

## How to build Revell's' Cutty Sark – A Modelers Guide

In building the model of the Revell's Cutty Sark, I feel one must get to understand the history of this beautiful and graceful Clipper Ship, prior to getting ready to start a labor of love.

Of all her lovely sisters that roamed the seven seas in the golden age of sail, only the Cutty Sark remains to show the world in which we live, what things of grace and beauty were the clipper ships in the fullness of their glory. Once so familiar in the London River, their very names breathed the sprit of romance. Names like Ariel, Taeping, Titania, Sir Lancelot, Leander, Belted Will and a score or others no less famous such as Blackadder, Hallowe'en, Lahloo, and Thermopylae.

The Thermopylae has her own claim to history as setting a record of speed and passage in the China Tea Race. The ships mentioned above set record upon record in the era of sail. In those early days the eagerly sought "Blue Riband of the Seas" was not as in our time, handed down to the liner making the fastest trans-Atlantic passage. It was awarded to the Clipper winning the great and exciting annual China Tea Race, gaining thereby and setting the premium price for tea cargo for the season, which brought a profit to the owner and a large bonus to the Captain.

On the afternoon of Monday 23rd. of November, 1869 a little clipper ship of only 936 tons gross was launched from Scott and Linton's Shipyard at Dumbarton on the Clyde. She bore the name that was to become famous throughout the world and was destined to win a place in the hearts of British seamen second only to HMS Victory. The Cutty Sark was 212 ft. in length, 36 ft. in beam with a depth of only 21 ft., yet according to Basil Lubbock, the foremost authority on the history of the Clipper Ship era, the *Cutty Sark* and the *Thermopylae* were the FASTEST ships ever to move through water under the power of sail alone.

The term "Cutty Sark" is a Scottish one, which means a short chemise or shirt. The Cutty Sark's original figurehead was named "Nannie," based on a poem, "Tam O'Shanter," by Robert Burns. The poem immortalizes the legend of Tam's escape from Nannie, a beautiful witch, who could not catch Tam before he fled over a river (witches, as legend reminds us, cannot cross bodies of water.) However she did manage to grasp the tail of Tam's horse and wrench it from the unfortunate animal. Nannie is depicted on the figurehead with her hand outstretched as she reaches for the tail. You will notice that most sailors place a wad of horse hair for Nannie to hold on to.

There is so much more history and facts to the ship I could fill several more pages, but I will leave it up to you to read on your own. To date, I have in my collection several books on the ship itself. One I find most indispensable is "*The Log of the Cutty Sark*" by Basil Lubbock as well as several brochures. Although, the ship was sold to the Portuguese in the early 20<sup>th</sup> century she was brought back to England and restored to her original glory for all to see. She currently and permanently rest in Greenwich, England in a custom built dry dock and is open to the public almost year round. Few people know that in the later days of the ships' history, she was sold to the Portuguese, re-rigged as a Barkentine and renamed the "*Ferreira*" in August 1895. The last true Capt of the Cutty Sark was named Richard Wooget and it is because of him and his love of photography that 95% of the images of the Cutty Sark survive today. He even went as far as having the ships crew row him away from the ship so he could get underway photographs.

As with most modeling projects, a little bit of research will be needed to be done so the modeler can get the correct colors for the time period you wish to represent. Below, is a correct color scheme for the Cutty Sark at the time of her launch. It is known that there were minor variations in different years. But the scheme adopted, is that of an authentic oil painting commissioned by the owners of Cutty Sark "White Hat" Willis, signed and dated by the artist F. Tudgay in 1872.

The link below is the Official Cutty Sark web site

<http://www.cuttysark.org.uk/colour-scheme.html>

As in the past articles I've written, I will go through the instructions as if you were taking it step by step. The model is 99% correct over all and the rigging instructions are very good. However, a few instructional directions were left out. If you have not noticed it's the instructions on making "foot ropes". These are the lines that the sailors stood on at the yards to work the sails and lines. Also, the Jeers and Halyards were omitted. In earlier editions of this model, the rigging instructions included how to make these lines. I guess someone thought that modelers could not handle rigging them. But we will fix that, I promise. Make sure you read my steps prior to reading the steps in the instruction manual.

O.K. Lets get started. The paint color and brand I used on the model are as follows:

**Floquil:**

Ft. Black, Antique White, Copper, Roof Brown, Rail Brown, Lt Green.

