

Lighthouse Ornaments for the Coasts

Dennis Belcher



Much of my life has been spent in the Midwest, and when I think of Christmas, I think of cold, snow, and ice. When my wife and I moved to the coast of North Carolina, we left the snow, ice, and cold weather, along with snowmen ornaments, icicle finials, and a multitude of other cold-weather holiday images. The ocean is the driving influence on the North Carolina coast, and it serves as inspiration for much of my work.

Lighthouses are a common symbol of seashores everywhere, and I wanted to turn an ornament fashioned after one. With a bit of research, I settled on the Bodie Island Lighthouse on the Outer Banks of North Carolina as inspiration. The current Bodie Island Lighthouse is the third that has stood on Bodie Island. It was built in 1872 and stands 156' (48m) tall. It is located on the Roanoke Sound side of the first island that is part of the Cape Hatteras National Seashore.

There are eight lighthouses still standing along the coast of North Carolina. Each is painted in a distinctive pattern, allowing ships to easily identify where they are along the coast, as well as warn of dangers. Bodie Island Lighthouse's horizontal paint pattern can easily be duplicated on a lathe, unlike some lighthouse patterns that are diagonal.

The process

Begin the project with wood selection. Unless you intend to paint the whole

ornament, choose a light-colored wood. I typically use hard maple that is free of darker heartwood. Begin with a blank 1" square by 5½" (25mm by 140mm) long.

I prefer to use a chuck for holding this project to make it easy to work on the roof and to drill the hole for the eyehook—I simply move the tailstock out of the way after forming the ornament. My preference is a Talon chuck with step jaws. A second choice would be spigot jaws. In both cases, the blank should make solid contact against all four jaws and extend about 4" to 4½" (100mm to 115mm). If there is any wiggle, turn a 1" (25mm) tenon on the blank with a shoulder for the jaws and remount.

The full width of the 1" blank will be needed at the base of the ornament, so be certain the wood is centered (*Photo 1*). To avoid having your lighthouse end up with one or two sides straight while the others are round, particular care needs to be taken to center the wood in the chuck jaws.

Turn the blank into a cylinder, and mark with a pencil the key dimensions. Use a small ruler or a story stick. My preference is the story stick, which is a shopmade guide with all the critical dimensions marked (*Photo 2*).

I use the point of a skew chisel to scribe the boundaries into the ornament after they have been marked in pencil (*Photo 3*).

Begin to form the body of the lighthouse. Visualize a taper that



Image courtesy of Outer Banks Visitors Bureau, outerbanks.org.

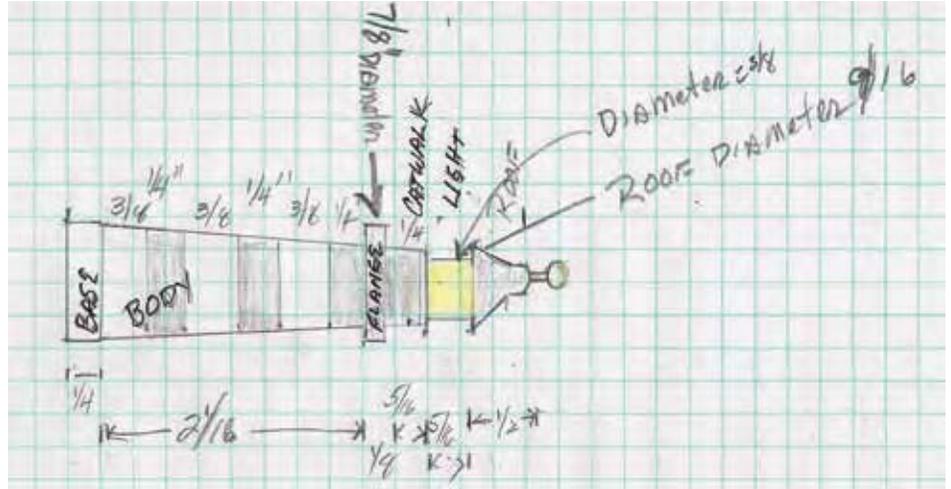


Figure 1. Make a rough sketch, to scale, and then transfer the dimensions to a story stick.

flows from the base, *through the flange*, and all the way to the upper edge of the catwalk. This taper is critical to achieve the correct look of a lighthouse (Figure 1).

Start by setting the flange. Use a freshly sharpened Bedan or

small parting tool to remove wood halfway to the final diameter and leave the flange a bit wide so the wood can be cleaned up later using a skew chisel (Photo 4).

Set the depth of the light area of the lighthouse. Then, begin on the roof

and refine that area until the final dimensions are reached (Photos 5, 6). Use the photograph of the Bodie Island Lighthouse as a reference.

Work on the base of the lighthouse. Mark the bottom of the ornament using a parting tool, just to the depth ▶



1 Use the tailstock with a revolving center to support the wood until the lighthouse is fully turned.



2 Mark key dimensions using a story stick and pencil.



3 Scribe boundaries into the wood using a small skew chisel.



4 Establish the diameter and width of the flange first.



5 Establish the diameter and width of the light area.



6 Turn the roof.



7 Establish the bottom of the lighthouse.



8 Work on the taper of the body.



9 Use a round skew chisel to get into tight areas.



10 Use a skew chisel to clean up the flange.

that it is clearly evident (*Photo 7*). The base is about $\frac{1}{4}$ " (6mm) wide. As with all the measurements, using a critical eye is the important thing—continue referring back to the photo of the original lighthouse.

Work on the taper of the body. I use a small spindle-roughing gouge to form the taper of the body (*Photo 8*). A $\frac{3}{8}$ " (10mm) spindle gouge works as well. If

you are proficient with a skew chisel, finalize the body taper with that to achieve a clean-cut surface.

