a division of Model Shipways, Inc.
3850 N. 29th Terrace, Hollywood, FL 33020
Toll-Free 800-222-3876 Monday - Friday 9-5 ET • Fax 800-742-7171

SAVE TIME & MONEY... ORDER DIRECTLY FROM OUR WEBSITE!
wwwmodelexpo-online.com