**Testors:**

Armor Sand, Ft. White, Euro Green, Rust, Brass, Military Brown

**Thinner:**

Acetone and Turpentine

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**Step 1: The HULL**

Paint the inside bulkheads white with at least 2 coats to be sure you cover the black plastic well. **DO NOT FOLLOW THE INST. ON THE WOOD TAN FOR THE BULWARKS, THIS IS WRONG!** This area was white ONLY. In the kit you will find the plastic keel supports. I have never liked them and have always decided to use metal stanchions (contact any ship fitting company and order a set, they run about \$8.00. You will find a nice selection of stanchions. See how my model is mounted to the baseboard. If you notice in the lower keel of the model you should have two square holes. These are for the two 1/4" square nuts for you to run bolts through. Bring a hull half to the hardware store and get two nuts that fit in them with two bolts that are 1/4" x 3" long, put the nuts in the slots. Using tube type plastic cement, glue the hull together and let dry for 24 hours. You will need some clamps along the keel and along the bow section as well as the stem piece.

When dry, carefully file down one copper plate at a time and hem use your favorite brand of filler to carefully fill the seams where the hull meets if needed. Try not to get any filler too past the seam on the stern section as it will remove the some detail. I place tape on each side of the seam and then use a fine file to bring the edge down, but if you feel comfortable with another method, go for it.

On the "copper plated" section use a 1/4" flat file and file in one direction beginning at the bow and work your way back. The upper hull area is ft. black; the rub rails are white as indicated. The top and outer edge of the top most rail is rust (mahogany color).

The lower hull painting /Corrosion detail was done in the follow manner: You must use FLOQUIL Brand Paints for this step.

1. Coat the hull with **Floquil** Copper (ONLY this brand of paint will work), let dry 24 hours.
2. Using a #2 size brush, use **Floquil** Lt. Green, streak the hull in from the top of the plates to the keel in downwards strokes only.
3. Using a #2 size brush, paint **Floquil** Ant. White directly over the Lt. Green, and then while the paint is still damp wash the paint down with ONLY turpentine, any other solvent is too strong. Let dry over night, the smell is not that bad, but if you work indoors on your models you will want to do this outside and let dry their.

Parts # 3 and 5 are the fake cargo holds and the small boxes in them are to represent crates of Tea. The color was either green or red, I've seen both. You can put a wash, but once you build the model you're not going lift up the hatch to see in it any way so why bother. You can rig open or closed if you prefer.

## **Step 2:**

The deck sections are well detailed and can be done in such a manner that will bring out the fine grain detail that Revell carved in the mold. First, airbrush all deck sections with a coat of ft. black and let dry 24 hours. Then coat the deck sections with a coat with armor sand, let this dry another 24 hours. Use medium steel wool to lightly rub through the Armor Sand to show the black paint on the raised highlights of the deck. In the tight areas, you will need to use your #11 or #12 blade to gently scrape off the armor sand paint to the same effect.

The edges of the cargo holds were dark brown, I use Roof Brown because it is a basic brown. The recessed officers' saloon cannot be seen when the top skylight is glued on and the windows are put in. The wood as you can see in the website is med to dark maple. Look in the different pages of the instructions and see where they tell you to place eye-bolts. **DO NOT USE THE PLASTIC ONES!** I like to use pre-made cotter pins or metal eyebolts from Model Expo. You can find several sizes at your local hardware store. In the past I have made my own using wire bent around some round nosed pliers.

## **Steps 3 - 14:**

These steps deal with assembly of the mast, yards and support structure. **DO NOT FOLLOW THEM AS WRITTEN!** This is the first sub-assembly, pick up four gallon size zip-lock type bags, and mark them Jib boom, Foremast, Mainmast, Mizzenmast, and go through the part kit and separate all the parts for the different masts'. Then go through the parts and separate the different parts for the yards, placing them in the correct bags. We are not going to go into the dead-eyes yet **LEAVE THEM ON THE TREES** right now.

Follow the instruction on gluing the **lower mast** together and set them aside to dry. These need a bit of attention and you are going to need to fill and file each to get the seam to disappear. **DO NOT FULLY ASSEMBLE THE MAST YET.** Were going to step the mast one section at a time just like they did to the real ship! Clean up and bore out the holes on the mast tops, and upper mast. On the upper masts look for a hole that is going all the way through them, each one has several. These are where the main lifts go through; using a small reamer or drill clean these out so you can get the rigging through them later on. Clean up the caps and holes on all parts.

## **BLOCKS:**

A word on the blocks supplied with the kit. Without a doubt, Revell has helped many modelers get over the fight and frustration by providing a nice molded and uniform scale set of blocks, they have provided Single, Double and double ended in both forms. Although the blocks are all the same size and in the real world they were not, since you're building this model very close to the real ship I prefer to use the stand blocks that come with the kit. However, you will need to pain them. I choose to paint mine black and or dark brown either would be correct, After you have painted them I choose a day when I have a few hours to spare and remove, trim and ream out ALL the blocks so as to have them ready when needed. You can carefully remove the blocks from the trees by using a NEW AND FRESH #11 blade, anything else will cause breakage.