Extend the taper of the body past the flange to the top edge of the catwalk. A round skew chisel works well to get into the small space (*Photo 9*). When working on a small project like this, I tend to reach for smaller tools. It's not that the project can't be done with

larger tools, but smaller tools are safer and easier to use on small projects.

Clean up the two sides of the flange, if needed (*Photo 10*).

Examine all elements of the lighthouse and finalize the dimensions so the proportions are balanced. The tendency is to make the roof a little larger than that of the actual lighthouse, so you may find that yours needs to be turned smaller.

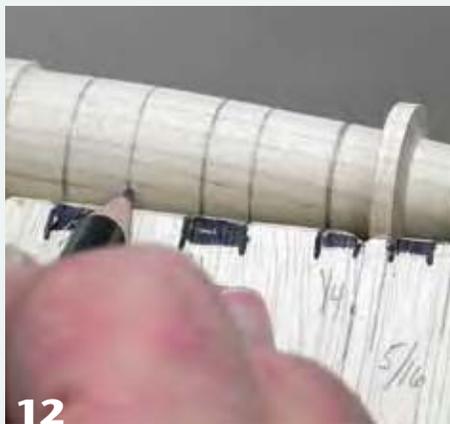
Sand and prepare to finish

Sand if needed, making sure you move the toolrest out of the way. Generally, I sand with a sequence of 180, 220, and 400. Sanding past this point may create difficulties when applying the ink bands on the body—if the blank is too smooth, the ink from the markers will not adhere to the wood.

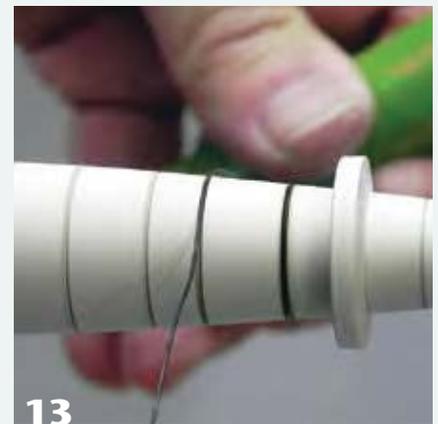
Color can be applied in one of three ways: friction burning, markers, or acrylic paints. Friction burning is the fastest and least involved. Marker coloration gives a deeper black, and yellow can be added to the light portion of the ornament. Painting with acrylics gives the crispest bands and most intense color. It is important to select a method for applying the black bands that is compatible with your finishing sequence so that the bands do not smudge (*Photo 11*).



11 Smudged bands like these can be avoided.



12 Use a story stick to establish where the bands will be.



13 After cutting V grooves, burn the grooves with a wire.

If you color the wrong area, simply turn away the paint and adjust the remaining dimensions accordingly.

Use the markings on your story stick to establish the boundaries of each black band. Marking the story stick with black helps in applying color to the correct areas (*Photo 12*).

Cut a slight V groove with a skew chisel at the boundary of each black band to sharpen the edge between the black bands and the body. Burn the groove with a small wire held in the groove at high speed (*Photo 13*). This creates a crisp edge for each color change.

Paint the ornament

Friction-burned bands

Remove the toolrest and hold a piece of wood against the ornament, within the marked band. Use moderate pressure. A piece of maple works well (*Photo 14*). An increased speed on the lathe helps the process. When the wood smokes, you have finished. Move to the next band.

There are a couple of things that are important to consider at this step. First, if you have sanded the blank too smooth, a proper burned area is harder to create. Second, be sure to turn down the lathe speed following the procedure.

Markers

It is critical that lathe speed be turned down to 500 rpm or lower because at faster speeds, the marker skates on the surface of the wood and does not transfer color well. If you have sanded the blank too smooth, you will also have trouble applying color.

An alternative is to turn off the lathe, hold the marker against the wood with one hand and turn the handwheel with the other hand. A slow lathe and light hand pressure seem to be the secret to success (*Photo 15*).

Acrylic paints

Acrylic paints produce crisp, intense colors. Using a small brush, apply them in the same manner as markers,

with one exception. Lathe speed must be below 25 rpm. At higher speeds you will end up painting a black strip across your shop.

Drill hole and finish

Remove the tailstock and drill the pilot hole for the eyehook. For this, I use a small drill bit, sized to the eyehook and epoxied into a shop-made handle (*Photo 16*). It is easy to crack the wood when screwing in the eyehook, so drill the correct-size hole for the eyehook.

Part off the ornament. Undercut the base slightly to ensure that the lighthouse will stand on its own (*Photo 17*). Remove the small nub, sand the bottom, and insert the eyehook into the top.

Any number of finishes can be used. The objective is to keep the edges of the colored bands crisp, the black remaining on the wood, and not smear color from a black band to the light-colored wood. A few hints:

Lacquer (Deft brand, for instance) or alcohol-based finish will dissolve the ink from markers. The heat generated by most lathe-applied finishes causes friction-generated bands and marker bands to smudge. Acrylic paint needs to be thoroughly dry before any finish is applied, to avoid smudging.

After a number of failures and ruined ornaments from using improper finishes, I recommend Wipe On Poly, gloss. I apply it after the ornament is removed from the lathe.

Final step of the project is to sign the base. Your lighthouse is a unique ornament that can be hung with pride. ■

Photos are by Carl Ciervo, unless otherwise noted.

Dennis Belcher retired in 2006 from a career in the investment world. He moved to Hampstead, North Carolina, and joined the Wilmington Area Woodturners Association. More of Dennis's work can be seen at seabreezewoodworks.com.



14 Friction burning adds a dark color to the maple.



15 Use markers (or acrylic paints) to add color.



16 Drill the hole for an eyehook.



17 Part the ornament off the lathe.