

Turning a Duck

by Fred Holder

Back in 2004, Guilo Marcolongo, a turner from Australia, demonstrated how to turn a Daffy Duck at the Utah Symposium. I decided to try one. Here's my process, with some photos from Guilo's demonstration.



Guilo's ducks

To begin this project, you need a piece of wood for the body and another piece of wood for the head. Here are the dimension ratios that I came up with from Guilo's ducks and they seem to give a nicely proportioned duck (everything is dimensioned off of the diameter of the body):

- Length of body: 1.5 diameter of body
- Length of head: 0.73 length of body
- Length of head blank: 1.25 length of body
- Diameter of head: 0.5 length of body
- Top of bill: 0.52 length of body
- Radius of foot: 0.33 length of body
- Eye: 0.1 length of body
- Diameter of leg: 0.06 length of body

I actually worked everything out using the length of the body then realized that the controlling factor will be the diameter of the piece of wood that you are turning the body from. After that I changed the basis for everything to be from the diameter of the body.

The body is turned into a good egg shape. Just make it 1.5 times as long as it is in diameter. From this make the dimensions of all of the other pieces.



The body has been turned and is nearly ready to part off. It is easier to turn the body with one end held in a chuck and then you have only one end to hand sand.

Next step is to turn the head. Cut a blank and turn it round. The round blank should measure 0.5 the length of the body and 1.25 times the length of the body. Make sure the ends are square with the body. Take this piece to the bandsaw and saw out a 1/4 section. Set the 1/4 section aside and shorten the blank by the top of the bill length or 0.52 length of the body. Mount this in the chuck and turn the egg shaped head to be 0.73 length of body.



Here the head is mounted in the chuck and ready to turn. The 1/4 section is left out in the initial turning of the head.



The head has been turned to shape. It is now time to glue in the $\frac{1}{4}$ section that will become the bill.

Now glue in the $\frac{1}{4}$ section that you had set aside. When the glue sets, turn the head down to meet with the bill and turn the bill into the shape shown in the photo.



Here the $\frac{1}{4}$ section is glued into the head and ready to final turn. You must turn the head down to match with the bill section and turn the bill section to a point at the very end. Do not turn on the center pointed section.

Sand, and the head is done except for drilling holes for the eyes and a hole to mount the head to the body. The head is never glued to the body. You leave it free so that you can position the head to best effect in your display.



Here the head has been completely turned. You must hand sand the top of the bill section.



In this photo, Guilo is determining where the head would look best on this particular duck.

Turn a disk that has a radius of 0.33 length of body and cut it into four sections to make four feet. This piece should be curved a bit to make the feet more pleasing. Round over the back of the feet on a disk sander and shape the front of the feet as shown in the finished picture. Turn the leg pieces and the neck piece; they can all be the same size or the neck piece can be different if desired.



This shows the blank from which Guilo made the feet. You can get four feet out of a blank like this.

Turn the eyes out of contrasting wood. I used African Blackwood, but walnut or any other dark wood would work fine. I turned the eyes into little balls on the end of a small tenon. The tenon was turned to a common drill size. The location of the eyes is then determined and holes are drilled for the eye tenons. The small end of the body goes towards the head. Hold the head and body together to decide where it looks best and drill a hole in the body for the neck pin. Now, try to determine the best point to align the center of gravity above the legs and drill two leg holes. Make sure the holes are parallel to one another. Drill holes in the feet pieces and glue in the legs. Now, apply glue to the top of the legs and insert them into the body. Press down until the duck is setting level and both feet are touching the table surface.

It is a good idea to do a dry set up of all of the pieces before you start gluing any of them together. Let the glue dry and apply finish to the duck.



The author's duck made for a friend who gave us some wood.

You will find these are interesting to make and Guilo says that they sell quite well, especially as a mama, papa, and ducklings set.