After you are satisfied with the fit and finish of the mast assemblies, review the rigging instructions and NOW attach all the blocks where needed.

## **YARDS:**

The yards that are in the kit are 99% correct. However, you need to add a bit of plastic sprue to the tops of each yard where the raised protrusions are. These are called Jack Stays, and it's where the sails were tied to the yards. I find it VERY easy to use.075mm plastic styrene rod

ACC glued to the top of each protrusion. Use a toothpick and a small drop on each one. Once dry, paint the yards black. See pictures before and after, looks a lot more detailed for just a little more work!

In **step 6** you will see them tell you to glue on the studding booms on the yards of the Main and fore mast you can do this after you paint them Testors Military or Floquil dr. brown. Also you will need to use a bit of rigging thread to simulate tying them in place. You can make 3-4 loops around the ends of each one and 3-4 loops over the second point of attachment on the yards.

Now you will need to attach the chain leader to each of the three lower yards for each mast. Clamp the yards in a table top vise or helping hands, and add 1 inch of small chain to the end of the yards. At the end of the chain add the block as indicated in the instruction.

## **Step 15:**

You should have performed this step already.

## **Step 16:**

Before you put the deck in the model I use several small pieces of styrene to form deck braces so that the edges of the three deck sections will lay and lock flush with each other, Here is how to make them. Cut 6 pieces of 1/4" by 1/8" styrene into 1" long pieces. Carefully glue two of them to once aide of the part 4 spacing them on either side of the smooth deck house area. Then glue one piece in the middle of the smooth area on part 6, once dry you can fit the two edges together and they will support each other and lay even. Do the same to the other side being careful to not get to close to the outer edges.

### **Steps 17, 18, 19:**

You can follow these steps as written, However, first paint the pin rails with Rail Brown and once the paint dries, paint the belaying pins Armor Sand. Glue the unit in place, making sure to take your time and fit each one carefully into the guide pin holes. Using liquid glue ONLY, you need to make sure that the entire length of the belaying pin rack is mated and fused into the bulkhead. These parts will have some stress on them once we start rigging, and you want to make sure the plastic parts fuse together, so they won't pull away from the bulkhead.

### **Step 20:**

Remember to replace the plastic eyebolts with metal once in this step, you will have to tie the several fore stays onto the parts you need the strength. Paint the deck with the same detail as the others. Paint part 80, Roof Brown. Paint part 78 flat black with a rusty dry brush. Paint parts 79 flat white.

### **Steps 21, 22 & 23:**

You can follow these as directed but you need to make corrections in the colors as follows; **Flat Black** for parts 84, 87, 88, and 92 "vertical bars" paint only the capstan bar retainer flat white. **Flat White** for all parts for the "sail lockers", One was a sail locker and one was the head, Notice the molded in pump on parts 97L.

### **Step 24:**

Follow this step as written, remembering to replace the plastic eyebolts with metal. Paint the pin rail the same as the earlier ones along the gunwales. The deck hatch covers were not bare wood like they show. They were covered with canvas so that no water would get below to ruin the cargo. They would remove the covers in good weather to let the cargo air out. You can make canvas covers in the following manner: Take two pieces of bathroom tissue, Single ply or 1 piece of two ply. Mix up an ounce or so of white glue diluted with water and wet the tissue one good coat let dry over night. Next day, you can use a hair spray to give them a stiff coat. Paint them Antique white and dry brush with tan/white mixture to so highlights.

### **Steps 25 - 26:**

O.K. You will need to do some detail painting in this step. First locate and mark with a scribe all the deck house walls parts with the numbers on the back of each part. Some of the kits had the numbers of them already and some did not. First paint all the walls Roof Brown. Once dry you will need to gloss coat them. After this dries, you will need to paint the "recessed round top areas" white. If you look at old photos of the Cutty Sark you can clearly see the paint pattern. After that white dries (might need two coats) remember to spray flattening agent to dull the wood tone down.

Next. The roofs of both deck houses are painted the same at the main deck sections, NOT BLUE GREY as instructed. The outer edges of the roofs' are white. The ladders are white and the water casks are black with a dry brush of silver grey to make the banding rings stand out in relief. The boat skids are painted white, there are small holes in the skids that need to be cleaned out for rigging thread. The extra yards/spars are painted black as well as the galley vent.

**Away All Boats:** All boats are white as well as the seats. On these molds there should have been a top rail that you could paint a med brown, you can add this detail with a piece of strip styrene or leave it off. All boats unless in service were always covered with tarp, unless just after a storm they let them air out. You can make the canvas covers super easy. Take two pieces of bathroom tissue, single ply or 1 piece of two ply. Mix up a once of white glue with water and wet the tissue one good coat let dry over night. Next day, you can use a hair spray to give them a stiff coat

### **Step 27:**

If you want to show your skill, you make these pump handles turn quite easy, first all parts in these steps are ft. black. Clean out the holes in the pump rods, and carefully remove the mold line from the pump shaft. Slide the rods on the shaft and make sure they rotate. Next clean out the holes in the pump frame slightly larger than the shaft, making sure to correctly mount the frame with the flat surface inward. Clean up the pump handles and carefully mount them to the shaft with a very small drop of acc glue. Complete one side at a time making sure to locate the crank of each handle in the opposite location (one up - one down).

### **Step 28:**

Paint the pin rails as you did before, you need to check the holes on the pump well prior to installation to make sure no flash will get in the way of the pump rods movement. The yard windlasses in black and you give it a wash with rust and silver on the gear works.

### **Steps 29, 30, 31, 32:**

For this step follow the detail painting from step 25-26. The companion hatch cover is the same color brown as the walls of the cabin houses. Bollards are painted black. The aft companionway roof is WHITE completely. The quarter deck front is WHITE, these were chicken coops (read fresh meat). The rack for the fire buckets is Roof Brown, the quarter deck top rail is Roof Brown and the stanchions are white. The fire buckets are red., they have molded in handles you can paint silver. The wall of the aft deckhouse "recessed areas" can be painted white, but I've seen the photos of it all brown also. Either way can be correct. Same goes for the left and right companionway walls. The door to the companionway is brown.

The skylight has great molding in the hinges, you can carefully paint them brass. Use white glue to make windows, The Binnacle is BRASS/Copper either is correct, I do not know why they say Mahogany. The cast are black with a dry brush effect on the bands.

**Steps 33, 34:** Follow as stated but paint the grating rust color and give it a heavy dry brush effect of armor sand, it will show wear and look great!, The poop deck steps are WHITE as are the hand rails. The wheel box needs to have decals prior to being placed in position look for 2 small "Cutty Sark" decals, and put them on. The wheel is rust colored dry brush with Armor Sand. Use metal eye-bolts. The single stanchions are white; Use a white thread for this, tying a small knot at the beginning and carefully wrap the thread around each stanchion going all the way to the end point. Paint the thread white and repaint the stanchions white, this will cause the "rope" to blend in with the stanchions.

## **Steps 35 & 36:**

In these steps all, parts are painted flat black except the aft main rail sections. You need to start assembling the dead-eyes that hold the Backstays in place. The dead-eye assembly's fit into the pre-cut holes in the pin rails system. In order to make as strong a model a possible you will need to CAREFULLY MATCH each part numbers and trim ANY flash away from the parts. With liquid cement carefully glue BOTH TOP AND BOTTOM dead-eyes section together and wait over night till dry. YOU NEED TO MAKE SURE YOU HAVE MADE EACH DEAD-EYE BLOCK TOUCH AND GLUE TO its OPPOSITE. Check each one to be SURE the top and bottom are well glued. Once you have glued them together start one side and work your way down placing them into position. Each dead-eye should have a slight inward lean toward the center of the ship I use ACC glue to fix them in place on the pin rails so they won't come loose. Once you have them in position, and then place your aft deadeye assemblies in position. When we start to rig we will use Coats and Clark thread to make up the shrouds and rat lines.

## **RIGGING:**

Ok, You have to remember the lines on a ship although looked tight, they were not.

They had to have play in them. Take a look at any of the sailing vessels still around today, and you will see what I'm talking about. The first rigging rule is "ALWAYS" always give yourself about 6" – 8" more than you need, run the rigging through a cake of bees wax, to impregnate it and soften it, then run the line between your thumb and forefinger to work the kinks out and heat it up (about 3 times fast). Also you can rig the lines through one side then do the other, find the maximum point where movement should stop the "Fix one side" and when you "fix the other; it cannot go past the breakpoint.

## **SHROUDS / RATLINES**

On the Cutty Sark I use the Coats and Clark brand thread for Buttons and Carpets because it is next to impossible to break can be waxed and takes passing heat well. The instructions are well laid out as to the sequence as to follow EXCEPT. In stead of doing it in the order described you need to remember to rig from the inside out and the bottom to the top